

OSCAR Bioenergy Joint Venture

Contract No. EP/SP/61/10
Organic Waste Treatment Facilities
Phase 1:
*Sixth Quarterly EM&A Summary
Report*

1 September 2016 – 30 November 2016

Environmental Resources Management

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Meinhardt Infrastructure and Environment Limited

**Organic Waste Treatment Facilities,
Phase I**

6th Quarterly EM&A Summary Report
(1 September 2016 – 30 November 2016)

(December 2016)

Verified by: Helen Cochrane



Position: Independent Environmental Checker

Date: 23 December 2016

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Reference 0279222

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
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1 INTRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by OSCAR Bioenergy Joint Venture (the Contractor) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme for the *Contract No. EP/SP/61/10 of Organic Waste Treatment Facilities Phase I (the Project)*.

1.1 PURPOSE OF THE REPORT

This is the sixth quarterly EM&A summary report, which summarizes the impact monitoring results and audit findings for the EM&A programme during the reporting period from **1 September 2016 to 30 November 2016**.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : **Introduction**

It details the scope and structure of the report.

Section 2 : **Project Information**

It summarises background and scope of the Project, site description, project organization, construction programme, the construction works undertaken and the status of Environmental Permits (EP)/licences over the construction phase of the Project.

Section 3 : **Environmental Monitoring Requirements**

It summarises the environmental monitoring including monitoring parameters, monitoring programmes, monitoring frequency, monitoring locations, Action and Limit Levels, Event/ Action Plans, environmental mitigation measures as recommended in the approved EIA report, EP and relevant environmental requirements stated in the Contract Specification.

Section 4 : **Implementation Status on Environmental Mitigation Measures**

It summarises the implementation of environmental protection measures during the reporting period.

Section 5 : **Waste Management**

It summarises the quantity of public fill and construction waste generated in the reporting period

Section 6 : **Environmental Site Inspection**

It summarises the audit findings of the weekly site inspections undertaken within the reporting period.

Section 7 : **Environmental Non-conformance**

It summarises any exceedance of environmental performance standard, and environmental complaints and environmental summons received within the reporting period.

Section 8 : **Conclusions**

2.1***BACKGROUND***

The Organic Waste Treatment Facilities (OWTF) Phase I development (hereinafter referred to as “the Project”) is to design, construct and operate a biological treatment facility with a capacity of about 200 tonnes per day and convert source-separated organic waste from commercial and industrial sectors (mostly food waste) into compost and biogas through proven biological treatment technologies.

The environmental acceptability of the construction and operation of the Project had been confirmed by findings of the associated Environmental Impact Assessment (EIA) Study completed in 2009. The Director of Environmental Protection approved this EIA Report under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) in February 2010 (Register No.: AEIAR-149/2010) (hereafter referred to as the approved EIA Report). Subsequent Report on Re-assessment on Environmental Implications and Report on Re-assessment on Hazard to Life Implications were completed in 2013, respectively.

An Environmental Permit (EP) (No. EP-395/2010) was issued by the Environmental Protection Department (EPD) to the EPD, the Permit Holder, on 21 June 2010 and varied on 18 March 2013 (No. EP-395/2010/A) and 21 May 2013 (No. EP-395/2010/B), respectively. The Design Build and Operate Contract for the OWTF (Contract No. EP/SP/61/10 Organic Waste Treatment Facilities Phase I (the Contract)) was awarded to SITA Waste Services Limited, ATAL Engineering Limited and Ros-Roca, Sociedad Anonima jointly trading as the OSCAR Bioenergy Joint Venture (OSCAR or the Contractor). A Further EP (No. FEP-01/395/2010/B) was issued by the EPD to the OSCAR on 16 February 2015. Variation to both EPs No. EP-395/2010/B and No. FEP-01/395/2010/B were made in December 2015. The latest EPs, No. EP-395/2010/C and No. FEP-01/395/2010/C, were issued by the EPD on 21 December 2015.

Under the requirements of Condition 5 of the EP (No. FEP-01/395/2010/C), an Environmental Monitoring and Audit (EM&A) programme as set out in the Agreement No. CE7/2008 (EP) EM&A Manual (hereinafter referred to as EM&A Manual) is required to be implemented. ERM-Hong Kong, Ltd (ERM) has been appointed by OSCAR as the Environmental Team (ET) to undertake the EM&A programme for the Contract.

The construction works commenced on 21 May 2015 and are scheduled for completion by September 2017.

2.2 GENERAL SITE DESCRIPTION

The Project Site is located at Siu Ho Wan in North Lantau with an area of about 2 hectares. The layout of the upgrading works is illustrated in *Annex A*.

2.3 CONSTRUCTION ACTIVITIES

A summary of the major construction activities undertaken in the reporting period is shown *Table 2.1*. The locations of the construction activities are shown in *Annex B*. The construction programme of the Project is presented in *Annex C*.

Table 2.1 *Summary of Construction Activities Undertaken in the Reporting Period*

Construction Activities Undertaken
<ul style="list-style-type: none">• Building 1 – superstructure works, water tanks construction.• Building 2 – defect rectification, ABWF and finishing work, steel work for covered walkway, installation of pump and pipework at roof, Electrical and BS installation work.• Building 3 – superstructure works, ABWF, Electrical and BS installation inside G/F rooms.• AD Tank – Erection of AD 3 and Suspension Buffer Tank, testing, scaffolding erection and cladding work to AD 1, water filling to AD2.• Biogas Holder & Plant Area –erection of De-sulphurisation tank 1 & 2, blowers, standby flare, carbon filter.• Ammonia Stripping Plant –structural steel and mechanical erection work.• Mechanical installation (guide rail) at Building 1.• Tiles installation inside tunnel of Building 2.• CHP area: Erection of CHP 1,2,3.• Sitewide – Underground drainage and drawpit work.• Portion 2 – temp. traffic arrangement, roadworks.• Portion 4 – Material handling and storage, steel bending & cutting.

2.4 PROJECT ORGANISATION AND MANAGEMENT STRUCTURE

The project organisation chart and contact details are shown in *Annex D*.

2.5 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the valid permits, licences, and/or notifications on environmental protection for this Project is presented in *Table 2.2*.

Table 2.2 *Summary of Environmental Licensing, Notification and Permit Status*

Permit/ Licenses/ Notification	Reference	Validity Period	Remarks
Environmental Permit	FEP-01/395/2010/C	Throughout the Contract	Permit granted on 21 December 2015
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation	Ref No. 386715	Throughout the Contract	-
Effluent Discharge License	WT00021482-2015	21 May 2015 – 31 May 2020	Approved on 21 May 2015
Construction Noise Permit -P1&P2	GW-RW0146-16	28 March 2016 – 27 September 2016	Approved on 21 March 2016
Construction Noise Permit-P1&P2	GW-RW0483-16	12 September 2016 – 11 December	Approved on 22 August 2016
Construction Noise Permit – P3	GW-RW0272-16	1 June 2016 – 30 November 2016	Approved on 17 May 2016
Chemical Waste Producer Registration	WPN 5213-961-O2231-01	Throughout the Contract	Approved on 29 April 2015
Waste Disposal Billing Account	Account number: 702310	Throughout the Contract	-

ENVIRONMENTAL MONITORING REQUIREMENT, ENVIRONMENTAL MITIGATION MEASURES

All the relevant environmental mitigation measures listed in the EIA Report and EM&A Manual are summarised in *Annex E*.

According to the EM&A Manual and EP requirement, no air quality, noise and water quality monitoring is required.

Bi-weekly landscape and visual audit is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the EIA Report are fully achieved.

IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

The Contractor has implemented environmental mitigation measures and requirements as stated in the approved EIA Report and EM&A Manual. The implementation status of the measures during the reporting period is summarised in *Annex E*.

Wastes generated from this Project include inert construction and demolition (C&D) materials (public fill) and non-inert C&D materials (construction waste). Construction waste comprises general refuse, metals and paper/cardboard packaging materials. Metals generated from the Project are also grouped into construction waste as the materials were not disposed of with others at public fill. Reference has been made to the Monthly Summary Waste Flow Table prepared by the Contractor (see *Annex F*). With reference to the relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in in *Table 5.1*.

Table 5.1 *Quantities of Waste Generated from the Project*

Month / Year	Quantity			
	Total Inert C&D Materials Generated ^(a)	Non-inert C&D Materials ^(b)		
		C&D Materials Recycled ^(c)	C&D Waste Disposed of at Landfill ^(d)	Chemical Waste
September 2016	324.35 tonnes	59,580.00 kg	138.25 tonnes	0 L
October 2016	1561.82 tonnes	49,300.00 kg	114.47 tonnes	0 L
November 2016	897.23 tonnes	123,000.00 kg	154.22 tonnes	0 L

Notes:

- (a) Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 2783.4 tonnes of inert C&D material were generated from the Project, of which 39 tonnes were reused in this Contract and the remaining 2,724.56 tonnes were disposed as public fill to Fill Banks at Tuen Mun Area 38 and 19.84 tonnes were disposed to Tseung Kwan O Area 137. The detailed waste flow is presented in *Annex F*.
- (b) Non-inert C&D materials (construction wastes) include metals, paper / cardboard packaging waste, plastics and other wastes such as general refuse. Metals generated from the Project were grouped into construction wastes as the materials were not disposed of with others at the public fill.
- (c) 96,800.00 kg of metals, 135,080.00 kg of papers/ cardboard packing and 0.00 kg of plastics were sent to recyclers for recycling during the reporting period.
- (d) Construction wastes other than metals, paper/cardboard packaging, plastics and chemicals were disposed of at NENT Landfill by subcontractors.

6.1 WEEKLY SITE AUDITS

Thirteen site inspections were conducted during the reporting period. There was no non-compliance recorded during the site inspections. Follow-up actions were undertaken as reported by the Contractor and observed in the subsequent weekly site inspections conducted in the reporting period.

September 2016

Joint site inspections were conducted by the representatives of the Contractor, SOR and the ET on 5, 12, 21 and 26 September 2016. The IEC was also present at the joint inspection on 21 September 2016.

October 2016

Joint site inspections were conducted by the representatives of the Contractor, SOR and the ET on 3, 11, 19, 24 and 31 October 2016. The IEC was also present at the joint inspection on 19 October 2016.

November 2016

Joint site inspections were conducted by the representatives of the Contractor, SOR and the ET on 7, 16, 21 and 28 November 2016. The IEC was also present at the joint inspection on 16 November 2016.

6.2 LANDSCAPE AND VISUAL AUDIT

Seven landscape and visual monitoring site inspections were conducted during the reporting period. Follow-up actions needed to be implemented were recommended to the Contractor and the status of the follow-up actions was reviewed during the subsequent weekly site inspections. It was confirmed that most of the necessary landscape and visual mitigation measures as summarised in *Annex E* were implemented by the Contractor.

In accordance with the EM&A Manual, bi-weekly landscape and visual inspection is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the EIA Report are fully achieved. The onsite inspection of the landscape and visual mitigation measures has commenced since June 2015 during weekly site inspections.

September 2016

Bi-weekly site inspections were conducted on 12 and 26 September 2016.

October 2016

Bi-weekly site inspections were conducted on 3, 19 and 31 October 2016.

November 2016

Bi-weekly site inspections were conducted on 7 and 21 November 2016.

Key landscape and visual mitigation measures implemented in the reporting period included:

- Provide insect prevention measures to the exposed root of retained tree to prevent potential damage due to the exposure.
- Provide the non-moisture holding material around the trees to prevent potential damage.
- Avoid placing machine near the tree protection zone.

6.3

EFFECTIVENESS OF MITIGATION MEASURES AND MONITORING

The mitigation measures recommended in the EIA report and required by the EP are considered effective in minimizing environmental impacts.

The EM&A for the Project was conducted as scheduled during the reporting period. No non-compliance events were observed during site inspections and no exceedances were recorded during this reporting period. The EM&A programme is considered effective.

7 ENVIRONMENTAL NON-CONFORMANCE

7.1 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance event was recorded during the reporting period.

One non-compliance event was recorded during the last reporting period, which was on 25 August 2016 9:45 in the morning. During cleaning of the waste water treatment tanks, a worker inadvertently allowed the cleaning water to flow out to the DSD Nullah without passing through the waste water treatment facilities. The contractor has been implementing remedial works and follow-up actions and will be completed shortly. The Investigation Report is shown in *Annex H*.

7.2 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaint was received during the reporting period. The cumulative environmental complaint log is shown in *Annex G*.

7.3 SUMMARY OF ENVIRONMENTAL SUMMON AND SUCCESSFUL PROSECUTION

No summon/prosecution was received during the reporting period. The cumulative summons/prosecution log is shown in *Annex G*.

This EM&A Report presents the EM&A works undertaken during the reporting period from 1 September 2016 to 30 November 2016 in accordance with EM&A Manual and requirements of EP (FEP-01/395/2010/C).

No air quality, noise and water quality monitoring is required.

Bi-weekly landscape and visual monitoring was conducted in this quarterly period. Most of the necessary landscape and visual mitigation measures recommended in the EIA Report were implemented by the Contractor. Follow-up actions would be implemented by the Contractor to improve protection measures on the retained or to-be transplanted trees.

No non-compliance event was recorded during the reporting period.

No complaint and summons/prosecution was received during the reporting period.

The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures in the coming periods.

EXECUTIVE SUMMARY

The construction works of *No. EP/SP/61/10 Organic Waste Treatment Facilities Phase I (the Project)* commenced on 21 May 2015. This is the sixth quarterly Environmental Monitoring and Audit (EM&A) summary report presenting the EM&A works carried out during the period from 1 September 2016 to 30 November 2016 in accordance with the EM&A Manual.

Environmental Monitoring and Audit Progress

A summary of the monitoring activities undertaken in this reporting period is listed below:

- Joint Environmental Site Inspection 13 times
- Landscape & Visual Monitoring 7 times

Waste Management

Waste generated from this Project includes inert construction and demolition (C&D) materials (public fill) and non-inert C&D materials (construction wastes).

Environmental Exceedance/Non-conformance/Compliant/Summons and Prosecution

No exceedance was recorded during the reporting period.

No non-compliance event was recorded during the reporting period.

No environmental complaint and summon/prosecution was received in this reporting period.

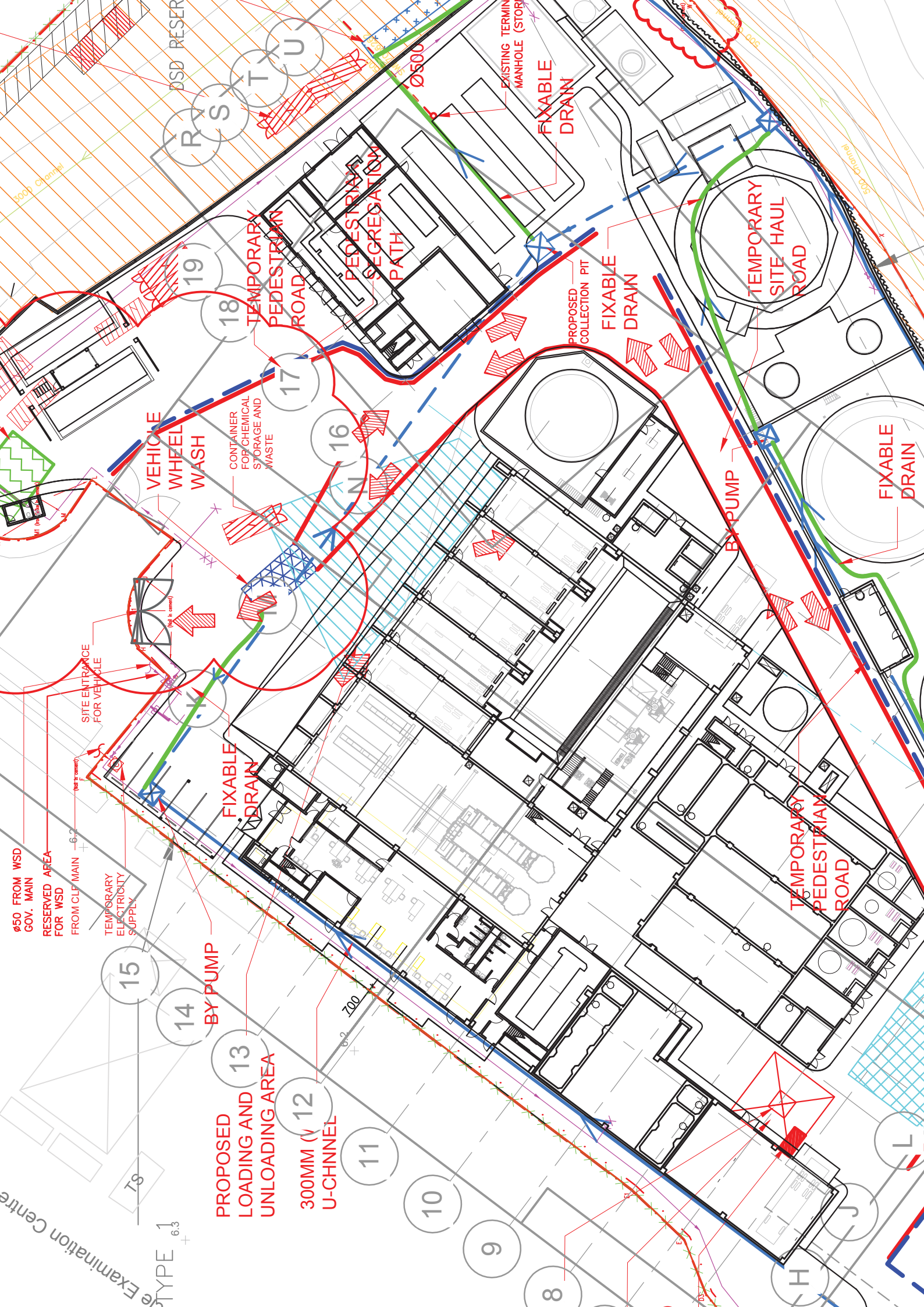
Annex A

Project Layout



Annex B

Works Location



Ø50 FROM WSD GOV. MAIN RESERVED AREA FOR WSD FROM CLP MAIN -6.2 TEMPORARY ELECTRICITY SUPPLY

Examination Centre
TYPE 1

19
18
17
16
15
14
13
12
11
10
9
8
L
H
J
K
N
R
S
T
U

BY PUMP
PROPOSED LOADING AND UNLOADING AREA

300MM (V 12) U-CHANNEL

VEHICLE WHEEL WASH

CONTAINER FOR CHEMICAL STORAGE AND WASTE

TEMPORARY PEDESTRIAN ROAD

PEDESTRIAN SEGREGATION PATH

FIXABLE DRAIN

PROPOSED COLLECTION PIT

FIXABLE DRAIN

BY PUMP

TEMPORARY SITE HAUL ROAD

FIXABLE DRAIN

TEMPORARY PEDESTRIAN ROAD

EXISTING TERMINATING MANHOLE (STOR)

Ø500

700

Ø500

15

14

13

12

11

10

9

8

L

H

J

K

700

6.3

Annex C

Construction Programme of the Project

Task Description	Start Date	End Date	Duration (Days)	Progress (%)	Days to Complete	Cost (€)	Resources	Dependencies	Notes
Consent granted in respect of Detail Design of control & instrumentation works	20-Oct-15	17-Feb-17	56d	0%	-25d	-360d	2300	MC2.1.8 - Employer's consent granted in respect of Detail Design	
	04-Nov-15	23-Jan-17	0d	0%	-24d	-446d	3000		
Consent granted in respect of Detailed Design of civil, electrical works	23-Feb-16	17-Feb-17	0d	0%	31d	-304d	3000		
	23-Feb-16	17-Feb-17	0d	0%	-25d	-360d	3000		
	23-Feb-16	17-Feb-17	0d	0%	-25d	-360d	3000		
	23-Feb-16	17-Feb-17	0d	0%	-25d	-360d	3000		
Design of the Works	27-1d	17-Feb-17	42d	100%	257d	-42d	2300	MC3.2.2 - Completion of Delivery of Anaerobic Digesters	
	25-Jan-16	17-Feb-17	0d	100%	257d	-42d	2300		
	25-May-16	17-Feb-17	0d	100%	215d	-183d	2300	MC3.2.4 - Completion of Delivery of Composting Tunnels	
	26-Jan-16	10-Feb-17	0d	0%	220d	-257d	2300		
	25-Feb-16	17-Oct-16 A	0d	100%	159d	-159d	2300		
	25-May-16	28-Oct-16 A	0d	100%	108d	-108d	2300		
	26-Jan-16	17-Feb-17	0d	0%	-3d	-262d	2300		
	23-Dec-16	23-Dec-16	0d	0%	136d	0d	2300		
	23-Dec-16	23-Dec-16	0d	0%	136d	0d	2300		
	23-Dec-16	23-Dec-16	0d	0%	136d	0d	2300		
	23-Dec-16	16-May-17	142d	0%	189d	-111d	2300		
Requirement Works	09-Sep-15	16-May-17	385d	0%	189d	-111d	2300		
	26-May-16	16-May-17	153d	0%	14d	-135d	2300		
	26-May-16	16-May-17	153d	0%	14d	-135d	2300		
	26-May-16	16-May-17	153d	0%	14d	-135d	2300		
	26-May-16	02-Dec-16	14d	0%	62d	-177d	2300	IC checks & certifies training syllabus & materials	
	08-Jun-16	02-Dec-16	15d	0%	62d	-177d	2300		
	22-Jun-16	16-Dec-16	0d	0%	62d	-177d	2300	Employer agrees to training syllabus and materials	
	25-Nov-16	16-May-17	64d	0%	12d	-112d	2300		
	25-Dec-16	26-Jan-17	385d	0%	274d	-26d	2300		
	09-Sep-15	04-Jan-17	59d	0%	293d	-333d	2300		
Factory Acceptance Test Plan	09-Sep-15	04-Jan-17	20d	55%	272d	-280d	2300	Submission of Factory Acceptance Test Plan	
	09-Oct-15	07-Dec-16	14d	35%	389d	-412d	2300	IC checks & comments on Factory Acceptance Test Plan	
	23-Oct-15	14-Dec-16	7d	0%	382d	-412d	2300	Revise & resubmit Factory Acceptance Test Plan	
	30-Oct-15	21-Dec-16	7d	0%	-20d	-412d	2300	IC checks & certifies Factory Acceptance Test Plan	
	19-Nov-15	04-Jan-17	0d	0%	-20d	-412d	2300	Employer Consents to Factory Acceptance Test Plan	
	10-Mar-16	23-Dec-16	42d	0%	-51d	-288d	2300		
	10-Mar-16	23-Dec-16	42d	0%	-51d	-288d	2300		
	11-Feb-16	11-Nov-16 A	14d	100%	-274d	-274d	2300	IC checks & comments on Site Acceptance Test Plan	
	18-Feb-16	02-Dec-16	7d	0%	-51d	-288d	2300	Revise & resubmit Site Acceptance Test Plan	
	19-Feb-16	09-Dec-16	7d	0%	-51d	-288d	2300	IC checks & certifies Site Acceptance Test Plan	
	10-Mar-16	23-Dec-16	0d	0%	-51d	-288d	2300	Employer Consents to Site Acceptance Test Plan	
	20-Jun-16	26-Jan-17	36d	0%	11d	-147d	2300		
	CV before Process Start up and commissioning	20-Jun-16	15-Dec-16	1d	0%	9d	-125d	2300	Submission of Detail CV before Process Start up and commissioning
21-Jun-16		29-Dec-16	14d	0%	17d	-178d	2300	IC checks & comments on Detail CV	
05-Jul-16		05-Jan-17	7d	0%	17d	-178d	2300	Revise & resubmit Detail CV	
12-Jul-16		12-Jan-17	7d	0%	17d	-178d	2300	IC checks & certifies	
01-Aug-16		26-Jan-17	0d	0%	17d	-178d	2300		
21-Jun-16		23-Dec-16	42d	0%	130d	-144d	2300		
21-Jun-16		23-Dec-16	36d	0%	130d	-144d	2300		
21-Jun-16		11-Nov-16 A	14d	100%	-130d	-130d	2300	IC checks & comments on All System Commissioning Plan	
05-Jul-16		02-Dec-16	7d	0%	130d	-144d	2300	Revise & resubmit All System Commissioning Plan	
12-Jul-16		09-Dec-16	7d	0%	130d	-144d	2300	IC checks & certifies All System Commissioning Plan	
All System Commissioning Plan	01-Aug-16	23-Dec-16	42d	0%	30d	-88d	2300		
	06-Aug-16	23-Dec-16	42d	0%	30d	-88d	2300		
	16-Sep-16	23-Dec-16	36d	0%	30d	-98d	2300		
	16-Sep-16	23-Dec-16	36d	0%	30d	-98d	2300		

