

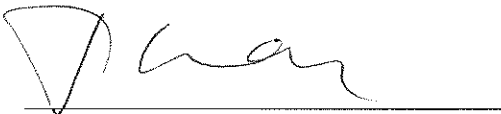
ASB Biodiesel (Hong Kong) Limited

Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate

Monthly EM&A Report

February 2013

(Version 1.0)

Certified By 
(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

CINOTECH CONSULTANTS LTD

Room 1710, Technology Park,
18 On Lai Street,

Shatin, NT, Hong Kong

Tel: (852) 2151 2083 Fax: (852) 3107 1388

Email: info@cinotech.com.hk



MANNINGS
(Asia) Consultants Limited

Address: 5/F, Winning Commercial Building, 46-48 Hillwood Road, Tsim Sha Tsui, Kowloon
Tel: 852 - 3168 2028 Fax: 852 - 3168 2022

<i>To:</i>	Cinotech	<i>Date:</i>	12 March 2013
<i>Attn:</i>	Ms. Ivy Tam / Ms. Betty Choi	<i>Fax:</i>	3107 1388
<i>From:</i>	Mr. Mark Cheung	<i>Ref:</i>	D1067/H00913
<i>Job No.</i>	D1067	<i>Total Pages:</i>	1

**Subject: Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate
Monthly EM&A Summary Report for February 2013**

Dear Madam,

We refer to your submission of the Monthly EM&A Report for February 2013 via email dated 12 March 2013.

We write to advise that we have no comment on the captioned report.

Regards,

Mark Cheung
Independent Environmental Checker

KTC/gk

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	I
Introduction	i
Environmental Monitoring and Audit Works	i
Environmental Licenses and Permits	ii
Key Information in the Reporting Month.....	ii
Future Key Issues	ii
1 INTRODUCTION.....	1
Background.....	1
Project Organizations	2
Construction Programme.....	3
Summary of EM&A Requirements	3
2 ENVIRONMENTAL AUDIT.....	4
Site Audits	4
Status of Environmental Licensing and Permitting.....	4
Status of Waste Management	4
Implementation Status of Environmental Mitigation Measures.....	4
Summary of Complaint and Prosecution.....	6
3 FUTURE KEY ISSUES	7
Key Issues for the Coming Month.....	7
Construction Program for the Next Months	7
4 CONCLUSIONS AND RECOMMENDATIONS	8
Conclusions	8
Recommendations	8

LIST OF TABLES

Table I	Summary Table for Key Information in the Reporting Month
Table 1.1	Key Project Contacts
Table 2.1	Summary of Environmental Licensing and Permit Status
Table 2.2	Observations and Recommendations of Site Audit

LIST OF FIGURE

Figure 1.1	Site Layout Plan
------------	------------------

LIST OF APPENDICES

Appendix A	Site Audit Summary
Appendix B	Updated Environmental Mitigation Implementation Schedule
Appendix C	Waste Generation in the Reporting Month
Appendix D	Complaint Log
Appendix E	Construction Programme

EXECUTIVE SUMMARY

Introduction

1. This is the 45th monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate". This report documents the findings of EM&A Works conducted in February 2013.
2. The major site activities undertaken in the reporting month included:
 - General site cleaning and tidying.
 - Zone 1A Administration Building – Finishing work
 - Zone 1A Administration Building – Windows, louver and doors installation work
 - Zone 1B Processing Building – Windows, louver and doors installation work
 - Zone 1B Fat Preparation Building – Windows, louver and doors installation work
 - Zone 1B Fat Preparation Building – Finishing work
 - Zone 1B Steam Boiler Room Building – Equipment installation work
 - Zone 2A Tank Farm – Steel tank fabrication work
 - Zone 2A Tank Farm – Tank cladding installation work
 - Zone 2A GTWSR – Equipment installation work
 - Zone 2B-2E Tank Farm – Steel tank fabrication work
 - Zone 2B-2E – LV switch room construction work
 - WWTP – Roof system installation work
 - WWTP – Equipment installation work
 - Jetty – Pile cap and deck superstructure construction work
 - Pipe Bridge – Pipe Bridge Erection Work
 - Building Services – P&D work
 - Building Services – Fire Service work
 - Building Services – MVAC work
 - Building Services – Electrical work
 - External Works – Boundary wall construction work
 - External Works – Storm water drainage work
 - External Works – Foul water drainage work
 - External Works – Fresh water main installation work
 - External Works – Salt water main installation work
 - External Works – Fire Services pipes laying work
 - External Works – Cable laying work
 - External Works – Pavement work

Environmental Monitoring and Audit Works

3. Environmental monitoring and audit works for the Project were performed regularly as stipulated in the EM&A Manual and the results were checked and reviewed. The implementation of the environmental mitigation measures and environmental complaint handling procedures were also checked.

