#### MONTHLY EM&A REPORT

ATAL-Degrémont-China State Joint Venture

Contract No. DC/2008/03 Design, Build and Operate Pillar Point Sewage Treatment Works: *Thirty-seventh Monthly EM&A Report* 

December 2013

**Environmental Resources Management** 

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December 2013 Reference 0119806

For and on behalf of ERM-Hong Kong, Limited
Approved by: Frank Wan
Signed: handhatt
Position: Partner
Certified by: (Environmental Team Leader – Winnie Ko)
Certified by: (Registered Landscape Architect (R127) – Tai Kai Wai)
Date: 9 December 2013



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#### By Hand & By Fax (2833 9162)

Drainage Services Department Sewage Services Branch Harbour Area Treatment Scheme Division 5/F., Western Magistracy, 2A Pok Fu Lam Road, Hong Kong.

Attn: Mr. Kenley C.K. KWOK (T: 2159 3409)

09 December 2013

Dear Sir,

Contract No. DC/2008/03 Design, Build and Operate Pillar Point Sewage Treatment Works

#### Monthly EM&A Report for November 2013

Reference is made to Environmental Team (ET)'s draft of the Monthly EM&A Report for November 2013 provided by email dated 5 and 9 December 2013. We have no further comment.

We hereby verify the said Monthly EM&A Report as having complied with the requirement as set out in the EM&A Manual in accordance with the condition 3.6 of Environmental Permit No. EP-321/2008/A.

Should you have any queries, please feel free to contact the undersigned at 3922 9393.

Yours faithfully,

For and on behalf of AECOM Asia Co. Ltd.

Y T Tang Independent Environmental Checker

C.C.	AECOM – Mr. C Y Hung	
	ERM – Ms. Winnie Ko	
	ATAL–Degremont–China State JV – Mr. C.Y. Fong	

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# EXECUTIVE SUMMARY

The construction works of *DC/2008/03 of Design, Build and Operate Pillar Point Sewage Treatment Works (the Project)* commenced on 13 November 2010. This is the 37<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 to 30 November 2013 in accordance with the EM&A Manual.

#### Summary of Construction Works undertaken during the Reporting Month

Works undertaken in the reporting month included:

- Construct finishing works at the Administration Building, Sludge Dewatering Building, UV Building, Septic Waste Reception Station, Sludge Skip Storage Building, PTW, CEPT, Reuse Water Pump Room, Existing Solid Handling Building, Empty Sludge Skip Storage Area and Chemical Building;
- Install E&M equipment at the Administration Building , Sludge Dewatering Building, PTW, CEPT, UV Building, Septic Waste Reception Station, Reuse Water Pump Room, Chemical Building, Sludge Skip Storage Building, Empty Sludge Skip Storage Area, Existing Solid Handling Building, Electrical buildings No.1, No.3 and No.4;
- Install BS and DO duct at the Deodorisation Units Portion A and Deodorisation Units Portion B;
- Construct drainage, cable ducts, water mains and boundary walls and installation of E&M Duct laying at P2;
- Conduct preparation works for Payment Flow Meter at Payment Flow Meter Chamber;
- Construct structural works at weigh bridge; and
- Construct backfilling and drainage works for the whole site.

#### Environmental Monitoring and Audit Progress

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

- 24-hour TSP Monitoring at each monitoring station (AM1 5 sets and AM2)
  1-hour TSP Monitoring at each monitoring station (AM1 15 sets and AM2)
  Joint Environmental Site Inspection 4 times
- Landscape & Visual Monitoring Once

# <u>Air Quality</u>

5 sets of 24-hour TSP and 15 sets of 1-hr TSP measurements were carried out at each of the designated monitoring stations during the reporting period. No exceedance was recorded during the reporting period.

#### 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). In total, 1602.35 tonnes of inert C&D material were generated from

the Project, of which 60 tonnes were reused in this Contract and the remaining 1542.35 tonnes were disposed as public fill. 18.00 kg of metals, 60.00 kg of papers/ cardboard packing and 50.00 kg of plastics were sent to recyclers for recycling during the reporting period.

#### **Environmental Site Inspection**

Four weekly joint environmental site inspections were carried out by the representatives of the Contractor, SOR and the Environmental Team (ET). Details of the audit findings and implementation status of the mitigation measures are presented in *Section 7.1*.

#### Landscape & Visual

Review on landscape and visual mitigation measures was performed on 4 November 2013. Details of the audit findings and implementation status of the mitigation measures are presented in *Sections 3.2* and *7.2*.

# 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.

# Future Key Issues

Works to be undertaken in the next reporting month include:

- Construct finishing works at the Administration Building, Sludge Dewatering Building, UV Building, Septic Waste Reception Station, Sludge Skip Storage Building, PTW, CEPT, Reuse Water Pump Room, Existing Solid Handling Building, Empty Sludge Skip Storage Area and Chemical Building;
- Install E&M equipment at the Administration Building , Sludge Dewatering Building, PTW, CEPT, UV Building, Septic Waste Reception Station, Reuse Water Pump Room, Chemical Building, Sludge Skip Storage Building, Empty Sludge Skip Storage Area, Existing Solid Handling Building, Electrical buildings No.1, No.3 and No.4 and weighbridge;
- Install BS and DO duct at the Deodorisation Units Portion A and Deodorisation Units Portion B;
- Construct drainage, cable ducts, water mains and boundary walls and installation of E&M Duct laying at P2;
- Conduct installation of payment flow meter at Payment Flow Meter Chamber;
- Construct wall and roof at Sludge Skip Storage Building;
- Construct structural works at Empty Sludge Skip Storage Area; and
- Construct backfilling and drainage works for the whole site.

Environmental impacts arising from the above construction activities are mainly associated with dust, construction noise, site runoffs, waste management and landscaping issues.

# 1 INRODUCTION

ERM-Hong Kong, Limited (ERM) was appointed by ATAL – Degrémont – China State Joint Venture (ADC-JV) (the Contractor) as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) programme for the *Contract No. DC*/2008/03 of Design, Build and Operate *Pillar Point Sewage Treatment Works (the Project)*.

# 1.1 PURPOSE OF THE REPORT

This is the 37<sup>th</sup> EM&A report which summarises the monitoring results and audit findings for the EM&A programme during the reporting period from **1** to **30 November 2013**.

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

#### Section 3: Environmental Monitoring Requirements

It summarises the environmental monitoring requirements including monitoring parameters, programmes, methodologies, frequency, 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: **Monitoring Results** It summarises the monitoring results obtained in the reporting period.

# Section 6: Waste Management It summarises the quantity of public fill and construction waste generated in the reporting period

# Section 7: Environmental Site Inspection

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

## Section 8: Environmental Non-conformance

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

#### Section 9: Further Key Issues

It summarises the impact forecast and monitoring schedule for the next reporting month.

## Section 10: Review of the EM&A Data and Predictions

It compares the monitoring data and waste quantity against the predictions in the approved Project EIA report.

Section 11 : Conclusions

# 2 PROJECT INFORMATION

#### 2.1 BACKGROUND

The existing Pillar Point Sewage Treatment Works (PPSTW) is located to the north of the Tuen Mun River Trade Terminal and is abutting the Lung Mun Road in the north. It is a preliminary treatment works with screening and grit removal processes and the treated effluent is discharged to the sea (North Western Water Control Zone) via a twin submarine outfall. The *Review of the Tuen Mun and Tsing Yi Sewerage Master Plan* (RTMTYSMP), commissioned in February 1999, recommended that the sewage treatment capacity be expanded and the plant be upgraded to chemically enhanced primary treatment (CEPT) with disinfection. This is to cater for the projected ultimate population and planned developments in the Tuen Mun area, and to improve the effluent quality reducing pollution loadings to the receiving waters.

The upgrading of the PPSTW comprises the following works:

- expanding the treatment capacity of the existing PPSTW to cope with the increased peak wet-weather sewage flow in Tuen Mun area;
- upgrading the sewage treatment level of the existing PPSTW to incorporate chemical treatment with disinfection at minimum removal rates of 70%, 55% and 99.9% of suspended solids (SS), biochemical oxygen demand (BOD) and *E.coli*, respectively;
- upgrading the existing septic waste reception facilities at PPSTW; and
- providing and upgrading ancillary facilities including the administration building, workshop, laboratory, odour control facilities, sludge handling and dewatering facilities, access roads and minor landscaping works within the STW for the operation and maintenance of the upgraded STW.

The potential environmental impacts of the Project have been studied in the *"Upgrading of Pillar Point Sewage Treatment Works"* (EIAO Register No: AEIAR-145/2008). The EIA was approved on 10 June 2008 under the *Environmental Impact Assessment Ordinance* (EIAO) and an Environmental Permit (EP-321/2008) for the works was granted on 17 November 2008. A variation of an Environmental Permit was granted on 23 April 2013 (EP-321/2008/A). Under the requirements of Condition 3.1 of EP-321/2008/A, an EM&A programme as set out in the EM&A Manual is required to be implemented.

The construction works commenced on 13 November 2010 and are scheduled for completion by 2014.

# 2.2 GENERAL SITE DESCRIPTION

The open area adjacent to the existing PPSTW has been designated for the upgrading works. The layout of the upgrading works is illustrated in *Annex* 

# 2.3 CONSTRUCTION ACTIVITIES

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

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

# Construction Activities Undertaken

- Construct finishing works at the Administration Building, Sludge Dewatering Building, UV Building, Septic Waste Reception Station, Sludge Skip Storage Building, PTW, CEPT, Reuse Water Pump Room, Existing Solid Handling Building, Empty Sludge Skip Storage Area and Chemical Building;
- Install E&M equipment at the Administration Building , Sludge Dewatering Building, PTW, CEPT, UV Building, Septic Waste Reception Station, Reuse Water Pump Room, Chemical Building, Sludge Skip Storage Building, Empty Sludge Skip Storage Area, Existing Solid Handling Building, Electrical buildings No.1, No.3 and No.4;
- Install BS and DO duct at the Deodorisation Units Portion A and Deodorisation Units Portion B;
- Construct drainage, cable ducts, water mains and boundary walls and installation of E&M Duct laying at P2;
- Conduct preparation works for Payment Flow Meter at Payment Flow Meter Chamber;
- Construct structural works at weigh bridge; and
- Construct backfilling and drainage works for the whole site.

# 2.4 PROJECT ORGANISATION AND MANAGEMENT STRUCTURE

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

# 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 2.2Summary of Environmental Licensing, Notification and Permit Status

Permit/ Licences/	Reference	Validity Period	Remarks
Notification			
Environmental	EP-321/2008/A	Throughout the	Permit granted on 23
Permit		Contract	April 2013
Notification of	Ref No. 308136	Throughout the	-
Construction Works		Contract	
under the Air			
Pollution Control			
(Construction Dust)			
Regulation			

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Water Discharge	WT00017778-2013	22 November 2013	Wastewater discharge
License		- 31 October 2015	licence was issued by
			EPD on 22 November
			2013.
Construction Noise	GW-RW0466-13	28 July 2013 - 27	-
Permit		January 2014	
Chemical Waste	5213-421-A2620-01	Throughout the	Licence approved on 28
Producer Registration		Contract	October 2010

# 3 ENVIRONMENTAL MONITORING REQUIREMENTS

# 3.1 AIR QUALITY MONITORING

# 3.1.1 Monitoring Location

The proposed air quality monitoring stations for the construction phase of the Project, as recommended in the approved EM&A Manual, are given in *Table 3.1* and shown in *Annex D*. The proposed locations (AM1 and AM2) have been agreed with the Drainage Services Department (DSD), Environmental Protection Department (EPD) and the Independent Environmental Checker (IEC).

# Table 3.1Construction Phase Air Monitoring Locations

Monitoring ID	Air Quality Monitoring Station
AM1	Tuen Mun EMSD Servicing Vehicle Station
AM2	River Trade Terminal Office

# 3.1.2 Monitoring Parameter and Frequency

The construction phase air quality monitoring has been conducted at the designated monitoring stations in accordance with the requirements stipulated in the EM&A Manual. 1-hour and 24-hour TSP levels have been monitored at the frequency and duration stated in *Table 3.2*. The construction phase TSP monitoring has been conducted as per the schedule presented in *Annex E*.

# Table 3.2 Construction Phase Air Quality Monitoring Parameters and Frequency

Parameter	Frequency
24-hour average TSP	Once every 6 days
1-hour average TSP	3 times every 6 days

# 3.1.3 Action and Limit Levels

The Action and Limit levels have been established and presented in *Table 3.3*.

# Table 3.3Action and Limit Levels for Air Quality

Parameter	Air Monitoring Station	Action Level, µgm <sup>-3</sup>	Limit Level, µgm <sup>-3</sup>
24-hour TSP	AM1	183	260
	AM2	192	260
1-hour TSP	AM1	343	500
	AM2	383	500

# 3.1.4 Monitoring Equipment

Continuous 24-hour and 1-hour TSP monitoring was performed using High Volume Samplers (HVS) with appropriate sampling inlets located at the designated monitoring stations.

The performance specification of HVS complied with the standard method "Determination of Suspended Particulate Matter in the Atmosphere (High Volume Method)" as stipulated in US EPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50 Appendix B). Table 3.4 summarises the equipment that were deployed for the 24-hour and 1-hour TSP monitoring respectively.