Activity	Start Date	End Date	Duration	Progress	Completion %	Dependencies	Notes
Process Commissioning Plan	42d 08-Oct-16	18-Nov-16	36d	30-Sep-16 A	23-Dec-16	136d	
	42d 08-Oct-16	21-Oct-16	36d	30-Sep-16 A	11-Nov-16 A	136d	IC checks & comments on Process Commissioning Plan
	7d 28-Oct-16	04-Nov-16	7d	03-Dec-16	02-Dec-16	136d	Revise & resubmit Process Commissioning Plan
	0d	18-Nov-16	0d	02-Dec-16	23-Dec-16	136d	IC checks & comments on Process Commissioning Plan
Process Commissioning Plan	36d 21-Jun-16	02-Aug-16	34d	06-Dec-16	17-Jan-17	162d	
	36d 21-Jun-16	02-Aug-16	34d	06-Dec-16	17-Jan-17	162d	Submission of Operation Plan
	1d 21-Jun-16	21-Jun-16	1d	06-Dec-16*	06-Dec-16	133d	IC checks & comments on Operation Plan
	14d 22-Jun-16	05-Jul-16	14d	07-Dec-16	20-Dec-16	202d	IC checks & comments on Operation Plan
Operation Plan	7d 06-Jul-16	12-Jul-16	7d	21-Dec-16	27-Dec-16	202d	Revise & resubmit Operation Plan
	7d 13-Jul-16	19-Jul-16	7d	28-Dec-16	03-Jan-17	202d	IC checks & certifies Process Commissioning Plan
	0d	02-Aug-16	0d	02-Aug-16	17-Jan-17	202d	IC checks & certifies Operation Plan
	42d 12-Nov-16	23-Dec-16	36d	30-Sep-16 A	23-Dec-16	136d	End Date of Access
Plant Commissioning Plan	42d 12-Nov-16	23-Dec-16	36d	30-Sep-16 A	23-Dec-16	136d	
	14d 12-Nov-16	25-Nov-16	0d	30-Sep-16 A	11-Nov-16 A	14d	IC checks & comments on Plant Commissioning Plan
	7d 26-Nov-16	02-Dec-16	15d	12-Nov-16 A	02-Dec-16	136d	Revise & resubmit Plant Commissioning Plan
	7d 03-Dec-16	09-Dec-16	7d	03-Dec-16	09-Dec-16	136d	IC checks & certifies Plant Commissioning Plan
Plant Commissioning Plan	0d	23-Dec-16	0d	23-Dec-16	23-Dec-16	136d	Employer Consents to Plant Commissioning Plan
	0d 07-Oct-16	07-Oct-16	146d	21-Mar-16 A	20-May-17	185d	Employer Consents to Plant Commissioning Plan
	0d 07-Oct-16	07-Oct-16	146d	21-Mar-16 A	20-May-17	185d	IC checks & comments on Plant Commissioning Plan
	0d 07-Oct-16	07-Oct-16	146d	21-Mar-16 A	20-May-17	185d	IC checks & comments on Plant Commissioning Plan
Plant Commissioning Plan	0d	07-Oct-16	0d	07-Oct-16	13-Jan-17	146d	End Date of Access
	0d	20-Jun-15	184d	21-Mar-16 A	20-May-17	225d	End Date of Access
	24d 20-Jun-15	15-Aug-15	0d	27-Jun-15 A	19-Oct-16 A	-349d	
	24d 20-Jun-15	15-Aug-15	0d	27-Jun-15 A	19-Oct-16 A	-349d	
Plant Commissioning Plan	24d 20-Jun-15	15-Aug-15	0d	27-Jun-15 A	19-Oct-16 A	-349d	
	24d 20-Jun-15	15-Aug-15	0d	27-Jun-15 A	19-Oct-16 A	-349d	
	24d 20-Jun-15	15-Aug-15	0d	27-Jun-15 A	19-Oct-16 A	-349d	
	22d 28-May-15	23-Feb-16	72d	28-Mar-15 A	16-Feb-17	259d	Submit Tree preservation, transplanting and felling proposal to LandsD and EPD (Natural Terrain - thru ER)
Plant Commissioning Plan	203d 18-Jun-15	23-Feb-16	52d	28-Mar-15 A	20-Jan-17	279d	
	34d 18-Jun-15	30-Jul-15	33d	09-Dec-16	20-Jan-17	279d	
	34d 18-Jun-15	30-Jul-15	33d	09-Dec-16	20-Jan-17	279d	
	0d	18-Jun-15	0d	09-Dec-16*	09-Dec-16*	-5d	
Plant Commissioning Plan	14d 19-Jun-15	02-Jul-15	14d	10-Dec-16	23-Dec-16	-6d	
	7d 03-Jul-15	09-Jul-15	7d	24-Dec-16	30-Dec-16	-6d	
	7d 10-Jul-15	16-Jul-15	7d	31-Dec-16	06-Jan-17	-6d	
	0d	30-Jul-15	0d	20-Jan-17	20-Jan-17	-540d	
Plant Commissioning Plan	28d 15-Jul-15	11-Aug-15	64d	28-Mar-15 A	20-Jan-17	345d	
	28d 15-Jul-15	11-Aug-15	64d	28-Mar-15 A	20-Jan-17	345d	
	7d 15-Jul-15	21-Jul-15	22d	28-Mar-15 A	09-Dec-16	-5d	
	7d 22-Jul-15	28-Jul-15	7d	10-Dec-16	16-Dec-16	-5d	
Plant Commissioning Plan	0d	11-Aug-15	0d	20-Jan-17	20-Jan-17	-528d	
	64d 04-Dec-15	23-Feb-16	43d	23-Nov-16	16-Jan-17	7d	
	64d 04-Dec-15	23-Feb-16	43d	23-Nov-16	16-Jan-17	7d	
	20d 04-Dec-15	04-Jan-16	20d	24-Nov-16	21-Dec-16	11d	
Plant Commissioning Plan	14d 05-Jan-16	18-Jan-16	14d	22-Dec-16	04-Jan-17	20d	
	0d	04-Jan-16	0d	23-Nov-16*	23-Nov-16*	-25d	
	0d	05-Jan-16	0d	28-Nov-16*	28-Nov-16*	-27d	
	14d 06-Jan-16	19-Jan-16	14d	29-Nov-16	12-Dec-16	8d	
Plant Commissioning Plan	7d 20-Jan-16	26-Jan-16	7d	13-Dec-16	19-Dec-16	8d	
	14d 27-Jan-16	09-Feb-16	14d	20-Dec-16	02-Jan-17	8d	
	0d	23-Feb-16	0d	16-Jan-17	16-Jan-17	-328d	
	0d	23-Feb-16	0d	16-Jan-17	16-Jan-17	-328d	

Task ID	Task Name	Start Date	End Date	Duration (Days)	Progress (%)	Current Date	Next Milestone	Notes
1280	Switchgear, LCP, Cable, Earthing, etc.	14-May-15	16-Oct-15	52d	02-May-15 A	20-Jan-17	279d	-375d
0d		0d	12-Oct-16 A	59d	15-Jan-17	50d		
0d		0d	12-Oct-16 A	59d	15-Jan-17	50d		
0d		0d	12-Oct-16 A	15d	02-Dec-16	0%	-20d	
0d		0d		0d	15-Jan-17	0%	-50d	
128d		14-May-15	16-Oct-15	52d	02-May-15 A	20-Jan-17	279d	-375d
128d		14-May-15	16-Oct-15	52d	02-May-15 A	20-Jan-17	279d	-375d
0d		0d	14-May-15	0d	19-Oct-16 A	100%	-523d	
37d		02-Jul-15	21-Aug-15	19d	02-May-15 A	14-Dec-16	7d	-327d
14d		22-Aug-15	04-Sep-15	36d	13-May-15 A	23-Dec-16	373d	-476d
7d		05-Sep-15	11-Sep-15	43d	10-Jul-15 A	30-Dec-16	366d	-476d
7d		12-Sep-15	18-Sep-15	50d	15-Jul-15 A	06-Jan-17	-30d	-476d
0d		0d	16-Oct-15	0d	20-Jan-17	0%	-30d	-462d
0d		0d		28d	05-Jul-16 A	15-Dec-16	-5d	
0d		0d		28d	05-Jul-16 A	15-Dec-16	-5d	
0d		0d		0d	05-Jul-16 A	17-Nov-16 A	100%	
0d		0d		14d	18-Nov-16	01-Dec-16	0%	-5d
0d		0d		0d	15-Dec-16	0%	-5d	
0d		0d		73d	01-Dec-15 A	17-Feb-17	-27d	-393d
0d		0d		73d	01-Dec-15 A	17-Feb-17	-27d	-393d
0d		0d		73d	01-Dec-15 A	17-Feb-17	-27d	-393d
0d		0d		0d	20-Oct-15	100%	-355d	
0d		0d		0d	14-Jan-16 A	14-Nov-16 A	100%	
0d		0d		29d	15-Nov-16 A	16-Dec-16	75%	-22d
0d		0d		29d	17-Dec-16	14-Jan-17	0%	-22d
0d		0d		7d	15-Jan-17	21-Jan-17	0%	-22d
0d		0d		0d	04-Feb-17	0%	-22d	
0d		0d		21d	01-Dec-15 A	16-Dec-16	60%	-25d
0d		0d		14d	17-Dec-16	30-Dec-16	0%	-35d
0d		0d		7d	31-Dec-16	06-Jan-17	0%	-35d
0d		0d		14d	07-Jan-17	20-Jan-17	0%	-35d
0d		0d		7d	21-Jan-17	27-Jan-17	0%	-35d
0d		0d		7d	28-Jan-17	03-Feb-17	0%	-35d
0d		0d		0d	17-Feb-17	0%	-35d	
45d		09-Sep-15	04-Nov-15	54d	15-Jul-15 A	23-Jan-17	-19d	-362d
33d		09-Sep-15	21-Oct-15	35d	09-Dec-16	23-Jan-17	-19d	-374d
33d		09-Sep-15	21-Oct-15	35d	09-Dec-16	23-Jan-17	-19d	-374d
33d		09-Sep-15	21-Oct-15	35d	09-Dec-16	23-Jan-17	-19d	-374d
0d		0d		0d	09-Sep-15	09-Dec-16	0%	-311d
14d		10-Sep-15	23-Sep-15	14d	13-Dec-16	26-Dec-16	0%	-24d
7d		24-Sep-15	30-Sep-15	7d	27-Dec-16	02-Jan-17	0%	-24d
7d		01-Oct-15	07-Oct-15	7d	03-Jan-17	09-Jan-17	0%	-24d
0d		0d	21-Oct-15	0d	23-Jan-17	0%	-24d	-460d
0d		0d		44d	28-Jul-15 A	31-Dec-16	-51d	
0d		0d		44d	28-Jul-15 A	31-Dec-16	-51d	
0d		0d		44d	28-Jul-15 A	31-Dec-16	-51d	
0d		0d		30d	28-Jul-15 A	17-Dec-16	0%	-51d
0d		0d		0d	31-Dec-16	0%	-51d	
0d		0d		39d	15-Jul-15 A	26-Dec-16	-46d	
0d		0d		39d	15-Jul-15 A	26-Dec-16	-46d	
0d		0d		25d	15-Jul-15 A	12-Dec-16	80%	-46d

Comprehensive Project Schedule & Resource Allocation									
Task ID	Task Name	Start Date	End Date	Duration (Days)	Progress (%)	Resources (FTE)	Cost (k\$)	Dependencies	Notes
191d	Review shop drawings from AD suppliers	20-Jan-16	18-Jan-17	29d	95%	2	-245d	AD Suppliers	Issue orders & receive shop drawings from AD suppliers
200	AD Supplier Selection	20-Apr-15	18-May-15	29d	99%	1	-376d	AD Suppliers	Safety Relief Valve
0d	AD Supplier Selection	0d	14-Dec-16	14d	88%	1	14d	AD Suppliers	Hot Water Pumps
0d	AD Supplier Selection	0d	30-Nov-16	28d	90%	1	28d	AD Suppliers	Hot Water Pumps
0d	AD Supplier Selection	0d	18-Nov-16*	18d	0%	1	-14d	AD Suppliers	Hot Water Pumps
64d	AD Supplier Selection	22-Oct-15	28-Dec-16	37d	0%	1	16d	AD Suppliers	Hot Water Pumps
0d	AD Supplier Selection	0d	16-Dec-16	16d	80%	1	20d	AD Suppliers	Hot Water Pumps
219d	AD Supplier Selection	23-Feb-16	30-Dec-16	27d	247d	247d	-213d	AD Suppliers	Hot Water Pumps
219d	AD Supplier Selection	23-Feb-16	30-Dec-16	27d	247d	247d	-213d	AD Suppliers	Hot Water Pumps
219d	AD Supplier Selection	23-Feb-16	30-Dec-16	27d	247d	247d	-213d	AD Suppliers	Hot Water Pumps
17d	AD Supplier Selection	08-Apr-15	29-Nov-16	25d	96%	8	-394d	AD Suppliers	Issue orders & receive shop drawings from Biogas suppliers
0d	AD Supplier Selection	0d	02-Dec-16	2d	92%	1	18d	AD Suppliers	Condensate Pumps
0d	AD Supplier Selection	0d	09-Dec-16	9d	88%	1	11d	AD Suppliers	Condensate Pots
64d	AD Supplier Selection	19-Nov-15	07-Dec-16	38d	92%	5	-198d	AD Suppliers	Biogas Storage Tank Holder
0d	AD Supplier Selection	0d	30-Dec-16	30d	88%	1	-9d	AD Suppliers	Biogas Storage Tank Holder
13d	AD Supplier Selection	15-Mar-15	11-Jan-17	44d	52%	4	-529d	AD Suppliers	Biogas Storage Tank Holder
13d	AD Supplier Selection	15-Mar-15	11-Jan-17	44d	52%	4	-529d	AD Suppliers	Biogas Storage Tank Holder
13d	AD Supplier Selection	15-Mar-15	11-Jan-17	44d	52%	4	-529d	AD Suppliers	Biogas Storage Tank Holder
16d	AD Supplier Selection	15-Mar-15	12-Dec-16	25d	97.2%	3	-623d	AD Suppliers	Issue orders & receive shop drawings from CHP suppliers
0d	AD Supplier Selection	0d	11-Jan-17	11d	0%	1	-3d	AD Suppliers	Issue orders & receive shop drawings from CHP suppliers
315d	AD Supplier Selection	12-Feb-15	30-Dec-16	29d	247d	247d	-151d	AD Suppliers	Issue orders & receive shop drawings from CHP suppliers
315d	AD Supplier Selection	12-Feb-15	30-Dec-16	29d	247d	247d	-151d	AD Suppliers	Issue orders & receive shop drawings from CHP suppliers
315d	AD Supplier Selection	12-Feb-15	30-Dec-16	29d	247d	247d	-151d	AD Suppliers	Issue orders & receive shop drawings from CHP suppliers
18d	AD Supplier Selection	12-Feb-15	22-Nov-16	3d	99%	3	-422d	AD Suppliers	Issue orders & receive shop drawings from Digestate Dewatering suppliers
0d	AD Supplier Selection	0d	16-Dec-16	16d	52%	1	5d	AD Suppliers	Centrate Tank
0d	AD Supplier Selection	0d	30-Dec-16	30d	0%	1	9d	AD Suppliers	Platform at Dewatering Area
0d	AD Supplier Selection	0d	18-Nov-16*	18d	100%	1	85d	AD Suppliers	Platform at Dewatering Area
0d	AD Supplier Selection	0d	05-Feb-16 A	1d	100%	1	85d	AD Suppliers	Platform at Dewatering Area
0d	AD Supplier Selection	0d	30-Jun-16 A	29d	68%	1	16d	AD Suppliers	Polymer Storage Tank
0d	AD Supplier Selection	0d	21-Mar-16 A	0d	100%	1	42d	AD Suppliers	Centrate Discharge Pumps
0d	AD Supplier Selection	0d	18-Nov-16*	21d	0%	1	42d	AD Suppliers	Centrate Discharge Pumps
143d	AD Supplier Selection	27-Oct-15	30-Dec-16	29d	78%	1	104d	AD Suppliers	Polymer Dosing System
0d	AD Supplier Selection	0d	04-Nov-16 A	0d	100%	1	104d	AD Suppliers	Polymer Dosing System
0d	AD Supplier Selection	0d	30-Jun-16 A	29d	66%	1	46d	AD Suppliers	Anti-Foaming and Anti-Scalant Station
0d	AD Supplier Selection	0d	11-Jul-16 A	21d	75%	1	36d	AD Suppliers	Anti-Foaming and Anti-Scalant Station
315d	AD Supplier Selection	12-Feb-15	03-Feb-17	51d	221d	221d	-173d	AD Suppliers	Issue orders & receive shop drawings from Composting suppliers
315d	AD Supplier Selection	12-Feb-15	03-Feb-17	51d	221d	221d	-173d	AD Suppliers	Issue orders & receive shop drawings from Composting suppliers
315d	AD Supplier Selection	12-Feb-15	03-Feb-17	51d	221d	221d	-173d	AD Suppliers	Issue orders & receive shop drawings from Composting suppliers
18d	AD Supplier Selection	12-Feb-15	02-Nov-16 A	0d	100%	1	-408d	AD Suppliers	Issue orders & receive shop drawings from Composting suppliers
143d	AD Supplier Selection	09-Sep-15	03-Feb-17	51d	72%	1	79d	AD Suppliers	Leachate Treatment Pump & Sump Pump
143d	AD Supplier Selection	27-Oct-15	28-Oct-16 A	0d	100%	1	-106d	AD Suppliers	Leachate Treatment Pump & Sump Pump
103d	AD Supplier Selection	09-Sep-15	05-Dec-16	12d	82%	1	260d	AD Suppliers	Compost Bagging Machine
103d	AD Supplier Selection	09-Sep-15	07-Dec-16	14d	90%	1	66d	AD Suppliers	Heat Exchangers
103d	AD Supplier Selection	09-Sep-15	05-Feb-16	9d	96%	1	71d	AD Suppliers	Hot Water Circulation Pumps
103d	AD Supplier Selection	09-Sep-15	05-Feb-16	38d	15%	1	43d	AD Suppliers	Hot Water Circulation Pumps
235d	AD Supplier Selection	16-Mar-15	28-Feb-17	68d	208d	208d	-250d	AD Suppliers	Tunnel Doors
235d	AD Supplier Selection	16-Mar-15	28-Feb-17	68d	208d	208d	-250d	AD Suppliers	Tunnel Doors
17d	AD Supplier Selection	16-Mar-15	22-Dec-16	25d	98%	1	-425d	AD Suppliers	Issue orders & receive shop drawings from WWTS suppliers
103d	AD Supplier Selection	24-Sep-15	25-Feb-16	42d	90%	1	7d	AD Suppliers	Issue orders & receive shop drawings from WWTS suppliers
0d	AD Supplier Selection	0d	23-Dec-16*	23d	0%	1	-8d	AD Suppliers	Issue orders & receive shop drawings from WWTS suppliers
0d	AD Supplier Selection	0d	09-Nov-16 A	0d	100%	1	Primary Sedimentation Tank (Conical Tank)	Issue orders & receive shop drawings from WWTS suppliers	
0d	AD Supplier Selection	0d	17-Jun-16 A	0d	100%	1	Primary Sedimentation Tank (Conical Tank)	Issue orders & receive shop drawings from WWTS suppliers	
0d	AD Supplier Selection	0d	17-Jun-16 A	0d	63%	1	-28d	AD Suppliers	Wastewater

Project Overview		Key Milestones & Deadlines				Resource Allocation & Utilization				Financial Performance & Budget			
Phase	Activity	Start Date	End Date	Duration (Days)	Team Lead	Team A	Team B	Team C	Team D	Actual Cost	Budget	Variance	ROI %
Phase 1: Initial Setup	Site Preparation	2023-01-15	2023-02-15	31	John Doe	100%	0%	0%	0%	15000	15000	0	15%
		2023-02-15	2023-03-15	30	Jane Smith	0%	100%	0%	0%	18000	18000	0	18%
	Infrastructure Installation	2023-03-15	2023-04-15	31	Mike Johnson	0%	0%	100%	0%	22000	22000	0	22%
		2023-04-15	2023-05-15	31	Sarah Lee	0%	0%	0%	100%	20000	20000	0	20%
	Equipment Commissioning	2023-05-15	2023-06-15	31	David Kim	0%	0%	0%	100%	25000	25000	0	25%
Phase 2: Core Operations	Production Line A	2023-06-15	2023-07-15	31	Emily White	100%	0%	0%	0%	30000	30000	0	30%
		2023-07-15	2023-08-15	31	Frank Green	0%	100%	0%	0%	32000	32000	0	32%
	Production Line B	2023-08-15	2023-09-15	31	Grace Brown	0%	0%	100%	0%	35000	35000	0	35%
		2023-09-15	2023-10-15	31	Henry Black	0%	0%	0%	100%	38000	38000	0	38%
	Quality Control & Maintenance	2023-10-15	2023-11-15	31	Ivy Red	0%	0%	0%	100%	40000	40000	0	40%
Phase 3: Finalization	System Integration	2023-11-15	2023-12-15	31	Jack Blue	0%	0%	0%	100%	45000	45000	0	45%
		2023-12-15	2024-01-15	31	Karen Yellow	0%	0%	0%	100%	48000	48000	0	48%
	Documentation & Reporting	2024-01-15	2024-02-15	31	Leo Purple	0%	0%	0%	100%	50000	50000	0	50%
		2024-02-15	2024-03-15	31	Mia Grey	0%	0%	0%	100%	52000	52000	0	52%
	Project Handover	2024-03-15	2024-04-15	31	Noah Silver	0%	0%	0%	100%	55000	55000	0	55%
Overall Project Summary: Total Duration: 180 Days. Total Budget: 500,000. Total Actual Cost: 500,000. Overall ROI: 55%.													
Detailed Breakdown of Key Milestones:													
Milestone 1: Site Preparation		2023-01-15 to 2023-03-15		62 Days		Team A & B		100% Completion		33,000		33,000	
Milestone 2: Infrastructure Installation		2023-03-15 to 2023-05-15		61 Days		Team C & D		100% Completion		42,000		42,000	
Milestone 3: Production Line A		2023-06-15 to 2023-07-15		31 Days		Team A		100% Completion		30,000		30,000	
Milestone 4: Production Line B		2023-08-15 to 2023-09-15		31 Days		Team C		100% Completion		35,000		35,000	
Milestone 5: Quality Control & Maintenance		2023-10-15 to 2023-11-15		31 Days		Team D		100% Completion		40,000		40,000	
Milestone 6: System Integration		2023-11-15 to 2023-12-15		31 Days		Team D		100% Completion		45,000		45,000	
Milestone 7: Documentation & Reporting		2024-01-15 to 2024-02-15		31 Days		Team D		100% Completion		50,000		50,000	
Milestone 8: Project Handover		2024-03-15 to 2024-04-15		31 Days		Team D		100% Completion		55,000		55,000	
Risk Assessment & Mitigation Strategies:													
Risk 1: Delayed Material Delivery		2023-02-15 to 2023-03-15		30 Days		Team A		High Risk		10,000		10,000	
Risk 2: Labor Shortage		2023-07-15 to 2023-08-15		30 Days		Team B		Medium Risk		15,000		15,000	
Risk 3: Budget Overrun		2023-10-15 to 2023-11-15		31 Days		Team D		Low Risk		20,000		20,000	
Resource Utilization Summary:													
Team A		2023-01-15 to 2023-07-15		182 Days		100% Utilization		30,000		30,000		30%	
Team B		2023-02-15 to 2023-08-15		182 Days		100% Utilization		32,000		32,000		32%	
Team C		2023-03-15 to 2023-09-15		182 Days		100% Utilization		35,000		35,000		35%	
Team D		2023-04-15 to 2024-04-15		365 Days		100% Utilization		40,000		40,000		40%	
Financial Performance Summary:													
Total Budget		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
Actual Cost		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
Variance		2023-01-15 to 2024-04-15		422 Days		0		0%		0		55%	
Key Takeaways & Recommendations:													
1. Strong Project Management		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
2. Efficient Resource Utilization		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
3. Timely Milestone Completion		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
Appendix A: Detailed Schedule of Activities													
Activity 1: Site Preparation		2023-01-15 to 2023-02-15		31 Days		100%		15,000		15,000		15%	
Activity 2: Infrastructure Installation		2023-02-15 to 2023-03-15		30 Days		100%		18,000		18,000		18%	
Activity 3: Production Line A		2023-06-15 to 2023-07-15		31 Days		100%		30,000		30,000		30%	
Activity 4: Production Line B		2023-08-15 to 2023-09-15		31 Days		100%		35,000		35,000		35%	
Activity 5: Quality Control & Maintenance		2023-10-15 to 2023-11-15		31 Days		100%		40,000		40,000		40%	
Activity 6: System Integration		2023-11-15 to 2023-12-15		31 Days		100%		45,000		45,000		45%	
Activity 7: Documentation & Reporting		2024-01-15 to 2024-02-15		31 Days		100%		50,000		50,000		50%	
Activity 8: Project Handover		2024-03-15 to 2024-04-15		31 Days		100%		55,000		55,000		55%	
Appendix B: Resource Allocation Matrix													
Team A		2023-01-15 to 2023-07-15		182 Days		100%		30,000		30,000		30%	
Team B		2023-02-15 to 2023-08-15		182 Days		100%		32,000		32,000		32%	
Team C		2023-03-15 to 2023-09-15		182 Days		100%		35,000		35,000		35%	
Team D		2023-04-15 to 2024-04-15		365 Days		100%		40,000		40,000		40%	
Appendix C: Financial Performance Metrics													
Total Budget		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
Actual Cost		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
Variance		2023-01-15 to 2024-04-15		422 Days		0		0%		0		55%	
Appendix D: Key Takeaways & Recommendations													
1. Strong Project Management		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
2. Efficient Resource Utilization		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	
3. Timely Milestone Completion		2023-01-15 to 2024-04-15		422 Days		500,000		100%		500,000		55%	