Environmental Licenses and Permits

4. Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project. Environmental Permits No. EP-319/2009 and EP-319/2009/A were issued on 11 March 2009 and 7 April 2009 respectively. The Contractor has applied for the Registration of Chemical Waste Producer (WPN-5113-839-C1186-15), Construction Noise Permit (GW-RE0043-13), Wastewater Discharge License (WT00004508-2009), Notification of Works under APCO (337009) and Waste Discharge Account (7013917).

Key Information in the Reporting Month

5. Summary of key information in this reporting month is tabulated in **Table I**.

Table I Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	1	Monthly EM&A Report for January 2013	Submitted to EPD on 20 February 2012	Verified by IEC	---
Notifications of any summons & prosecutions	0	---	N/A	N/A	---

Future Key Issues

6. Major site activities for the coming three months will include:
- General site cleaning and tidying.
 - Zone 1A Administration Building – Finishing works
 - Zone 1B Steam Boiler Room – ABWF works excluding windows, louvers and doors
 - Tank Farm 2A – Pipe installation work
 - Tank Farm 2A – Bund wall finishing work
 - Tank Farm 2A GTWSR – Equipment and pipe installation works
 - Tank Farm 2A GTWSR – ABWF works excluding windows, louvers and doors
 - Tank Farm 2B-2E – Tank fabrication works
 - Tank Farm 2B-2E – Finishing works
 - WWTP – ABWF works excluding windows, louvers and doors
 - Jetty – Deck superstructure construction works
 - Pipe Bridge – Pipe bridge erection work
 - Building Services – Fire services work
 - Building Services – MVAC work
 - Building Services – Electrical work
 - Building Services – P&D work
 - Building Services – Lift installation work

- External – Boundary wall construction work
 - External Works – Storm water drainage work
 - External Works – Foul water drainage work
 - External Works – Plumbing laying work
 - External Works – Fire Services piping laying work
 - External Works – Cable laying work
 - External Works – Pavement work
7. The future environmental concerns are air quality, water quality, waste management and surface runoff from construction works.

1 INTRODUCTION

Background

- 1.1 Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate is a Designated Project (hereafter referred to as “the Project”) under the Environmental Impact Assessment Ordinance (Cap. 449). A study of environmental impact assessment (EIA) was undertaken to consider the key issues of air quality, noise, water quality, ecological and identify possible mitigation measures associated with the works. An EIA Report was approved by the Environmental Protection Department (EPD) on 26 February 2009.
- 1.2 The project is to construct and operate a 100,000 tonnes per annum biodiesel plant at Tseung Kwan O Industrial Estate. The plant will use a multi-feedstock which consists of waste cooking oil (WCO), oil and grease recovered from grease trap waste (GTW), Palm Fatty Acid Distillate (PFAD) and animal fats. The proposed biodiesel plant not only offers a convenient recycling outlet for GTW and WCO but also converts the oil and grease recovered from these wastes into useful products. The Project also offers a cleaner alternative to diesel fuel to the Hong Kong market. The main processes include the followings:-
- Construction of feedstock reception and storage facilities, and offices;
 - Construction of a grease trap waste pre-treatment facility (with a designated treatment capacity of about 200,000 tonnes per annum);
 - Construction of a wastewater treatment plant (with a designed treatment capacity of about 170,000 m³ per annum);
 - Installation of biodiesel production and glycerine purification system;
 - Construction of product storage and ancillary facilities;
 - Pretreatment of grease trap waste;
 - Treatment of wastewater generated from feedstock pre-treatment and glycerine dewatering process, and filtrates from dewatering process of sludge treatment;
 - Transesterification of feedstock with alcohol-catalyst; and
 - Purification of biodiesel.
- 1.3 The general layout of the Project is shown in **Figure 1.1**.
- 1.4 Layout plan of tank farm **2A, 2B to 2E** is revised and a report is made by Environmental Resources Management (ERM) regarding such change. The report concluded that no deviation is found from the approved EIA report.
- 1.5 Environmental Permits (EP) No. EP-319/2009, EP-319/2009/A and EP-319/2009/B were issued on 11 March 2009, 7 April 2009 and 31 Jan 2013 respectively for Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate to ASB Biodiesel (Hong Kong) Limited as the Permit Holder. A VEP was submitted and the latest EP No. EP-319/2009/C was issued by EPD on 5 Mar 2013.
- 1.6 Cinotech Consultants Limited was commissioned by the Contractor to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. This is the 45th Monthly EM&A report summarizing the EM&A works for the Project in February 2013.