# Table 3.4TSP Monitoring Equipment

Monitoring Station	Monitoring Equipment (HVS and Calibrator)
24-hr and 1-hr TSP	
AM1	GMW GS-2310 (S/N 7580), CM-AIR-43 (S/N 0438320)
AM2	GMW GS-2310 (S/N 1252), CM-AIR-43 (S/N 0438320)

# 3.1.5 Monitoring Methodology

The setup locations of the HVSs were listed in *Table 3.1*. All HVSs were free-standing with no obstruction.

The following criteria were considered in the installation of the HVSs:

- appropriate support to secure the samplers against gusty wind were provided at AM1 and AM2;
- a minimum of 2m separation from walls, parapets and penthouses was required for rooftop samplers;
- no furnace or incinerator flues was nearby;
- airflow around the sampler was unrestricted; and
- permission was obtained to set up the samplers and gain access to the monitoring stations.

# Preparation of Filter Papers

- glass fibre filters were labelled and sufficient filters that were clean and without pinholes were selected;
- all filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25°C and not variable by more than ± 3°C; the relative humidity (RH) was 40%; and
- SGS Hong Kong Ltd, a HOKLAS accredited laboratory, implemented comprehensive quality assurance and quality control programmes.

# Field Monitoring

• the power supply was checked to ensure that the HVSs were working properly;

- the filter holder and area surrounding the filter were cleaned;
- the filter holder was removed by loosening the foul bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully;
- the filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter;
- swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges;
- the shelter lid was closed and secured with an aluminium strip;
- the HVSs were warmed-up for about 5 minutes to establish runtemperature conditions;
- a new flowrate record sheet was inserted into the flow recorder;
- the flow rates of the HVSs were checked and adjusted to between 1.22 and 1.37 m<sup>3</sup> min<sup>-1</sup> which were within the range specified in the EM&A Manual (ie 0.6 to 1.7 m<sup>3</sup> min<sup>-1</sup>);
- the programmable timer was set for a sampling period of 24 hours ± 1 hour, and the starting time, weather condition and the filter number were recorded;
- the initial elapsed time was recorded;
- at the end of sampling, the sampled filter was removed carefully and folded in half 1 so that only surfaces with collected particulate matter were in contact;
- the filter was placed in a clean plastic envelope and sealed;
- all monitoring information was recorded on a standard data sheet; and
- filters were sent to SGS Hong Kong Ltd for analysis.

# Maintenance and Calibration

- the HVSs and their accessories were maintained in good working condition, eg. motor brushes were replaced routinely and electrical wiring was checked to ensure a continuous power supply; and
- the flow rate of each HVS with mass flow controller was calibrated using an orifice calibrator. Initial calibrations of the dust monitoring equipment were conducted upon installation and prior to commissioning. Five-point calibration was carried out for HVSs using CM-AIR-43 Calibration Kit. HVSs are calibrated on a bi-monthly basis. The calibration records for the HVSs are given in *Annex F*.

# Wind Data Monitoring

Average wind data (wind speed and wind direction) during the monitoring period were obtained from the meteorological station at Tuen Mun of the Hong Kong Observatory (HKO) and were presented in *Annex G*.

## 3.1.6 Event and Action Plan

The Event/Action Plan (EAP) for air quality monitoring is presented in *Annex H*.

#### 3.2 LANDSCAPE AND VISUAL MONITORING

In accordance with the EM&A Manual, monthly landscape and visual monitoring is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the approved EIA Report are fully achieved. The monitoring procedures and criteria as described in the EM&A Manual were adopted.

# 3.3 Environmental Mitigation Measures and Environmental Requirements in Contract

All the relevant environmental mitigation measures listed in the EIA Report and EM&A Manual as well as the specific environmental requirements stated in the Contract Specification are summarised in *Annex I*. A summary of the key environmental mitigation measures implemented as per the Contract Requirements is also presented in *Annex I*.

# IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

4

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

#### 5 MONITORING RESULTS

#### 5.1 AIR QUALITY

A total of 5 sets of 24-hour and 15 sets of 1-hour TSP measurements were taken at each of the monitoring stations (AM1 and AM2) during the reporting period. The monitoring data for 24-hour and 1-hour TSP together with the wind data and graphical presentations for the past 4 months are presented in *Annex G*. The weather conditions during the monitoring period ranged from sunny to rainy. The local impacts near the monitoring stations of AM1 and AM2 were mainly associated with vehicular emissions. No exceedance of Action and Limit Level of the 1-hr and 24-hr TSP was recorded during the reporting period.

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 J*). 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 *Table 6.1*.

Month / Year	Quantity				
	Total Inert C&D	Non-inert C&D Materials (b)			
	Materials Generated <sup>(a)</sup>	C&D Materials Recycled <sup>(c)</sup>	C&D Waste Disposed of at Landfill <sup>(d)</sup>	Chemical Waste	
November 2013	1602.35 tonnes	128.00 kg	36.44 tonnes	0 L	

# Table 6.1Quantities of Waste Generated from the Project

Notes:

(a) Inert C&D materials (public fill) include bricks, concrete, building debris, rubble and excavated spoil. In total, 1602.35 tonnes of inert C&D waste were generated from the Project, of which 60.00 tonnes were reused in this Contract and the remaining 1542.35 tonnes were disposed as public fill. The detailed waste flow is presented in *Annex J*.

- (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) 18.00 kg of metals, 60.00 kg of papers/ cardboard packing and 50.00 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 WENT Landfill by subcontractors.

# 7 ENVIRONMENTAL INSPECTIONS

# 7.1 WEEKLY SITE AUDITS

Joint site inspections were conducted by representatives of the Contractor, the SOR and the ET on 4, 14, 21 and 29 November 2013. The IEC was also present at the joint inspection on 21 November 2013.

Major observations during the reporting period are summarised as follows:

4 November 2013

• General refuse was observed accumulating beside the Outfall Pumping Station. The Contractor was reminded to store them in specific enclosed bins and frequently collect them.

14 November 2013

- A chemical container was observed beside N1 Manhole. The Contractor was reminded to store the chemical container in designated area for chemical waste.
- Tree tag was observed missing for the retained tree 259. The Contractor was reminded to provide the tree tag.

21 November 2013

- Oil leakage was observed under the chain cutting machine outside the Existing Outfall Pumping Station. The Contractor was reminded remove the oil leakage and dispose of as chemical waste. Also the Contractor was reminded to well maintain the machine such that there is no leakage of oil.
- Construction material was observed storing under retained tree R40. The Contractor was reminded to remove the construction material and fence off the protection zone for the tree.

29 November 2013

- Oil stain was observed beside the hammer breaker at Gate 3. The Contractor was reminded to clean up the oil stain and dispose of as chemical waste.
- Waste was observed accumulating at Gate 3. The Contractor was reminded to collect the waste frequently, and stored in enclosed bin.

Follow-up actions resulting from the last site inspections were taken as reported by the Contractor and their results were observed in the site inspections conducted in the reporting period.

#### 7.2 LANDSCAPE AND VISUAL MONITORING

In accordance with the EM&A Manual, monthly landscape and visual monitoring is required to ensure that the design, implementation and maintenance of landscape and visual mitigation measures recommended in the EIA Report are fully achieved. A review of the landscape and visual mitigation measures was performed on 4 November 2013. It was confirmed that most of the necessary landscape and visual mitigation measures as summarised in *Annex I* were implemented by the Contractor. The major findings are summarised as follow:

#### 4 November 2013

- Worn hessian pads/gunny bags wrapping the tree trunk were found intact on the retained trees along weighing bridge and access road after completion of nearby construction works. The Contractor was reminded to remove all the wrapping materials to prevent the trees from insect infestation and rotten bark.
- Broken branches were observed hanging on some retained trees along the access road. The Contractor was reminded to remove the broken branches and prune the tree crowns in order to prevent the broken branches from further decaying and falling on the access road.

# 8 ENVIRONMENTAL NON-CONFORMANCE

# 8.1.1 Summary of Monitoring Exceedance

No exceedances of the Action and Limit Levels of 1-hr and 24-hr TSP was recorded during the reporting period.

#### 8.1.2 Summary of Environmental Non-Compliance

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

#### 8.1.3 Summary of Environmental Complaint

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

## 8.1.4 Summary of Environmental Summon and Successful Prosecution

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

## 9 FUTURE KEY ISSUES

#### 9.1.1 Key Issues for the Coming Month

Works to be undertaken for the coming monitoring period are summarised in *Table 9.1*.

#### Table 9.1Construction Works to be Undertaken in the Next Reporting Period

#### **Construction Activities Undertaken**

- Construct finishing works at the Administration Building, Sludge Dewatering Building, UV Building, Septic Waste Reception Station, Sludge Skip Storage Building, PTW, CEPT, Reuse Water Pump Room, Existing Solid Handling Building, Empty Sludge Skip Storage Area and Chemical Building;
- Install E&M equipment at the Administration Building, Sludge Dewatering Building, PTW, CEPT, UV Building, Septic Waste Reception Station, Reuse Water Pump Room, Chemical Building, Sludge Skip Storage Building, Empty Sludge Skip Storage Area, Existing Solid Handling Building, Electrical buildings No.1, No.3 and No.4 and Weighbridge;
- Install BS and DO duct at the Deodorisation Units Portion A and Deodorisation Units Portion B;
- Construct drainage, cable ducts, water mains and boundary walls and installation of E&M Duct laying at P2;
- Conduct installation of payment flow meter at Payment Flow Meter Chamber;
- Construct wall and roof at Sludge Skip Storage Building;
- Construct structural works at Empty Sludge Skip Storage Area; and
- Construct backfilling and drainage works for the whole site.

Potential environmental impacts arising from the above construction activities will be mainly associated with dust, construction noise, site runoffs, waste management and landscaping issues.

#### 9.1.2 Monitoring Schedule for the Next Reporting Period

The tentative schedule of TSP monitoring for the next reporting period was presented in *Annex E*. Environmental monitoring will be conducted at the same monitoring locations in the next reporting period. The monitoring programme has been reviewed and was considered adequate for the nature of works in progress.

#### 9.1.3 Construction Programme for the Next Three Months

The most up-to-date construction programme for the Project is presented in *Annex L*.

# 10 REVIEW OF THE EM&A DATA AND EIA PREDICTIONS

#### 10.1 AIR QUALITY

Since the EIA has only included a qualitative assessment of dust impact during the construction phase, a comparison was made between the monitoring results from the start of the Project and the Hong Kong Air Quality Objectives (HKAQO) (see *Table 10.1*).

## Table 10.1 Comparison of the HKAQO and Air Quality Monitoring Results

Monitoring Station	Corresponding ASR in EIA	HKAQO, µg m <sup>-3</sup>	Measured 24-hour TSP Monitoring Results, µg m <sup>-3 (a) (b)</sup>	
		24 hour <sup>(a)</sup>	Average	Range
AM1	A1	260	72	50 - 100
AM2	A7	260	77	51 - 102
Notes:				

(a) Only 24-hour TSP monitoring results were compared as there is no 1 hour TSP criterion in HKAQO.

(b) The average and range of data were calculated from the period between the commencement of the construction works and this reporting month.

The monitoring results show that the average and range of the 24-hour TSP levels recorded since the commencement of the construction works have been well below the 24-hour TSP criterion in the HKAQO. Recommended mitigation measures in *Section 3.7.1.1* of EIA have been implemented throughout the construction period and were considered effective.

#### 10.2 WASTE MANAGEMENT

The estimated amount of waste generated from the Project and the cumulative quantities of waste generated up to this reporting month are presented in *Table 10.2*. The amount of inert C&D material sent to public fills is higher than the estimated amount in the EIA. With reference to the C&D Material Assessment (Contractor's General Submission (CSF) No.:

DC200803/CSF/SAF/060026/A), the difference in quantities is mainly due to the differences in excavation depths and the excavation methods in the Contract Works and that assumed in the Reference Design. Recommended mitigation measures in *Sections* 7.5.1.1 to 7.5.1.9 of the EIA will continue to be implemented during the construction stage.

Type of Material	Estimated Amount of Public Fill and Construction Waste in the EIA (inert & non- inert)	Estimated Amount of Public Fill and Construction Waste in C&D Material Assessment (CSF No.: DC200803/CSF/SAF/060026/ A) <sup>(c)</sup>	Accumulated Actual Amount of Public Fill and Construction Waste Recorded <sup>(a) (b)</sup> (inert & non-inert)
Amount of C&D Materials Arising	61,489.00 m <sup>3</sup>	77,600.00 m <sup>3</sup>	128,709.76 m <sup>3</sup>
Amount of C&D Materials Reused on other site	-	-	3,163.89 m <sup>3</sup>
Amount of C&D Materials Reused on site	14,926.00 m <sup>3</sup>	18,000.00 m <sup>3</sup>	24,130.00 m <sup>3</sup>
Amount of C&D Materials Sent to Fill Banks	46,563.00 m <sup>3</sup>	59,600.00 m <sup>3</sup>	101,415.55 m <sup>3</sup>
General Refuse	Small	-	1,947.56 tonnes
Chemical Waste	Small	-	810.00 L

# Table 10.2Quantity of Amount of C&D Materials, General Wastes and Chemical<br/>Wastes Actually Generated and Estimated in the EIA and C&D Material<br/>Assessment

(a) The actual amount of C&D Materials has been recorded since the commenceme construction works.

(b) The density of soil and rock (bulked) is  $1.8 \text{ tonnes}/\text{m}^3$ .