Project Overview		Key Milestones & Deliverables			Resource Allocation & Utilization			Financial Performance & Budget		
Task ID	Task Name	Start Date	End Date	Duration (Days)	Planned Resources	Actual Resources	Resource Utilization (%)	Budget (k\$)	Actual Spend (k\$)	Variance (k\$)
Phase 1: Site Preparation & Infrastructure	Accessories System (Biogas Cleaning & Storage)	0d	30-Dec-16	29d	15-Jul-16 A	30-Dec-16	62%	-16d		
	Accessories System (Heat Recovery & Power Generation)	0d	30-Dec-16	29d	03-Aug-16 A	30-Dec-16	68%	-16d		
	Accessories System (Cable Containment System)	61d	14-Jan-16	20d	11-Jul-16 A	03-Jan-17	78%	-33d	-238d	
	Accessories System (Composting and Dewatering)	0d	25-Nov-16	5d	21-Nov-16	25-Nov-16	0%	50d		
	Accessories System (Remaining)	0d	23-Dec-16	5d	19-Dec-16	23-Dec-16	0%	-18d		
	Accessories System (Earth and Lightning)	40d	08-Dec-16	15d	27-May-15 A	08-Dec-16	98.23%	29d	-246d	
	Accessories System (Emergency Diesel Tank (1st batch - Composting and Dewatering))	101d	19-Jan-17	42d	19-Aug-16 A	19-Jan-17	53%	-4d	-211d	
	Accessories System (Remaining)	0d	16-Jan-17	39d	18-Nov-16*	16-Jan-17	0%	-17d		
	Accessories System (Issue shop drawings from Transformer supplier)	0d	09-Mar-17	90d	17-Nov-15 A	09-Mar-17	241d			
	Accessories System (Issue orders & receive shop drawings from Transformer supplier)	0d	23-Nov-16	5d	17-Nov-15 A	23-Nov-16	98%	326d		
Phase 2: Core System Installation & Commissioning	Accessories System (11kV / 380V Transformers, Earthing Transformer)	0d	23-Nov-16	5d	28-May-16 A	23-Nov-16	96%	-51d		
	Accessories System (Units (PMU) by CLP)	0d	09-Mar-17	72d	09-Dec-16*	09-Mar-17	0%	-21d		
	Accessories System (Issue shop drawings from HV Switch Board supplier)	0d	23-Nov-16	5d	17-Nov-15 A	23-Nov-16	326d			
	Accessories System (Issue orders & receive shop drawings from HV Switch Board supplier)	0d	23-Nov-16	5d	17-Nov-15 A	23-Nov-16	326d			
	Accessories System (HV Switch Board, switchgear and Instrumentation)	0d	23-Nov-16	5d	28-May-16 A	23-Nov-16	99%	-51d		
	Accessories System (FAT of HV Switch board)	0d	20-Oct-16 A	0d	19-Oct-16 A	20-Oct-16 A	100%			
	Accessories System (Issue orders & receive shop drawings from LV Switch Board suppliers)	273d	15-May-15	28d	23-Nov-15 A	20-Dec-16	302d	-206d		
	Accessories System (Issue orders & receive shop drawings from LV Switch Board suppliers)	273d	15-May-15	28d	23-Nov-15 A	20-Dec-16	302d	-206d		
	Accessories System (Issue orders & receive shop drawings from LV Switch Board suppliers)	12d	15-May-15	20d	23-Nov-15 A	15-Dec-16	94%	296d	-355d	
	Accessories System (Issue orders & receive shop drawings from LV Switch Board suppliers)	121d	19-Oct-15	23d	14-Jul-16 A	20-Dec-16	86%	-43d	-172d	
Phase 3: Final System Integration & Handover	Accessories System (FAT of Main LV Switch Board)	5d	01-Dec-16	4d	28-Nov-16*	01-Dec-16	0%	-36d	-196d	
	Accessories System (Issue orders & receive shop drawings from SCADA/PLC suppliers)	222d	27-May-15	78d	01-Mar-15 A	23-Feb-17	253d	-298d		
	Accessories System (Issue orders & receive shop drawings from SCADA/PLC suppliers)	222d	27-May-15	78d	01-Mar-15 A	23-Feb-17	253d	-298d		
	Accessories System (Issue orders & receive shop drawings from SCADA/PLC suppliers)	222d	27-May-15	78d	01-Mar-15 A	23-Feb-17	253d	-298d		
	Accessories System (Issue orders & receive shop drawings from SCADA/PLC suppliers)	20d	27-May-15	8d	01-Mar-15 A	29-Nov-16	268d	-358d		
	Accessories System (SCADA/PLC System and component (Batch 1))	83d	22-Oct-15	20d	08-Jul-16 A	15-Dec-16	88%	-23d	-206d	
	Accessories System (SCADA/PLC System and component (Batch 1))	2d	29-Jan-16	0d	21-Sep-16 A	11-Nov-16 A	100%		-230d	
	Accessories System (SCADA/PLC System and component (Batch 2))	0d	16-Jan-17	39d	19-Aug-16 A	16-Jan-17	55%	5d		
	Accessories System (SCADA/PLC System and component (Batch 2))	0d	30-Dec-16	35d	16-Nov-16 A	30-Dec-16	0%	296d		
	Accessories System (SCADA/PLC System and component (Batch 3))	0d	23-Feb-17	42d	21-Dec-16*	23-Feb-17	0%	-11d		
Phase 4: Final Testing & Commissioning	Accessories System (SCADA/PLC System and component (Batch 3))	0d	14-Feb-17	24d	14-Jan-17	14-Feb-17	0%	261d		
	Accessories System (SCADA/PLC System and component (Batch 1))	280d	12-Feb-15	58d	17-Aug-15 A	14-Feb-17	218d	-256d		
	Accessories System (SCADA/PLC System and component (Batch 2))	282d	12-Feb-15	42d	17-Aug-15 A	19-Jan-17	234d	-227d		
	Accessories System (SCADA/PLC System and component (Batch 2))	282d	12-Feb-15	42d	17-Aug-15 A	19-Jan-17	234d	-227d		
	Accessories System (SCADA/PLC System and component (Batch 2))	20d	12-Feb-15	9d	17-Aug-15 A	30-Nov-16	98%	267d	-426d	
	Accessories System (SCADA/PLC System and component (Batch 1))	83d	22-Oct-15	9d	21-Jun-16 A	30-Nov-16	95%	-31d	-194d	
	Accessories System (SCADA/PLC System and component (Batch 2))	0d	06-Dec-16*	30d	06-Dec-16*	19-Jan-17	0%	-24d		
	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	44d	08-Jun-16 A	23-Jan-17	13d	-221d		
	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	44d	08-Jun-16 A	23-Jan-17	13d	-221d		
	Accessories System (SCADA/PLC System and component (Batch 2))	0d	20-Jan-17	14d	03-Jan-17	20-Jan-17	0%	-34d		
Phase 5: Final Review & Handover	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	44d	08-Jun-16 A	23-Jan-17	82%	13d	-221d	
	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	39d	15-Dec-16	14-Feb-17	29d	-235d		
	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	39d	15-Dec-16	14-Feb-17	29d	-235d		
	Accessories System (SCADA/PLC System and component (Batch 2))	0d	01-Feb-17	30d	15-Dec-16*	01-Feb-17	0%	-20d		
	Accessories System (SCADA/PLC System and component (Batch 2))	0d	01-Feb-17	30d	15-Dec-16*	01-Feb-17	0%	-40d		
	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	18d	05-Jan-17	01-Feb-17	1d	-226d		
	Accessories System (SCADA/PLC System and component (Batch 2))	81d	05-Nov-15	18d	05-Jan-17*	01-Feb-17	1d	-226d		
	Accessories System (SCADA/PLC System and component (Batch 2))	137d	14-Aug-15	50d	10-Jun-16 A	02-Feb-17	-10d	-227d		
	Accessories System (SCADA/PLC System and component (Batch 2))	137d	14-Aug-15	50d	10-Jun-16 A	02-Feb-17	-10d	-227d		
	Accessories System (SCADA/PLC System and component (Batch 2))	83d	14-Aug-15	32d	10-Jun-16 A	05-Jan-17	84%	-9d	-263d	

Comprehensive Project Schedule & Resource Allocation									
Activity / Task	Start Date	End Date	Duration (Days)	Progress (%)	Start Date	End Date	Duration (Days)	Progress (%)	Notes / Milestones
Phase 1: Foundation & Early Structure	Excavation and Working Platform (Part A)	0d	0d	0%	24-Jan-17	0%	15d		
	Foundational ABWF Works (Part A)	0d	85d	30-Nov-16	15-Mar-17	0%	1d		
	Foundation Works (Zone #1.1.3 Part A - Building 1 Workshop)	0d	45d	10-Dec-16	08-Feb-17	-7d			◆ Handover G/F to E&M Works (Zone #1.1.3 Part A - Building 1 Workshop)
	Foundation Works (Zone #1.1.3 Part A - Building 1 F.S.Pump Rm.)	0d	0d	10-Dec-16		38d			◆ Handover G/F to E&M Works (Zone #1.1.3 Part A - Building 1 F.S.Pump Rm.)
	Foundation Works (Zone #1.1.4 Part A - Building 1 WWTP MCC)	0d	0d	17-Jan-17		9d			◆ Handover G/F to E&M Works (Zone #1.1.4 Part A - Building 1 WWTP MCC)
Phase 2: Core Structure & Services	Foundation Works (Zone #1.2.1 Part A - Building 1 Admin. Bldg. Firemen Lift)	0d	0d	10-Dec-16		-45d			◆ Handover G/F to E&M Works (Zone #1.2.1 Part A - Building 1 Admin. Bldg. Firemen Lift)
	Foundation Works (Zone #1.2.2 Part A - Building 1 Admin. Bldg. Grid)	0d	0d	23-Dec-16		-33d			◆ Handover G/F to E&M Works (Zone #1.2.2 Part A - Building 1 Admin. Bldg. Grid)
	Foundation Works (Zone #1.2.3 Part A - Building 1 Admin. Bldg. Grid)	0d	0d	08-Feb-17		-31d			◆ Handover G/F to E&M Works (Zone #1.2.3 Part A - Building 1 Admin. Bldg. Grid)
	Foundation Works (Banker & Influence Zone)	155d	29-Dec-15	132d	12-Sep-16 A	199d	-241d		◆ Handover G/F to E&M Works (Zone #1.2.4 Part A - Building 1 Banker & Influence Zone)
	Foundation Works (Parapet @+22.150)	18d	30-Dec-15	18d	18-Nov-16	08-Dec-16	-8d	-263d	◆ Handover G/F to E&M Works (Zone #1.2.5 Part A - Building 1 Parapet @+22.150)
Phase 3: Upper Levels & Finalization	Foundation Works (Part C)	18d	30-Dec-15	18d	18-Nov-16	08-Dec-16	-8d	-263d	◆ Handover G/F to E&M Works (Zone #1.2.6 Part A - Building 1 Part C)
	Foundation Works (Temporary Opening at +17.20mPD)	0d	0d	22-Nov-16	24-Dec-16	64d			◆ Handover G/F to E&M Works (Zone #1.2.7 Part A - Building 1 Temporary Opening at +17.20mPD)
	Foundation Works (Parapet @+22.150)	12d	10-Mar-16	34d	11-Oct-16 A	29-Dec-16	-23d	-228d	◆ Handover G/F to E&M Works (Zone #1.2.8 Part A - Building 1 Parapet @+22.150)
	Foundation Works (MCC Room Roof @+22.150)	12d	10-Mar-16	34d	18-Nov-16*	29-Dec-16	-23d	-228d	◆ Handover G/F to E&M Works (Zone #1.2.9 Part A - Building 1 MCC Room Roof @+22.150)
	Foundation Works (MCC Room Roof @+22.150)	0d	0d	13d	18-Nov-16*	01-Dec-16	-1d		◆ Handover G/F to E&M Works (Zone #1.2.10 Part A - Building 1 MCC Room Roof @+22.150)
Phase 4: Final Works & Handover	Foundation Works (Area of G/F (Part C))	155d	29-Dec-15	09-Jul-16	02-Dec-16	-2d			◆ Handover G/F to E&M Works (Zone #1.2.11 Part A - Building 1 Area of G/F (Part C))
	Foundation Works (Internal Area of G/F (Part C))	6d	29-Dec-15	3d	12-Sep-16 A	04-May-17	-36d	-241d	◆ Handover G/F to E&M Works (Zone #1.2.12 Part A - Building 1 Internal Area of G/F (Part C))
	Foundation Works (Internal Area of G/F (Part C))	12d	06-Jan-16	19-Jan-16	01-Dec-16	01-Dec-16	-13d	-258d	◆ Handover G/F to E&M Works (Zone #1.2.13 Part A - Building 1 Internal Area of G/F (Part C))
	Foundation Works (Mezz. Lev. & 1/F (Part C))	24d	20-Jan-16	19-Feb-16	09-Jan-17	09-Jan-17	-43d	-264d	◆ Handover G/F to E&M Works (Zone #1.2.14 Part A - Building 1 Mezz. Lev. & 1/F (Part C))
	Foundation Works (Internal Area of Mess Lev. & 1/F (Part C))	9d	01-Mar-16	10-Mar-16	18-Nov-16	05-Dec-16	-18d	-220d	◆ Handover G/F to E&M Works (Zone #1.2.15 Part A - Building 1 Internal Area of Mess Lev. & 1/F (Part C))
Phase 5: Final Completion & Handover	Foundation Works (Internal Area of Mess Lev. & 1/F (Part C))	12d	11-Mar-16	24-Mar-16	12-Dec-16	-18d	-214d		◆ Handover G/F to E&M Works (Zone #1.2.16 Part A - Building 1 Internal Area of Mess Lev. & 1/F (Part C))
	Foundation Works (1/F and R/F (Part C))	40d	29-Mar-16	17-May-16	28-Mar-17	-48d	-259d		◆ Handover G/F to E&M Works (Zone #1.2.17 Part A - Building 1 1/F and R/F (Part C))
	Foundation Works (Part C)	85d	24-Mar-16	09-Jul-16	04-May-17	-36d	-241d		◆ Handover G/F to E&M Works (Zone #1.2.18 Part A - Building 1 Part C)
	Foundation Works (Zone #1.1.1 Part C - SBT Pump Room)	0d	04-Feb-16	04-Feb-16	08-Feb-17	08-Feb-17	-297d		◆ Handover G/F to E&M Works (Zone #1.1.1 Part C - SBT Pump Room)
	Foundation Works (Zone #1.1.6 Part C - Building 1 - Pre-treat. Area Bridges)	0d	0d	0d	15-Dec-16*		-26d		◆ Handover G/F to E&M Works (Zone #1.1.6 Part C - Building 1 - Pre-treat. Area Bridges)
Phase 6: Final Works & Handover	Foundation Works (Zone #1.1.7 Part C - Building 1 - Area E without ABWF)	0d	0d	08-Nov-16 A	100%				◆ Handover G/F to E&M Works (Zone #1.1.7 Part C - Building 1 - Area E without ABWF)
	Foundation Works (Zone #1.1.7 Part C - Building 1 - Area E)	0d	0d	28-Nov-16	0%	323d			◆ Handover G/F to E&M Works (Zone #1.1.7 Part C - Building 1 - Area E)
	Foundation Works (Zone #1.1.8 Part C - Building 1 - Area D without ABWF)	0d	0d	24-Oct-16 A	100%				◆ Handover G/F to E&M Works (Zone #1.1.8 Part C - Building 1 - Area D without ABWF)
	Foundation Works (Zone #1.1.9 Part C - Building 1 - Area G)	0d	04-Feb-16	0d	28-Dec-16	0%	-35d	-265d	◆ Handover G/F to E&M Works (Zone #1.1.9 Part C - Building 1 - Area G)
	Foundation Works (Zone #1.2.5 Part C - Building 1 - CAPCS Area - 350)	0d	0d	0d	08-Feb-17	0%	-48d		◆ Handover G/F to E&M Works (Zone #1.2.5 Part C - Building 1 - CAPCS Area - 350)
Phase 7: Final Works & Handover	Foundation Works (Zone #1.2.5 Part C - Building 1 - Pretreatment)	0d	0d	0d	14-Jan-17	0%	-36d		◆ Handover G/F to E&M Works (Zone #1.2.5 Part C - Building 1 - Pretreatment)
	Foundation Works (Zone #1.2.6 Part C - Building 1 - Chiller Plant)	0d	0d	0d	07-Feb-17	0%	-15d		◆ Handover G/F to E&M Works (Zone #1.2.6 Part C - Building 1 - Chiller Plant)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	112d	24-Oct-15	09-Mar-16	13-Dec-16	01-Mar-17	-37d	-289d	◆ Handover G/F to E&M Works (Zone #1.2.7 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	112d	24-Oct-15	09-Mar-16	13-Dec-16	01-Mar-17	-37d	-289d	◆ Handover G/F to E&M Works (Zone #1.2.7 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	77d	24-Oct-15	25-Jan-16	13-Dec-16	25-Jan-17	-37d	-297d	◆ Handover G/F to E&M Works (Zone #1.2.8 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
Phase 8: Final Works & Handover	Foundation Works (Roof & Covered Walkway Structural Steelwork)	6d	03-Mar-16	09-Mar-16	27d	26-Jan-17	01-Mar-17	-289d	◆ Handover G/F to E&M Works (Zone #1.2.9 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	0d	26-Jan-17	20-Feb-17	-29d		◆ Handover G/F to E&M Works (Zone #1.2.10 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	262d	08-Jul-15	25-May-16	10-Jun-16 A	23-Mar-17	229d	-246d	◆ Handover G/F to E&M Works (Zone #1.2.11 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	260d	08-Jul-15	23-May-16	10-Jun-16 A	23-Mar-17	229d	-250d	◆ Handover G/F to E&M Works (Zone #1.2.12 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	15d	08-Jul-15	24-Jul-15	04-Jul-16 A	05-Dec-16	316d	-408d	◆ Handover G/F to E&M Works (Zone #1.2.13 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
Phase 9: Final Works & Handover	Foundation Works (Roof & Covered Walkway Structural Steelwork)	15d	08-Jul-15	24-Jul-15	04-Jul-16 A	05-Dec-16	316d	-408d	◆ Handover G/F to E&M Works (Zone #1.2.14 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	15d	19-Aug-15	04-Sep-15	10-Jun-16 A	05-Dec-16	316d	-372d	◆ Handover G/F to E&M Works (Zone #1.2.15 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	15d	19-Aug-15	04-Sep-15	10-Jun-16 A	05-Dec-16	316d	-372d	◆ Handover G/F to E&M Works (Zone #1.2.16 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	111d	05-Jan-16	23-May-16	13-Jul-16 A	23-Mar-17	90d	-250d	◆ Handover G/F to E&M Works (Zone #1.2.17 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	0d	20-Oct-16 A	11-Nov-16 A	0%		◆ Handover G/F to E&M Works (Zone #1.2.18 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
Phase 10: Final Works & Handover	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	36d	12-Nov-16 A	31-Dec-16	0%	138d	◆ Handover G/F to E&M Works (Zone #1.2.19 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	13d	19-Sep-16 A	02-Dec-16	76.33%	50d	◆ Handover G/F to E&M Works (Zone #1.2.20 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	0d	0d	0d	0%	0d	◆ Handover G/F to E&M Works (Zone #1.2.21 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	0d	0d	0d	0%	0d	◆ Handover G/F to E&M Works (Zone #1.2.22 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)
	Foundation Works (Roof & Covered Walkway Structural Steelwork)	0d	0d	0d	0d	0d	0%	0d	◆ Handover G/F to E&M Works (Zone #1.2.23 Part C - Building 1 - Roof & Covered Walkway Structural Steelwork)

Activity	Start	End	Duration	Progress	Dependencies	Notes
ABWF Work	23-Feb-16	23-Dec-16	6d	250d	68%	
	23-May-16	23-Mar-17	90d	-250d	0%	
Handover to E&M Works (Zone #2.1.8 - Building 2 Composting Tunnel)	23-May-16	30-Dec-16	10d	-183d	100%	
	10-Nov-16 A	10-Nov-16 A				
Handover to E&M Works (Zone #2.1.9 - Dewatering Area)	23-May-16	24-Dec-16*	-1d	0%		
	30-Dec-16*	30-Dec-16*	10d	-183d	0%	
Fabricate & deliver Structural Steelwork	25-May-16	02-Mar-17	21d	-230d	0%	
	02-Mar-17	02-Mar-17	21d	-230d	0%	
Installation of Bearing Support for Link Bridge at Bldg 1 & 2	05-Mar-16	22-Dec-16	21d	-239d	50%	
	16-Mar-16	13-Dec-16	0%	-222d	0%	
Erect Steelwork	11-Apr-16	16-Jan-17	21d	-230d	0%	
	02-Mar-17	02-Mar-17	21d	-230d	0%	
Works at Link Bridge (Zone #2.2 - Link Bridge)	25-May-16	26-Jan-17	21d	-203d	0%	
	25-May-16	26-Jan-17	21d	-203d	0%	
#3	07-Oct-16	31-Mar-17	222d	-143d		
	19-Nov-15 A	19-Nov-15 A				
Foul Drainage Connections	03-Mar-16	27-Jan-17	273d	-269d	0%	
	29-Aug-16 A	27-Jan-17	273d	-269d	0%	
Dog House (+18.6mPD)	23-Dec-15	02-Dec-16	318d	-279d	0%	
	13-Feb-16	24-Oct-16 A	0%	-206d	100%	
Concrete Plinths / Walls / Trenches / Raised Floor	15-Feb-16	02-Dec-16	-46d	-239d	85%	
	03-Mar-16	27-Jan-17	-46d	-269d	11%	
Works (Bldg #3/Zone #3.1.3 - Energy Centre Roof)	03-Mar-16	27-Jan-17	-36d	-269d	0%	
	23-Nov-16	27-Jan-17	-36d	-269d	0%	
Works (Bldg #3 - Energy Centre 3nos. MCC Rooms and	31-Dec-16*	31-Dec-16*	-14d	0%		
	12-Dec-16*	12-Dec-16*	-20d	0%		
Works (Bldg #3/Zone #3.1.4 - Energy Centre G/F)	23-Nov-16*	23-Nov-16*	-51d	0%		
	19-Dec-16*	19-Dec-16*	-51d	0%		
Works (Bldg #3/Zone #3.1.5 - Energy Centre Other	27-Jan-17	27-Jan-17	-42d	-269d	0%	
	05-Sep-16 A	02-Dec-16	-3d	-218d	0%	
ABWF for Pump Buildings	10-Mar-16	02-Dec-16	-218d	-218d	80%	
	05-Sep-16 A	02-Dec-16	-20d	-218d	0%	
Handover to E&M Works (Zone #3.2.3 - Jet Mixing Pump Rooms & Centrifuge Feed Pump Room)	28-Nov-16	02-Dec-16	-3d	0%		
	28-Nov-16*	28-Nov-16*	-29d	0%		
Handover to E&M Works (Zone #3.2.4 - Heat & Forward Pump Room 1 & 2)	02-Dec-16*	02-Dec-16*	-3d	0%		
	01-Mar-17	01-Mar-17	-8d	-355d	0%	
Rat Foundations	16-Dec-15	22-Dec-16	-8d	-355d	0%	
	16-Dec-15	01-Mar-17	-8d	-355d	0%	
Clearance	22-Jan-16	04-Jan-17	293d	-281d	0%	
	18-Nov-16	01-Dec-16	319d	-331d	0%	
Underground Drainage Work	22-Jan-16	04-Jan-17	22d	-281d	95%	
	22-Dec-16	22-Dec-16	-13d	-337d	0%	
ABWF Works	22-Dec-15	31-Dec-16	22d	-303d	80%	
	12-Sep-16 A	31-Dec-16	-13d	-303d	0%	
Handover to E&M Works (Zone #3.5.1 - Bit	22-Jan-16	04-Jan-17	22d	-281d	80%	
	31-Dec-16	31-Dec-16	-13d	-279d	0%	
Excavation	04-Jan-17	04-Jan-17	30d	-281d	0%	
	04-Jan-17	04-Jan-17	30d	-281d	0%	
Control Room Footing	18-Mar-17	18-Mar-17	-33d	-287d	0%	
	02-Dec-16	18-Mar-17	-33d	-287d	0%	
Wall, Floor Slab and Stair	02-Dec-16	08-Dec-16	-36d	-301d	0%	
	09-Dec-16	19-Dec-16	-36d	-301d	0%	
Wall, Floor Slab and Stair	04-Jan-16	09-Jan-17	-36d	-301d	0%	
	21-Jan-16	26-Jan-17	-36d	-301d	0%	