Project Organizations

1.7 Different parties with different levels of involvement in the project organization include:

- Project Proponent – ASB Biodiesel (Hong Kong) Limited
- Project Manager – AECOM
- Contractor – China Harbour Engineering Company Limited (CHEC)
- Environmental Team (ET) – Cinotech Consultants Limited
- Independent Environmental Checker (IEC) – Mannings (Asia) Consultants Ltd.

1.8 The responsibilities of respective parties are detailed in Section 1.10 of the Final EM&A Manual of the Project.

1.9 The key contacts of the Project are shown in **Table 1.1**.

Table 1.1 Key Project Contacts

Party	Role	Name	Position	Phone No.	Fax No.
ASB	Project Proponent	Ms. Sylvia Har	Senior Plant Engineer	9479 0949	3741 1661
Cinotech	Environmental Team	Dr. HF Chan	ET Leader	2151 2088	3107 1388
		Ms. Ivy Tam	Project Coordinator	2151 2090	
		Ms. Betty Choi	Audit Team Leader	2151 2072	
Mannings	Independent Environmental Checker	Mr. Mark Cheung	Independent Environmental Checker	3168 2028	3168 2022
		Mr. Gavin Kwok	Assistant to Independent Environmental Checker	3168 2028	
AECOM	Project Manager	Mr. Matthew Lau	Construction Manager	9363 5586	N/A
CHEC	Contractor	Mr. Peter Chung	Project Manager	9471 2438	2623 9226
		Mr. Anson Wong	Safety and Environmental Officer	9656 3837	
		Mr. Simon Li	Environmental Supervisor (Ass. Planning Engineer)	6152 7867	

Construction Programme

- 1.10 The site activities undertaken in the reporting month were:
- General site cleaning and tidying.
 - Zone 1A Administration Building – Finishing work
 - Zone 1A Administration Building – Windows, louver and doors installation work
 - Zone 1B Processing Building – Windows, louver and doors installation work
 - Zone 1B Fat Preparation Building – Windows, louver and doors installation work
 - Zone 1B Fat Preparation Building – Finishing work
 - Zone 1B Steam Boiler Room Building – Equipment installation work
 - Zone 2A Tank Farm – Steel tank fabrication work
 - Zone 2A Tank Farm – Tank cladding installation work
 - Zone 2A GTWSR – Equipment installation work
 - Zone 2B-2E Tank Farm – Steel tank fabrication work
 - Zone 2B-2E – LV switch room construction work
 - WWTP – Roof system installation work
 - WWTP – Equipment installation work
 - Jetty – Pile cap and deck superstructure construction work
 - Pipe Bridge – Pipe Bridge Erection Work
 - Building Services – P&D work
 - Building Services – Fire Service work
 - Building Services – MVAC work
 - Building Services – Electrical work
 - External Works – Boundary wall construction work
 - External Works – Storm water drainage work
 - External Works – Foul water drainage work
 - External Works – Fresh water main installation work
 - External Works – Salt water main installation work
 - External Works – Fire Services pipes laying work
 - External Works – Cable laying work
 - External Works – Pavement work

Summary of EM&A Requirements

- 1.11 The EM&A requirements are described in the following sections, including:
- Environmental mitigation measures, as recommended in the project EIA study final report; and
 - Environmental requirements in contract documents.
- 1.12 The advice on the implementation status of environmental protection and pollution control/ mitigation measures is summarized in Section 3 of this report.

2 ENVIRONMENTAL AUDIT

Site Audits

- 2.1 Site audits were carried out by ET on monthly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summary of the site audit in this reporting month is attached in **Appendix A**.
- 2.2 Site audit was conducted on 19th February 2013 by ET in the reporting month. No non-compliance was observed during the site audits.

Status of Environmental Licensing and Permitting

- 2.3 All permits/licenses obtained for the Project are summarized in **Table 2.1**.

Status of Waste Management

- 2.4 The quantities of waste generated in this reporting month are summarized in **Appendix C**.

Implementation Status of Environmental Mitigation Measures

- 2.5 According to the EIA Study Report, Environmental Permit and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the EMIS is provided in **Appendix B**.