(c) The estimated amount of C&D material generated from the Contract Works was revised in the C&D Material Assessment and submitted to the SO on 9 September 2010 (CSF No.: DC200803/CSF/SAF/060026/A) because of the new plant & facility layout.

# **10.3 CONCLUSION OF THE REVIEW**

The EIA predictions and monitoring results since the commencement of the construction works have been reviewed. The EIA concluded that the Project would not cause adverse impacts to the environment, and monitoring results have also confirmed that so far. Mitigation measures recommended in the EP, EIA and EM&A Manual will continue to be implemented throughout the construction phase of the Project.

#### CONCLUSIONS

11

This EM&A Report presents the EM&A programme undertaken during the reporting period from 1 to 30 November 2013 in accordance with EM&A Manual and requirements of EP (EP-321/2008/A).

No exceedance of Action and Limit Levels of 24-hour TSP and 1-hour TSP was recorded at the monitoring stations during the reporting period.

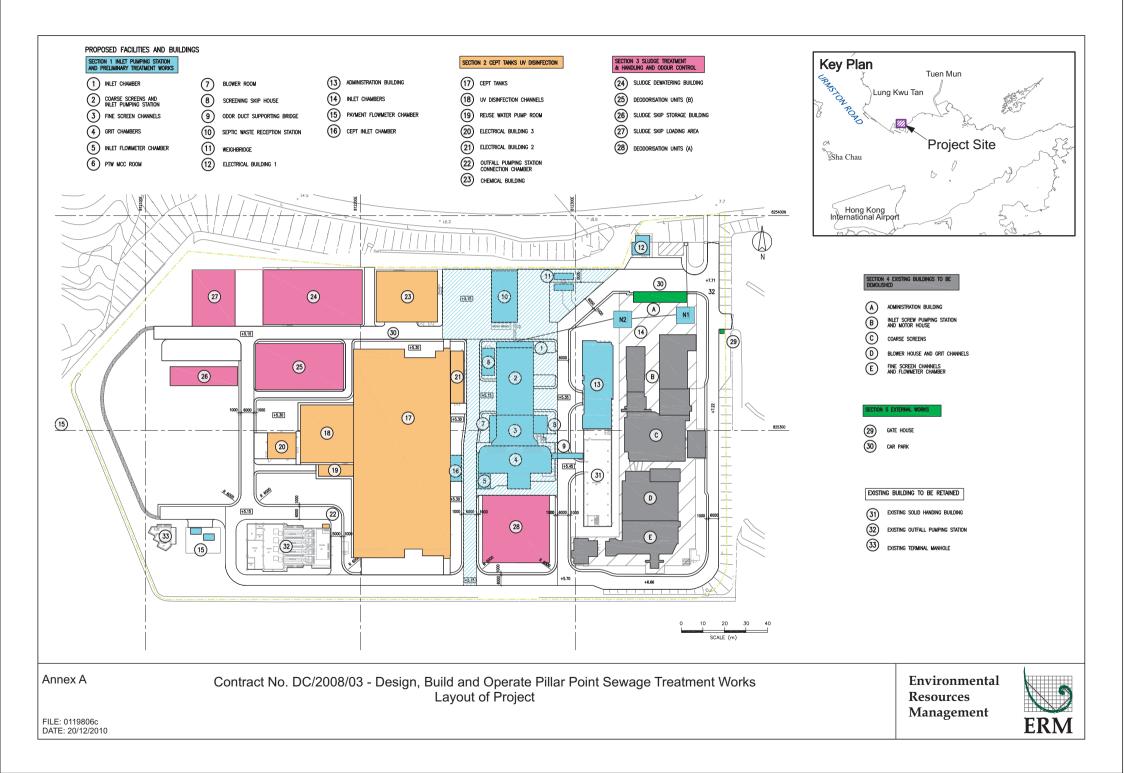
Monthly landscape and visual monitoring was conducted in the reporting period. Most of the necessary landscape and visual mitigation measures recommended in the EIA Report were implemented by the Contractor. Follow-up actions are required by the Contractor to improve protection of the retained or to-be transplanted trees.

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

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

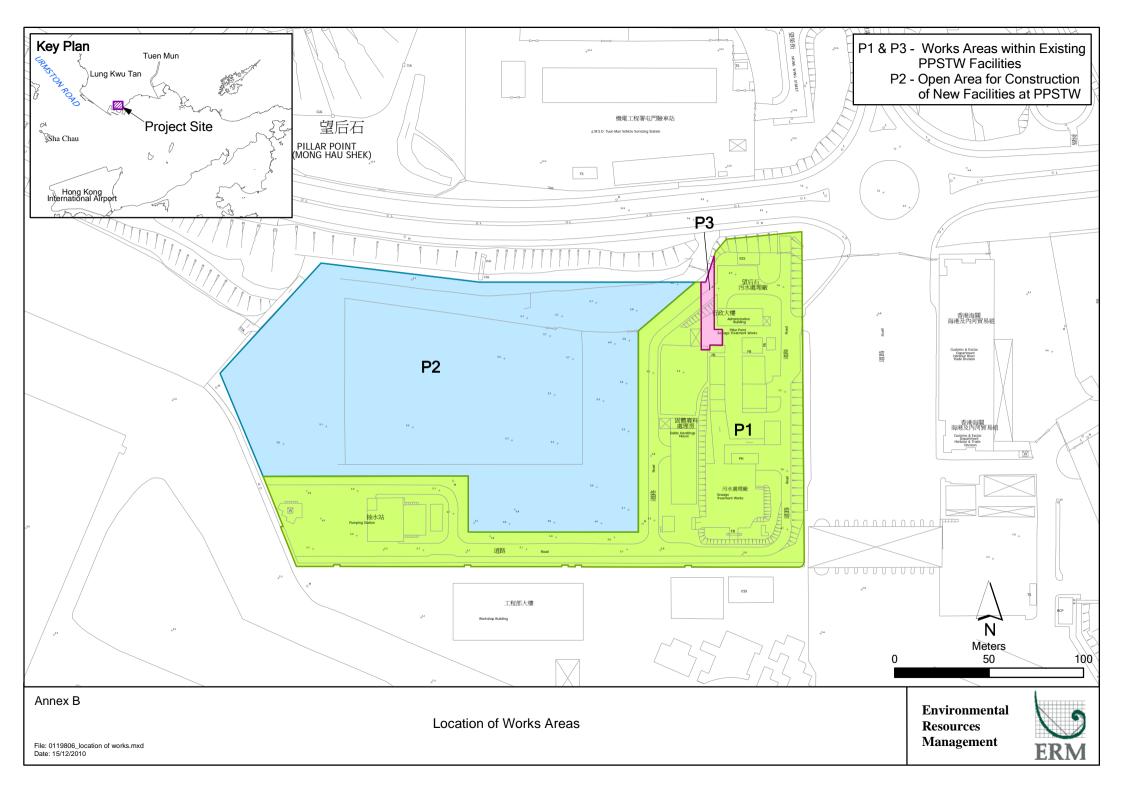
The ET will keep track of the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all the necessary mitigation measures in the coming periods. Annex A

Location of Project



Annex B

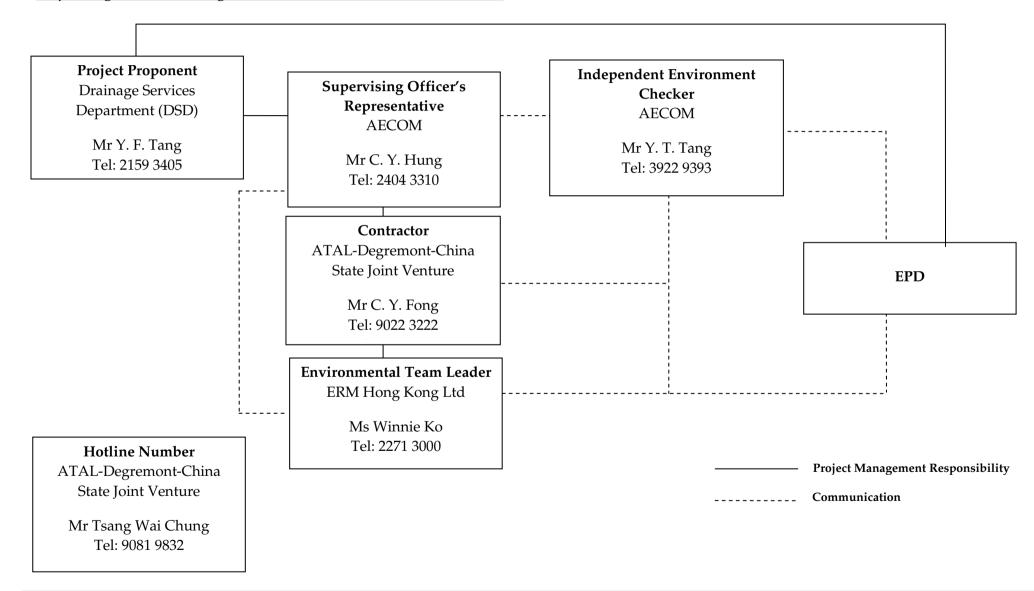
Works Location



Annex C

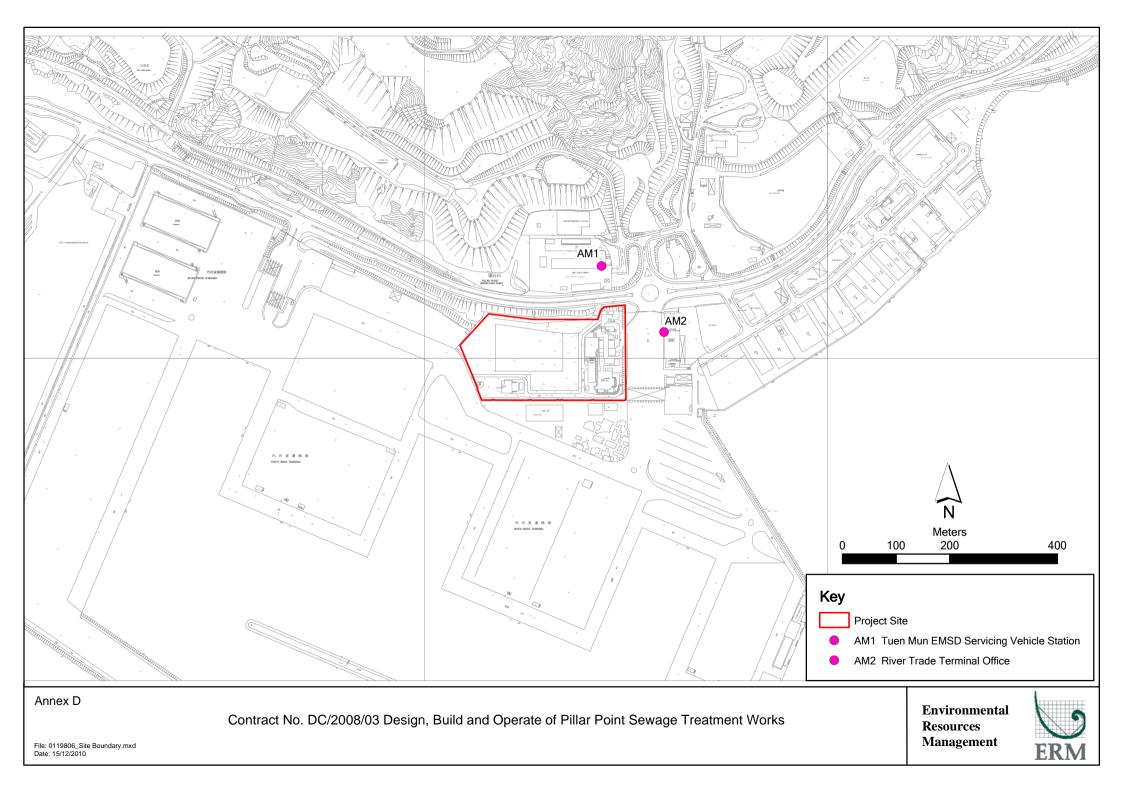
Project Organization Chart with Contact Details

<u>Project Organization During Construction Phase (with contact details)</u>



Annex D

Locations of Air Quality Monitoring Stations





AM1 – Tuen Mun EMSD Servicing Vehicle Station



AM2 - River Trade Terminal Office

Annex E

Monitoring Schedule of Reporting Month and Next Month

# Contract No. DC/2008/03 - Design, Build and Operate Pillar Point Sewage Treatment Works (Tuen Mun EMSD Servicing Vehicle Station - AM1 & River Trade Terminal Office - AM2) November 2013

November 2013									
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
					01-Nov	02-Nov			
03-Nov	04-Nov	05-Nov	06-Nov	07-Nov	08-Nov	09-Nov			
	3X1-hr & 1X 24-hr TSP				3X1-hr & 1X 24-hr TSP				
10-Nov	11-Nov	12-Nov	13-Nov	14-Nov	15-Nov	16-Nov			
				3X1-hr & 1X 24-hr TSP					
17-Nov	18-Nov	19-Nov	20-Nov	21-Nov	22-Nov	23-Nov			
			3X1-hr & 1X 24-hr TSP						
24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov			
		3X1-hr & 1X 24-hr TSP							

## Contract No. DC/2008/03 - Design, Build and Operate Pillar Point Sewage Treatment Works (Tuen Mun EMSD Servicing Vehicle Station - AM1 & River Trade Terminal Office - AM2)