Comprehensive Project Schedule & Resource Allocation Report - Q3 2024										
Task ID	Task Name	Start Date	End Date	Duration (Days)	Progress (%)	Resources	Dependencies	Notes	Priority	
326d	02-Sep-15	109d	13-Nov-15 A	31-Mar-17	222d	-143d				
		58d	05-Apr-16 A	27-Jan-17	-3d	-165d				
		32d	05-Apr-16 A	24-Dec-16	82%	-3d	-165d			
		26d	11-Jun-16	27-Jan-17	0%	-3d	-165d			
288d	02-Sep-15	109d	13-Nov-15 A	31-Mar-17	23d	-201d				
		48d	02-Jun-16	27-Jan-17	28.4%	74d	-150d			
146d	17-Sep-15	57d	13-Nov-15 A	26-Jan-17	-35d	-258d				
		148d	02-Sep-15	26-Jan-17	15%	-35d	-268d			
142d	05-Dec-15	01-Jun-16	15-Feb-17	0%	-52d	-211d				
47d	02-Jun-16	28-Jul-16	31-Mar-17	0%	-32d	-202d				
0d	0e1, 2 & 3 (Part 1)	74d	13-Nov-15 A	18-Feb-17	58d					
0d		41d	18-Nov-16*	07-Jan-17	91d					
0d		16d	13-Nov-15 A	06-Dec-16	88%	-27d				
0d		24d	05-Dec-15 A	16-Dec-16	80.6%	-27d				
0d	0e and Sewage (Part 1)	27d	05-Apr-16 A	19-Dec-16	75%	-40d				
0d		31d	11-Apr-16 A	24-Dec-16	62%	-40d				
0d	0e & Connect to Existing 500mm Trapezoidal Channel	60d	03-Dec-16	17-Feb-17	0%	55d				
0d		12d	10-Aug-16 A	04-Jan-17	55.6%	-40d				
0d		35d	06-Jan-17	18-Feb-17	0%	-37d				
0d		86d	20-Apr-16 A	04-Mar-17	245d					
0d	0e and Sewage (Part 2)	48d	30-Nov-16	27-Jan-17	0%	74d				
0d		13d	20-Apr-16 A	06-Dec-16	68%	315d				
0d	0e and Sewage (Part 2)	22d	25-Apr-16 A	13-Dec-16	61%	309d				
0d		28d	18-Jul-16 A	20-Dec-16	55%	303d				
0d	0e and Sewage (Part 2)	32d	05-Sep-16 A	24-Dec-16	30%	-42d				
0d		36d	26-Sep-16 A	31-Dec-16	22.2%	-17d				
0d	0e and Sewage (Part 3)	47d	06-Jan-17	04-Mar-17	0%	-49d				
0d		109d	16-Aug-16 A	31-Mar-17	83d					
0d	0e and Sewage (Part 3)	35d	16-Aug-16 A	30-Dec-16	38%	157d				
0d		45d	18-Aug-16 A	12-Jan-17	22.5%	-44d				
0d	0e and Sewage (Part 3)	45d	05-Sep-16 A	19-Jan-17	18%	-44d				
0d		40d	08-Dec-16	26-Jan-17	0%	-44d				
0d	0e and Sewage (Part 3)	40d	24-Dec-16	15-Feb-17	0%	-52d				
0d		70d	06-Jan-17	31-Mar-17	0%	-32d				
43d	16-Mar-16	10-May-16	14-Mar-17	80d	-252d					
43d	16-Mar-16	10-May-16	23-Feb-17	0%	-256d					
0d	0e 1 & 4 (Part 4)	38d	10-Jun-16 A	27-Jan-17	116d					
0d		20d	15-Apr-16 A	10-Dec-16	82%	-13d				
0d	0e and Sewage (Part 4)	25d	05-May-16 A	16-Dec-16	-15d					
0d		25d	12-Aug-16 A	16-Dec-16	80%	-15d				
0d	0e and Sewage (Part 4)	22d	08-Jul-16 A	13-Dec-16	85%	-12d				
0d		28d	16-May-16 A	23-Dec-16	75%	-15d				
0d	0e and Sewage (Part 4)	20d	20-Jun-16 A	03-Jan-17	-15d					
0d		35d	25-Jul-16 A	09-Jan-17	47.7%	-32d				
0d	0e and Sewage (Part 4)	30d	09-Dec-16*	16-Jan-17	0%	-16d				
0d		55d	06-Jan-17	14-Mar-17	0%	-17d				
24d	23-Nov-15	19-Dec-15	01-Feb-17	73d	-328d					
24d	23-Nov-15	19-Dec-15	01-Feb-17	73d	-328d					
145d	15-Apr-16	07-Oct-16	13-Jan-17	285d	-80d					
0d	0e and Sewage (Part 4) - Summary									

Activity	Start	End	Duration	Progress	Notes			
Construct of New Concrete Footpath Pavement and Reinstatement of Verge	0d	0d	7d	0%	09-Dec-16			
Reconstruction	0d	0d	35d	0%	13-Jan-17			
Relocation of Fire Hydrant and Street Lamp by Authority or Others	0d	0d	8d	0%	01-Dec-16			
CLP	147d	08-Apr-16	03-Oct-16	119d	02-Nov-16 A	16-Apr-17	41d	-157d
	91d	08-Apr-16	27-Jul-16	50d	02-Nov-16 A	18-Jan-17	51d	-144d
	91d	08-Apr-16	27-Jul-16	50d	02-Nov-16 A	18-Jan-17	51d	-144d
	91d	08-Apr-16	27-Jul-16	50d	02-Nov-16 A	18-Jan-17	51d	-144d
	90d	22-Apr-16	20-Jul-16	47d	02-Nov-16 A	03-Jan-17	63d	-167d
Cables	0d	0d	18d	0%	09-Dec-16	31-Dec-16	0%	-49d
Inspection and CLP inspection	26d	08-Apr-16	09-May-16	5d	24-Dec-16*	31-Dec-16	0%	-49d
Water and energize power	6d	10-May-16	17-May-16	6d	05-Jan-17	11-Jan-17	0%	-197d
Water Meter Cabinet	6d	21-Jun-16	27-Jul-16	6d	12-Jan-17	18-Jan-17	0%	-144d
	26d	30-Jun-16	01-Aug-16	49d	17-Jan-17	17-Mar-17	20d	-187d
	26d	30-Jun-16	01-Aug-16	49d	17-Jan-17	17-Mar-17	20d	-187d
	26d	30-Jun-16	01-Aug-16	49d	17-Jan-17	17-Mar-17	20d	-187d
	0d	0d	30-Jun-16	0d	17-Jan-17	17-Mar-17	0%	-23d
Part IV - Request for Inspection (Fresh Water Supply)	0d	0d	0d	0%	14-Feb-17	14-Feb-17	0%	-40d
Reinspection (Fresh Water Supply)	21d	04-Jul-16	01-Aug-16	15d	15-Feb-17	07-Mar-17	0%	-40d
Terminal Foulwater MH	0d	0d	60d	16-Feb-17	16-Apr-17	52d		
	0d	0d	60d	16-Feb-17	16-Apr-17	52d		
	0d	0d	60d	16-Feb-17	16-Apr-17	52d		
	0d	0d	60d	16-Feb-17	16-Apr-17	52d		
	76d	16-Jun-16	03-Oct-16	54d	28-Dec-16	16-Mar-17	11d	-112d
Pure Vessels (Compressed Air / ASP)	76d	16-Jun-16	03-Oct-16	54d	28-Dec-16	16-Mar-17	11d	-112d
	76d	16-Jun-16	03-Oct-16	54d	28-Dec-16	16-Mar-17	11d	-112d
	20d	05-Sep-16	03-Oct-16	20d	06-Jan-17	06-Feb-17	39d	-84d
	20d	24-Jun-16	22-Jul-16	20d	28-Dec-16*	25-Jan-17	0%	-35d
	20d	16-Jun-16	14-Jul-16	20d	17-Feb-17	16-Mar-17	0%	-168d
MECHANICAL & M INSTALLATION WORKS (INCL. RE-SU)								
Relocation of HV Switchboard, HV/LV Transformer and Earthing Transformer	0d	0d	75d	13-May-16 A	31-Jan-17	279d		
Installation of HV Switchboard, HV/LV Transformer and Earthing Transformer	0d	0d	71d	08-Jul-16 A	27-Jan-17	20d		
	0d	0d	71d	08-Jul-16 A	27-Jan-17	20d		
Installation of HV Switchboard, HV/LV Transformer and Earthing Transformer	0d	0d	0d	02-Dec-16*	02-Dec-16*	-57d		
Installation of LV Switchboard and MCC	0d	0d	46d	03-Dec-16	17-Jan-17	0%	-57d	
Installation of LV Switchboard and MCC	0d	0d	0d	02-Dec-16*	02-Dec-16*	0%	-59d	
	0d	0d	46d	03-Dec-16	17-Jan-17	0%	-59d	
Installation of Emergency Genset	0d	0d	27d	08-Jul-16 A	14-Dec-16	41.3%	11d	
Installation of Cable	0d	0d	24d	27-Aug-16 A	11-Dec-16	47.83%	-60d	
Installation of Control system (SCADA Panel/LCP)	0d	0d	0d	02-Dec-16*	02-Dec-16*	0%	-64d	
Installation of Control system (SCADA Panel/LCP)	0d	0d	46d	03-Dec-16	17-Jan-17	0%	-64d	
Installation of ELV System	0d	0d	0d	09-Dec-16*	09-Dec-16*	0%	20d	
Installation of ELV System	0d	0d	46d	10-Dec-16	24-Jan-17	0%	20d	
Termination of Fiber Optic Cable	0d	0d	35d	07-Sep-16 A	22-Dec-16	23.91%	32d	
Installation of Earthing System	0d	0d	0d	12-Dec-16*	12-Dec-16*	0%	20d	
Installation of Earthing System	0d	0d	46d	13-Dec-16	27-Jan-17	0%	20d	
Installation of Instrument	0d	0d	0d	12-Dec-16*	12-Dec-16*	0%	-62d	
Installation of Instrument	0d	0d	46d	13-Dec-16	27-Jan-17	0%	-62d	
Installation of Biogas Storage Tank	0d	0d	75d	25-Jun-16 A	31-Jan-17	279d		
	0d	0d	75d	25-Jun-16 A	31-Jan-17	279d		
Installation of Biogas Storage Tank	0d	0d	0d	07-Dec-16*	07-Dec-16*	0%	-13d	
Installation of Biogas Storage Tank	0d	0d	20d	08-Dec-16	27-Dec-16	0%	-13d	
Installation of Weighbridge	0d	0d	0d	07-Dec-16*	07-Dec-16*	0%	10d	

Task Description		Start Date	End Date	Progress (%)	Dependencies	Notes		
Installation of Pipe Racks and Supports	Installation of Pipe Bridge	0d	20d	01-Dec-16	20-Dec-16	0%	-46d	IC Certifies M.S. for Installation of Pipe Racks and Supports
	Installation of Pipe Bridge	0d	0d	30-Nov-16*	20-Dec-16	0%	314d	◆ Submit M.S. for Installation of Pipe Bridge
Installation of Composting System (Star Screen)	Installation of Composting System (Star Screen)	0d	20d	01-Dec-16	20-Dec-16	0%	314d	IC Certifies M.S. for Installation of Pipe Bridge
	Installation of Pipeline	0d	0d	20-Sep-16 A	17-Oct-16 A	100%		IC Certifies M.S. for Installation of Pipeline
Installation of Pumpset and Rotating Equipment	Installation of Pumpset and Rotating Equipment	0d	20d	02-Aug-16 A	07-Dec-16	56.52%	-48d	IC Certifies M.S. for Installation of Pumpset and Rotating Equipment
	Installation of Mechanical Support and Structure	0d	27d	25-Jun-16 A	14-Dec-16	41.3%	-56d	◆ Submit M.S. for Installation of Mechanical Support and Structure
Installation of Mechanical Support and Structure	Installation of Mechanical Support and Structure	0d	0d	09-Dec-16*	09-Dec-16*	0%	302d	◆ Submit M.S. for Installation of Mechanical Support and Structure
	Installation of Electric Heater	0d	30d	10-Dec-16	08-Jan-17	0%	302d	IC Certifies M.S. for Installation of Electric Heater
Installation of Electric Heater	Installation of Electric Heater	0d	0d	07-Dec-16*	07-Dec-16*	0%	20d	◆ Submit M.S. for Installation of Electric Heater
	Installation of CHP & ASP Stack	0d	17d	08-Dec-16	24-Dec-16	0%	20d	IC Certifies M.S. for Installation of Electric Heater
Installation of CHP & ASP Stack	Installation of CHP & ASP Stack	0d	0d	07-Dec-16*	07-Dec-16*	0%	15d	◆ Submit M.S. for Installation of CHP & ASP Stack
	Installation of CHP & ASP Stack	0d	15d	08-Dec-16	22-Dec-16	0%	15d	IC Certifies M.S. for Installation of CHP & ASP Stack
Installation of Wastewater Treatment Plant (WWTP)	Installation of Wastewater Treatment Plant (WWTP)	0d	53d	26-Aug-16 A	09-Jan-17	0%	-31d	◆ Submit M.S. for Installation of Wastewater Treatment Plant (WWTP)
	Installation of Lifting Appliance	0d	0d	16-Dec-16*	16-Dec-16*	0%	-25d	◆ Submit M.S. for Installation of Lifting Appliance
Installation of Lifting Appliance	Installation of Lifting Appliance	0d	46d	17-Dec-16	31-Jan-17	0%	-25d	◆ Submit M.S. for Installation of Lifting Appliance
	Installation of Tank	0d	0d	16-Dec-16*	16-Dec-16*	0%	-43d	◆ Submit M.S. for Installation of Tank
Installation of Tank	Installation of Tank	0d	46d	17-Dec-16	31-Jan-17	0%	-43d	◆ Submit M.S. for Installation of Tank
	Labeling of Equipment, Valve and Instrument	0d	0d	30-Dec-16*	30-Dec-16*	0%	-47d	◆ Submit M.S. for Labeling of Equipment, Valve
Labeling of Equipment, Valve and Instrument	Labeling of Equipment, Valve and Instrument	0d	30d	31-Dec-16	29-Jan-17	0%	-47d	◆ Submit M.S. for Labeling of Equipment, Valve
	Installation of MVAC System	0d	71d	13-May-16 A	27-Jan-17	22d	-22d	◆ Submit M.S. for Installation of MVAC System
Installation of MVAC System	Installation of MVAC System	0d	71d	13-May-16 A	27-Jan-17	-22d	-22d	IC Certifies M.S. for Installation of MVAC System
	Installation of MVAC System	0d	71d	13-May-16 A	27-Jan-17	-22d	-22d	◆ Submit M.S. for Installation of MVAC System
Installation of MVAC System	Installation of MVAC System	0d	0d	02-Dec-16*	02-Dec-16*	0%	-12d	◆ Submit M.S. for Installation of MVAC System
	Installation of MVAC System	0d	46d	03-Dec-16	17-Jan-17	0%	-12d	IC Certifies
Installation of Lifting Platform	Installation of Lifting Platform	0d	15d	13-May-16 A	02-Dec-16	67.39%	-45d	IC Certifies M.S. for Installation of Lifting Platform
	Installation of Lifting Platform	0d	0d	12-Dec-16*	12-Dec-16*	0%	-45d	◆ Submit M.S. for Installation of Lifting Platform
Installation of Lifting Platform	Installation of Lifting Platform	0d	46d	13-Dec-16	27-Jan-17	0%	-45d	◆ Submit M.S. for Installation of Lifting Platform
	Installation of Lifting Platform	285d	142d	31-Aug-15 A	16-May-17	189d	-131d	IC Certifies
Installation of MVAC System	Installation of MVAC System	120d	135d	04-Jul-16 A	08-May-17	-35d	-248d	IC Certifies
	Installation of MVAC System	120d	135d	04-Jul-16 A	08-May-17	-35d	-248d	◆ Submit M.S. for Installation of MVAC System
Installation of MVAC System	Installation of MVAC System	120d	135d	04-Jul-16 A	08-May-17	-35d	-248d	◆ Submit M.S. for Installation of MVAC System
	Installation of MVAC System	120d	135d	04-Jul-16 A	08-May-17	-35d	-248d	◆ Submit M.S. for Installation of MVAC System
Installation of MVAC System	Installation of MVAC System	0d	0d	04-Jul-16 A	27-Oct-16 A	100%		IC Certifies
	Installation of MVAC System	24d	18-Apr-16	17-May-16	21-Nov-16	100%	-156d	IC Certifies
Installation of MVAC System	Installation of MVAC System	18d	12-May-16	02-Jun-16	25-Apr-17	0%	-35d	IC Certifies
	Installation of MVAC System	0d	0d	25-Apr-17	25-Apr-17	0%	-35d	◆ Submit M.S. for Installation of Lifting Platform
Installation of MVAC System	Installation of MVAC System	26d	03-Jun-16	05-Jul-16	08-May-17	0%	-248d	IC Certifies
	Installation of MVAC System	50d	04-Feb-16	09-Apr-16	25-Feb-17	0%	-1d	IC Certifies
Installation of MVAC System	Installation of MVAC System	0d	0d	28-Dec-16	28-Feb-17	0%	15d	IC Certifies
	Installation of MVAC System	0d	50d	31-Dec-16	03-Mar-17	0%	15d	IC Certifies
Installation of MVAC System	Installation of MVAC System	0d	53d	05-Jan-17	10-Mar-17	0%	9d	IC Certifies
	Installation of MVAC System	155d	04-Feb-16	15-Aug-16	03-Apr-17	220d	-189d	IC Certifies
Installation of MVAC System	Installation of MVAC System	155d	04-Feb-16	15-Aug-16	03-Apr-17	220d	-189d	IC Certifies
	Installation of MVAC System	155d	04-Feb-16	15-Aug-16	03-Apr-17	220d	-189d	IC Certifies
Installation of MVAC System	Installation of MVAC System	18d	18-Apr-16	09-May-16	29-Nov-16	0%	43d	IC Certifies
	Installation of MVAC System	12d	10-May-16	24-May-16	25-Nov-16	0%	43d	IC Certifies
Installation of MVAC System	Installation of MVAC System	12d	10-May-16	24-May-16	01-Dec-16	0%	43d	IC Certifies
	Installation of MVAC System	18d	25-May-16	15-Jun-16	28-Nov-16	0%	51d	IC Certifies
Installation of MVAC System	Installation of MVAC System	0d	0d	05-Dec-16	08-Dec-16	0%	46d	IC Certifies
	Installation of MVAC System	0d	3d	05-Dec-16	07-Dec-16	0%	43d	IC Certifies
Installation of MVAC System	Installation of MVAC System	18d	16-Jun-16	07-Jul-16	25-Jan-17	0%	-167d	IC Certifies

Task ID	Task Name	Start Date	End Date	Current Status	Progress (%)	Start Delay	End Delay	Notes
001	Grillage Pumps	0d	11-Jan-17	17-Jan-17	0%	15d	15d	Installation of Pump No. 1
		0d	07-Jan-17*	27-Jan-17	0%	6d	6d	Installation of Pump No. 2
002	Mixer	0d	21-Jan-17	21-Feb-17	0%	-12d	-12d	Mixer Installation
003	Pipework (Pre-treatment)	0d	11-Feb-17	04-Mar-17	0%	-22d	-22d	Installation of Mixing Tank No. 1
0d		07-Dec-16*	12-Dec-16	0%	-1d	-1d	Installation of Sieve Drum No. 1	
0d		07-Dec-16*	15-Dec-16	0%	-1d	-229d	Installation of Sieve Drum No. 2	
28d	Mixing Tank No. 1	04-Feb-16	10-Mar-16	10-Mar-16	0%	306d	306d	Installation of Sieve Drum No. 2
0d	Sieve Drum No. 1	0d	07-Dec-16*	12-Dec-16	0%	16d	-201d	Installation of Sieve Drum No. 1
28d		Mixing Tank No. 2	11-Mar-16	16-Apr-16	16-Apr-16	0%	16d	16d
12d	Grit Trap No. 1	18-Apr-16	30-Apr-16	30-Apr-16	0%	10d	-190d	Installation of Sand Grit Trap No. 1
12d	Grit Trap No. 2	03-May-16	17-May-16	17-May-16	0%	306d	-178d	Installation of Sand Grit Trap No. 2
12d	Light Fraction Screw No. 1	18-May-16	31-May-16	31-May-16	0%	-1d	-172d	Installation of Heavy/Light Fraction Screw No. 1
12d		Light Fraction Screw No. 2	01-Jun-16	15-Jun-16	15-Jun-16	0%	-1d	-170d
0d	Inverter	0d	05-Jan-17	13-Jan-17	0%	-6d	-6d	Installation of Heavy/Light Fraction Screw No. 1
0d		09-Jan-17	18-Jan-17	18-Jan-17	0%	-6d	-6d	Installation of Heavy/Light Fraction Screw No. 2
0d	Overhead Travelling Crane	0d	09-Jan-17	18-Jan-17	0%	-6d	-6d	Installation of Heavy/Light Fraction Screw No. 1
18d		Crusher Area	18-Apr-16	09-May-16	09-May-16	0%	9d	-196d
0d	Pipework (with Supports and Racks)	0d	14-Jan-17*	23-Jan-17	0%	10d	10d	Installation of Heavy/Light Fraction Screw No. 1
0d		Instrumentation and Control	29-Dec-16*	02-Feb-17	02-Feb-17	0%	4d	4d
0d	Oil Guide	0d	22-Nov-16*	24-Feb-17	0%	-15d	-15d	Installation of Heavy/Light Fraction Screw No. 1
92d		Travelling Crane	04-Feb-16	31-May-16	31-May-16	0%	-47d	-215d
0d	Switch	0d	18-Jan-17	18-Feb-17	0%	-47d	-47d	Installation of Heavy/Light Fraction Screw No. 1
100d		16-Mar-16	19-Jul-16	19-Jul-16	0%	-47d	-200d	Installation of Heavy/Light Fraction Screw No. 2
75d	Hand Building Services Works on 1/F	18-May-16	15-Aug-16	15-Aug-16	0%	-47d	-189d	Installation of Heavy/Light Fraction Screw No. 1
41d		18-Apr-16	06-Jun-16	14-Jan-17	13-Feb-17	-11d	-205d	Installation of Heavy/Light Fraction Screw No. 2
41d	Pipework at Pre-treatment MCC Room	18-Apr-16	06-Jun-16	14-Jan-17	13-Feb-17	-11d	-205d	Installation of Heavy/Light Fraction Screw No. 1
0d		14-Jan-17	07-Feb-17	07-Feb-17	0%	-36d	-36d	Installation of Heavy/Light Fraction Screw No. 2
41d	Pipework and Package Panels at Pre-treatment MCC Room	18-Apr-16	06-Jun-16	14-Jan-17	13-Feb-17	-11d	-205d	Installation of Heavy/Light Fraction Screw No. 1
179d		04-Feb-16	12-Sep-16	11-May-16 A	13-Apr-17	-39d	-173d	Installation of Heavy/Light Fraction Screw No. 2
179d	Suspension buffer tank & Testing	04-Feb-16	12-Sep-16	11-May-16 A	13-Apr-17	-39d	-173d	Installation of Heavy/Light Fraction Screw No. 1
32d		04-Feb-16	15-Mar-16	01-Aug-16 A	12-Dec-16	16d	-222d	Installation of Heavy/Light Fraction Screw No. 2
0d	Insulation of Digestion buffer tank	0d	13-Dec-16*	16-Jan-17	0%	16d	16d	Installation of Heavy/Light Fraction Screw No. 1
87d		29-Mar-16	13-Jul-16	11-May-16 A	17-Oct-16 A	-79d	-79d	Installation of Heavy/Light Fraction Screw No. 2
0d	Insulation of Digestion Tank No. 1	0d	18-Oct-16 A	03-Dec-16	0%	-47d	-47d	Installation of Heavy/Light Fraction Screw No. 1
87d		14-Apr-16	28-Jul-16	11-May-16 A	14-Nov-16 A	-90d	-90d	Installation of Heavy/Light Fraction Screw No. 2
0d	Insulation of Digestion Tank No. 2	0d	05-Dec-16*	02-Feb-17	0%	-47d	-47d	Installation of Heavy/Light Fraction Screw No. 1
87d		29-Apr-16	12-Aug-16	25-Jul-16 A	09-Dec-16	-38d	-38d	Installation of Heavy/Light Fraction Screw No. 2
0d	Insulation of Digestion Tank No. 3	0d	10-Dec-16*	08-Feb-17	0%	-38d	-38d	Installation of Heavy/Light Fraction Screw No. 1
18d		03-Aug-16	23-Aug-16	15-Dec-16	23-Mar-17	-43d	-173d	Installation of Heavy/Light Fraction Screw No. 2
0d	Exchangers	0d	15-Dec-16*	21-Feb-17	0%	-43d	-43d	Installation of Heavy/Light Fraction Screw No. 1
0d		19-Jan-17	16-Feb-17	16-Feb-17	0%	-17d	-17d	Installation of Heavy/Light Fraction Screw No. 2
0d	Relief Valves	0d	15-Dec-16*	21-Jan-17	0%	17d	17d	Installation of Heavy/Light Fraction Screw No. 1
36d		29-Jul-16	12-Sep-16	03-Dec-16	20-Jan-17	-3d	-106d	Installation of Heavy/Light Fraction Screw No. 2
12d	Digestate Tank	24-Aug-16	06-Sep-16	06-Sep-16	0%	-5d	-129d	Installation of Heavy/Light Fraction Screw No. 1
0d		0d	21-Dec-16	06-Apr-17	06-Apr-17	0%	-39d	-39d
0d	Buffer Pump Room	0d	01-Feb-17	07-Mar-17	0%	-8d	-8d	Installation of Heavy/Light Fraction Screw No. 1
0d		22-Dec-16	13-Apr-17	13-Apr-17	0%	-43d	-214d	Installation of Heavy/Light Fraction Screw No. 2
92d	Treatment System Pipework	06-Apr-16	26-Jul-16	08-Feb-17	13-Apr-17	0%	-43d	Installation of Heavy/Light Fraction Screw No. 1
0d		0d	0d	0d	0d	0%	0d	Installation of Heavy/Light Fraction Screw No. 2