Table 2.1 Summary of Environmental Licensing and Permit Status

Permit / License No.	Valid Period		Details	Status
	From	To		
Environmental Permit (EP)				
EP-319/2009/A	07/04/2009	N/A	Construction and operation of (i) a biochemical plant with a storage capacity of more than 500 tonnes and in which substances are processed and produced; (ii) a storage, transfer and trans-shipment of oil facility with a storage capacity of not less than 1,000 tonnes; and (iii) a dangerous goods godown with a storage capacity exceeding 500 tonnes .	Valid
Registration of Chemical Waste Producer				
WPN-5113-839-C1186-15	12/06/2009	-	Spent Lubrication oil.	Valid
Construction Noise Permit (CNP)				
GW-RE0043-13	02/01/2013	20/07/2013	Use of Powered Mechanical Equipment during 0000-2400 hours on general holidays (including Sundays), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday.	Valid
Wastewater Discharge License				
WT00004508-2009	07/09/2009	-	Discharge of wastewater from construction site including wheel washing water and chemical precipitation tank	Valid
Billing Account for Disposal of Construction Waste				
A/C No.: 7013917	-	-	-	Valid
Notification of Works under APCO				
Ref. no.: 337009	26/10/2011	-	-	Valid

- 2.6 During the site inspection in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit session are summarized in **Table 2.2**.

Table 2.2 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
N/A	N/A	N/A	N/A

Summary of Complaint and Prosecution

- 2.7 No environmental related complaint, prosecution or notification of summons was received in the reporting month.
- 2.8 Since the Project commencement, there were a total of 5 project-related environmental complaints. No prosecution or notification of summons was received since the Project commencement. The Complaint Log is attached in **Appendix D**.

3 FUTURE KEY ISSUES

Key Issues for the Coming Month

3.1 Key issues to be considered in the coming month include:

- Noise from operation of the equipment and machinery on-site;
- Effluent discharge generated from surface runoff;
- Dust generated from excavation works and stockpile of dusty materials;
- Maintenance of de-silting facilities and drainage system, such as U-channels;
- Storage of chemicals/fuel and chemical waste/waste oil on site;
- Accumulation of stagnant water in the site areas;
- Accumulation of C&D waste and general waste on site.

Construction Program for the Next Months

3.2 A tentative construction programme is provided in **Appendix E**. The major construction activities in the coming three months will include:

- General site cleaning and tidying.
- Zone 1A Administration Building – Finishing works
- Zone 1B Steam Boiler Room – ABWF works excluding windows, louvers and doors
- Tank Farm 2A – Pipe installation work
- Tank Farm 2A – Bund wall finishing work
- Tank Farm 2A GTWSR – Equipment and pipe installation works
- Tank Farm 2A GTWSR – ABWF works excluding windows, louvers and doors
- Tank Farm 2B-2E – Tank fabrication works
- Tank Farm 2B-2E – Finishing works
- WWTP – ABWF works excluding windows, louvers and doors
- Jetty – Deck superstructure construction works
- Pipe Bridge – Pipe bridge erection work
- Building Services – Fire services work
- Building Services – MVAC work
- Building Services – Electrical work
- Building Services – P&D work
- Building Services – Lift installation work
- External – Boundary wall construction work
- External Works – Storm water drainage work
- External Works – Foul water drainage work
- External Works – Plumbing laying work
- External Works – Fire Services piping laying work
- External Works – Cable laying work
- External Works – Pavement work

4 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 4.1 Environmental audit works were conducted in the reporting month. Site inspections were conducted on monthly basis. The results were reviewed and checked.
- 4.2 1 environmental complaint was received. There was no prosecution or notification of summons.

Recommendations

- 4.3 According to the environmental audit performed in the reporting month, the following recommendations were made:

Water Impact

- To identify any wastewater discharges from site.
- To ensure properly maintenance for de-silting facilities.
- To clear the silt and sediment in the sedimentation tanks.
- To review the capacity of de-silting facilities for discharge.
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge.
- To avoid accumulation of stagnant and ponding water on site.
- To clear the drainage channel regularly to prevent blockage.
- To set up silt curtain around marine piling work.

Dust Impact

- To remove fugitive dusty material on the haul road periodically.
- Excavated dusty materials or stockpile of dusty materials should be covered by impervious sheeting, or sprayed with water so as to maintain entire surface wet.