December 2013										
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday				
01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec				
	3X1-hr & 1X 24-hr TSP				3X1-hr & 1X 24-hr TSP					
08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec				
				3X1-hr & 1X 24-hr TSP						
15-Dec	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec				
			3X1-hr & 1X 24-hr TSP							
22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec				
		3X1-hr & 1X 24-hr TSP	Public Holiday	Public Holiday						
29-Dec	30-Dec	31-Dec								
	3X1-hr & 1X 24-hr TSP									

December 2013

Annex F

Calibration Reports for HVSs

# TSP Monitoring Equipment

Monitoring	Location	Monitoring Equipment	Monitoring Equipment		Next Calibration Date
Station ID					
24-hr and 1-hr TSI	D	HVS	Calibrator		
AM1	Tuen Mun EMSD Vehicle Servicing Station	GMW GS-2310 (S/N 7580)	CM-AIR-43 (S/N 0438320)	02 November 2013	02 January 2014
AM2	River Trade Terminal Office	GMW GS-2310 (S/N 1252)	CM-AIR-43 (S/N 0438320)	02 November 2013	02 January 2014

### High-Volume TSP Sampler 5-Point Calibration Record

Location:EMSDCalibrated by:K.T.HoDate:02/11/2013	
SamplerModel:GMWS-2310 ACCU-VeSerial Number:S/N 7580	OL
Calibration Orfice and Standard Calibration Relationship	
Serial Number : 2323	
Service Date : 26 Dec 2012	
Slope (m) : 2.09107	
Intercept (b) : -0.02838	
Correlation Coefficient(r) : 0.99996	
Standard Condition	
Pstd (hpa) : 1013	
Tstd (K) : 298.18	
Calibration Condition	
Pa (hpa) : 1017	
Ta(K) : 298	

Resi	sistance Plate dH [green liquid] Z (inch water)		Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	11.2	3.353	1.617	64	64.13
2	13 holes	9.1	3.023	1.459	56	56.11
3	10 holes	7.2	2.689	1.299	48	48.09
4	7 holes	4.6	2.149	1.041	37	37.07
5	5 holes	2.6	1.616	0.786	23	23.05

Sampler Calibration Relationship

Slope(m):48.653 Intercept(b): -14.669

Correlation Coefficient(r): 0.9992

Checked by: <u>Magnum Fan</u>

Date: 06/11/2013

#### High-Volume TSP Sampler 5-Point Calibration Record

Location Calibrated by Date	: : :	River Trade P.F.Yeung 02/11/2013
Sampler		
Model	:	GMWS-2310 ACCU-VOL
Serial Number	:	S/N 1252
Calibration Orfice and Standa Serial Number Service Date Slope (m) Intercept (b) Correlation Coefficient(r)	rd Calibrati : : : :	<u>on Relationship</u> 2323 26 Dec 2012 2.09107 -0.02838 0.99996
Standard Condition		
Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition	_	
Pa (hpa)	:	1017
Ta(K)	:	298

Resi	stance Plate	dH [green liquid] Z		X=Qstd	IC	Y
(inch water)			(cubic meter/min)			
1	18 holes	11.2	3.353	1.617	64	64.13
2	13 holes	9.1	3.023	1.459	56	56.11
3	10 holes	7.2	2.689	1.299	48	48.09
4	7 holes	4.6	2.149	1.041	36	36.07
5	5 holes	2.6	1.616	0.786	22	22.04

Sampler Calibration Relationship

Slope(m):50.144 Intercept(b): -16.920 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan

Date: 06/11/2013



TISCH ENVIROMENTAL, INC. 145 SOUTH MIAMI AVE. VILLAGE OF CLEVES, OH 45002 513.467.9000 877.263.7610 TOLL FREE 513.467.9009 FAX WWW.TISCH-ENV.COM

## AIR POLLUTION MONITORING EQUIPMENT

	ORIFICE 7		NDARD CERT		WORKSHEET T	E-5025A
Date - De Operator		2 Rootsmeter Orifice I.	w/	438320 2323	Ta (K) - Pa (mm) -	295 753.11
PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1 2 3 4 5	NA NA NA NA NA	NA -NA NA NA NA	1.00 1.00 1.00 1.00 1.00	1.4440 1.0240 0.9120 0.8720 0.7200	3.2 6.4 8.0 8.8 12.8	2.00 4.00 5.00 5.50 8.00

# DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		·Va .	(x axis) Qa	(y axis)	
0.9967 0.9925 0.9903 0.9893 0.9840	0.6902 0.9693 1.0858 1.1345 1.3666	1.4149 2.0010 2.2372 2.3464 2.8299		0.9957 0.9915 0.9893 0.9883 0.9883	0.6896 0.9683 1.0847 - 1.1334 1.3652	0.8851 1.2517 1.3995 1.4678 1.7702	
Qstd slo intercep coeffici	t (b) =	2.09107 -0,02838 0.99996	******	Qa slop intercep coeffici	t (b) = ent (r) =	1.30939 0.01775 0.99996	
		D- /7CO) (208/	ma)]	v axis =	SORT [H20 (]	[a/Pa)]	

y axis = SQRT[H2O(Pa/760)(298/Ta)]

#### CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta) Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa] Qa = Va/Time

For subsequent flow rate calculations:

 $Qstd = 1/m\{[SQRT(H2O(Pa/760)(298/Ta))] - b\}$ Qa = 1/m{ [SQRT H20(Ta/Pa)] - b}

Annex G

24-hour and 1-hour TSP Monitoring Results

# Annex G - 24-hour and 1-hour TSP Monitoring Results

## 1-hour TSP Monitoring Results

Station AM1

\*

				TSP					Wind		
	Start	Finish	Weather	Concentration	Action Level	Limit Level	Site Conditions /	Temperature	Speed *	Sampler	Filter
Date	Time	Time		(µg/m³)	(µg/m³)	(µg/m³)	<b>Observations / Remarks</b>	( <b>℃</b> )	(m/s)	ID	ID
04-11-2013	13:10	14:10	Cloudy	139	343	500	Construction work in progress	22.0	*	7580	8555
	14:10	15:10	Cloudy	147	343	500	Construction work in progress	22.0	*	7580	8556
	15:10	16:10	Cloudy	154	343	500	Construction work in progress	22.0	*	7580	8557
08-11-2013	13:10	14:10	Cloudy	125	343	500	Construction work in progress	28.0	*	7580	8578
	14:10	15:10	Cloudy	139	343	500	Construction work in progress	28.0	*	7580	8579
	15:10	16:10	Cloudy	135	343	500	Construction work in progress	28.0	*	7580	8580
14-11-2013	13:10	14:10	Sunny	111	343	500	Construction work in progress	24.0	*	7580	8591
	14:10	15:10	Sunny	118	343	500	Construction work in progress	24.0	*	7580	8710
	15:10	16:10	Sunny	124	343	500	Construction work in progress	24.0	*	7580	8711
20-11-2013	13:10	14:10	Fine	169	343	500	Construction work in progress	24.0	*	7580	8725
	14:10	15:10	Fine	153	343	500	Construction work in progress	24.0	*	7580	8726
	15:10	16:10	Fine	157	343	500	Construction work in progress	24.0	*	7580	8727
26-11-2013	13:10	14:10	Sunny	177	343	500	Construction work in progress	23.0	*	7580	8750
	14:10	15:10	Sunny	190	343	500	Construction work in progress	23.0	*	7580	8751
	15:10	16:10	Sunny	165	343	500	Construction work in progress	23.0	*	7580	8752
			Min.	111							
					1						

	Max.	190
I	Average	147

Wind Speed data is presented in the Meteorological Data table

#### 1-hour TSP Monitoring Results

Station AM2

\*

	Start	Finish	Weather	TSP Concentration	Action Level	Limit Level	Site Conditions /	Temperature	Wind Speed *	Sampler	Filter
Date	Time	Time		(μg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(μg/m <sup>3</sup> )	Observations / Remarks	(°C)	(m/s)	ID	ID
04-11-2013	13:00	14:00	Cloudy	153	383	500	Construction work in progress	26.0	*	1252	8551
	14:00	15:00	Cloudy	156	383	500	Construction work in progress	26.0	*	1252	8552
	15:00	16:00	Cloudy	152	383	500	Construction work in progress	26.0	*	1252	8553
08-11-2013	13:00	14:00	Cloudy	147	383	500	Construction work in progress	28.0	*	1252	8574
	14:00	15:00	Cloudy	136	383	500	Construction work in progress	28.0	*	1252	8575
	15:00	16:00	Cloudy	149	383	500	Construction work in progress	28.0	*	1252	8576
14-11-2013	13:00	14:00	Sunny	110	383	500	Construction work in progress	24.0	*	1252	8590
	14:00	15:00	Sunny	136	383	500	Construction work in progress	24.0	*	1252	8707
	15:00	16:00	Sunny	132	383	500	Construction work in progress	24.0	*	1252	8708
20-11-2013	13:00	14:00	Fine	146	383	500	Construction work in progress	24.0	*	1252	8721
	14:00	15:00	Fine	153	383	500	Construction work in progress	24.0	*	1252	8722
	15:00	16:00	Fine	156	383	500	Construction work in progress	24.0	*	1252	8723
26-11-2013	13:10	14:10	Sunny	171	383	500	Construction work in progress	23.0	*	7580	8746
	14:10	15:10	Sunny	179	383	500	Construction work in progress	23.0	*	7580	8747
	15:10	16:10	Sunny	163	383	500	Construction work in progress	23.0	*	7580	8748
			Min.	110							

	110
Max.	179
Average	149

Wind Speed data is presented in the Meteorological Data table

# Annex G - 24-hour and 1-hour TSP Monitoring Results

## 24-hour TSP Monitoring Results

#### Station AM1

Start		Finish		Weather	Filter	Weight (g)	Elapsed Tim	e Reading	Sampling Time		/ Rate (m	<sup>3</sup> /min)	TSP Conc.	Action Level	Limit Level	Observations / Remarks	Sampler	Filter
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		ID	ID
04-11-2013	16:10	05-11-2013	16:10	Cloudy	2.7762	2.9291	15275.18	15299.18	24	1.20	1.20	1.20	88	183	260	Construction work in progress	7580	8558
08-11-2013	16:10	09-11-2013	16:10	Cloudy	2.7509	2.9012	15302.18	15326.18	24	1.20	1.20	1.20	87	183	260	Construction work in progress	7580	8581
14-11-2013	16:10	15-11-2013	16:10	Sunny	2.8112	2.9575	15329.18	15353.18	24	1.20	1.20	1.20	85	183	260	Construction work in progress	7580	8712
20-11-2013	16:10	21-11-2013	16:10	Fine	2.7911	2.9319	13556.18	13580.18	24	1.20	1.20	1.20	81	183	260	Construction work in progress	7580	8728
26-11-2013	16:10	27-11-2013	16:10	Sunny	2.7925	2.9466	13583.18	13607.18	24	1.20	1.20	1.20	89	183	260	Construction work in progress	7580	8753
												Min.	81					
												Max.	89					
												Average	86					

#### 24-hour TSP Monitoring Results

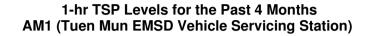
#### Station AM2

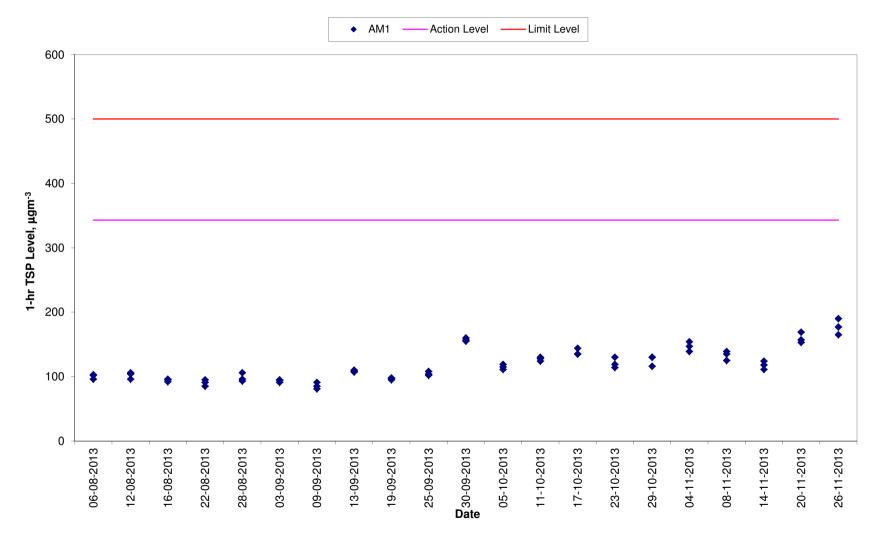
									Sampling				TSP	Action	Limit			
Start		Finish		Weather	Filter	Weight (g)	Elapsed Tim	ne Reading	Time	Flow	r Rate (m	n <sup>3</sup> /min)	Conc.	Level	Level	<b>Observations / Remarks</b>	Sampler	Filter
Date	Time	Date	Time		Initial	Final	Initial	Final	(hrs)	Initial	Final	Average	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )		ID	ID
04-11-2013	16:00	05-11-2013	16:00	Cloudy	2.7811	2.9449	23293.20	23317.20	24	1.21	1.21	1.21	94	192	260	Construction work in progress	1252	8554
08-11-2013	16:00	09-11-2013	16:00	Cloudy	2.7441	2.8911	23320.20	23344.20	24	1.21	1.21	1.21	84	192	260	Construction work in progress	1252	8577
14-11-2013	16:00	15-11-2013	16:00	Sunny	2.7966	2.9411	23347.20	23371.20	24	1.21	1.21	1.21	83	192	260	Construction work in progress	1252	8709
20-11-2013	16:00	21-11-2013	16:00	Fine	2.8080	2.9339	23374.20	23398.20	24	1.21	1.21	1.21	72	192	260	Construction work in progress	1252	8724
26-11-2013	16:00	27-11-2013	16:00	Sunny	2.8021	2.9531	23401.20	23425.20	24	1.21	1.21	1.21	87	192	260	Construction work in progress	1252	8749