Task ID	Task Name	Start Date	End Date	Duration (Days)	Progress (%)	Current Status	Dependencies	Notes
126d	04-Jul-16	30-Nov-16	06-Apr-17	14d	-102d	14d		
126d	04-Jul-16	30-Nov-16	06-Apr-17	14d	-102d	14d		
38d	04-Jul-16	17-Aug-16	30-Dec-16	5d	53.33%	5d		Installation of Combine Heat Power System no.1 (Summary)
40d	18-Aug-16	05-Oct-16	30-Dec-16	5d	53.33%	5d		Installation of Combine Heat Power System no.2 (Summary)
40d	06-Oct-16	22-Nov-16	30-Dec-16	5d	53.33%	5d		Installation of Combine Heat Power System no.3 (Summary)
0d			30-Dec-16	0%	0%	5d		Installation of Combine Heat Power System no.4 (Summary)
0d			14-Feb-17	0%	0%	-4d		Back
0d			06-Apr-17	0%	0%	14d		Power Generation System Pipework
26d	01-Nov-16	30-Nov-16	20-Feb-17	31d	-64d	31d		Continuous Emissions Monitoring System (CEMS)
26d	01-Nov-16	30-Nov-16	29-Dec-16	31d	-23d	31d		Works
0d			17-Jan-17	0%	0%	31d		Switch
39d	17-Oct-16	30-Nov-16	13-Feb-17	31d	-58d	31d		Local Control
0d			16-Feb-17	0%	0%	16d		
0d			16-Feb-17	0%	0%	16d		
0d			10-Feb-17	0%	0%	-33d		
0d			16-Feb-17	0%	0%	16d		
95d	02-Jul-16	24-Oct-16	13-Apr-17	7d	-140d	7d		Installation of Bio Gas Cleaning System no.1 (Desulphurisation)
95d	02-Jul-16	24-Oct-16	13-Apr-17	7d	-140d	7d		Installation of Bio Gas Cleaning System no.2 (Desulphurisation)
95d	02-Jul-16	24-Oct-16	13-Apr-17	7d	-140d	7d		Installation of Bio Gas Cleaning System no.3 (Desulphurisation)
26d	02-Jul-16	01-Aug-16	23-Dec-16	34d	-121d	34d		Installation of Bio Gas Cleaning System no.1 (Desulphurisation)
26d	02-Aug-16	31-Aug-16	23-Dec-16	23d	-95d	23d		Installation of Bio Gas Cleaning System no.2 (Desulphurisation)
26d	01-Sep-16	03-Oct-16	06-Feb-17	-13d	-101d	-13d		Storage Tank
31d	15-Sep-16	24-Oct-16	13-Apr-17	-19d	-140d	-19d		Storage System Pipework
39d	01-Sep-16	19-Oct-16	16-Mar-17	17d	-120d	17d		Works
0d			10-Mar-17	0%	0%	17d		Switch
57d	02-Jul-16	06-Sep-16	04-Apr-17	-3d	-171d	-3d		
57d	02-Jul-16	06-Sep-16	04-Apr-17	-3d	-171d	-3d		
57d	02-Jul-16	06-Sep-16	04-Apr-17	-3d	-171d	-3d		
18d	02-Jul-16	22-Jul-16	29-Nov-16	-10d	-108d	-10d		Installation of Standby Flaring Gas Unit
18d	02-Jul-16	22-Jul-16	29-Nov-16	68d	-108d	68d		Installation of Biogas Blowers
18d	02-Jul-16	22-Jul-16	11-Feb-17	30d	-166d	30d		Cooling and Condensate Removal System
0d			28-Mar-17	0%	0%	-15d		and Supports (Biogas Area - Pipe Rack 2)
0d			04-Apr-17	0%	0%	-12d		System Pipework
0d			20-Dec-16	80%	81d	81d		Carbon Filters
39d	23-Jul-16	06-Sep-16	11-Mar-17	6d	-151d	6d		Works
0d			27-Feb-17	0%	0%	11d		
0d			27-Feb-17	0%	0%	11d		
0d			21-Feb-17	0%	0%	-42d		panels at Biogas MCC Rooms
0d			27-Feb-17	0%	0%	11d		and Package Panels at Biogas MCC Rooms
104d	04-Feb-16	15-Jun-16	29-Apr-17	-27d	-259d	-27d		Works
88d	26-Feb-16	15-Jun-16	29-Apr-17	-27d	-259d	-27d		Biogas System and associated pipework
88d	26-Feb-16	15-Jun-16	29-Apr-17	-27d	-259d	-27d		
40d	26-Feb-16	16-Apr-16	09-Mar-17	-31d	-267d	-31d		
51d	14-Apr-16	15-Jun-16	20-Jan-17	-26d	-181d	-26d		Water Stripping Plant
0d			29-Apr-17	0%	0%	-30d		Water Treatment System Pipework
0d			23-Feb-17	0%	0%	25d		Water Treatment Tank (Conical Tank)
0d			23-Feb-17	0%	0%	-12d		Back
0d			20-Feb-17	0%	0%	-20d		Water Treatment Tank (in ASP)
21d	18-Apr-16	12-May-16	20-Apr-17	-31d	-278d	-31d		Works
41d	04-Feb-16	29-Mar-16	18-Feb-17	-8d	-266d	-8d		
41d	04-Feb-16	29-Mar-16	18-Feb-17	-8d	-266d	-8d		
0d			11-Feb-17	0%	0%	-40d		panels at WWTP MCC Room
41d	04-Feb-16	29-Mar-16	18-Feb-17	-8d	-266d	-8d		and Package Panels at WWTP MCC Room

Task ID	Task Name	Category	Start Date	End Date	Duration (Days)	Progress (%)	Status	Dependencies	Notes
001	Site Preparation (Clearing, Excavation)	General	2023-01-01	2023-03-15	75	100%	Completed	None	Excavation of foundation area completed.
002	Foundation Construction (Concrete Pours)	Structural	2023-03-16	2023-04-30	45	100%	Completed	None	Foundation slabs poured and cured.
003	Structural Steel Erection	Structural	2023-04-31	2023-06-15	45	100%	Completed	None	Steel framework for main structure erected.
004	Roofing Installation	Envelope	2023-06-16	2023-07-31	45	100%	Completed	None	Roof panels installed.
005	Interior Partitions	Interior	2023-07-31	2023-09-15	45	100%	Completed	None	Interior walls and ceiling installed.
006	MEP Installation (Plumbing, Electrical)	Mechanical/Electrical	2023-09-16	2023-11-30	75	95%	In Progress	005	MEP rough-in complete, awaiting fixtures.
007	Finishing (Drywall, Painting)	Interior	2023-11-31	2024-01-15	45	100%	Completed	None	Final interior finish work completed.
008	Final Inspection & Handover	General	2024-01-16	2024-01-31	15	100%	Completed	None	Building ready for occupancy.
009	Site Cleanup	General	2024-02-01	2024-02-15	15	100%	Completed	None	Final site cleanup and debris removal.
010	Documentation	General	2024-02-16	2024-02-31	15	100%	Completed	None	Project closeout documentation.
011	Handover to Client	General	2024-03-01	2024-03-15	15	100%	Completed	None	Client sign-off received.
012	Project Review	General	2024-03-16	2024-03-31	15	100%	Completed	None	Final project review meeting.
013	Construction of Building 1	General	2024-04-01	2024-05-31	60	100%	Completed	None	Building 1 completed.
014	Construction of Building 2	General	2024-06-01	2024-07-31	60	100%	Completed	None	Building 2 completed.
015	Construction of Building 3	General	2024-08-01	2024-09-30	60	100%	Completed	None	Building 3 completed.
016	Construction of Building 4	General	2024-10-01	2024-11-30	60	100%	Completed	None	Building 4 completed.
017	Construction of Building 5	General	2024-12-01	2025-01-31	60	100%	Completed	None	Building 5 completed.
018	Construction of Building 6	General	2025-02-01	2025-03-31	60	100%	Completed	None	Building 6 completed.
019	Construction of Building 7	General	2025-04-01	2025-05-31	60	100%	Completed	None	Building 7 completed.
020	Construction of Building 8	General	2025-06-01	2025-07-31	60	100%	Completed	None	Building 8 completed.
021	Construction of Building 9	General	2025-08-01	2025-09-30	60	100%	Completed	None	Building 9 completed.
022	Construction of Building 10	General	2025-10-01	2025-11-30	60	100%	Completed	None	Building 10 completed.
023	Construction of Building 11	General	2025-12-01	2026-01-31	60	100%	Completed	None	Building 11 completed.
024	Construction of Building 12	General	2026-02-01	2026-03-31	60	100%	Completed	None	Building 12 completed.
025	Construction of Building 13	General	2026-04-01	2026-05-31	60	100%	Completed	None	Building 13 completed.
026	Construction of Building 14	General	2026-06-01	2026-07-31	60	100%	Completed	None	Building 14 completed.
027	Construction of Building 15	General	2026-08-01	2026-09-30	60	100%	Completed	None	Building 15 completed.
028	Construction of Building 16	General	2026-10-01	2026-11-30	60	100%	Completed	None	Building 16 completed.
029	Construction of Building 17	General	2026-12-01	2027-01-31	60	100%	Completed	None	Building 17 completed.
030	Construction of Building 18	General	2027-02-01	2027-03-31	60	100%	Completed	None	Building 18 completed.
031	Construction of Building 19	General	2027-04-01	2027-05-31	60	100%	Completed	None	Building 19 completed.
032	Construction of Building 20	General	2027-06-01	2027-07-31	60	100%	Completed	None	Building 20 completed.
033	Construction of Building 21	General	2027-08-01	2027-09-30	60	100%	Completed	None	Building 21 completed.
034	Construction of Building 22	General	2027-10-01	2027-11-30	60	100%	Completed	None	Building 22 completed.
035	Construction of Building 23	General	2027-12-01	2028-01-31	60	100%	Completed	None	Building 23 completed.
036	Construction of Building 24	General	2028-02-01	2028-03-31	60	100%	Completed	None	Building 24 completed.
037	Construction of Building 25	General	2028-04-01	2028-05-31	60	100%	Completed	None	Building 25 completed.
038	Construction of Building 26	General	2028-06-01	2028-07-31	60	100%	Completed	None	Building 26 completed.
039	Construction of Building 27	General	2028-08-01	2028-09-30	60	100%	Completed	None	Building 27 completed.
040	Construction of Building 28	General	2028-10-01	2028-11-30	60	100%	Completed	None	Building 28 completed.
041	Construction of Building 29	General	2028-12-01	2029-01-31	60	100%	Completed	None	Building 29 completed.
042	Construction of Building 30	General	2029-02-01	2029-03-31	60	100%	Completed	None	Building 30 completed.
043	Construction of Building 31	General	2029-04-01	2029-05-31	60	100%	Completed	None	Building 31 completed.
044	Construction of Building 32	General	2029-06-01	2029-07-31	60	100%	Completed	None	Building 32 completed.
045	Construction of Building 33	General	2029-08-01	2029-09-30	60	100%	Completed	None	Building 33 completed.
046	Construction of Building 34	General	2029-10-01	2029-11-30	60	100%	Completed	None	Building 34 completed.
047	Construction of Building 35	General	2029-12-01	2030-01-31	60	100%	Completed	None	Building 35 completed.
048	Construction of Building 36	General	2030-02-01	2030-03-31	60	100%	Completed	None	Building 36 completed.
049	Construction of Building 37	General	2030-04-01	2030-05-31	60	100%	Completed	None	Building 37 completed.
050	Construction of Building 38	General	2030-06-01	2030-07-31	60	100%	Completed	None	Building 38 completed.
051	Construction of Building 39	General	2030-08-01	2030-09-30	60	100%	Completed	None	Building 39 completed.
052	Construction of Building 40	General	2030-10-01	2030-11-30	60	100%	Completed	None	Building 40 completed.
053	Construction of Building 41	General	2030-12-01	2031-01-31	60	100%	Completed	None	Building 41 completed.
054	Construction of Building 42	General	2031-02-01	2031-03-31	60	100%	Completed	None	Building 42 completed.
055	Construction of Building 43	General	2031-04-01	2031-05-31	60	100%	Completed	None	Building 43 completed.
056	Construction of Building 44	General	2031-06-01	2031-07-31	60	100%	Completed	None	Building 44 completed.
057	Construction of Building 45	General	2031-08-01	2031-09-30	60	100%	Completed	None	Building 45 completed.
058	Construction of Building 46	General	2031-10-01	2031-11-30	60	100%	Completed	None	Building 46 completed.
059	Construction of Building 47	General	2031-12-01	2032-01-31	60	100%	Completed	None	Building 47 completed.
060	Construction of Building 48	General	2032-02-01	2032-03-31	60	100%	Completed	None	Building 48 completed.
061	Construction of Building 49	General	2032-04-01	2032-05-31	60	100%	Completed	None	Building 49 completed.
062	Construction of Building 50	General	2032-06-01	2032-07-31	60	100%	Completed	None	Building 50 completed.
063	Construction of Building 51	General	2032-08-01	2032-09-30	60	100%	Completed	None	Building 51 completed.
064	Construction of Building 52	General	2032-10-01	2032-11-30	60	100%	Completed	None	Building 52 completed.
065	Construction of Building 53	General	2032-12-01	2033-01-31	60	100%	Completed	None	Building 53 completed.
066	Construction of Building 54	General	2033-02-01	2033-03-31	60	100%	Completed	None	Building 54 completed.
067	Construction of Building 55	General	2033-04-01	2033-05-31	60	100%	Completed	None	Building 55 completed.
068	Construction of Building 56	General	2033-06-01	2033-07-31	60	100%	Completed	None	Building 56 completed.
069	Construction of Building 57	General	2033-08-01	2033-09-30	60	100%	Completed	None	Building 57 completed.
070	Construction of Building 58	General	2033-10-01	2033-11-30	60	100%	Completed	None	Building 58 completed.
071	Construction of Building 59	General	2033-12-01	2034-01-31	60	100%	Completed	None	Building 59 completed.
072	Construction of Building 60	General	2034-02-01	2034-03-31	60	100%	Completed	None	Building 60 completed.
073	Construction of Building 61	General	2034-04-01	2034-05-31	60	100%	Completed	None	Building 61 completed.
074	Construction of Building 62	General	2034-06-01	2034-07-31	60	100%	Completed	None	Building 62 completed.
075	Construction of Building 63	General	2034-08-01	2034-09-30	60	100%	Completed	None	Building 63 completed.
076	Construction of Building 64	General	2034-10-01	2034-11-30	60	100%	Completed	None	Building 64 completed.
077	Construction of Building 65	General	2034-12-01	2035-01-31	60	100%	Completed	None	Building 65 completed.
078	Construction of Building 66	General	2035-02-01	2035-03-31	60	100%	Completed	None	Building 66 completed.
079	Construction of Building 67	General	2035-04-01	2035-05-31	60	100%	Completed	None	Building 67 completed.
080	Construction of Building 68	General	2035-06-01	2035-07-31	60	100%	Completed	None	Building 68 completed.
081	Construction of Building 69	General	2035-08-01	2035-09-30	60	100%	Completed	None	Building 69 completed.
082	Construction of Building 70	General	2035-10-01	2035-11-30	60	100%	Completed	None	Building 70 completed.
083	Construction of Building 71	General	2035-12-01	2036-01-31	60	100%	Completed	None	Building 71 completed.
084	Construction of Building 72	General	2036-02-01	2036-03-31	60	100%	Completed	None	Building 72 completed.
085	Construction of Building 73	General	2036-04-01	2036-05-31	60	100%	Completed	None	Building 73 completed.
086	Construction of Building 74	General	2036-06-01	2036-07-31	60	100%	Completed	None	Building 74 completed.
087	Construction of Building 75	General	2036-08-01	2036-09-30	60	100%	Completed	None	Building 75 completed.
088	Construction of Building 76	General	2036-10-01	2036-11-30	60	100%	Completed	None	Building 76 completed.
089	Construction of Building 77	General	2036-12-01	2037-01-31	60	100%	Completed	None	Building 77 completed.
090	Construction of Building 78	General	2037-02-01	2037-03-31	60	100%	Completed	None	Building 78 completed.
091	Construction of Building 79	General	2037-04-01	2037-05-31	60	100%	Completed	None	Building 79 completed.
092	Construction of Building 80	General	2037-06-01	2037-07-31	60	100%	Completed	None	Building 80 completed.
093	Construction of Building 81	General	2037-08-01	2037-09-30	60	100%	Completed	None	Building 81 completed.
094	Construction of Building 82	General	2037-10-01	2037-11-30	60	100%	Completed	None	Building 82 completed.
095	Construction of Building 83	General	2037-12-01	2038-01-31	60	100%	Completed	None	Building 83 completed.
096	Construction of Building 84	General	2038-02-01	2038-03-31	60	100%	Completed	None	Building 84 completed.
097	Construction of Building 85	General	2038-04-01	2038-05-31	60	100%	Completed	None	Building 85 completed.
098	Construction of Building 86	General	2038-06-01	2038-07-31	60	100%	Completed	None	Building 86 completed.
099	Construction of Building 87	General	2038-08-01	2038-09-30	60	100%	Completed	None	Building 87 completed.
100	Construction of Building 88	General	2038-10-01	2038-11-30	60	100%	Completed	None	Building 88 completed.

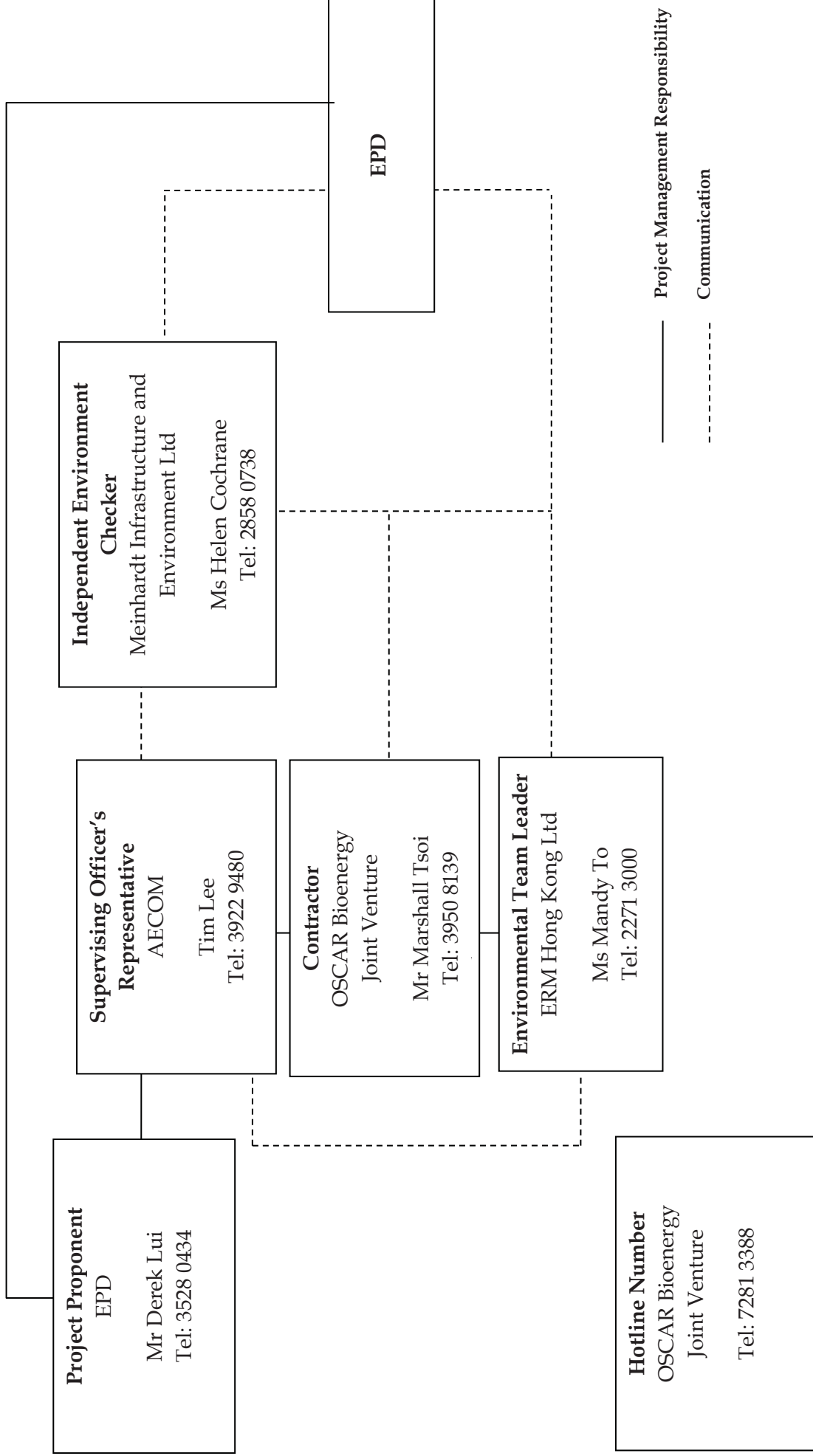
Project Overview							Operational Performance							Resource Allocation							Financial Summary							Risk Management						
Area	Phase	Task	Start	End	Status	Progress	Efficiency	Quality	Cost	Resource	Hours	Productivity	Availability	Cost	Allocation	Hours	Cost	Allocation	Hours	Cost	Allocation	Hours	Cost											
Process Development	Phase 1: Foundation	Task 1.1	2023-01-15	2023-03-15	In Progress	75%	High	Low	100000	10	1500	90%	10	100000	10	1500	90%	10	100000	10	1500	90%	10											
		Task 1.2	2023-03-15	2023-05-15	Completed	100%	High	Low	100000	10	1500	90%	10	100000	10	1500	90%	10	100000	10	1500	90%	10											
		Task 1.3	2023-05-15	2023-07-15	Completed	100%	High	Low	100000	10	1500	90%	10	100000	10	1500	90%	10	100000	10	1500	90%	10											
		Task 1.4	2023-07-15	2023-09-15	Completed	100%	High	Low	100000	10	1500	90%	10	100000	10	1500	90%	10	100000	10	1500	90%	10											
		Task 1.5	2023-09-15	2023-11-15	Completed	100%	High	Low	100000	10	1500	90%	10	100000	10	1500	90%	10	100000	10	1500	90%	10											
	Phase 2: Integration	Task 2.1	2023-11-15	2024-01-15	In Progress	60%	Medium	Medium	200000	20	2000	80%	20	200000	20	2000	80%	20	200000	20	2000	80%	20											
		Task 2.2	2024-01-15	2024-03-15	On Hold	20%	Low	High	200000	20	2000	80%	20	200000	20	2000	80%	20	200000	20	2000	80%	20											
		Task 2.3	2024-03-15	2024-05-15	On Hold	10%	Low	High	200000	20	2000	80%	20	200000	20	2000	80%	20	200000	20	2000	80%	20											
		Task 2.4	2024-05-15	2024-07-15	On Hold	5%	Low	High	200000	20	2000	80%	20	200000	20	2000	80%	20	200000	20	2000	80%	20											
		Task 2.5	2024-07-15	2024-09-15	On Hold	0%	Low	High	200000	20	2000	80%	20	200000	20	2000	80%	20	200000	20	2000	80%	20											
Production & Delivery	Line A: Core Manufacturing	Task 3.1	2023-01-15	2023-02-15	Completed	100%	High	Low	150000	15	1800	85%	15	150000	15	1800	85%	15	150000	15	1800	85%	15											
		Task 3.2	2023-02-15	2023-03-15	Completed	100%	High	Low	150000	15	1800	85%	15	150000	15	1800	85%	15	150000	15	1800	85%	15											
		Task 3.3	2023-03-15	2023-04-15	Completed	100%	High	Low	150000	15	1800	85%	15	150000	15	1800	85%	15	150000	15	1800	85%	15											
		Task 3.4	2023-04-15	2023-05-15	Completed	100%	High	Low	150000	15	1800	85%	15	150000	15	1800	85%	15	150000	15	1800	85%	15											
		Task 3.5	2023-05-15	2023-06-15	Completed	100%	High	Low	150000	15	1800	85%	15	150000	15	1800	85%	15	150000	15	1800	85%	15											
	Line B: Packaging & Distribution	Task 3.6	2023-06-15	2023-07-15	Completed	100%	High	Low	100000	10	1200	75%	10	100000	10	1200	75%	10	100000	10	1200	75%	10											
		Task 3.7	2023-07-15	2023-08-15	Completed	100%	High	Low	100000	10	1200	75%	10	100000	10	1200	75%	10	100000	10	1200	75%	10											
		Task 3.8	2023-08-15	2023-09-15	Completed	100%	High	Low	100000	10	1200	75%	10	100000	10	1200	75%	10	100000	10	1200	75%	10											
		Task 3.9	2023-09-15	2023-10-15	Completed	100%	High	Low	100000	10	1200	75%	10	100000	10	1200	75%	10	100000	10	1200	75%	10											
		Task 3.10	2023-10-15	2023-11-15	Completed	100%	High	Low	100000	10	1200	75%	10	100000	10	1200	75%	10	100000	10	1200	75%	10											
Maintenance & Improvement	Facility Upkeep	Task 4.1	2023-11-15	2024-01-15	In Progress	50%	Medium	Medium	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.2	2024-01-15	2024-03-15	On Hold	15%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.3	2024-03-15	2024-05-15	On Hold	5%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.4	2024-05-15	2024-07-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.5	2024-07-15	2024-09-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
	Process Innovation	Task 4.6	2024-09-15	2024-11-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.7	2024-11-15	2025-01-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.8	2025-01-15	2025-03-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.9	2025-03-15	2025-05-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											
		Task 4.10	2025-05-15	2025-07-15	On Hold	0%	Low	High	180000	18	2100	80%	18	180000	18	2100	80%	18	180000	18	2100	80%	18											