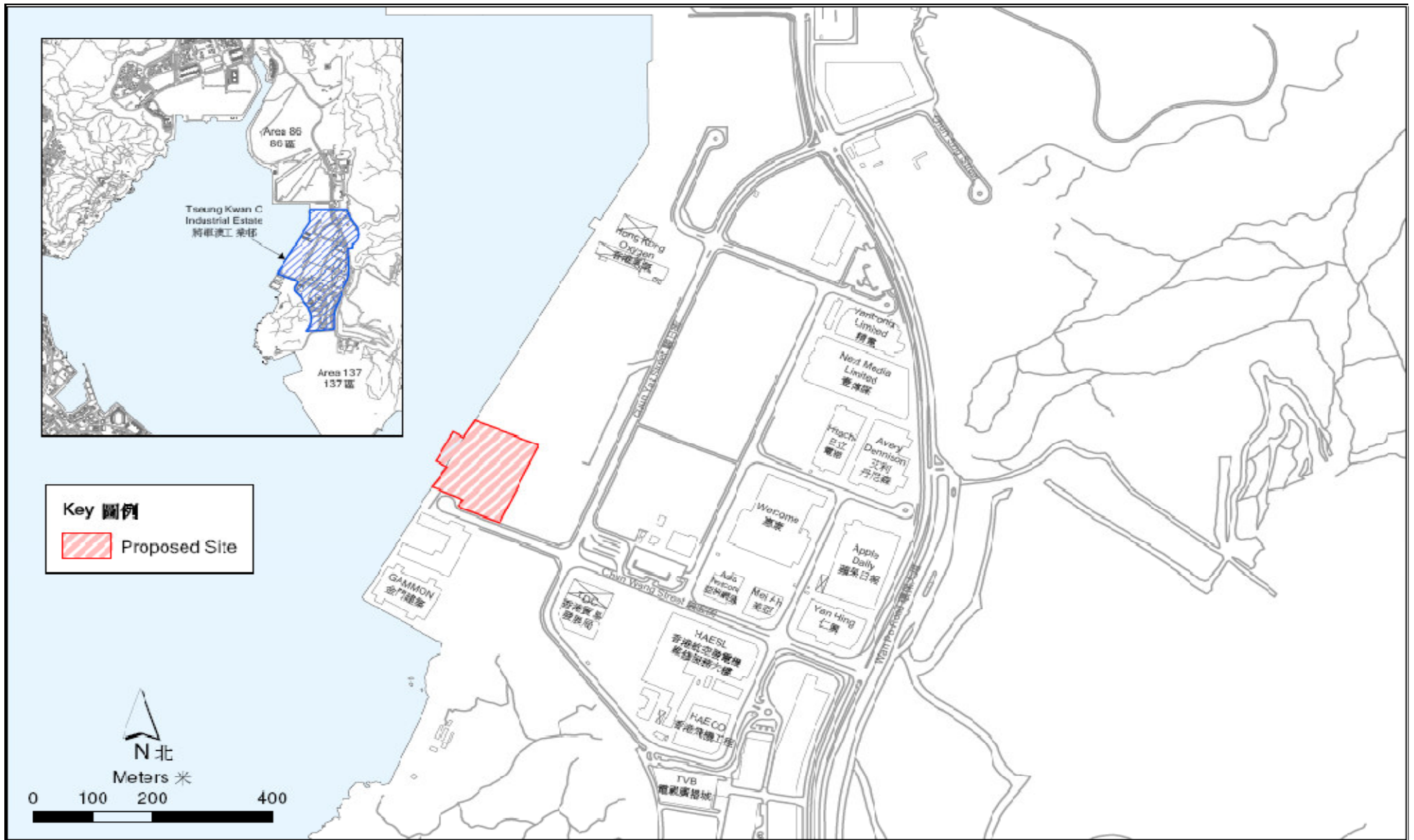
Noise Impact

- To space out noisy equipment and position as far away as possible from sensitive receivers.
- To inspect the noise sources inside the site.

Waste / Chemical Management

- To provide proper rubbish bins / skips for waste collection.
- To provide proper storage area for oil container on site.
- To avoid and check for any accumulation of waste materials or rubbish on site.
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the equipment.

FIGURES



Title	Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate		Scale	N.T.S	Project No.	MA9021
	Site Layout Plan		Date	Jun-09	Figure	1.1



**APPENDIX A
SITE AUDIT SUMMARY**

Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate

Monthly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	130219
Date	19February 2013 (Wednesday)
Time	16:15 – 16:40

Ref. No.	Non-Compliance	Related Item No.
-	None	-

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>F. Reminders</p> <ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. <p>G. Others</p> <p>Follow-up on previous audit section (Ref. No.:130116):</p> <ul style="list-style-type: none"> Environmental deficiencies 130116-R01 and R02 were improved/rectified by the Contractor. 	