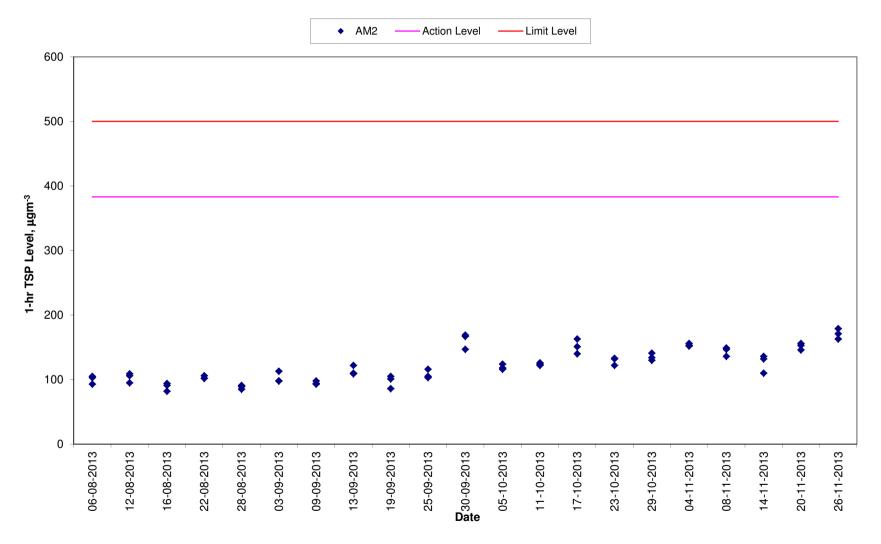
#### Meteorological Data Extracted from the Hong Kong Observatory

		Tuen Mun Station						
Date	Weather	Average Air Temperature (℃)	Average Relative Humiditiy (%)	Total Rainfall (mm)	Average Wind Speed (km/h)	Wind Direction		
04-11-2013	Cloudy	22.0	77-99	12.2	10.0	N		
05-11-2013	Cloudy	22.0	79-98	3.6	8.0	N		
08-11-2013	Cloudy	24.0	60-86	Trace	6.0	N-SE		
09-11-2013	Cloudy	25.0	62-86	Trace	9.0	N		
14-11-2013	Sunny	21.0	68-88	Trace	10.0	N		
15-11-2013	Sunny	20.0	62-83	0.0	9.0	N		
20-11-2013	Fine	20.0	65-77	Trace	6.0	N		
21-11-2013	Fine	19.0	55-79	0.5	6.0	N		
26-11-2013	Sunny	18.0	59-80	0.0	9.0	SE-N		
27-11-2013	Sunny	20.0	68-88	0.5	12.0	N		

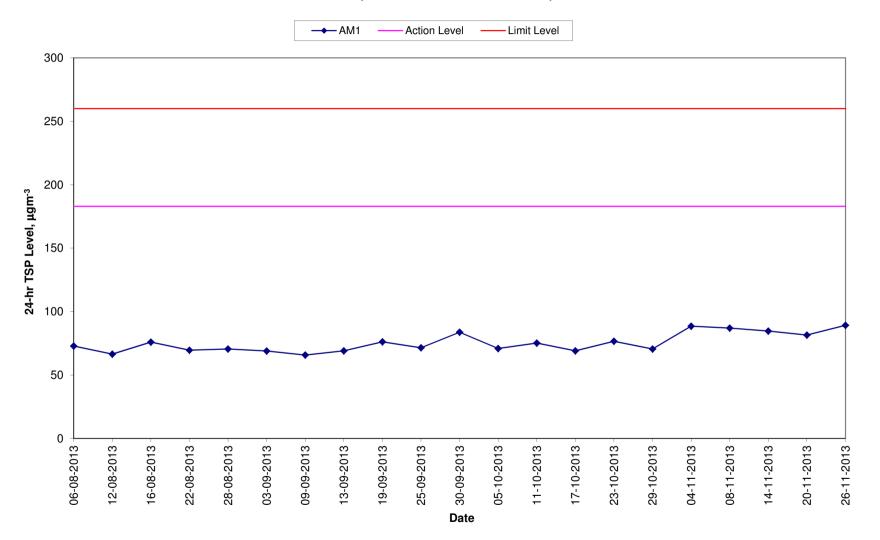




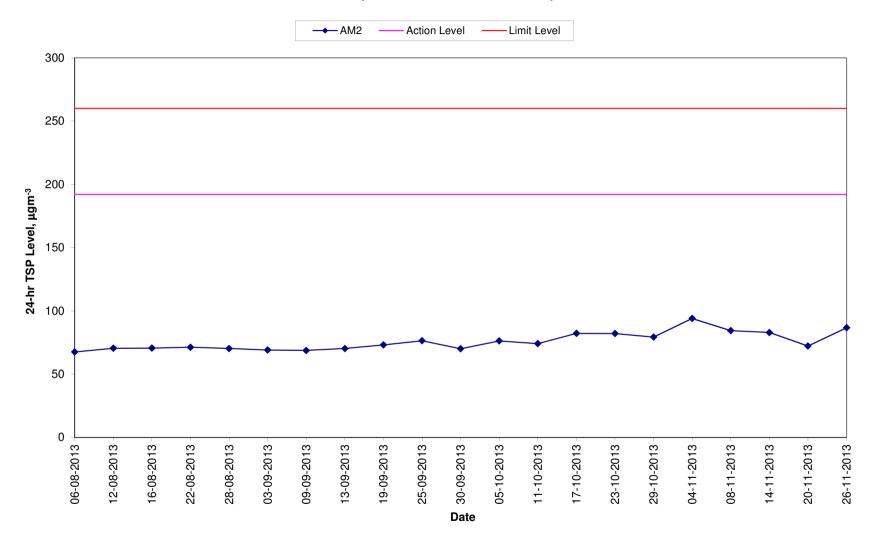
#### 1-hr TSP Levels for the Past 4 Months AM2 (River Trade Terminal Office)



#### 24-hr TSP Levels for the Past 4 Months AM1 (River Trade Terminal Office)



#### 24-hr TSP Levels for the Past 4 Months AM2 (River Trade Terminal Office)



Annex H

Event/Action Plan for Air Quality Monitoring

Action Level/Limit Level	Environmental Team Leader (ETL)	Independent Environmental Checker (IEC)	Supervising Officer Representative (SOR)	Contractor
Action Level				
Exceedance for one sample	<ul> <li>Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>Inform IEC and SOR;</li> <li>Repeat measurement to confirm findings;</li> <li>Increase monitoring frequency to daily.</li> </ul>	<ul> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ul>	• Notify Contractor and DSD.	<ul> <li>Rectify any unacceptable practice</li> <li>Amend working methods if appropriate.</li> </ul>
Exceedance for two or more consecutive samples	<ul> <li>Identify source;</li> <li>Inform IEC and SOR;</li> <li>Advise the SOR on the effectiveness of the proposed remedial measures;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IEC and Contractor on remedial actions required;</li> <li>If exceedance continues, arrange meeting with IEC and SOR;</li> <li>If exceedance stops, cease additional monitoring.</li> </ul>	<ul> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ET on the effectiveness of the proposed remedial measures;</li> <li>Supervise Implementation of remedial measures.</li> </ul>	<ul> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor and DSD;</li> <li>Ensure remedial measures properly implemented.</li> </ul>	<ul> <li>Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ul>

# Table H1Event Action Plan for Air Quality Monitoring

Action Level/Limit Level	Environmental Team Leader (ETL)	Independent Environmental Checker (IEC)	Supervising Officer Representative (SOR)	Contractor
Limit Level				
Exceedance for one sample	<ul> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform IEC, SOR, DSD and EPD;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD, DSD and SOR informed of the results.</li> </ul>	on possible remedial measures;	<ul> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ul>	<ul> <li>Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ul>
Exceedance for two or more consecutive samples	<ul> <li>Notify IEC, SOR, DSD and EPD;</li> <li>Identify source;</li> <li>Repeat measurement to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Arrange meeting with IEC and SOR to discuss the remedial actions to be taken;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD, DSD and SOR informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ul>	<ul> <li>Discuss amongst SOR, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ul>	<ul> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Ensure remedial measures properly implemented;</li> <li>If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ul>	<ul> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by the SOR until the exceedance is abated.</li> </ul>

Annex I

Implementation Schedule of Mitigation Measures

# Annex I Summary of Mitigation Measures Implementation Schedule

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	ronmental Mitigation Measures in the EIA and EM&A Manual	1	
Construction Pha	Se Se		
Air Quality	Dust mitigation measures stipulated in <i>the Air Pollution Control</i> ( <i>Construction Dust</i> ) <i>Regulation</i> shall be incorporated to control Post emission. Notice shall be given to authority prior to commencing of work.	Work sites / during construction period	Notice of works commencement was submitted to EPD on 3 August 2010.
Water Quality	The practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted. It is recommended to install perimeter channels in the works areas to intercept runoff as site boundary prior to the commencement of any earthwork. To prevent storm runoff from washing across exposed soil surfaces, intercepting channels should be provided. Drainage channels are also required to convey site runoff to sand/silt traps and oil interceptors. Provision of regular cleaning and maintenance can ensure the normal operation of these facilities throughout the construction period. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains.	Work site/During the construction period	
Water Quality	There is a need to apply to EPD for a discharge license under the WPCO for discharging effluent from the construction site. The discharge quality is required to meet the requirements specified in the discharge license. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. Reuse and recycling of the treated effluent can minimize water consumption and reduce the effluent discharge volume. The beneficial uses of the treated effluent may include dust suppression, wheel washing and general cleaning. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license which is under the ambit of regional office (RO) of EPD.	Work site/During the construction period	√ Discharge licence was awarded by EPD on 7 December 2010.
Water Quality	The construction programme should be properly planned to minimize soil excavation, if any, in rainy seasons. This prevents soil erosion from	Work site/During the construction period	$\checkmark$

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	exposed soil surfaces. Any exposed soil surfaces should also be properly protected to minimize dust emission. In areas where a large amount of exposed soil exists, earth bunds or sand bags should be provided. Exposed stockpiles should be covered with tarpaulin or impervious sheets at all times. The stockpiles of materials should be placed at locations away from any stream course so as to avoid releasing materials into the water bodies. Final surfaces of earthworks should be compacted and protected by permanent work. It is suggested that haul roads should be paved with concrete and the temporary access roads protected using crashed stone or gravel, wherever practicable. Wheel washing facilities should be provided at all site exists to ensure that earth, mud and debris would not be carried out of the works areas by vehicles.		
Water Quality	Good sites practices should be adopted to clean the rubbish and litter on the construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	Work site/During the construction period	<>
Water Quality	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 water collector should be deployed to clean the chemical toilets on a regular basis. The construction workers can also make use of the existing toilet facilities within the PPSTW as necessary.	Work site/During the construction period	$\checkmark$
Water Quality	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 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 the construction period	N
Waste Management	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	Work site/During the construction period	$\checkmark$

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	should be observed and complied with for control of chemical wastes.		
Waste Management	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and stumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Work site/During the construction period	<>
Waste Management	<ul> <li>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 the chemical wastes. General requirements are given as follows:</li> <li>Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> <li>Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> <li>Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>	Work site/During the construction period	
Waste Management	<ul> <li><i>Good Site Practices</i> Recommendations for good site practices during the construction activities include:</li> <li>Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site</li> <li>Training of site personnel in proper waste management and chemical handling procedures</li> <li>Provision of sufficient waste disposal points and regular collection of waste</li> <li>Appropriate measures to minimise windblown litter and dust</li> </ul>	Work site/During the construction period	√
	<ul> <li>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by</li> </ul>		

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	<ul> <li>transporting wastes in enclosed containers</li> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.</li> <li>Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Facility.</li> </ul>		
Waste Management	<ul> <li>Waste Reduction Measures</li> <li>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices.</li> <li>Recommendations to achieve waste reduction include:</li> <li>Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> <li>Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force</li> <li>Proper storage and site practices to minimise the potential for damage or contamination of construction materials.</li> <li>Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</li> </ul>	Work site/During planning & design stage, and construction stage	
Waste Management	<i>General Refuse</i> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable 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.	Work site / During the construction period	<>
Waste Management	Construction and Demolition Material In order to minimise the impact resulting from collection and transportation of C&D material for off-site disposal, the excavated	Work site / During design stage & construction period	$\checkmark$

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	material generated from site formation works for the proposed new facilities and units at the STW should be reused on-site as far as practicable. The surplus excavated material should be disposed of at the designated public fill reception facility, as agreed with the Secretary of the Public Fill Committee, for other beneficial uses.		
Waste Management	<ul> <li>Mitigation measures and good site practices should be followed to control potential environmental impact from handling and transportation of C&amp;D material. The mitigation measures include:</li> <li>Where it is unavoidable to have transient stockpiles of C&amp;D material pending collection for disposal, the transient stockpiles shall be located away from waterfront or storm drains as far as possible.</li> <li>Open stockpiles of construction materials or construction wastes onsite should be covered with tarpaulin or similar fabric.</li> <li>Skip hoist for material transport should be totally enclosed by impervious sheeting.</li> <li>Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving a construction site</li> <li>The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.</li> <li>The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.</li> <li>All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.</li> <li>The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading.</li> </ul>	Work site / During design stage & construction period	
Waste Management	When disposing C&D material at a public filling facility, it shall be noted that the material shall only consist of earth, building debris and broken rock and concrete. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal	Work site/During design stage & construction period	$\checkmark$

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor. In order to monitor the disposal of the surplus C&D material at the designed public fill reception facility and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements and implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work with reference to the ETWB TCW No. 31/2004 "Trip Ticket System for Disposal of Construction and Demolition Materials" as attached in Appendix 7-1. An Independent Environmental Checker should be responsible for auditing the results of the system.		
Waste Management	Chemical Waste If chemical wastes are produced at the construction site, the Contractor would be required to register with the 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, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work site / During the construction period	
Landscape & Visual	Temporary Tree NurseriesTemporary tree nurseries may be set up for the transplanted tree and proposed trees at an early stage to allow small trees to grow during the construction periods. By the time when planting area becomes available, trees mature and increase in trunk & spread size. They will require minimal pruning and suffer much less damage during transplanting when comparing the travel distance from an on-site nursery to an off- site nursery.Besides, these trees may also be positioned as visual mitigation during	Work site/During design stage & construction period	√. A tree nursery has been set up off-site near the site office.