Activity	Start Date	End Date	Duration	Progress (%)	Start Date	End Date	Duration	Progress (%)	Start Date	End Date	Duration	Progress (%)
Installation in Transformer Room transformers and cables cables installation	0d	0d	0d	0%	24-Nov-16	17-Jan-17	51d	0%				
	0d	0d	0d	0%	24-Nov-16	09-Jan-17	51d	0%				
	0d	0d	0d	0%	24-Nov-16	17-Jan-17	51d	0%				
	0d	0d	0d	0%	24-Nov-16	17-Jan-17	51d	0%				
Control & Monitoring System (SCADA/PLC) Switch Board Main LVSB to MCC	212d	15-Dec-15	02-Sep-16	119d	31-Aug-16	13-Apr-17	10d	-181d				
	212d	15-Dec-15	02-Sep-16	119d	31-Aug-16	13-Apr-17	10d	-181d				
	103d	18-Apr-16	19-Aug-16	70d	18-Jan-17	13-Apr-17	10d	-52d				
	100d	18-Apr-16	16-Aug-16	32d	21-Dec-16	02-Feb-17	0%	-52d				
	0d	18-Apr-16		45d	19-Jan-17	15-Mar-17	0%	-52d				
	115d	18-Apr-16	02-Sep-16	96d	13-Dec-16	11-Apr-17	0%	-52d				
	210d	15-Dec-15	31-Aug-16	90d	31-Aug-16	09-Mar-17	73%	8d				
Piping System Installation Pump (Genset) Pump Pipes to Building 1 & 2 - Pipe Crossing 1 & 2 Pipes for Pipes for Pipes for Pipes for Pipes for Pipes for Pipes for Pipes for Pipes for Pipes for Pipes for	0d	0d	0d	0%	01-Feb-17	23-Feb-17	0%	-31d				
	60d	22-Jun-16	31-Aug-16	60d	01-Feb-17	12-Apr-17	0%	11d				
	0d	0d	0d	108d	30-Nov-16	12-Apr-17	-33d					
	0d	0d	0d	108d	30-Nov-16	12-Apr-17	-33d					
	0d	0d	0d	47d	16-Feb-17	12-Apr-17	0%	-47d				
	0d	0d	0d	45d	01-Feb-17	24-Mar-17	0%	-18d				
	0d	0d	0d	45d	30-Nov-16	24-Jan-17	0%	30d				
	0d	0d	0d	45d	11-Jan-17	07-Mar-17	0%	-3d				
	1d	28-Jul-16	28-Jul-16	35d	03-Feb-17	15-Mar-17	0%	-188d				
	1d	28-Jul-16	28-Jul-16	35d	03-Feb-17	15-Mar-17	0%	-188d				
	1d	28-Jul-16	28-Jul-16	35d	03-Feb-17	15-Mar-17	0%	-188d				
Control Room (Transformer Room) Control Room (Main LV Switchroom) Control Room (For Anaerobic Digestion System) Control Room (For Composting System) Control Room (For Dewatering System) Control Room (For Heat Recovery and Power Generation System) Control Room (For Biogas Storage and Cleaning System) Control Room (For Biogas Storage and Cleaning System) Control Room (For Biogas Storage and Cleaning System) Control Room (For Biogas Storage and Cleaning System) Control Room (For Biogas Storage and Cleaning System)	0d	0d	0d	1d	03-Feb-17	03-Feb-17	0%	-52d				
	1d	28-Jul-16	28-Jul-16	1d	08-Feb-17	08-Feb-17	0%	-42d				
	1d	28-Jul-16	28-Jul-16	12d	08-Feb-17	21-Feb-17	0%	-20d				
	1d	28-Jul-16	28-Jul-16	24d	16-Feb-17	15-Mar-17	0%	27d				
	0d	0d	0d	24d	16-Feb-17	15-Mar-17	0%	9d				
	0d	0d	0d	12d	08-Feb-17	21-Feb-17	0%	-36d				
	0d	0d	0d	12d	15-Feb-17	28-Feb-17	0%	-42d				
	0d	0d	0d	16d	08-Feb-17	25-Feb-17	0%	-51d				
	0d	0d	0d	16d	08-Feb-17	25-Feb-17	0%	-51d				
	0d	0d	0d	16d	08-Feb-17	25-Feb-17	0%	-51d				
	0d	0d	0d	16d	08-Feb-17	25-Feb-17	0%	-51d				
Hydraulic testing & pipe pressure testing (with ER) Air + Recycling	0d	0d	0d	16d	08-Feb-17	25-Feb-17	0%	-51d				
	0d	0d	0d	16d	08-Feb-17	25-Feb-17	0%	-51d				

Annex D

Project Organization Chart with Contact Details

Project Organization During Construction Phase (with contact details)



Annex E

Implementation Schedule of Mitigation Measures

Annex E Summary of Mitigation Measures Implementation Schedule

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/Timing	Status
<i>Summary of Environmental Mitigation Measures in the EIA and EM&A Manual</i>				
A. Air Quality				
3.73	2.5	<p><u>Air Pollution Control (Construction Dust) Regulation & Good Site Practices</u></p> <ul style="list-style-type: none"> • Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. • Use of frequent watering for particularly dusty construction areas and areas close to ASRs. • Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering should be applied to aggregate fines. • Open stockpiles should be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations. • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site. • Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading points, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods. • Imposition of speed controls for vehicles on unpaved site roads. 8 kilometers per hour is the recommended limit. • Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs. • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides. • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed. • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system. 	Construction Site / During Construction Period	<>
B. Hazard to Life				
4.102	3.3	<p><u>Construction Phase</u></p> <ul style="list-style-type: none"> • The number of workers on site during construction stage should be kept at the same level as 	Construction Site / During Construction Period	√

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		<p>the assessment.</p> <ul style="list-style-type: none"> • Construction works should be suspended when delivery of chlorine takes place. • 3m high fence should be constructed along the boundary facing the SHWWTW. • Emergency evacuation procedures should be formulated and the Contractor should ensure all workers on site should be familiar with these procedures as well as the route to escape in case of gas release incident. Relevant Departments, such as Fire Services Department (FSD), should be consulted during the development of Emergency procedures. Diagram showing the escape routes to a safe place should be posted in the site notice boards and at the entrance/exit of site. A copy of the latest version emergency procedures should be dispatched to Tung Chung Fire Station for reference once available. • The emergency procedures should specify means of providing a rapid and direct warning (e.g. Siren and Flashing Light) to construction workers in the event of chlorine gas release in the SHWWTW. • The Contractor should establish a communication channel with the SHWWTW operation personnel and FSD during construction stage. In case of any hazardous incidents in the treatment works, operation personnel of SHWWTW should advise the Contractor to inform construction workers to proceed with emergency procedure. The Contractor should appoint a Liaison Officer to communicate with FSD Incident Commander on site in case of emergency. • Introduction training should be provided to any staff before carryout construction works at the Project site. • Periodic drills should be coordinated and conducted to ensure all construction personnel are familiar with the emergency procedures. Upon completion of the drills, a review on every step taken should be conducted to identify area of improvement. Prior notice of periodic drills should be given to Station Commander of Tung Chung Fire Station. Joint operational exercise with FSD and SHWWTW is recommended. 		
5.44	C. <i>Water Quality</i> 4.5	<p><u>Construction site run-off and general construction activities:</u> The mitigation measures as outlined in the ProPECC PN 1/94 Construction Site Drainage should be adopted where applicable.</p>	Construction Site / During Construction Period	<>
5.45	4.5	<p><u>Excavation of Soil Materials</u> The construction programme should be properly planned to minimise soil excavation, if any, in rainy seasons. This prevents soil erosion from exposed soil surfaces. Any exposed soil surfaces should also be properly protected to minimise dust emission. In areas where a large amount of exposed soils exist, earth bunds or sand bags should be provided. Exposed stockpiles should be covered with tarpaulin or impervious sheets at all times. The stockpiles of</p>	Construction Site / During Construction Period	<>

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		materials should be placed at locations away from any stream courses so as to avoid releasing materials into the water bodies. Final surfaces of earthworks should be compacted and protected by permanent work.		
5.46	4.5	<i>Accidental spillage of chemicals:</i> Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	Construction Site / During Construction Period	√
5.47	4.5	Maintenance of vehicles and equipments involving activities with potential for leakage and spillage should only be undertaken within the areas which appropriately equipped to control these discharges.	Construction Site / During Construction Period	√
5.48	4.5	Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas should be sited on sealed areas in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal.	Construction Site / During Construction Period	<>
5.49	4.5	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: <ul style="list-style-type: none"> • Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. • Chemical waste containers should be suitably labeled, to notify and warn the personnel who are handling the wastes, to avoid accidents. • Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. 	Construction Site / During Construction Period	<>
5.50		Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid entering to the nearby watercourses. Stockpiles of cement and other construction materials should be kept covered when not being used. Rubbish and litter from construction sites should also be collected to prevent spreading of rubbish and litter from the site area. It is recommended to clean the construction sites on a regular basis.	Construction Site / During Construction Period	<>
5.51	4.5	<u>Sewage Effluent</u>	Work site/ During the	√

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		The presence of construction workers generates sewage. It is recommended to provide sufficient chemical toilets in the works areas. The toilet facilities should be more than 30m from any watercourse. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.	construction period	
5.52	4.5	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the project. Regular environmental audit on the construction site can provide an effective control of any malpractices and can achieve continual improvement of environmental performance on site.	Work Site / During Construction Period	√
5.53	4.5	<p><u>Nullah Decking</u></p> <p>To minimize the potential water quality impacts from the nullah reconstruction works, the practices outlined below should be adopted where applicable:</p> <ul style="list-style-type: none"> • The proposed works should be carried out within the dry season between October and March when the flow in the open nullah is low. • The use of less or smaller construction plants may be specified to reduce the disturbance to the nullah bed. • Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from the nullah and any water courses during carrying out of the construction works. • Stockpiling of construction materials and dusty materials should be covered and located away from the nullah any water courses. • Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nullah and nearby water receivers. • Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the nullah, where practicable. • Construction effluent, site run-off and sewage should be properly collected and/or treated. • Any works site inside the nullah should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the water quality. • Proper shoring may need to be erected in order to prevent soil/ mud from slipping into the nullah and nearby watercourse. • Supervisory staff should be assigned to station 	Work Site / During Construction Period	N/A
<i>D. Waste Management</i>				
6.41	5.4	<u>Good Site Practices</u>	Work Site / During	<>

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		<p>Recommendations for good site practices during the construction phase would include:</p> <ul style="list-style-type: none"> • Obtain relevant waste disposal permits from appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354) and subsidiary Regulations and the Land (Miscellaneous Provisions) Ordinance (Cap. 28); • Provide staff training for proper waste management and chemical handling procedures; • Provide sufficient waste disposal points and regular waste collection; • Provide appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Carry out regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; • Separate chemical wastes for special handling and disposed of to licensed facility for treatment; and • Employ licensed waste collector to collect waste. 	Construction Period	
6.42	5.5	<p><u>Waste Reduction Measures</u></p> <p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> • Design foundation works that could minimise the amount of excavated material to be generated; • Provide training to workers on the importance of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; • Sort out demolition debris and excavated materials from demolition works to recover reusable/ recyclable portions (i.e. soil, broken concrete, metal etc.); • Segregate and store different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage the collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce; and • Plan and stock construction materials carefully to minimize the amount of waste to be generated and to avoid unnecessary generation of waste. 	Work Site/ During Design & Construction Period	<>
6.44	5.7	<p><u>Excavated and C&D Materials</u></p> <p>In order to minimise the impact resulting from collection and transportation of C&D material for off-site disposal, the excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below:</p> <ul style="list-style-type: none"> • A WMP, which becomes part of the Environmental Management Plan (EMP), should be prepared in accordance with ETWB TCW No.19/2005; 	Work Site/ During Design & Construction Period	√

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
6.45 - 6.46	5.8 - 5.9	<ul style="list-style-type: none"> A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) should be adopted for easy tracking; and In order to monitor the disposal of excavated and C&D material at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to ETWB TCW No. 31/2004). <p>An EMP should be prepared and implemented in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. The EMP should be submitted to the Supervising Officer (SO) and Supervising Officer's Representative (SOR) for approval. The EMP should be reviewed regularly and updated, preferably on a monthly basis.</p> <p>A system should be devised to work for on-site sorting of excavated and C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimize temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.</p>	Work Site/ During Design & Construction Period	√
6.47	5.10	<p><u>Chemical Waste</u></p> <p>Should chemical wastes be produced at the construction site, the Contractor would be required to register with EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste (such as explosive, flammable, oxidizing, irritant, toxic, harmful, or corrosive). The Contractor should employ a licensed collector to transport and dispose of the chemical wastes, to either the CWTC in Tsing Yi, or any other licensed facilities, in accordance with the Waste Disposal (Chemical Waste) General Regulation.</p>	Work Site / During Construction Period	<>
6.48	5.11	<p><u>General Refuse</u></p> <p>General refuse should be stored in enclosed bins or compaction units separated from C&D material. A licensed waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	Work Site / During Construction Period	<>
E. 7.99 & Table 7.7	<u>Landscape and Visual</u> Table 6.1	<p><u>Construction Phase</u></p> <ul style="list-style-type: none"> Topsoil, where identified, should be stripped and stored for re-use in the construction of the 	Work site/ During Design & Construction Stages	√

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location/ Timing	Status
		<p>soft landscape works, where practical</p> <ul style="list-style-type: none"> • Compensatory tree planting should be provided to compensate for felled trees. - Compensation tree species shall be chosen from both indigenous and ornamental species - Compensatory tree planting quantities shall be as per DLO approved requirement. • Control of night-time lighting • Erection of decorative screen hoarding compatible with the surrounding setting 		
<i>F. Noise</i>				
8.25	7.3	<p>Good Site Practice:</p> <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program; • Mobile plant, if any, should be sited as far from noise sensitive receivers (NSRs) as possible; • Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and • Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 	Work site/ During Design & Construction Stages	√

Remark:

- √ Compliance of Mitigation Measures
- <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- ▲ Non-compliance of Mitigation Measures but rectified by OSCAR Bioenergy JV
- Δ Deficiency of Mitigation Measures but rectified by OSCAR Bioenergy JV
- N/A Not Applicable in Reporting Period

Annex F

Waste Flow Table

**No. EP/SP/61/10 of Organic Waste Treatment Facilities Phase I
Monthly Summary Waste Flow Table**

Month	Actual Quantities of Inert C&D Materials Generated						Actual Quantities of Non-inert C&D Materials (Construction Waste) Generated					
	Total Quantity Generated	Reused in the Contract	Reused in other Projects	Hard Rocks & Large Broken Concrete	Disposed as Public Fill	Metals (see Note 1)	Paper/ cardboard packaging (see Note 1)	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse (see Note 3)		
	tonne	tonne	tonne	tonne	tonne	kilogram	kilogram	kilogram	Litre	tonne		
May 2015	29.58	0.00	0.00	0.00	29.58	0.00	0.00	0.00	0.00	0.00		
June 2015	2226.90	0.00	0.00	0.00	2226.90	0.00	0.00	0.00	0.00	9.66		
July 2015	2832.27	0.00	0.00	0.00	2832.27	0.00	0.00	0.00	0.00	33.68		
August 2015	6657.25	0.00	0.00	0.00	6657.25	0.00	20.00	0.00	0.00	55.06		
September 2015	5467.05	0.00	0.00	0.00	5467.05	3480.00	0.00	0.00	0.00	83.81		
October 2015	5419.04	0.00	0.00	0.00	5419.04	18710.00	0.00	0.00	0.00	20.45		
November 2015	1375.26	0.00	0.00	0.00	1375.26	21610.00	0.00	0.00	0.00	17.38		
December 2015	2199.56	75.28	0.00	0.00	2124.28	0.00	41.00	0.00	0.00	21.83		
January 2016	4601.43	0.00	0.00	0.00	4601.43	18140.00	50.00	0.00	640.00	20.86		
February 2016	4167.01	0.00	0.00	0.00	4167.01	510.00	79.00	0.00	0.00	16.57		
March 2016	299.92	41.28	0.00	0.00	258.64	22320.00	75.00	0.00	0.00	22.69		
April 2016	3186.37	98.37	0.00	0.00	3088.00	60690.00	77.00	0.00	255.00	37.63		
May 2016	1612.33	63.41	0.00	0.00	1548.92	13490.00	35000.00	0.00	0.00	40.76		
June 2016	1144.73	30.43	0.00	0.00	1114.30	14600.00	120.00	0.00	0.00	58.34		
July 2016	662.76	0.00	0.00	0.00	662.76	13370.00	0.00	0.00	0.00	40.48		
August 2016	391.88	0.00	0.00	0.00	391.88	18660.00	84.00	0.00	0.00	61.91		
September 2016	324.35	0.00	0.00	0.00	324.35	56800.00	2780.00	0.00	0.00	138.25		
October	1561.82	0.00	39.00	0.00	1522.82	40000	9300.00	0.00	700.00	114.47		
November	897.23 (See Note 4)	507.94	00.00	0.00	389.76	0.00	123000.00	0.00	0.00	154.22		

Total	45074.12	816.24	39.00	0.00	44218.88	302380.00	170626.00	0.00	1595.00	948.05
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- Notes:
- (1) Metal and paper/cardboard packaging were collected by recycler for recycling.
 - (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material collected by recycler for recycling.
 - (3) General refuse was disposed of at NENT by subcontractors.
 - (4) In total, 897.23 tonnes of inert C&D material were generated from the Project, of which the 389.76 tonnes were disposed as public fill to Fill Bank at Tuen Mun Area 38 in reporting period.

Annex G

Environmental Complaint,
Environmental Summons
and Persecution Log

Annex G Cumulative Complaint and Summons/Prosecutions Log

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
May 2015	0	0
June 2015	0	0
July 2015	0	0
August 2015	0	0
September 2015	0	0
October 2015	0	0
November 2015	0	0
December 2015	0	0
January 2016	0	0
February 2016	0	0
March 2016	0	0
April 2016	0	0
May 2016	0	0
June 2016	0	0
July 2016	0	0
August 2016	0	0
September 2016	0	0
October 2016	0	0

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
November 2016	0	0
Overall Total	0	0

Annex H

Investigation Report of Environmental Non- Compliance

OSCAR Bioenergy Joint Venture

Contract No. EP/SP/61/10
Organic Waste Treatment Facilities
Phase 1:
Non-Compliance Investigation Report

27 September 2016

Environmental Resources Management

16/F, Berkshire House,
25 Westlands Road,
Quarry Bay, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
<http://www.erm.com>



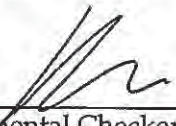
INVESTIGATION REPORT

OSCAR Bioenergy Joint Venture

Contract No. EP/SP/61/10
Organic Waste Treatment Facilities
Phase 1:
Non-Compliance Investigation Report

27 September 2016

Reference 0279222

For and on behalf of ERM-Hong Kong, Limited	
Approved by:	Frank Wan
Signed:	
Position:	Partner
Certified by:	 (Environmental Team Leader - Mandy To)
Certified by:	 (Independent Environmental Checker - Helen Cochrane)
Date:	27 September 2016

Investigation Report of Environmental Non-Compliance

Date	25 Aug 2016
Time	09:45 a.m.
Monitoring Location	Temporary waste water treatment facilities at P1 of the Site (Detailed location and photos shown on the marked drawing DR-PSC-00-0CN-1005 attached as Appendix A)
Weather	Fine
Parameter	Water (WPCO Effluent Discharge License attached as Appendix B)
Incident Description	<ol style="list-style-type: none"> 1. Po Shing is OSCAR's civil work subcontractor who is responsible to construct, operate and maintain the site waste water treatment facilities. 2. In mid-August 2016, OSCAR requested Po Shing to replace the honeycomb filter of a sedimentation tank in order to ensure the site waste water treatment facilities can maintain its performance. 3. On 25 August 2016, Po Shing assigned a worker to carry out some preparation works for filter replacement by using some water to clean the sedimentation tank (Cleaning procedure attached as Appendix C). 4. During the cleaning process, the labour mistakenly disconnected the piping between the sedimentation tank and the subsequent waste water treatment tank. 5. The washing water flowed out through the overflow pipe to the ground. 6. Some of excess washing water eventually split into the Nullah for about 5 minutes. 7. Sand bag were provided along the edge of Nullah since March 2016 to avoid surface runoff entering the Nullah from P1 (Photos attached as Appendix D). During the incident period, the sand bags were still placed there.
Action Taken / Action to be Taken	<ol style="list-style-type: none"> 1. Upon becoming aware of this incident, OSCAR immediately stopped the cleansing process and all operations relating to the waste water treatment tank in the morning of 25 August 2016. 2. Two water samples had been taken under the supervision of EPD's and ER's representatives. The first water sample was taken at the discharge point on 25 August

	<p>2016 and failed to pass the standards stipulated in the WPCO Effluent Discharge License. A second water sample was taken on 9 September 2016 which complied with the standards in the WPCO Effluent Discharge License. (The laboratory testing reports were attached as Appendix E).</p> <ol style="list-style-type: none"> 3. During the period where the wastewater treatment plant was not in operation, effluent was firstly collected in a sump pit for participation and soak away before pumping to the sedimentation tank. 4. Cleaning process will be resumed once training is provided. During cleaning, all works will be carried out under close supervision of the assigned competent persons. 5. Contractor will use concrete to properly cover all the sand bags and stabilize the sands dropped from broken sand bags to avoid the sands washed into the Nullah by surface runoff.
<p>Remedial Works and Follow-up Actions</p>	<p>After the event, OSCAR immediately enforce the following actions to prevent the recurrence of the similar incident:</p> <ol style="list-style-type: none"> 1. In-House Rule A set of in-house rules to govern the procedures of operation and maintenance for the waste water treatment system will be prepared and strictly imposed on site, which include the designation of competent person and the correct method of cleaning the tanks. 2. Training Training has been provided to the site personnel for the operation and maintenance of the waste water treatment system, particularly during maintenance and dismantling any part of the waste water treatment system (Training record is attached as Appendix F). 3. Supervision OSCAR will assign site supervisor to monitor future filter replacement works to ensure that all washing water will be retained in the waste water treatment tank and treated before discharge.

OSCAR Bioenergy Joint Venture
EP/SP/61/10 - Organic Waste Treatment Facilities Phase 1

	Operation of the wastewater treatment plant will be resumed upon notification to the Independent Consultant and the Engineer Representative.
--	--

Prepared by: Leah Pak, ET representative

Date 28-September-2016

Appendix A

Project Layout



shows the Waste Water Treatment Facility and DSD Nullah



Appendix B

WPCO Effluent Discharge License

本署檔號
Our Ref.: (11) in EP/RW/0000372289
來函檔號
Your Ref.:
電話
Tel. No.: 2417 6064
電子郵件
E-mail:
圖文傳真
Fax. No.: 2411 3073
網址
Homepage: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (West)
8/F, Tsuen Wan Government Offices,
38 Sai Lau Kok Road,
Tsuen Wan, New Territories



環境保護署
環保法規管理科
區域辦事處(西)
新界荃灣西樓角路38號
荃灣政府合署8樓

BY REGISTERED POST

OSCAR Bioenergy Joint Venture
2801 Island Place Tower,
510 King's Road,
North Point, Hong Kong

21 MAY 2015

Dear Sir / Madam,

Water Pollution Control Ordinance (WPCO)
Western Buffer Water Control Zone
Issue of Licence

I refer to your application for a licence made under section 19 of the Ordinance for the discharge/deposit from your premises as stated in the licence. Further to your payment of the licence application fee on 14.05.2015, a licence pursuant to Section 20 is enclosed. Your attention is drawn to the details, terms and conditions subject to which the licence is granted. You should note in particular, the stipulated sampling, treatment and disposal requirements and should also read the notes at the back of the licence.

Please note that the granting of this licence to you does not imply that the discharge from your premises is in compliance with the required standards as stipulated in the licence. It is your responsibility to ensure that the terms and conditions of the licence are complied with.

You are reminded that it is an offence to contravene any of the provisions specified in the licence. The offender is liable to a fine of \$200,000 and to imprisonment for 6 months.

If you are aggrieved by any of the terms and conditions of the licence, you may appeal to the Appeal Board by lodging a notice of appeal under Section 29 in the prescribed manner and form within 21 days after receipt of this licence.

Should you have any enquiry, please feel free to contact Mr. Y.H. LAW at 2417 6086.