	Name	Signature	Date
Recorded by	KW Leung	<i>KW Leung</i>	4 March 2013
Checked by	Dr. HF Chan	<i>HF Chan</i>	4 March 2013

**APPENDIX B
UPDATED ENVIRONMENTAL
MITIGATION IMPLEMENTATION
SCHEDULE**

Appendix B - Summary of Environmental Mitigation Implementation Schedule (Construction Phase)

Types of Impacts	Mitigation Measures	Status
Construction Dust	<ul style="list-style-type: none"> • Dust control measures such as water spaying on roads and dusty areas, covering of lorries by impervious sheets and controlling of the falling height of fill materials will be implemented; • Effective dust screens, sheeting or netting will be provided to enclose the scaffolding from the ground level of the facility during the building construction; • All debris and materials will be covered or stored in a sheltered debris collection area; • Hoarding from ground level will be provided along the entire length of the site boundary except for a site entrance or exit; • Every stockpile of dusty materials will be covered entirely by impermeable sheeting or placed in an area sheltered on the top and the 3 sides; • Regular maintenance and checking of the diesel powered mechanical equipment will be adopted to avoid any black smoke emissions and to minimize gaseous emissions. • Monthly site audits will be conducted to ensure the implementation of suitable dust control measures and good site practices. 	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
Construction Noise	<ul style="list-style-type: none"> • Only well-maintained plant will be operated on-site and plant will be serviced regularly during the construction program; • Silencers or mufflers on construction equipment will be utilized and will be properly maintained during the construction program; • Mobile plant, if any, will be sited as far from NSRs as possible; • Machines and plant (such as trucks) that may be in intermittent use will be shut down between work periods or will be throttled down to a minimum; • Plant known to emit noise strongly in one direction will, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and • Material stockpiles and other structures will be effectively utilised, wherever practicable, in screening noise from onsite construction activities. 	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

Remarks: ^ Compliance of mitigation measure; X Non-compliance of mitigation measure;
 N/A Not Applicable at this stage; • Non-compliance but rectified by the contractor;
 * Recommendation was made during site audit but improved/rectified by the contractor;
 # Non-compliance but rectified/improved by the contractor and awaiting IEC's further comment.

Types of Impacts	Mitigation Measures	Status
Water Quality	<p><u>Piling Activities</u></p> <ul style="list-style-type: none"> Silt curtain will be installed around the marine piling area to contain any suspended mud and sediments generated during the piling works. Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from groundwater (if pumping is required) to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. 	^
	<p><u>Construction Site Run-off and Drainage</u></p> <ul style="list-style-type: none"> Silt removal facilities such as silt traps or sedimentation facilities will be provided to remove silt particles from runoff to meet the requirements of the TM standard under the WPCO. The design of silt removal facilities will be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures will be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Careful programming of the works to minimise surface excavations for the construction works during the wet season. If excavation of soil cannot be avoided during the wet season, exposed slope surfaces will be covered by a tarpaulin or other means. Other measures that need to be implemented before, during, and after rainstorms are summarised in ProPECC PN 1/94. Exposed soil surfaces will be protected by paving or fill material as soon as possible to reduce the potential of soil erosion. Open stockpiles of construction materials or construction wastes on-site of more than 50m³ will be covered with tarpaulin or similar fabric during rainstorms. These materials will not be placed near the seawall area. 	^ ^ ^ ^
	<p><u>General Construction Activities</u></p> <ul style="list-style-type: none"> Debris and refuse generated on-site will be collected, handled and disposed of properly to avoid entering the nearby water sensitive receivers (WSRs). Stockpiles of cement and other construction materials will be kept covered when not being used. Oils and fuels will only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas will be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund will be drained of rainwater after a rain event. 	^ ^

Remarks: ^ Compliance of mitigation measure; X Non-compliance of mitigation measure;
N/A Not Applicable at this stage; • Non-compliance but rectified by the contractor;
* Recommendation was made during site audit but improved/rectified by the contractor;
Non-compliance but rectified/improved by the contractor and awaiting IEC's further comment.

Types of Impacts	Mitigation Measures	Status
	<p data-bbox="394 225 902 252"><u>Sewage generated from On-site Workforce</u></p> <ul data-bbox="443 296 1977 427" style="list-style-type: none"> <li data-bbox="443 296 1977 360">• Temporary sanitary facilities, such as portable chemical toilets, will be provided on-site. A specialised contractor will be responsible for regular collection and appropriate disposal of the sewage and maintenance of these facilities. <li data-bbox="443 363 1977 427">• Monthly site inspections will be carried out during construction to ensure that the mitigation measures listed above are properly implemented. The site audit frequency will be increased to weekly intervals during the piling works. 	<p data-bbox="2056 296 2078 316">^</p> <p data-bbox="2056 363 2078 383">^</p>
<p data-bbox="215 488 315 515">Ecology</p>	<ul data-bbox="443 472 1977 563" style="list-style-type: none"> <li data-bbox="443 472 1977 563">• Mitigation measures for minimising water quality impacts are presented in detail above. These measures will be properly implemented and good construction practices will be adopted to minimise potential adverse impacts to marine ecological resources. 	<p data-bbox="2056 488 2078 507">^</p>

Remarks: ^ Compliance of mitigation measure; X Non-compliance of mitigation measure;
N/A Not Applicable at this stage; • Non-compliance but rectified by the contractor;
* Recommendation was made during site audit but improved/rectified by the contractor;
Non-compliance but rectified/improved by the contractor and awaiting IEC's further comment.