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	the construction period.		
Landscape & Visual	No-intrusion Zone To maximize protection to existing trees and ground vegetation, construction contracts may designate "No-intrusion Zone" to various areas within the site boundary with rigid and durable fencing for each individual no-intrusion zone. The contractor should close monitor and restrict the site working staff not to enter the "no-intrusion zone", even for non-direct construction activities and storage of equipment.	Work site/During design stage & construction period	√
Landscape & Visual	Hoarding Hoarding or boundary fencing for construction shall be considered. It should be sensitively designed, subtle, camouflaged and more 'permeable' so that they fit into the existing environment when looking from outside.	Work site/During design stage & construction period	
Landscape & Visual	Dust and Erosion Control for Exposed Soil Excavation works and demolition of existing building blocks and which will be highly visible form surrounding areas should be well planned and with precautions to suppress dust. Exposed soil shall be covered or 'camouflaged' and watered often. Areas that are expected to be left with bare soil for a long period of time after excavation shall be properly covered with suitable protective fabric. Silt and erosion shall be controlled by ground barriers around the slope cutting area	Work site/During design stage & construction period	
Landscape & Visual	Existing Tree Record Inventory All retained trees should be record photographically at the commencement of the Contract, and carefully protected during the construction period. Detailed tree protection specification shall be allowed and included in the Contract Specification, which specifying the tree protection requirement, submission and approval system, and the tree monitoring system.	Work site/During design stage & construction period	√

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
Landscape & Visual	<u>Construction Light</u> All security floodlights for construction sites shall be equipped with adjustable shield, frosted diffusers and reflective covers, and be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC users. The Contractor shall consider other security measures which shall minimize the visual impacts.	Work site / During design stage & construction period	V
Landscape & Visual	<u>Tree Transplanting</u> Apart from the 18 numbers of " <i>Leucaena leucocephala</i> ", which are proposed to be felled in accordance with ETWB TCW No. 3/2006, all the affected trees shall be transplanted. Where practicable, trees shall be directly transplanted to permanent on-site locations. The location of the transplanted tree is shown in <b>Figure 8.9.1</b> .	Work site / During design stage & construction period	√.
Landscape & Visual	<u>Tree Compensation Ratio</u> The total number of compensatory trees planted in the project area shall not be less than 1:1 ratios by new trees. Required numbers and locations of compensatory trees shall be determined and agreed with Government during the tree felling application process under ETWCTC 3/2006. Compensatory trees shall be at least heavy standard size to create "immediate" greening effect. 81 numbers of " <i>Cassia surattensis</i> " will be provided as the additional compensatory planting for loss of greenery in the area due to removal of the affected trees. The location of the additional compensatory planting is shown in <b>Figure 8.9.1</b> .	Work site / During design stage & construction period	N/A
Landscape & Visual	Re-use of Existing Soil and Advance formation of Planting Area Existing topsoil shall be re-used where possible for new planting areas within the project. Advance formation of planting area and early implementation of the plating works can minimize adverse impact on trees. The construction program shall consider using the soil removed from one phase for backfilling another. Suitable storage ground, gathering ground and mixing ground may be set up on-site as necessary.	Work site / During design stage & construction period	$\checkmark$

Type of	Environmental Protection Measures	Location/ Timing	Status
Impact Landscape & Visual	Establishment Period12 month establishment period for the soft landscape works will be allowed in the main contract. Most construction contracts in Hong Kong require the Contractor to carry out routine horticultural operations, including watering, pruning, weeding, pest control, replacement of dead plants etc. to ensure healthy establishment of new planting during a 12 month establishment period. This period also serves as a kind of warranty / guarantee on the quality of the plants supplied and installed 	Work site/During operation period	N/A. To be implemented during operation phase of Project.
Landscape & Visual	Re-instatement of excavated Area         All excavated area and disturbed area for utilities diversion, temporary road diversion, and pipeline woks will be reinstated to former conditions, subject to applicable Government Standards.	Work site / During design stage & operation period	N/A. To be implemented during operation phase of Project.
Landscape & Visual	Appearance and Greening for the proposed structures Compatible design, construction materials and surface finishes of the proposed structure should match with the nearby existing external appearance of PPSTW buildings for achieving visual uniformity. Finishing materials shall have due consideration to form, basic color, color/tone variation, micro-and macro-texture, and reflectivity/light absorbance to avoid glare. Planting, such as turf, low groundcovers and climbers, may also be planted on top of these elements to provide greening and aesthetic effect.	Work site / During design stage & operation period	N/A. To be implemented during operation phase of Project.
Summary of Key	Environmental Mitigation Measures in Contract Requirements		
Air Quality	Only Ultra-low-sulphur diesel (ULSD) should be used for all diesel- operated plants and equipments on site	Work sites / during construction period	$\checkmark$
Air Quality and Noise	Plants and equipments of good operation conditions should be used on site.	Work sites / during construction period	$\checkmark$
Noise	No diesel hammers should be used for piling works	Work sites / during construction period	
Noise	Construction Noise Permits (CNP) should be applied for works conducted outside non-restricted hours.	Work sites / during construction period	$\checkmark$
Noise	Quiet construction equipments and the quietest practicable working	Work sites / during construction period	

Type of Impact	Environmental Protection Measures	Location/ Timing	Status
	methodologies should be adopted for works whenever feasible. Noise labels should be provided for air compressors. Hoods and cover panels of generators and air compressors should be closed during operation. Noise labels should be provided for air compressors and hand-held percussive breakers.		
Waste Management	Temporary works construction on site should minimize the use of timber to reduce the quantity of C&D waste generated during works period.	Work sites / during construction period	$\checkmark$
Landscape and Visual	Retained or to-be-transplanted trees on site should be properly protected from physical damages and soil compacts with temporary fencing or hessian armouring whenever feasible.	Work sites / during construction period	$\diamond$

Remark:

- $\sqrt{}$  Compliance of Mitigation Measures
- <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- Non-compliance of Mitigation Measures but rectified by ATAL-Degrémont-China State JV
- Δ Deficiency of Mitigation Measures but rectified by ATAL-Degrémont-China State JV
- N/A Not Applicable in Reporting Period

Annex J

Waste Flow Table

	Actual Quantities of Inert C&D Materials Generated (see Note 13)						Actual Quantities of Non-inert C&D Materials (Construction Waste) Ger (see Note 13)				
Month	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	
Nov 2010	2,248.00	0.00	0.00	55.00	2248.00	60.00	100.00	0.00	0.00	18.05 (see Note 4)	
Dec 2010	11,314.00 (see Note 4)	0.00	0.00	225.00	11314.00	100.00	120.00	20.00	0.00	28.40 (see Note 4)	
Jan 2011	58,383.00 (see Note 4)	0.00	0.00	3,000.00	58,382.90	250.00	280.00	60.00	0.00	4.59 (see Note 4)	
Sub-total	71,945.00	0.00	0.00	3280.00	71944.90	410.00	500.00	80.00	0.00	51.04	
Feb 2011	12,855.00	0.00	0.00	1,050.00	12,854.70	100.00	150.00	50.00	0.00	2.43 (see Note 4)	
Mar 2011	22,859.00	0.00	0.00	1,500.00	22,858.70	150.00	180.00	55.00	0.00	9.02	
Apr 2011	8,547.00 (see Note 7)	0.00	5,684.00(see Note 5, 7)	550.00	2,863.30	50.00	30.00	15.00	0.00	5.78	
Sub-total	44,261.00	0.00	5684.00	3100.00	38576.70	300.00	360.00	120.00	0.00	17.23	
May 2011	6,293.00 (see Note 7)	0.00	11.00 (see Note 5, 7)	425.00	6,282.00 (see Note 7)	45.00	25.00	10.00	360.00 (see Note 7)	8.83	
Jun 2011	4,587.00 (see Note 7)	0.00	0.00 (see Note 7)	313.00	4,586.00 (see Note 7)	40.00	30.00	15.00	0.00	7.10	
Jul 2011	523.00	0.00	0.00	25.00	522.90	15.00	5.00	10.00	0.00	7.20	
Sub-total	11,403.00	0.00	11.00	763.00	11391.50	100.00	60.00	32.00	360.00	23.13	
Aug 2011	571.00 (see Note 11)	0.00	0.00	50.00	571.00 (see Note 11)	0.00	0.00	15.00	450.00 (see Note 8)	6.12	
Sept 2011	235.00	0.00	0.00	25.00	235	20.00	0.00	0.00	0.00	12.15 (see Note 9)	
Oct 2011	5,705.00 (see Note 10)	0.00	0.00	650.00	5,705.00 (see Note 10)	100.00	0.00	0.00	0.00	2.98	
Sub-total	6,511.00	0.00	0.00	725.00	6511.00	120.00	0.00	15.00	450.00	21.25	
Nov 2011	6,294.00	0.00	0.00	775.00	6,294.00	50.00	0.00	0.00	0.00	44.84	
Dec 2011	3,011.00	0.00	0.00	263.00	3,011.00	20.00	0.00	0.00	0.00	17.14	
Jan 2012	349.00	64.00	0.00	25.00	284.60	20.00	150.00	0.00	0.00	49.01	

# Contract No. : DC/2008/03 - Design, Build and Operate Pillar Point Sewage Treatment Works Monthly Summary Waste Flow Table

	Actual Quantities of Inert C&D Materials (Public Fill) Generated					Actual Qua	ntities of Non-inert Co	&D Materia	ls (Construct	tion Waste) Generated
Month	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
Sub-total	9,654.00	64.00	0.00	1063.00	9589.60	90.00	150.00	0.00	0.00	110.99
Feb 2012	3,371.00	30.00	0.00	2,810.00	3,341.00	150.00	0.00	0.00	0.00	48.72
Mar 2012	6,460.00	3,000.00	0.00	625.00	3,459.70	30.00	0.00	0.00	0.00	41.10
Apr 2012	3,774.00	3,000.00	0.00	250.00	774.40	40.00	0.00	0.00	0.00	40.01
Sub-total	13,605.00	6,030.00	0.00	3685.00	7575.10	220.00	0.00	0.00	0.00	129.83
May 2012	7,936.00	5,600.00	0.00	750.00	2,336.20	40.00	0.00	10.00	0.00	75.19
Jun 2012	13,091.00	7,500.00	0.00	875.00	5,590.80	40.00	35.50	8.00	0.00	66.74
Jul 2012	11,972.00	8,600.00	0.00	825.00	3,372.50	40.00	36.40	5.00	0.00	100.50
Sub-total	32,999.00	21,700.00	0.00	2450.00	11299.50	120.00	70.90	23.00	0.00	242.43
Aug 2012	11,660.00	11,000.00	0.00	950.00	659.80	30.00	10.00	6.00	0.00	78.77
Sept 2012	3,055.00	1,500.00	0.00	920.00	1,555.38	30.00	40.00	5.00	0.00	118.80
Oct 2012	2,657.00	200.00	0.00	500.00	2,457.01	30.00	59.40	8.00	0.00	124.04
Sub-total	17,372.00	12,700.00	0.00	2370.00	4672.19	90.00	109.40	19.00	0.00	321.61
Nov 2012	2,691.00	250.00	0.00	750.00	2,441.01	50.00	25.00	10.00	0.00	128.08
Dec 2012	4,319.00	400.00	0.00	200.00	3,919.13	60.00	20.00	15.00	0.00	165.28
Jan 2013	4,442.00	100.00	0.00	200.00	4,341.56	200.00	40.00	20.00	0.00	111.23
Sub-total	11,452.00	750.00	0.00	1150.00	10701.70	310.00	85.00	45.00	0.00	404.59
Feb 2013	1,286.00	85.00	0.00	50.00	1,201.23	180.00	35.00	16.00	0.00	99.44
Mar 2013	900.00	900.00	0.00	120.00	0.00	120.00	45.00	10.00	0.00	97.43
Apr 2013	680.00	680.00	0.00	300.00	0.00	22.00	50.00	15.00	0.00	80.21
Sub-total	2866.00	1665.00	0.00	470.00	1201.23	322.00	130.00	41.00	0.00	277.08
May 2013	1443.37	100.00	0.00	1020.00	1343.37	40.00	43.00	9.00	0.00	46.88 (see Note 16)
June 2013	1993.06	50.00	0.00	850.00	1943.06	100.00	60.00	5.00	0.00	53.89