Yours faithfully,

(LAM Ka-ho)

for Director of Environmental Protection

Encl.: Discharge Licence

本署檔號
Our Ref.: (11) in EP/RW/0000372289
來函檔號
Your Ref.:
電話
Tel. No.: 2417 6064
電子郵件
E-mail:

圖文傳真
Fax. No.: 2411 3073
網址
Homepage: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (West)
8/F, Tsuen Wan Government Offices,
38 Sai Lau Kok Road,
Tsuen Wan, New Territories



環境保護署
環保法規管理科
區域辦事處(西)
新界荃灣西樓角路38號
荃灣政府合署8樓

掛號郵件

OSCAR Bioenergy Joint Venture
香港北角英皇道 510 號
港運大廈 2801 室

先生 / 女士：

水污染管制條例 西部緩衝區水質管制區 發出排污牌照事宜

就閣下根據上稱條例第19條及牌照上所述地址所排放污水或沉積物而向本署遞交的牌照申請，本署於二零一五年五月十四日收到有關的牌照申請費用。現寄上根據本條例第20條而簽發的牌照。敬請留意發牌的細則、條件及規定，尤須注意有關取樣、處理及排放等事宜之規定。另請細讀牌照背頁的附註。

獲簽發此牌照並非表示排出的污水或污染物質已達到牌照中所規定的要求標準。閣下必須採取必要措施以確保能符合牌照中的條款。

請注意，任何人違反本牌照的任何條文，即屬犯罪，可處罰款二十萬元及監禁六個月。

假使閣下對牌照內所載條件及規定有所不滿，可於收到本牌照後21天內，按第29條的規定，以指定的方式及表格，向上訴委員會遞交上訴通知及提出上訴。

如有查詢，請致電 2417 6086 與本署的羅銳雄先生聯絡。

環境保護署署長
(林嘉豪 代行)

附件：排污牌照



Licence No. : WT00021482-2015
牌照編號 :

This Licence is Valid to : 31/05/2020
本牌照有效期至 : 二零二零年五月三十一日

ENVIRONMENTAL PROTECTION DEPARTMENT
環境保護署
WATER POLLUTION CONTROL ORDINANCE (CAP. 358)
水污染管制條例(第358章)
LICENCE PURSUANT TO SECTION 15-20/23A*
按第15-20/23A*條簽發的牌照

The Director of Environmental Protection ("the Authority") grants this licence under the Water Pollution Control Ordinance ("the Ordinance") on the terms and conditions stated below.

環境保護署署長(「監督」)按下列的條款及條件，根據水污染管制條例(「本條例」)批給此牌照。

21 MAY 2015

Date
日期

(LAM Ka-ho)
For the Authority

監督 (林嘉豪 代行)

PART A 甲部 : GENERAL TERMS 一般條款

Name of Licensee ("the Licensee") 持牌人名稱(「持牌人」)	SITA Waste Services Limited, ATAL Engineering Limited and Ros-Roca, Sociedad Anonima jointly trading as OSCAR Bioenergy Joint Venture 昇達廢料處理有限公司、安樂工程有限公司及Ros-Roca, Sociedad Anonima 聯合經營的OSCAR Bioenergy Joint Venture
Discharge Premises ("the premises") 排放處所(「處所」)	Works Area at Portion 1 and 2 of the Construction Site of Organic Waste Treatment Facilities Phase 1 at Sham Fung Road, Siu Ho Wan, Lantau Island, Hong Kong (Contract No.: EP/SP/61/10) 香港大嶼山小蠔灣深豐路有機資源回收中心第1期的建築地盤工作區的第1和第2部分(合約編號: EP/SP/61/10)
Water Control Zone 水質管制區	North Western 西北部
Discharge Category 排放種類	Discharge of Industrial /-Commercial / Institutional* Trade Effluent 工業/商業/機構* 污水排放
Nature of Discharge and Wastewater Treatment Facilities 排放性質及廢水處理設施	Effluent Arising from Construction Site 由建築地盤所產生的廢水 Sedimentation Tank 沉澱池
Discharge Point(s) 排放點	Communal Storm Drain 公用雨水渠
Sampling Point(s) 取樣點	Discharge Outlet of Sedimentation Tank 沉澱池的出水口

*Delete as appropriate
將不適用者刪去

PART B 乙部 : SPECIFIC CONDITIONS 特別條件

B1. Limitations on Discharge 排放限制

The quantity and composition of any discharge from the premises shall not exceed the limits stated in the table below^(Note a). All figures are upper limits unless otherwise indicated. All units are expressed as concentration in milligramme per litre unless otherwise stated.

任何源自處所之排放的量和成份不得超過下表所列的限度^(附註a)。除另予表明外，所有數字均為上限。除另予說明外，所有單位均以毫克/升的濃度表示。

Determinand 測量物	Limit 限度
Flow Rate (m ³ /day) 流量 (立方米 / 日)	40
pH (pH units in range) 酸鹼值(pH 單位上下限)	6-9
Suspended Solids 懸浮固體	30
Chemical Oxygen Demand 化學需氧量	80

B2. Self-monitoring and Reporting 自行監測及報告

- The Licensee shall perform self-monitoring as and when required by the Authority.
持牌人須在監督要求時進行自行監測。
- The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses in accordance with the sample type and measurement frequency specified for each determinand named below:-
持牌人須在取樣點為排放抽取樣本，並依照下列指定的測量物、取樣形式及頻率，自資予以分析。

<u>Determinand 測量物</u>	<u>Unit 單位</u>	<u>Sample Type 取樣形式</u>	<u>Frequency 頻率</u>
Suspended Solids 懸浮固體	mg/L 毫克/升	Grab 隨意取集	Quarterly 每三個月

Results of these monitoring shall be summarized in a report on a ~~monthly~~ / ~~bi-monthly~~ / quarterly * basis and shall be submitted to the Authority.

所有監測結果須以摘要形式，每一個月/兩個月/三個月*作出報告，並須呈交監督審閱。

*Delete as appropriate
將不適用者刪去

C 丙部 : STANDARD CONDITIONS 標準條件

1. The Discharge 排放

C1.1 The discharge shall not contain polychlorinated biphenyls (PCB), polyaromatic hydrocarbon (PAH), fumigant, pesticide or toxicant, chlorinated hydrocarbons, flammable or toxic solvents, calcium carbide; any substance likely to damage the sewer or to interfere with any of the treatment processes, or to be harmful to the health and safety of any personnel engaged in the operation or maintenance of a sewerage system; waste liable to form scum or deposits in any part of the drainage or sewerage system, or the waters of Hong Kong; waste liable to form discolouration in any parts of the waters of Hong Kong; sludge, floatable substances or solids larger than 10 mm; and sludge or solid refuse of any kind.

排放不得含有多氯聯苯、聚芳烴、薰蒸劑、殺蟲劑或毒劑、氯化烴、可燃的或有毒的溶劑、碳化鈣；會損毀污水渠結構或干擾任何處理程序的物質，或有損操作及維修排污系統人員健康及安全的任何物質；足以及在排水或排污系統，或香港水域任何範圍內形成浮渣或沉積物的廢物；足以及在香港水域任何範圍內形成變色的廢物；污泥、漂浮物質或體積超越 10 毫米的固體；及任何種類的污泥或固體垃圾。

C1.2 No discharge shall bypass the wastewater treatment facilities, the Sampling Point(s) or the Discharge Point(s) unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternative exists.

除非避免人命傷亡或嚴重財物損失或無其他可行代替辦法，排放不得繞流不經其廢水處理設施，取樣點或排放點。

C1.3 Dilution of the discharge to achieve compliance with the limits contained in this licence is prohibited.

不得將排放稀釋，以求達到本牌照內所訂的限度。

C2. Flow Measurement 量度流量

The Licensee shall determine the flow rate of the discharge by installing, operating and maintaining a continuous flow measuring device with an accuracy certified by its manufacturer to be within plus or minus 3 percent of the actual flow, and calibrating the flow measuring device regularly according to manufacturer's recommendations. If no such device is installed, the Licensee shall determine the flow rate through using calculation methods agreed by the Authority, by making reference to the amount of water used in the premises being served by mains supply and other sources, less process consumption and any other losses.

持牌人必須設置、操作及保養一個連續性流量計作為測定排放的流量率之方法，其準確程度須經製造商證實為不超逾或低於真正流量的 3%，並應根據製造商建議的方法，定期校準流量計。如沒有設置該設備，持牌人須依照監督同意的計算方法，根據處所由自來水及其他水源供應的總用水量減去工序耗水量及其他耗水量來測定流量率。

C3. Treatment 處理

C3.1 The Licensee shall provide necessary wastewater treatment facilities, and shall engage personnel with adequate qualification and experience to properly operate and maintain all wastewater treatment facilities at all times. Standby equipment shall be provided to guard against failure of major treatment equipment.

持牌人須提供必需的廢水處理設施，並須僱用有足夠資格及經驗的人士，時常妥善操作及保養所有廢水處理設施。主要處理設施須配有後備裝置，以應付故障發生。

C3.2 In the event of loss of efficiency of operation, or failure of all or part of the wastewater treatment facility, the Licensee shall take all reasonable steps to the extent necessary to maintain compliance with this licence. Such steps shall remain until operation of the wastewater treatment facility is restored or an alternative method of treatment is provided.

倘若部份或整個廢水處理設施操作失靈或發生故障，持牌人須採取所有必要的合理措施，以求達到符合本牌照的規定。此等措施須維持至廢水處理設施恢復如常操作或有其他代替的處理方法可供採用為止。

C3.3 If the wastewater treatment facilities are not properly operated and maintained to the satisfaction of the Authority, the Licensee shall take immediate and effective remedial actions as required by the Authority.

倘若廢水處理設施的操作及保養未能令監督滿意，持牌人須按監督之規定，採取即時及有效的補救行動。

C4. Disposal 棄置

Sludges, screenings, solids, oil and grease, filter backwash, or other pollutants removed in the course of treatment shall be disposed of in a proper manner^(Note b & c).

處理過程中所產生的污泥、隔濾物、固體、油脂、過濾器回洗或其他污染物，必須妥善地棄置^(附註 b 及 c)。

C5. Monitoring 監測

- C5.1 The Licensee shall provide and maintain suitable facility such as an inspection chamber, manhole sampling valve at each Sampling Point to enable duly authorized officer(s) of the Authority to take samples of the discharge at any time from the premises.
持牌人須在每一個取樣點提供及保養適當的設施，例如檢查槽，沙井或取樣閥，以確保獲監督授權的人員隨時可在處所內抽取排放樣本。
- C5.2 For self-monitoring, “grab samples” shall be taken during the period when the determinand to be analyzed for is likely to be present in its maximum concentration. “Composite samples” shall include samples taken over daily duration of the discharge.
在自行監測中，「隨意取集樣本」須在測量物的濃度很可能是最高的那段時間內抽取。「綜合樣本」須包含在每日排放期間不同時候所抽取的樣本。
- C5.3 For self-monitoring, all samples shall be analyzed in accordance with the most updated analytical methods used by the Government Chemist ^(Note d).
在自行監測中，所有樣本均須按照政府化驗師所採用的最新分析方法予以分析^(附註 d)。

C6. Records and Reporting 紀錄及報告

- C6.1 The Licensee shall keep the following records in the premises for inspection by duly authorized officer(s) of the Authority:
持牌人須在處所內保存下列紀錄，以備獲監督授權的人員隨時查閱：
- (i) records of flow rate, nature and composition of the discharge;
排放流量率、性質及成份的紀錄；
 - (ii) updated records of all monitoring information, including all laboratory analytical results relating to samples taken, all original chart recordings for continuous flow and pH monitoring; and
所有最新監測資料的紀錄，包括所有關於已取樣本的檢驗分析結果、所有連續性流量及酸鹼值監測記錄圖表的正本；及
 - (iii) records of all desludging and degreasing operation, and records of corresponding disposal operation.
所有清除污泥和清理隔油池廢物工序的紀錄，及其棄置工序的紀錄。

Copies of all such records shall be submitted to the Authority upon request.

在監督要求時，須向監督呈交所有該等紀錄的副本。

- C6.2 The Licensee shall notify and explain to the Authority within 24 hours upon the occurrence of an accidental discharge or any emergency bypass or an overflow of untreated effluent or an operation upset which places the discharge in a temporary state of non-compliance with this licence. The Licensee shall within 7 days following the incident, submit to the Authority a detailed report in writing on the cause and duration of the non-compliance and steps taken or to be taken to reduce, eliminate, or prevent recurrence of such non-compliance. Reporting in accordance with this Condition does not relieve the Licensee of any obligations imposed by this licence.
倘若有未經處理的污水意外排放、緊急繞流或溢滿的事件或操作失靈，引至排放出現短暫不符合牌照規定的情況，持牌人須在事發後 24 小時內立即知會監督並予以解釋。持牌人須在事故發生後 7 天內，以書面報告，詳述事件的起因、違反牌照條件的時間及為減少、消除或防止類似事件再次發生所採取或將會採取的措施，送交監督審閱。然而，按照本條件的規定提交報告並不表示持牌人可獲免除承擔本牌照內所載的任何責任。

C7. Operation Manual 操作手冊

The Licensee shall prepare an operation manual which shall include, as a minimum, operating procedures, inspection programme and repair and maintenance programme for the wastewater treatment facilities. The operation manual shall be kept at the aforesaid wastewater treatment facilities and a copy of the manual shall be submitted to the Authority upon request.

持牌人須擬備廢水處理設施的操作手冊。手冊內容須最低限度包括操作程序、檢查、維修及保養工作計劃表。該手冊須保存在上述廢水處理設施內。持牌人須在監督要求時，呈交手冊副本乙份。

C8. Notification of Change 更改通知

The Licensee shall notify the Authority in writing within 14 days of any changes or proposed changes in the processes of manufacture or the nature of the raw materials used or of any other circumstances which may alter the nature and composition of the discharge or may result in the permanent cessation of the discharge.

倘若持牌人更改或擬更改其生產程序、或所用原料的性質、或有其他足以改變其排放的性質及成份或可導致永久性終止排放的事情，必須在 14 日內以書面通知監督。

- (a) For the purposes of determining compliance with the limits stated in Specific Condition B1, samples shall be taken by the duly authorized officer(s) of the Authority at the Sampling Point(s) or any other points from which the samples so taken are regarded by the Authority as being representative of the quality of the discharge. When any single sample analyzed for a determinand is proved not complying with corresponding limit set out in the table, the discharge is deemed to have failed to comply with Specific Condition B1.
為確定排放是否符合特別條件第 B1 項內所列的限度，獲監督授權的人員須在取樣點或在監督認為可以抽取到具代表性的樣本的任何其他位置抽取樣本。只要在任何一個經分析的樣本中，證實任何一個測量物不符合表中所列的相應限度時，排放即被視為不符合特別條件第 B1 項。
- (b) An example of proper disposal method for sludge is sending dewatered sludge to landfill for disposal.
妥善棄置污泥方法中的一個例子是將脫水後的污泥運往堆填區棄置。
- (c) Proper disposal of grease trap waste includes but is not limited to employing any reputable firm or collector who will use the right equipment and dispose of the collected grease trap waste at West Kowloon Transfer Station. The updated list of grease trap waste collectors who are using the disposal service at West Kowloon Transfer Station is maintained in the EPD website and Green Restaurant website.
妥善的隔油池廢物棄置方法包括卻不限於聘用任何信譽良好的公司／收集商使用適當的設備在西九龍廢物轉運站棄置所收集的隔油池廢物。環保署網站及環保食肆網均載有目前使用西九龍廢物轉運站棄置隔油池廢物的收集商最新名單。
- (d) The Licensee may make reference to Annex 1 of the <Technical Memorandum on Effluent Standards> for analytical methods used by the Government Chemist.
持牌人可參照「流出物標準技術備忘錄」附件 1 有關政府化驗師所採用的分析方法。
- (e) The Licensee shall keep this licence in the premises and make it available at all times for inspection by duly authorized officer(s) of the Authority.
持牌人須在處所內保存此牌照，以備獲監督授權的人員隨時查閱。
- (f) (i) The Licensee shall allow duly authorized officer(s) of the Authority to enter the premises for the purposes of inspection, sampling, records examination or any other duties authorized by Section 37 and Section 38 of the Ordinance.
持牌人須准許獲監督授權的人員進入處所內進行檢查、抽取樣本、審查紀錄或執行其他根據本條例第 37 及第 38 條所授權的職務。
(ii) Where the premises has security measures in force which would require proper identification and clearance before entry, the Licensee shall make necessary arrangements such that upon presentation of evidence of identity and of authorization, duly authorized officer(s) will be permitted to enter, without delay, for the purposes of performing duties.
倘若由於處所的保安理由而需先行鑑定來人的身份，持牌人必須作出必要的安排，以便獲授權人員在出示身份證明及授權文件後，即可內進執行其職務而不致受延誤。
- (g) (i) For a licence granted under Section 15 of the Ordinance, the Licensee may, not less than 2 months before expiry of the licence, apply under Section 19 of the Ordinance for a new licence. The Authority may grant the licence or otherwise.
持有根據本條例第 15 條所批給牌照的人士，可於牌照屆滿前不少於 2 個月內，根據本條例第 19 條的規定，申請一面新牌照。監督可批給或拒絕批給牌照。
(ii) For a licence granted under Section 20 or 23A of the Ordinance, the Licensee may, not more than 4 months and not less than 2 months before expiry of the licence, apply under Section 23 or 23A respectively of the Ordinance for renewal of licence. The Authority may renew the licence or otherwise.
持有根據本條例第 20 條或第 23 A 條所批給牌照的人士，可於牌照屆滿前不多於 4 個月及不少於 2 個月內，根據本條例的第 23 或 23 A 條的規定，申請牌照續期。監督可將牌照續期或拒絕將牌照續期。
- (h) Under Section 24 of the Ordinance, the Authority may by notice in writing, impose new or amended terms and conditions on this licence or cancel this licence. Under Section 25, 26 and 27 of the Ordinance, a Licensee whose licence has been so varied or cancelled may be entitled to compensation.
根據本條例第 24 條的規定，監督可以書面通知，向本牌照施加新訂或經修訂的條款及條件，或取消本牌照。根據本條例第 25、26 及 27 條的規定，被更改或取消牌照的持牌人可能會獲得補償。
- (i) Under Section 28 of the Ordinance, the Licensee may apply to the Authority for a variation of this licence.
根據本條例第 28 條的規定，持牌人可向監督申請更改本牌照。
- (j) Under Section 49 of the Ordinance, this licence shall not be construed as a dispensation from the requirements of any other Ordinance except where that other Ordinance so provides.
根據本條例第 49 條的規定，本牌照並不得解釋為豁免符合任何其他條例的規定，除非該其他條例如此訂定。

Appendix C

Cleaning Procedure of Treatment Tank

Cleaning Procedure Treatment Tank 清洗環保缸的程序

update: 18 Jul., 16

1.	<p>The Treatment Tank will be cleaned thoroughly every three months or when the turbidity of the discharge is not satisfactory. 該處理設施會定期每三個月，或排水過於污濁時進行清洗。</p>
2.	<p>Close all the inlet and outlet valves of the Treatment Tank. 關閉接駁水缸出入水口。</p>
3.	<p>Employ a sewer sucking truck to remove all the residue sludge and water in the tank. 吸漿車放吸喉，開動水泵，進行吸漿。</p>
4.	<p>The sewer sucking truck will dispose the contents of the tank to TKO137 Fill Bank in accordance with the waste disposal regulations. 完成後，該吸漿車會前往將軍澳 137 公眾填料區傾倒。</p>
5.	<p>After the cleaning of the Tank, the first batch of treated waste water will be directed to the sedimentation tank for more than 10mins. (depends on site conditions) 如洗缸後地盤需要排水，排水需經軟喉引流回沉澱缸，排放約 10 分鐘(根據實際情況而定)。</p>
6.	<p>The remaining treated waste water will either be discharged at the discharging point as stated in the “Discharging License”, or return to the sedimentation tank. 處理經過的水缸水，可引流回沉澱缸，或排放出地盤。</p>
7.	<p>Record the time taken for discharging operation and estimate the quantity of discharge. 紀錄排水量、時間。</p>
8.	<p>Repeat item 1. 重覆項目 1。</p>
Note	<p>In case of inclement weather whereas the size of catchment, treatment and storage cannot handle the runoff, the overflows will be collected and circulate to the treatment tank with appropriate piping system. 如遇大雨/過量存水，過量的水會經軟喉引導回啡缸，循環來回。</p>

Appendix D

Sand Bag Photo



March 2016



August 2016



September 2016

Appendix E

Water Sample Laboratory Report



CERTIFICATE OF ANALYSIS

Client	: ATKINS CHINA LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 2
Contact	: MS EVA KEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1634365
Address	: 13/F, WHARF T&T CENTRE, HARBOUR CITY, TSIM SHA TSUI, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: eva.keung@atkinsglobal.com	E-mail	: Richard.Fung@alsglobal.com		
Telephone	: +852 2972 1553	Telephone	: +852 2610 1044		
Facsimile	: +852 2890 6343	Facsimile	: +852 2610 2021		
Project	: ORGANIC WASTE TREATMENT FACILITIES PHASE 1	Quote number	: ----	Date Samples Received	: 25-AUG-2016
Order number	: ----			Issue Date	: 05-SEP-2016
C-O-C number	: ----			No. of samples received	: 1
Site	: ----			No. of samples analysed	: 1

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 25-AUG-2016 to 02-SEP-2016.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1634365

Sample(s) were received in ambient condition.
Water sample(s) analysed and reported on an as received basis.

This report may not be reproduced except with prior written approval from the testing laboratory.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	Position	Authorised results for
Fung Lim Chee, Richard	General Manager	Inorganics



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	Client sample ID		Unit
		LOR	Client sampling date / time	
EA/ED: Physical and Aggregate Properties				
EA002: pH Value	----	0.1		pH Unit
EA025: Suspended Solids (SS)	----	2		mg/L
EP: Aggregate Organics				
EP026C: Chemical Oxygen Demand	----	5		mg/L

SAMPLE 1
 [25-AUG-2016]
 HK1634365-001



CERTIFICATE OF ANALYSIS

Client	: ATKINS CHINA LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 2
Contact	: MS EVA KEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1636761
Address	: 13/F, WHARF T&T CENTRE, HARBOUR CITY, TSIM SHA TSUI, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: eva.keung@atkinsglobal.com	E-mail	: Richard.Fung@alsglobal.com		
Telephone	: +852 2972 1553	Telephone	: +852 2610 1044		
Facsimile	: +852 2890 6343	Facsimile	: +852 2610 2021		
Project	: ORGANIC WASTE TREATMENT FACILITIES PHASE 1	Quote number	: ----	Date Samples Received	: 09-SEP-2016
Order number	: ----			Issue Date	: 20-SEP-2016
C-O-C number	: ----			No. of samples received	: 1
Site	: ----			No. of samples analysed	: 1

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is: 09-SEP-2016 to 19-SEP-2016.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK1636761

Sample(s) were received in ambient condition.
Water sample(s) analysed and reported on an as received basis.