**APPENDIX C
WASTE GENERATION IN THE
REPORTING MONTH**

**APPENDIX D
COMPLAINT LOG**

APPENDIX D – COMPLAINT LOG

Reporting Month: February 2013

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
COM-2012-08-001	Jetty Area	28-08-2012	A resident in Lohas Park complained about noise nuisance from the site.	Investigation by EPD identified the source to be chiselling work at the jetty area. Although the chisel machines were covered by valid CNP, the Contractor decided to suspend the corresponding work during restricted hours. The machine was later covered by sound proof canvas to minimize noise transmission. Subsequent inspection and noise measurement by the EPD on 3 rd September 2012 concluded that the noise reduction measure was effective and acceptable at Lohas Park.	Closed
COM-2012-09-002	Jetty Area	07-09-2012	A resident in Lohas Park complained about noise nuisance from the site.	Investigation by EPD identified the source to be chiselling work at the jetty area. Only one chisel machine was operated on the day of complain and it was screened by sound proof canvas. Although the machine was covered by valid CNP, the Contractor decided to suspend the corresponding work during restricted hours during investigation period. Subsequent inspection and noise measurement (daytime at site, night time at Lohas Park) by the EPD on 12 th September 2012 concluded that the noise levels were acceptable at Lohas Park.	Closed
COM-2012-09-003	Jetty Area	27-09-2012	A resident in Lohas Park complained about noise nuisance from the site.	The chisel machine used at JP3 of the jetty area was identified as the noise source. According to the Contractor, the machine was screened by sound proof canvas. Although the machine was covered by valid CNP, the Contractor decided to carry out the corresponding work during normal operation hours only. This was agreed with the complainant in Lohas Park.	Closed
COM-2012-09-004	Not Specified	04-10-2012	A resident in Lohas Park complained about noise nuisance from the site at	According to the Contractor, According to the Contractor, only one drilling machine and chiselling machine were in use, which were covered by valid CNP. We advised the Contractor to communicate with the residents in Lohas	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			11:18pm.	Park given consistent noise complains. The Contractor explained to the complainant that chiselling work will stop at 11pm every day and start after 10am during weekends to minimize noise nuisance. Further in November, a noise enclosure was erected to cover the noisy part of the chiselling machine.	
Com-2012-11-005	Jetty Area	23-11-2012	A resident in Lohas Park complained about noise nuisance from the site at around 3:00 am	The chisel machine used of the jetty area was identified as the noise source. According to the Contractor, the machine was screened by enclosure. Although the machine was covered by valid CNP, the Contractor decided to carry out the corresponding work during 7:00 – 23:00. Contractor explained to the complainant that the bored piling will be completed in early December.	Closed