July 2013	1246.64	100.00	0.00	1100.00	1146.64	100.00	60.00	10.00	0.00	71.15
Sub-total	4683.07	250.00	0.00	2970.00	4433.07	240.00	163.00	24.00	0.00	171.92
August 2013	873.73	120.00	0.00	700.00	753.73	50.00	60.00	8.00	0.00	63.95
September 2013	748.43	50.00	0.00	650.00	698.43	40.00	60.00	5.00	0.00	41.28
October 2013	1701.99	45.00	0.00	1500.00	1656.99	20.00	60.00	5.00	0.00	34.79
Sub-total	3324.15	215.00	0.00	2850.00	3109.15	110.00	180.00	18.00	0.00	140.02
November 2013	1602.35	60.00	0.00	1490.00	1542.35	18.00	60.00	50.00	0.00	36.44
Total	231677.57	43434.00	5695.00	26366.00	182547.99	2450.00	1868.30	470.00	810.00	1947.56

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 WENT by subcontractors.
- (4) The waste flow data for November and December 2010, January and February 2011 was updated in March 2011based on SOR's comments and has been confirmed by the Contractor.
- (5) The inert C&D materials were reused in the Contract No. EP/SP/58/08 at Tuen Mun Tsang Tsui.
- (6) Chemical waste was collected though the licensed chemical waste collector, Dunwell Ind. (Holdings) Ltd, with the waste collection licence number 7111-757-W0015-WC.
- (7) The waste flow data for April, May and June 2011 was updated in August 2011 based on SOR's comments and has been confirmed by the Contractor.
- (8) The waste flow data of chemical waste for August 2011 was updated in October 2011 based on Contractor's revised waste flow summary.
- (9) The waste flow data of general refuse for September 2011 was updated in November 2011 based on Contractor's revised waste flow summary.
- (10) The waste flow data of C&D material for October 2011 was updated in December 2011 based on Contractor's revised waste flow summary.
- (11) The waste flow data of C&D material for August 2011 was updated in January 2011 based on SOR's comments and has been confirmed by the Contractor.
- (12) The waste flow data of metal and paper/cardboard packaging for June 2011 was revised in August 2012.
- (13) The quantity of inert and non-inert C&D material generated from May 2012 to December and imported fill material was updated by the Contractor on 6 November 2012.
- (14) The quantity of Rocks & Broken Concrete from November 2010 to November 2012 was updated by the Contractor on 12 December 2012.
- (15) The quantity of C&D material reused in this Contract in Oct, Nov and Dec 2012 were updated by the Contractor on 5 January 2012.
- (16) The quantity of general refuse in this Contract for May 2013 was updated by the Contractor in June 2013.

Annex K

Environmental Complaint, Environmental Summons and Persecution Log

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
November 2010	0	0
December 2010	0	0
January 2011	0	0
February 2011	0	0
March 2011	0	0
April 2011	0	0
May 2011	0	0
June 2011	0	0
July 2011	0	0
August 2011	0	0
September 2011	0	0
October 2011	0	0
November 2011	0	0
December 2011	0	0
January 2012	0	0
February 2012	0	0
March 2012	0	0

Annex K Cumulative Complaint and Summons/Prosecutions Log

Reporting Month	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
April 2012	0	0
May 2012	0	0
June 2012	0	0
July 2012	0	0
August 2012	0	0
September 2012	0	0
October 2012	0	0
November 2012	0	0
December 2012	0	0
January 2013	0	0
February 2013	0	0
March 2013	0	0
April 2013	0	0
May 2013	0	0
June 2013	0	0
July 2013	0	0
August 2013	0	0
September 2013	0	0
October 2013	0	0

<b>Reporting Month</b>	Number of Complaints in Reporting Month	Number of Summons/Prosecutions in Reporting Month
November 2013	0	0
Overall Total	0	0

Annex L

Construction Programme of the Project

Design, Build and Operate Pillar Point Sewage Treatment Works

	Activity ID	Description	Original Duratior	Early Start	Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float		NOV	2013	DEC	JAN
Ke	ey Date						1				201				
	Commencement a	nd Completion of Works									i i		i i		1
	Contract Dates			-		-		•							1
	KMD000120	Completion of Design and Construction Works	0		04JUN2014		08MAY2014			-27d	i i				
	KMD000140	Completion of Interim Operation	0		08MAY2014		08MAY2014			0					
	KMD000150	Commencement of Operation of Facilities	0	05JUN2014		09MAY2014				-27d					1
	KMD000160	Original Contract Completion Date	0		25NOV2013 *	•	25NOV2013 *			0	i i		Origi	inal Contract Com	pletion Date
	KMD000170	EOT granted for May 11 to Sept 2012 (98.5 days)	99	26NOV2013	04MAR2014	26NOV2013	04MAR2014			0	¦-		÷ -		
	KMD000175	EOT Extra granted for May 11 (2 days)	2	05MAR2014	06MAR2014	05MAR2014	06MAR2014			0	i				l
	KMD000176	EOT Extra granted for Jun 11 (2.5 days)	3	07MAR2014	09MAR2014	07MAR2014	09MAR2014			0					1
	KMD000177 KMD000178	EOT granted for Jul 11 (0.5 days)	0	10MAR2014 10MAR2014	09MAR2014 10MAR2014	10MAR2014 10MAR2014	09MAR2014 10MAR2014			0			1		1
	KMD000178	EOT granted for Aug 11 (0.5 days)	0	10MAR2014 11MAR2014	10MAR2014	10001AR2014	10MAR2014			0			i i		1
	KMD000179	EOT granted for Sep 11 (0.5 days)	3	11MAR2014	13MAR2014	11MAR2014	13MAR2014			0	!-		+-		L
	KMD000180	EOT granted for Oct 11 (3 days) EOT granted for Nov 11 (1 days)	31	14MAR2014	14MAR2014	14MAR2014	14MAR2014			0	i i		i i		1
	KMD000181	EOT granted for Oct 2012	2	15MAR2014	16MAR2014	15MAR2014	16MAR2014			0					1
	KMD000185	EOT granted for Holiday/ Sun at Extended Period	8	17MAR2014	24MAR2014	17MAR2014	24MAR2014			0	i i		i i		1
	KMD000190	EOT granted for Nov 2012 (7.5 days)	7	25MAR2014	31MAR2014	25MAR2014	31MAR2014								1
	KMD000192	EOT granted for Dec 2012	4	01APR2014	04APR2014	01APR2014	04APR2014						<del>+</del> -	·	<b>-</b>
	KMD000195	EOT granted Mar 2013 (4.5 days)	5	05APR2014	09APR2014	05APR2014	09APR2014								1
	KMD000195	EOT granted for April 2013 (3 days)	3	10APR2014	12APR2014	10APR2014	12APR2014				i		i i		1
	KMD000190	EOT granted for May 2013 (4 days)	4	13APR2014	16APR2014	13APR2014	16APR2014			0					1
	KMD000197	EOT granted for June 2013 (4.5 days)	5	17APR2014	21APR2014	17APR2014	21APR2014			0	i.		i i		1
	KMD000199	Additional EOT granted for April 2013 (4 days)	4	22APR2014	25APR2014	22APR2014	25APR2014			0	!-		+-	·	L
	KMD000200	Additional EOT granted for May 2013 (2.5 days)	3	26APR2014	28APR2014	26APR2014	28APR2014			0	i i		i i		1
	KMD000200	EOT granted for July 2013 (2.5 days)	3	20APR2014 29APR2014	01MAY2014	29APR2014	01MAY2014			0					1
	KMD000201	7EOT granted for August 2013 (7 days)	7	02MAY2014	08MAY2014	02MAY2014	08MAY2014			0	i		i i		1
Pr	eliminaries		· ·	0210171 2014	000012014			1	1	<u> </u>					<u> </u>
	General Requiren	nents									i		i		i
	Contract Prelim														1
	PLW005320	Operation Plan - Approval	10	07AUG2012	25NOV2013	07AUG2012	25NOV2013	07AUG2012	1	0				ation Plan - Approv	val
	PLW006100	O&M Manual for the Upgrade Works	90	15JAN2013 A	1	15JAN2013 A	30APR2014	15JAN2013		76d			opera		1
	PLW006200	As-built Drawing for Upgrade Works	90	26NOV2013	23FEB2014	08FEB2014	08MAY2014	100/ 11/2010		74d					
	PLW007200	EPD Approval Variation to Discharge Permit	90	02SEP2013 A	1	02SEP2013 A		02SEP2013		114d				EPD App	roval Variation to
		Proving Test for All E&M Works				1	1		1	1					1
	Building and Str	uctures													1
	IP0000060	Interim Operation of Existing Plant	1075	19DEC2010	03JUN2014	19DEC2010	08MAY2014	19DEC2010		-26d					
	esign and Design	Checking of Permanent Works				-		•			i		- i	-	I
	Submission and C	onsent													1
	Submission and	Approval									i.		i i		1
	DPD081161	DDA9A-D: Elect. sys design- RtoC x2	28	24AUG2011	01DEC2013	24AUG2011	01DEC2013	24AUG2011		0			Di	DA9A-D: Elect. sy	vs design- RtoC x
	DPD081170	DDA9A-D: Elect. sys design- SO Consent Granted	0		01DEC2013		01DEC2013			0	i.		- 🔶 I	DDA9A-D: Elect.	sys design- SO C
	DPD814123	All area: Fan SO Review	50	02JUL2012 A	07DEC2013	02JUL2012 A	07DEC2013	02JUL2012		0				All area: Fan S	O Review
	DPD814125	All area: Fan SO approved	0		07DEC2013		07DEC2013			0	i.		i i i	🔶 All area: Fan S	SO approved
	DPD904181	Refurbish: DDA 25A~D E&M - RtoC x2	28	20SEP2013 A	26NOV2013	20SEP2013 A	26NOV2013	20SEP2013		0			📫 Refur	rbish: DDA 25A~D	E&M - RtoC x2
Ci	vil and Structural	Works									i		i		İ.
	Chemically Enhan	ced Primary Treatement System													1
	Building and Str	uctures									i.		i		i
	CCC150101B	Maintenance Works for Structures	517	28SEP2012 A	25DEC2013	28SEP2012 A	25DEC2013	28SEP2012		0				Ma	intenance Works
	CCC156650B	CEPT: MCC Bonntile to external wall	7	24NOV2013	30NOV2013	03JAN2014	09JAN2014			40d	i i		🗖 CE	EPT: MCC Bonntil	e to external wall
	CCC156660B	CEPT: MCC Gravel on roof	6	31DEC2013	05JAN2014	15FEB2014	20FEB2014			40d				!	戸 СЕРТ: МСС
	New Preliminary T	reatment Works									i		i		Ì
	Building and Str	uctures													1
	CCC150200	PTW: Remaining ABWF	90	02OCT2013	26NOV2013	02OCT2013	08MAY2014	02OCT2013		126d			PTW:	: Remaining ABW	F
Sta	art date 14	JUL2010													
	nish date 04	JUN2014 Page 1A of 10A													
		NOV2013													
		NOV2013		PPSTW	Progran	nme R7B	- Progres	s up to 24	4 Nov 13	- Rem	naini	ng W	orks		
	genumber 1A						Ŭ					-			
	oject name PF ? Primavera Syst	R39 ems. Inc.													