This report may not be reproduced except with prior written approval from the testing laboratory.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	Position	Authorised results for
Fung Lim Chee, Richard	General Manager	Inorganics



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	Client sample ID		Unit	Value
		LOR	Client sampling date / time		
EA/ED: Physical and Aggregate Properties					
EA002: pH Value	----	0.1		pH Unit	8.1
EA025: Suspended Solids (SS)	----	2		mg/L	<2
EP: Aggregate Organics					
EP026C: Chemical Oxygen Demand	----	5		mg/L	<5

Appendix F

Training Record

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	08:45am-09:00am					
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Training Tutor Signature (Safety):						
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Au Chi Ming	歐志明	HRMK0110910	23/2/2019	OSCAR	吊機机手	*	*
2	Ma Kin Kong	馬健剛	HRJD0103562R	9/9/2016	OSCAR	管工	*	*
3	Chan Chi Yan	陳智仁	HRJD0191846R	20/10/2018	OSCAR	焊工	*	*
4	Fung Yuet Keung	馮越強	HRYL0092302R	22/1/2017	OSCAR	焊工	*	*
5	Tam Kai Tong	譚啓棠	SCW01109083R	17/2/2017	OSCAR	工人	*	*
6	Chow Kam-Sui	周金水	GC-245994R	12/12/2016	OSCAR	工人	*	*
7	Chu Chun Fat	朱振發	HRMK0115297	18/4/2019	OSCAR	工人	*	*
8	Cheng Ngai Wang	鄭毅弘	GC-355630R	17/11/2017	OSCAR	管工	*	*
9	Zhou Qingsheng	周慶生	HRJD0194348R	4/11/2018	OSCAR	工人	*	*
10	Li Kwok Ning (Vicky)	李國寧	HRJD0159520	11/3/2018	OSCAR	工人	*	*

榮興

3

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	08:45am-09:00am					
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Training Tutor Signature (Safety):						
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Wong So Chai	黃蘇仔	GC-247005R	21/7/2017	OSCAR	工人	*	*
2	Cheung Hoi Lun	張海輪	HRYL0140773R	8/7/2018	OSCAR	金棚大王	*	*
3	Chow Shu Hei	周樹喜	HRJD0131456R	31/8/2017	OSCAR	工人	*	*
4	Leung Tsz Lung	梁子龍	SCW99155392R	6/11/2018	OSCAR	工人	*	*
5	Lee Wah Yi	李華兒	HRYL0154977R	17/12/2018	OSCAR	工人	*	*
6	Chui Ka Wai	徐家偉	HRYL0102934R	10/5/2017	OSCAR	工人	*	*
7	So Sam Tai	蘇三弟	SCW03176784R	28/2/2019	OSCAR	工人	*	*
8	Chow Kau	周九	HRYL0112539R	22/8/2017	OSCAR	工人	*	*
9	Chow Tai Hei	周帶喜	HRJD0117132R	31/3/2017	OSCAR	工人	*	*
10	Chow Kam Wah	周錦華	HRYL0096515R	8/6/2017	OSCAR	工人	*	*

榮興

(4)

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk- / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016							
Safety Toolbox Talk topic:	----- Environmental Toolbox Talk Topic: 污水處理							
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee							
Training Tutor (Environmental):	Grant Hui / Ruby Law							
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	SO TAI KAN	蘇大根	HRKT0024688R	27/04/2017	宏宗(保成)	普通工人	*	*
2	TSOI WAI NAM	蔡偉南	HRYL0039957R	26/04/2017	宏宗(保成)	電氣裝配工	*	*
3	LAM SHEIR MING	林社明	HRTW0012214	27/08/2016	宏宗(保成)	普通工人	*	*
4	YIP HING TIN	葉慶典	HRYL0116694R	10/10/2017	宏宗(保成)	普通工人	*	*
5	LI YEN TUN	李炎敦	SC130126Y0123	25/01/2016	宏宗(保成)	普通工人	*	*
6	Lin Yuliu	林玉流	HRTW0056965	10/4/2017	宏宗(保成)	普通工人	*	*
7	HOI-SZE-MING	蔡思明	HRYL0138411R	14/06/2018	宏宗(保成)	普通工人	*	*
8	CHAN MUK TUNG	陳木東	HRTW0062224R	12/08/2017	宏宗(保成)	操作工(挖掘機)	*	*
9	Tsang Kam Fai	曾錦輝	HRMK0033273R	12/08/2018	宏宗(保成)	操作工(挖掘機)	*	*
10	TSUI SHEUNG KEUNG	徐常強	HRJD0051106R	24/03/2015	宏宗(保成)	普通工人	*	*

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:		Time (Safety):						
Safety Toolbox Talk topic:		Time (Environmental):						
Training Tutor (Safety):		Environmental Toolbox Talk Topic:						
Training Tutor (Environmental):		Training Tutor Signature (Safety):						
		Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	XU YANGZHI	徐楊志	HRJD0077520R	11/12/2015	宏宗(保成)	普通工人	*	*
2	Chow Chun Tim	周根添	HRJD0103445R	15/01/2017	宏宗(保成)	普通工人	*	*
3	Lam Pui-Chung	劉沛松	HRJD0131364R	8/7/2017	宏宗(保成)	普通工人	*	*
4	Mak Chun Shu	麥振樞	HRJD0132721R	15/07/2017	宏宗(保成)	普通工人	*	*
5	Lam Shui-Po	林水波	HRTW0071829R	26/02/2018	宏宗(保成)	普通工人	*	*
6	Wong Ping	王平	HRJD0161127R	12/4/2018	宏宗(保成)	挖掘操作工	*	*
7	Chan Wai Kwong	陳偉光	HRJD0161128R	27/04/2018	宏宗(保成)	普通工人	*	*
8	KAM KIT CHOI	甘傑財	HRJD0054842R	21/04/2017	宏宗(保成)	普通工人	*	*
9	LAW KA LAU	羅家流	HRJD0158955R	27/04/2018	宏宗(保成)	普通工人	*	*
10	TSANG KWONG YUEN	曾廣淵	HRKT0032087	22/08/2015	宏宗(保成)	普通工人	*	*

東方

6

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	-----					
Safety Toolbox Talk topic:	-----	Time (Environmental):	08:45am-09:00am					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Safety):	-----					
Training Tutor Signature (Environmental):	-----							
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Wong Po Cheung	黃保祥	HRTW0044737R	7/7/2016	宏宗(保成)	普通工人	*	*
2	QIU CHUNYI	邱春意	HRKT0084282	05/05/2018	宏宗(保成)	普通工人	*	*
3	Liu Meide	林美得	HRTW0035934	3/8/2016	宏宗(保成)	雜工	*	*
4	Yeung Hiu Shing	楊曉成	GC-072244R	5/9/2017	宏宗(保成)	石矢	*	*
5	Cheng Yue	鄭裕	HRYL0114838R	17/9/2017	宏宗(保成)	石矢	*	*
6	Ng Tam	吳淡	HRYL0117490R	1/11/2017	宏宗(保成)	石矢	*	*
7	Lam Leung Tseng	林良層	HRKT0082275R	1/6/2018	宏宗(保成)	石矢	*	*
8	Chung Shun	鍾舜	HRKT0068796R	27/9/2017	宏宗(保成)	石矢	*	*
9	Weng Daqiang	翁達強	HRTW0039897	28/3/2016	宏宗(保成)	石矢	*	*
10	Wong Hau Kwan	黃孝坤	HRJD0108287R	30/11/2016	宏宗(保成)	石矢	*	*

東方

2

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:		7/9/2016						
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic: 污水處理						
Training Tutor (Safety):		Training Tutor Signature (Safety):						
Training Tutor (Environmental):		Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Ip Shiu Po	葉水波	HRTW0040208R	30/6/2016	宏宗(保成)	石叻	*	*
2	Chan To Lim	陳道帝	HRJD01920131R	9/11/2018	宏宗(保成)	普通工人	*	*
3	Cheng David	鄭旭澤	HRJD0169754R	17/5/2018	宏宗(保成)	機手	*	*
4	Cheung Sau-Chiu	張壽照	HRJD0084144R	24/3/2016	宏宗(保成)	機手	*	*
5	Leung Wah Kam	梁華錦	C13238R	22/5/2017	宏宗(保成)	扎鐵	*	*
6	Tse Ping Kwan	謝炳坤	HRJD0145523R	1/12/2017	宏宗(保成)	工人	*	*
7	Huang Qingfeng	黃慶丰	HRJD0198365R	5/12/2018	宏宗(保成)	工人	*	*
8	Man Ah Nung	文亞儂	HRKT0056007R	14/1/2017	宏宗(保成)	工人	*	*
9	Liu Shenglu	劉盛爐	CA201302081	5/7/2016	宏宗(保成)	工人	*	*
10	Wong Chiu Hoi	黃昭凱	HRKT0107893	28/4/2019	宏宗(保成)	工人	*	*

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)									
Date:		7/9/2016		Time (Safety):						Time (Environmental): 08:45am-09:00am	
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic: 污水處理									
Training Tutor (Safety):		Michael So / Eric Loh / Edward Leung / Samuel Lee									
Training Tutor (Environmental):		Grant Hui / Ruby Law									
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)			
1	Liu Kerong	劉克榮	HRTW0083378R	13/8/2018	宏宗(保成)	工人	*	*			
2	Van A Yang	溫亞養	HRJD0131932R	10/7/2017	宏宗(保成)	工人	*	*			
3	So Shing Fai	蘇盛輝	HRJD0146459R	16/12/2017	宏宗(保成)	扎鐵	*	*			
4	Liu Fenceng	劉芬層	GC-081793R	25/12/2018	宏宗(保成)	釘板	*	*			
5	Luo Jihan	羅繼寒	HRMK0053921	29/8/2016	宏宗(保成)	釘板	*	*			
6	Cheung Chi Fai	張志輝	HRJD0188231R	22/9/2018	宏宗(保成)	工人	*	*			
7	Li Weitian	李偉田	HRJD0142482R	13/10/2017	宏宗(保成)	工人	*	*			
8	Ngai Chuen	魏泉	HRKT0109476R	19/5/2019	宏宗(保成)	工人	*	*			
9	Ho Yip Fu	何業富	HRTW0089110R	2/11/2018	宏宗(保成)	工人	*	*			
10	Kwan Yun Po	關潤波	HRYL0146015R	8/10/2017	宏宗(保成)	工人	*	*			

東方

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Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	08:45am-09:00am					
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Training Tutor Signature (Safety):						
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Kwan Yui Ming	關銳明	HRYL0113338R	31/8/2017	宏宗(保成)	工人	*	* MA
2	Lee Chak Hung	李澤雄	HRJD0205725R	17/2/2019	宏宗(保成)	工人	*	* 李
3	Li-Kang	李慷	HRTW0082320R	16/7/2018	宏宗(保成)	工人	*	*
4					宏宗(保成)		*	*
5					宏宗(保成)		*	*
6					宏宗(保成)		*	*
7					宏宗(保成)		*	*
8					宏宗(保成)		*	*
9					宏宗(保成)		*	*
10					宏宗(保成)		*	*

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016							
Safety Toolbox Talk topic:	Environmental Toolbox Talk Topic: 污水處理							
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee							
Training Tutor (Environmental):	Grant Hui / Ruby Law							
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	TSUI SHEUNG KEUNG	徐常強	HRJD0051106R	24/03/2017	宏宗(保成)	木工	*	*
2	XU YANGZHI	徐楊志	HRJD0077520R	11/12/2015	宏宗(保成)	木工	*	*
3	Chow Chun Tim	周振添	HRJD0103445R	15/04/2017	宏宗(保成)	木工	*	*
4	Lam Pui-Ghung	劉沛松	HRJD0131364R	8/7/2017	宏宗(保成)	木工	*	*
5	Mak Chun Shu	麥振樞	HRJD0132721R	15/07/2017	宏宗(保成)	木工	*	*
6	Lam Shui Po	林水波	HRTW0071829R	26/02/2018	宏宗(保成)	木工	*	*
7	Ng Chi Hung	吳智雄	HRMK0067762R	25/04/2017	宏宗(保成)	木工	*	*
8	Choy Hung Fai	蔡雄輝	HRJD0154078R	13/02/2018	宏宗(保成)	木工	*	*
9	FAN KAM SING	范錦星	SCW03129894		宏宗(保成)	木工	*	*
10		盧樂			宏宗(保成)	木工	*	*

東方(木工)

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk/ Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:		7/9/2016		Time (Safety):		-----		
Safety Toolbox Talk topic:		-----		Time (Environmental):		08:45am-09:00am		
Training Tutor (Safety):		Michael So / Eric Loh / Edward Leung / Samuel Lee		Environmental Toolbox Talk Topic:		污水處理		
Training Tutor (Environmental):		Grant Hui / Ruby Law		Training Tutor Signature (Safety):		-----		
Training Tutor Signature (Environmental):								
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	LO HING CHUEN	盧慶泉	HRYL0112785R	09/09/2017	宏宗(保成)	木工	*	*
2	Tsoi, Kin Lam	蔡建林	SCW03162824	18/11/01	宏宗(保成)	木工	*	*
3	Fan Kam Sing	范錦星	SCW03129894R	04/05/2018	宏宗(保成)	釘板	*	*
4	Wong Tang Sun	黃騰新	HRJD0182138R	22/08/2018	宏宗(保成)	釘板	*	*
5	Law Kai Yin	羅啟賢	SCW03169376	23/07/2018	宏宗(保成)	木工	*	*
6	So Yiu	蘇堯	HRTW0068671R	23/11/2017	宏宗(保成)	工人	*	*
7	See Yiu Tong	施耀堂	HRKT0085834R	26/5/2018	宏宗(保成)	釘板	*	*
8	Yan Hon Kan	殷漢根	HRMK0062692R	6/3/2017	宏宗(保成)	工人	*	*
9	Lui Man Muk	呂文木	GC-072770R	27/9/2017	宏宗(保成)	釘板	*	*
10	Ng Kong Lun	吳江舜	HRJD0167132R	10/6/2018	宏宗(保成)	釘板	*	*

東方(木工)

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)							
Date:		7/9/2016		Time (Safety):		Time (Environmental):		08:45am-09:00am	
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic: 污水處理							
Training Tutor (Safety):		Training Tutor Signature (Safety):							
Training Tutor (Environmental):		Training Tutor Signature (Environmental):							
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)	
1	Siu Sit Ming	蕭燮明	HRJD0178328R	15/7/2018	宏宗(保成)	釘板	*	*	
2	Woo Tsang Wing	胡崢榮	HRJD0196294R	15/12/2018	宏宗(保成)	釘板	*	*	
3	Woo Wai Wan	胡偉環	HRTW0068960R	26/11/2017	宏宗(保成)	工人	*	*	
4							*	*	
5							*	*	
6							*	*	
7							*	*	
8							*	*	
9							*	*	
10							*	*	

東方(木工)

3

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	08:45am-09:00am					
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Training Tutor Signature (Safety):						
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Yeung Hong Fai	楊康輝	HRYL0093898R	16/5/2017	宏宗(保成)	測量	*	*
2	Lai Chi Kwan	黎志坤	HRYL0139005R	27/6/2018	宏宗(保成)	測量	*	*
3	Song Chenning	宋晨寧	HRYL0116481R	31/10/2017	宏宗(保成)	工人	*	*
4	Tang Yan Hong	唐燕鴻	SCW03155648	12/6/2017	宏宗(保成)	測量	*	*
5	Cheong Ka Wai	張家瑋	HRYL0131855	29/9/2018	宏宗(保成)	工人	*	*
6	Tsang Man Chit	曾文捷	SCW03145774	25/8/2016	宏宗(保成)	測量	*	*
7	Chan Yuk Chiu	陳玉朝	HRYL0108784R	25/8/2017	宏宗(保成)	測量	*	*
8	Chung Ming Fai	鍾明輝	HRJD02052982	14/2/2019	宏宗(保成)	工人	*	*
9	Lam Chun Kit	林進杰	HRYL00889548R	24/11/2016	宏宗(保成)	測量	*	*
10	Leung Ho Pan	梁浩彬	SCW03169493	29/7/2018	宏宗(保成)	工人	*	*

恆裕

(J)

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:		7/9/2016						
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic: 污水處理						
Training Tutor (Safety):		Training Tutor Signature (Safety):						
Training Tutor (Environmental):		Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	TAM FOR TING	譚文婷	GC-064349R	29/07/2016	宏宗(保成)	普通工人	*	*
2	WONG SIU PO	黃紹波	HRMK0044268	13/03/2016	宏宗(保成)	普通工人	*	*
3	Leung Chi Fung	梁致豐	HRMK0049343	10/06/2016	宏宗(保成)	Foreman	*	*
4	Ngan Hon Chai	顏漢釵	HRTW0036149R	22/02/2016	宏宗(保成)	Foreman	*	*
5	So, Wai Keung Warlian	蘇偉強	HRYL0098711	29/03/2017	宏宗(保成)	天秤/机手	*	*
6	Yip Pak Kay	葉栢奇	GC-079887R	10/11/2016	宏宗(保成)	吊机机手	*	*
7	Li Yeung Pan	李陽彬	SCW03138954	4/2/2016	宏宗(保成)	Q.S	*	*
8	Wong Chun Hey	黃鎮馭	HRJH0106970	23/10/2016	宏宗(保成)	AQS	*	*
9	Li Chak Him	李澤謙	CE21054	4/3/2016	宏宗(保成)	Grad E	*	*
10	Wong Kwun Faut	黃冠發	CE400132	19/5/2017	宏宗(保成)	intern	*	*

保成

2

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:		7/9/2016						
Safety Toolbox Talk topic:		----- Environmental Toolbox Talk Topic: 污水處理						
Training Tutor (Safety):		Michael So / Eric Loh / Edward Leung / Samuel Lee						
Training Tutor (Environmental):		Grant Hui / Ruby Law						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Heung Chun Kit	向俊傑	CE400045	19/5/2017	宏宗(保成)	intern	*	*
2	Wong Siu Leung	黃兆良	HRKT0082765	13/4/2018	宏宗(保成)	管工	*	*
3	Shing Wing Yat	盛永日	GC-211362	10/1/2018	宏宗(保成)	電工	*	*
4	Ting Chun Yu	丁俊宇	HRYL0097300R	14/3/2017	宏宗(保成)	電工	*	*
5	Leung Chi Hang	梁熾恒	HRJD0110015R	8/12/2016	宏宗(保成)	SO	*	*
6	Lo, Lit Cheong	羅烈昌	SCW03090567R	17/04/03	宏宗(保成)	雜工	*	*
7	Lam Hon-Man	林漢民	GC-077608R	31/07/2018	宏宗(保成)	雜工	*	*
8	Yu Fung	余峰	GC-361996R	18/07/10	宏宗(保成)	雜工	*	*
9	Chen Shaozhen	陳少貞	LTC-001360	19/08/2018	宏宗(保成)	雜工	*	*
10	Cai Chun Ming	蔡春明	HRTW0088092R	22/11/2018	宏宗(保成)	雜工	*	*

保成

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	08:45am-09:00am					
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Training Tutor Signature (Safety):						
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Lam Kei Hei	林琪希	HRMK0074398	1/8/2017	宏宗(保成)	雜工	*	*
2	Yeung Yee Lan	楊綺蘭	SEITSC-002897R	22/7/2016	宏宗(保成)	清潔工人	*	*
3	Cheng Kong Yuen	鄭江源	HRKT0098491	30/11/2018	宏宗(保成)	雜工	*	*
4	Lui Siu Wan	呂少云	HRJD0172691R	28/7/2018	宏宗(保成)	雜工	*	*
5	Lin Yu Lin	林玉流	HRTW0056965	4/10/2017	宏宗(保成)	雜工	*	*
6	Cheng Wai Kwan	鄭偉君	HRTW0086006R	29/9/2018	宏宗(保成)	雜工	*	*
7	Wang Nan	王楠	HRTW0054836	15/12/2016	宏宗(保成)	雜工	*	*
8	Leung Yuk Long	梁沃朗	HRYL0076761	10/6/2016	宏宗(保成)	Engineer	*	*
9	Wong Lai Yee	黃麗儀	HRTW0093821	30/1/2019	宏宗(保成)	清潔	*	*
10	Wong Lai Kiu	黃麗嬌	HRYL0108840	16/7/2017	宏宗(保成)	雜工	*	*

保成

2

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	'-----'					
Safety Toolbox Talk topic:	'-----'	Time (Environmental):	08:45am-09:00am					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Safety):	'-----'					
Training Tutor Signature (Environmental):		Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Li Ngai Kuen	李毅權	SGW03081864R	30/7/2018	宏宗(保成)	管工	*	*
2	Chan Suen (Melody)	陳璿	HRKT0085743	24/5/2018	宏宗(保成)	Intern	*	*
3	Lau Wing Kin	劉永健	SCW03172623	26/10/2018	宏宗(保成)	AQS	*	*
4	Mai Suni	麥素妮	SEITSC-017245	2/6/20219	宏宗(保成)	工人	*	*
5	Ngo Shu Hoi	敖樹海	HRYL0173143R	29/5/2019	宏宗(保成)	AQS	*	*
6	Tsoi Wan Wah	蔡云華	GC-246034R	4/12/2016	宏宗(保成)	訊號員	*	*
7	Zeng Qiongying	曾琮英	SCW03167181	19/5/2018	宏宗(保成)	工人	*	*
8	Li Kwan	李君	HRJD0115347R	14/2/2017	宏宗(保成)	工人	*	*
9	Chan Ka Ming (Alex)	陳家銘	CWGC/SAF/02773R	23/10/2017	宏宗(保成)	工人	*	*
10	Tam Chi Wah	譚志華	SCW03146839R	21/11/2016	宏宗(保成)	管工	*	*

保成

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Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk- / Environmental Toolbox talk / Safety-Work Cycle / Others: (Day)						
Date:		7/9/2016						
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic: 污水處理						
Training Tutor (Safety):		Training Tutor Signature (Safety): Michael So / Eric Loh / Edward Leung / Samuel Lee						
Training Tutor (Environmental):		Training Tutor Signature (Environmental): Grant Hui / Ruby Law						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Leung Chung Yan	梁松有	HRJD0130449R	21/06/2017	宏宗(保成)	札鐵 / 索具工	*	*
2	Sin Fook Shing	冼福成	HRYL0117486R	24/10/2017	宏宗(保成)	札鐵	*	*
3	Wong Siu Yin	黃兆然	HRJD0162074R	26/03/2018	宏宗(保成)	札鐵	*	*
4	So Shing	蘇勝	HRYL0095882R	5/3/2017	宏宗(保成)	札鐵	*	MS
5	Au Ping Leung	區秉良	HRITW0053388R	13/02/2017	宏宗(保成)	札鐵	*	*
6	TSE Kai Wah	謝啟華	SCW03166228	21/04/2018	宏宗(保成)	札鐵	*	字
7	Ho Kan Shing	何根成	HRYL0109477R	22/07/2017	宏宗(保成)	札鐵 / 索具工	*	字
8	Xie Yan Feng	謝燕峰	SCW03143231	10/6/2016	宏宗(保成)	札鐵	*	字
9	Chan Chi Yung	陳志勇	HRKT0089834	23/07/2018	宏宗(保成)	札鐵	*	*
10	Xie Yanbo	謝燕波	SCW0343230	10/6/2016	宏宗(保成)	札鐵	*	*

進展

(F)

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk- / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	08:45am-09:00am					
Safety Toolbox Talk topic:		Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Training Tutor Signature (Safety):						
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Environmental):						
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Wong Chi Ming	黃志明	HRYL013195R	30/03/2016	宏宗(保成)	札鐵	*	*
2	Cong Man Nhat	江文日	HRYL009551R	4/3/2017	宏宗(保成)	札鐵	*	*
3	Kwok Shui Hing	郭水興	HRYL0125309	20/01/2018	宏宗(保成)	鋼筋屈紮工	*	*
4	Sin Kwong Lun	冼廣倫	HRYL0114346R	26/10/2017	宏宗(保成)	札鐵	*	*
5	Li Hon Wa	李漢華	SGW03156428	02/07/2017	宏宗(保成)	札鐵	*	*
6	Ngai Chi Wing	魏志榮	HRJD0118523R	10/3/2017	宏宗(保成)	札鐵	*	*
7	Lee Chin Wah	李展華	HRKI0063814R	24/7/2017	宏宗(保成)	札鐵	*	*
8	Chik Kin Wang	植健宏	HRYL0080626	29/7/2016	宏宗(保成)	札鐵	*	*
9	Hon Wai Keung	韓偉強	GC-068752R	16/12/2016	宏宗(保成)	札鐵	*	*
10	Yip Chui-Ching	葉翠青	HRYL0104053R	22/5/2017	宏宗(保成)	札鐵	*	*

進展

2

Record of Attendance of Training

Training Session:		Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)						
Date:	7/9/2016	Time (Safety):	'-----'					
Safety Toolbox Talk topic:	'-----'	Time (Environmental):	08:45am-09:00am					
Training Tutor (Safety):	Michael So / Eric Loh / Edward Leung / Samuel Lee	Environmental Toolbox Talk Topic:	污水處理					
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Safety):	'-----'					
		Training Tutor Signature (Environmental):	'-----'					
No.	Name of Trainee (英文名)	中文名	Green Card No (平安咭)	Expire Date (到期日)	Company (公司名)	Trade (工種)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Chau Chi Luen	周自聯	HRYL0099569R	15/4/2017	宏宗(保成)	扎鐵	*	*
2	Lam Koon Tak	林觀得	HRTW0053281R	16/2/2017	宏宗(保成)	工人	*	*
3	Chan Po Kin	陳寶健	HRYL0116490R	6/10/2017	宏宗(保成)	扎鐵	*	*
4	Liu Chi Wai	廖志偉	HRYL0160933	27/1/2019	宏宗(保成)	工人	*	*
5	Pang Chau Lam	彭秋林	HRJD0140895R	1/11/2017	宏宗(保成)	扎鐵	*	*
6	Lee Chin Pang	李展鵬	HRKT0089835	23/7/2016	宏宗(保成)	扎鐵	*	*
7	Tsui Wai Hung	徐偉洪	SC160301-17074	28/2/2019	宏宗(保成)	工人	*	*
8	Chan Siu Por	陳少波	HRYL0097500R	30/4/2017	宏宗(保成)	工人	*	*
9	Au Yat Wai	區日威	SCW97900934	13/4/2017	宏宗(保成)	扎鐵	*	*
10	Pang Shing Yau	彭成有	HRJD0163300R	14/5/2018	宏宗(保成)	工人	*	*

進展

2

Record of Attendance of Training

Site Safety and Environmental Induction / Safety Toolbox talk / Environmental Toolbox talk / Safety Work Cycle / Others: (Day)

Date:	07 / 08 09 / 2016	Time (Safety):	11:15 - 11:30
Safety Toolbox Talk Topic		Time (Environmental):	11:15 - 11:30
Training Tutor (Safety):	Eric Loh / Leung Yu Cheng / Lee Wing Hung	Environmental Toolbox Talk Topic	Wastewater treatment
Training Tutor (Environmental):	Grant Hui / Ruby Law	Training Tutor Signature (Safety):	
		Training Tutor Signature (Environmental):	

No.	Name of Trainee (英文名)	Chinese Name (中文名)	Green Card No. (平安卡)	Expire day (到期日)	Company (公司)	Trades (工种)	Safety Training 安全訓練 (簽名)	Environmental Training 環保訓練 (簽名)
1	Shi Xiangin	施香琴	HRYL0150324	29/09/2018	保成	乙工		X 琴
2	Chow chi lun	周子倫	GC-378220	1/4/2018	OSCAR	Engineering manager		X W.H. Ho.
3								
4								
5								
6								
7								
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9								
10								