Remarks: N/A

APPENDIX E
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	BL Start	BL Finish	Current Duration	Current Start	Current Finish	% Complete	Delay from Initial	Total Float	2012												2013							
										Oct	N	D	J	F	M	Apr	M	J	Jul	A	S	Oct	N	D	J	F	M	Apr	M
C270MC-3M-Rolling Programme Ver.2.0 (010313)																													
Milestones																													
Remaining Construction Works																													
1A - Administration Building																													
Administration Building Structural and Builder's Work																													
A17435	AB-ABWF works excluding windows, louvers & doors 2nd Stage			40	30-Jan-13 A	10-Mar-13	95%		-222																				
AB-Electrical																													
A17142	AB-BS Final Connection (Electrical) (Isolator/MCB board/Wiring accessories)			192	01-Sep-12 A	11-Mar-13	99%		-169																				
A17190	AB-BS Lighting installation works	21-May-12	19-Jun-12	194	01-Sep-12 A	14-Mar-13	98%	-267	-164																				
A17610	AB-BS Electrical Testing	05-Jul-12	02-Sep-12	181	13-Oct-12 A	11-Apr-13	60%	-221	-120																				
AB-Fire Services																													
A17185	AB-Control Room and Pump Room FS equipment installation and associated pipe w	21-Apr-12	20-May-12	168	04-Aug-12 A	11-Mar-13	95%	-295	-135																				
A17186	AB-BS Cable Final Connection (Fire Services)			174	21-Sep-12 A	13-Mar-13	95%		-135																				
A17800	AB-BS Fire Service Testing	05-Jul-12	02-Sep-12	117	22-Dec-12 A	17-Apr-13	50%	-227	-156																				
AB-Plumbing and Drainage																													
A17110	AB-BS Piping works (Plumbing)	26-Feb-12	05-Apr-12	265	23-Jun-12 A	14-Mar-13	96%	-343	-187																				
A17120	AB-BS Piping works (Drainage)	06-Apr-12	20-May-12	264	23-Jun-12 A	13-Mar-13	94%	-297	-186																				
A17125	AB-BS Wiring and Control (P&D)			196	21-Sep-12 A	04-Apr-13	60%		-173																				
A17155	AB-Installation of sanitary fittings	21-May-12	19-Jul-12	81	28-Jan-13 A	18-Apr-13	20%	-273	-187																				
A17700	AB-BS Plumbing and Drainage Testing	20-Jul-12	17-Sep-12	218	13-Oct-12 A	18-May-13	50%	-243	-187																				
AB-MVAC																													
A17220	AB-BS MVAC Testing	05-Jul-12	02-Sep-12	142	10-Nov-12 A	31-Mar-13	25%	-210	-109																				
AB-Lift																													
A17500	AB-Lift Installation Works	26-Feb-12	10-Apr-12	210	14-Aug-12 A	11-Mar-13	98%	-335	-157																				
A17600	AB-Lift Testing	05-Jul-12	18-Aug-12	146	22-Oct-12 A	16-Mar-13	90%	-210	-94																				
1B - Process Building																													
Processing Building Structural and Builder's Work																													
A18220	PB-Installation of windows, louvers and doors 2nd stage	04-Jul-12	03-Aug-12	141	13-Oct-12 A	02-Mar-13	95%	-211	-166																				
PB-Plumbing and Drainage																													
A18010	PB-BS Piping works (Plumbing)	05-Mar-12	18-Apr-12	78	05-Jan-13 A	23-Mar-13	50%	-339	-182																				
A18020	PB-BS Piping works (Drainage)	19-Apr-12	02-Jun-12	97	17-Dec-12 A	23-Mar-13	50%	-294	-182																				
A18025	PB-Installation of sanitary fittings	03-Jun-12	01-Aug-12	21	23-Mar-13	13-Apr-13	0%	-255	-182																				
A18300	PB-BS Plumbing and Drainage Testing	02-Aug-12	30-Sep-12	30	13-Apr-13	13-May-13	0%	-225	-182																				
PB-Electrical																													
A18040	PB-BS Cable laying works(Electrical) 2nd stage	19-Apr-12	02-Jun-12	68	19-Jan-13 A	27-Mar-13	40%	-298	-183																				
A18050	PB-BS Lighting installation works	03-Jun-12	02-Jul-12	119	17-Dec-12 A	14-Apr-13	40%	-286	-183																				
A18055	PB-BS Electrical Testing	05-Jul-12	02-Sep-12	60	15-Apr-13	13-Jun-13	0%	-284	-183																				
PB-MVAC																													
A18060	PB-BS Installation of piping and Ducting Works (MVAC)	05-Mar-12	02-Jun-12	110	06-Dec-12 A	26-Mar-13	71.8%	-296	-103																				
A18061	PB-BS Wiring and control installation works (MVAC)			119	30-Nov-12 A	29-Mar-13	90%		-57																				
A18065	PB BS MVAC Testing	05-Jul-12	02-Sep-12	60	29-Mar-13	28-May-13	0%	-267	-57																				
PB-Fire Services																													
A18070	PB-BS Piping installation works (Fire Services)	05-Mar-12	18-Apr-12	111	17-Dec-12 A	06-Apr-13	18%	-353	-182																				
A18080	PB-BS Sprinkler installation works (Fire Services)	19-Apr-12	02-Jun-12	111	17-Dec-12 A	06-Apr-13	18%	-308	-182																				
A18081	PB-BS Cable laying works			101	22-Dec-12 A	02-Apr-13	28.5%		-182																				
A18082	PB-BS Final connection works			45	09-Mar-13	23-Apr-13	0%		-182																				

Proposed Bio-Diesel Plant at T.K.O. Lot 39 Main Contract for All Remaining Works

3 Month Rolling Programme

for EM&A Report (01 March 2013)

Date	Revision	Checked	Approved
01-Mar-13	3 Mth Rolling Programme		