# ATAL - Degremont - China State Joint Venture 2014 MAR FEB APR MAY Completion of Ir EOT granted for May 11 to Sept 2012 (98.5 days) EOT Extra granted for May 11 (2 days) EOT Extra granted for Jun 11 (2.5 days) EOT granted for Jul 11 (0.5 days) EOT granted for Aug 11 (0.5 days) EOT granted for Sep 11 (0.5 days) EOT granted for Oct 11 (3 days) EOT granted for Nov 11 (1 days) EOT granted for Oct 2012 EOT granted for Holiday / Sun at Extended Perid EOT granted for Nov 2012 (7.5 days) EOT granted for Dec 2012 EOT granted Mar 2013 (4.5 days) EOT granted for April 2013 (3 days EOT granted for May 2013 (4 da EOT granted for June 2013 ( Additional EOT granted for Additional EOT granted EOT granted for July 2 7EOT granted for O&M Manual for the Upgrade Works As-built Drawing for Upgrade Works to Discharge Permit ; x2 O Consent Granted rks for Structures /all CC Gravel on roof Early bar Progress bar Critical bar Summary bar Start milestone point $\diamond$ Finish milestone poin

Activity ID	Description	Original Duratior	Early Start	Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float	2013 2014	
	PTWN: Screeding to staircase		01DEC2013*	04DEC2013	25APR2014	28APR2014			139d		IAI
	PTWN: Nosing Tile to staircase		05DEC2013	06DEC2013	29APR2014	30APR2014			139d		
	PTWN: Skirting to staircase		07DEC2013	08DEC2013	01MAY2014	02MAY2014			139d		
	PTWN: Railing to staircase		09DEC2013	14DEC2013	03MAY2014	02101A12014 08MAY2014			139d		
				26DEC2013	25APR2014	08MAY2014			1390 127d		
	PTW: Bonntile coating to external wall		13DEC2013								
	PTWS: FRP cover		30DEC2013*	10JAN2014	21JAN2014	07FEB2014			22d		
	PTWS: Washed grano to staircase		01DEC2013 *	04DEC2013	13APR2014	16APR2014			127d		
	PTWS: Non-slip nosing tile to staircase		05DEC2013	06DEC2013	17APR2014	18APR2014			127d		
	PTWS: Railing to staircase	6	07DEC2013	12DEC2013	19APR2014	24APR2014			127d	27d PTWS: Railing to staircase	
sinfection System											
Building and Stru				•	•	•	•	•	-	📕 i 📘 i i i i i	
	UV: Precast concrete cover		24NOV2013			07FEB2014			68d		
CCC301100B	UV: Gravel on roof	6	01DEC2013*	06DEC2013	27JAN2014	07FEB2014			57d	57d UV: Gravel on roof	
udge Treatment F	Facilities										
Building and Stru	uctures										
CCC602590B	SDB: FRP cover at polymer area	4	01DEC2013*	04DEC2013	29JAN2014	07FEB2014			59d	59d SDB: FRP cover at polymer area	
CCC603980B	Skip: Door for water meter cabinet	3	24NOV2013	26NOV2013	24NOV2013	26NOV2013			0	0 Skip: Door for water meter cabinet	
otic Waste Colle							•	•	-		
Building and Stru											
	Septic : Gravel on roof	2	01DEC2013*	02DEC2013	27APR2014	28APR2014			141d	41d Septic : Gravel on roof	
	Septic: Bonntile to external wall and column		01DEC2013			08MAY2014			141d		
iliary Building		12	OIDEC2013	IZDEC2013	2/74F1\2014	00007412014			1410		
	und more										
uilding and Stru	-						1	1			
	RWPS: Colour gravel on roof		24NOV2013	29NOV2013		29NOV2013			0	0 RWPS: Colour gravel on roof	
	RWPS: Bonntile to external wall		30NOV2013	11DEC2013	30NOV2013	11DEC2013			0	0 RWPS: Bonntile to external wall	
	Chem: FRP floor at tank compound		01DEC2013*	14DEC2013	19JAN2014	07FEB2014			49d		
	Chem: Photovoltaic glazing		24NOV2013	07DEC2013	24NOV2013	07DEC2013			0	0 Chem: Photovoltaic glazing	
CCC500960B	Chem: Textured coating to external wall	28	02NOV2013	08DEC2013	02NOV2013	08DEC2013	02NOV2013		0	0 Chem: Textured coating to external wall	
CCC910570B	EB1: Green roofing	7	02DEC2013*	09DEC2013	25JAN2014	07FEB2014			44d	t4d EB1: Green roofing	
CCC930670B	EB3: Gravel on roof	6	24NOV2013	29NOV2013	24NOV2013	29NOV2013			0	0 EB3: Gravel on roof	
CCC970105	Gate House: Commencement of Construction	0	24NOV2013		20DEC2013				26d	26d 🔷 Gate House: Commencement of Construction	
CCC970110	Gate House: Excavation	6	02DEC2013*	07DEC2013	20DEC2013	28DEC2013			16d	16d Gate House: Excavation	
CCC970120	Gate House: Foundation		09DEC2013	19DEC2013	30DEC2013	10JAN2014			16d		
CCC970130	Gate House: Backfilling Work		20DEC2013	27DEC2013	11JAN2014	16JAN2014			16d	<u> </u>	
	Gate House: Superstructure		28DEC2013	07FEB2014	17JAN2014	26FEB2014			16d		
	Gate House: Remove Temp Support		08FEB2014	28FEB2014	27FEB2014	19MAR2014			16d		
				-		08MAY2014		1			
	Gate House: ABWF Works	20	UIIVIAR2U14	24MAR2014	104PR2014	081VIAY2014			33d	30 Gale House. ABWF Works	
lour Control Faci											
Building and Stru		i.e		1	1		1	I			
	DOUA: Bontile to external wall	12	05FEB2014 *	16FEB2014	27APR2014	08MAY2014			81d	B1d DOUA: Bontile to external wall	
ndscaping Wroks											
Viscellaneous W	-	<u> </u>			-		-				
CMT995345D	Landscaping (Summary)	27 2	20MAR2014	24APR2014	01APR2014	08MAY2014			10d	10d Landscaping	s (Summa) ا
CMT995350	Landscape Preparation Works	4	10FEB2014	13FEB2014	01APR2014	04APR2014			43d	43d Landscape Preparation Works	
CMT995360	Planting Works	7	14FEB2014	21FEB2014	07APR2014	14APR2014			43d	43d Planting Works	
CMT995370	Establishment Works		22FEB2014	03MAR2014	15APR2014	26APR2014			43d		
	Landscape Softworks and Establishment Works		22FEB2014	03MAR2014		26APR2014			43d		
CMT995390	Tree Transplantation		04MAR2014			08MAY2014			43d		
	Preservation and Protection of Trees		04MAR2014			08MAY2014	ĺ		43d		
	Irrigation System		04101AR2014 10FEB2014			08MAY2014			430 62d		
	I Renewal Works				2017172014	0011/41/2014	I		1 020		
liscellaneous W			4 1 1 1 1 2 2 1 1					1			
	Refurbishment of Existing Buildings / Structures		17JAN2014			08MAY2014	1		25d		ulidings
t date 14J sh date 04J a date 24N	SHB: External ABWF           JUL2010         IUL2010           JUN2014         Page 2A of 10A           NOV2013         NOV2013					08MAY2014	s up to 24	 1 Nov 13	<u>25d</u>	emaining Works	

Design, Build and Operate Pillar Point Sewage Treatment Works

Activity ID	Description	Original Duratior		Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float	2013	
CCM001180B	CLID: Front uprling platform for external upp		06JAN2014 *	18JAN2014	23JAN2014	11FEB2014	Start	FIIISI		OCT NOV DEC	JAN SH
	SHB: Erect working platform for external wks SHB: Remove existing finishes	12 12	20JAN2014	07FEB2014	12FEB2014	25FEB2014			15d 15d		311 
	SHB: Touch up external concrete surface	12	08FEB2014	19FEB2014	26FEB2014	08MAR2014			15d	i i i	<u> </u>
	SHB: Plastering to external wall	10	20FEB2014	03MAR2014	10MAR2014	20MAR2014			15d	· -! <mark>- +</mark> -	
	SHB: Bonnite finishes to external wall	24	04MAR2014	31MAR2014	21MAR2014	2010/AR2014 22APR2014			15d		
	SHB: Remove working platform to external wall	12	01APR2014	15APR2014	23APR2014	08MAY2014			15d		
liscellaneous Wo		12	01APR2014	13AFR2014	234582014	001VIA12014			150	1 I I	
Miscellaneous V											
	EB4: Coloured gravel	6	24NOV2013	29NOV2013	01MAR2014	06MAR2014			91d	EB4: Coloured gravel	
xternal Works							11		0.0		
Miscellaneous V	Vorks										
CWM101066	Flowmeter: Penstock modi & Divert sewage to bypa	50	28SEP2013 A	06DEC2013	28SEP2013 A	06DEC2013	28SEP2013		0	Flowmeter: Pensto	ock modi & Div
CWM101070	Flowmeter: Temporary shut down of OPS	3	07DEC2013	09DEC2013	07DEC2013	09DEC2013			0	Flowmeter: Tem	porary shut do
CWM101080	Flowmeter: Replace Pipeline 1	16	26NOV2013	11DEC2013	08DEC2013	23DEC2013			12d	Flowmeter: Rep	
CWM101090	Flowmeter: Const. Weir 1 at Extg Outfall Manhole	16	12DEC2013	27DEC2013	24DEC2013	08JAN2014			12d	Flov	wmeter: Const.
CWM101100	Flowmeter: Replace Pipeline 2	16	19JAN2014	03FEB2014	03FEB2014	18FEB2014	i l		15d		
CWM101110	Flowmeter: Const. Weir 2 at Extg Outfall Manhole	16	19JAN2014	03FEB2014	03FEB2014	18FEB2014	i l		15d		
CWM101120	Flowmeter: Backfill	12	26FEB2014	11MAR2014	12MAR2014	25MAR2014			12d		
CWM101500	Boundary Wall: Provision of New U-channel	60	25NOV2013	11FEB2014	21FEB2014	08MAY2014			68d		
CWM101600	Construction of Sitewide Roadworks	60	13MAR2014	28MAY2014	21FEB2014	08MAY2014			-17d		
CWM101610	Construction of Access M012	24	300CT2013	02DEC2013	300CT2013	07DEC2013	300CT2013		5d	Construction of Acces	ss M012
CWM101615	Formation of Access M003 (North of CEPT & DOUB)	18	02NOV2013	26NOV2013	02NOV2013	15APR2014	02NOV2013		111d	Formation of Access M00	
CWM101610	Construction of Access M003 (N of CEPT & DOUB)	30	02NOV2013	06DEC2013	02NOV2013	31MAR2014	02NOV2013		90d	Construction of Ac	
CWM101625	Formation of Access M007	15	17MAY2014	04JUN2014	16APR2014	08MAY2014	0211012010		-22d		
CWM101630	Construction of Access M007	27	02MAY2014	04JUN2014	01APR2014	08MAY2014			-22d	i i i	
CWM101635	Formation of Access M002 0+80 to 0+113.6	15	28MAR2014	15APR2014	06MAR2014	22MAR2014			-19d		
CWM101640	Construction of Access M002 0+80 to 0+113.6	21	16APR2014	15MAY2014	24MAR2014	17APR2014			-19d		
CWM101650	Formation of Access M002 0+00 to 0+80	14	18DEC2013	06JAN2014	18FEB2014	05MAR2014			45d		Formation of the second sec
CWM101655	Construction of Access M002 0+00 to 0+80	35	07JAN2014	21FEB2014	06MAR2014	16APR2014			45d	i i i	
CWM101000	Formation of Access M002 01 00 10 01 00	15	12DEC2013	31DEC2013	20NOV2013	06DEC2013			-19d		Formation of Ac
CWM101070	Construction of Access M010	30	02JAN2014	11FEB2014	07DEC2013	14JAN2014			- 19d	· · ·	ormation of Ac
CWM1016/5	Formation of Access M006 0+00 to 0+50	15	20JAN2014	11FEB2014	27DEC2013	14JAN2014			- 19d	· -!	
CWM101683	Construction of Access M006 0+00 to 0+50	30		18MAR2014	15JAN2014	24FEB2014			- 190 - 19d		
			12FEB2014 11MAR2014	27MAR2014	17FEB2014	05MAR2014			-		
CWM101685	Formation of Access M006 0+50 to 0+110	15							-19d		
	Construction of Access M006 0+50 to 0+110	15			1	22MAR2014			-19d		
CWM101689	Construction of Access M001	30	29MAR2014	09MAY2014	07MAR2014	11APR2014			-19d	·	
CWM101690	Construction of Access M009	50	13MAR2014	16MAY2014	15FEB2014	15APR2014			-22d		
CWM101695	Access around new PTW	80	17DEC2013	28MAR2014	09DEC2013	20MAR2014	420070240		-7d		
CWM101700	Construction of Access M005	35	12OCT2013	09DEC2013	12OCT2013	07DEC2013	120CT2013		-1d	Construction of A	ACCESS MUU5
CWM101770	FS: Construction of Access M004	35	17FEB2014	28MAR2014	20JAN2014	06MAR2014			-19d		
CWM101790	Construction of Weighbridge	40	17OCT2013	09DEC2013	170CT2013	03DEC2013	17OCT2013		-5d		Neighbridge
CWM101800	Installation of Sitewide Drainage	380	02JUN2012 A	-	02JUN2012 A	-	02JUN2012		19d		
CWM102000	Installation of Sitewide Severage	380	19APR2012 A			08MAY2014	19APR2012		-7d		
CWM102040	Severage Overflow from CEPT to Extg manhole	260	21MAY2012	25NOV2013	21MAY2012	27MAR2014	21MAY2012		97d	Sewerage Overflow from (	JEPT to Extg r
CWM102070	Connection to extg Pump Station	95	25NOV2013	24MAR2014	25NOV2013	24MAR2014					
CWM102160	Laying LV cable duct	100	18FEB2013 A		18FEB2013 A		18FEB2013		31d		Laying LV cab
CWM102170	Laying ELV cable duct	116	18FEB2013 A		18FEB2013 A		18FEB2013		0		Laying ELV ca
CWM102180	Sitewide Watermain	84	26APR2013 A		26APR2013 A		26APR2013		24d	Sitewide Waterma	ain
CWM102300	Demolition of Existing Admin Building	30	10MAR2014	14APR2014	24FEB2014	29MAR2014			-12d		
CWM103100	Demolish E&M Work at Extg PTW	20	09FEB2014	28FEB2014	10FEB2014	01MAR2014			1d	i i	
CWM103200	Commencement of Demolishing Extg PTW	0	09FEB2014		10FEB2014				1d	· · · · · · · · · · · · · · · · · · ·	
CWM103210	Demolish Extg Structures of PTW	75	09FEB2014	24APR2014	10FEB2014	25APR2014			1d		
CWM200520B	Divert Flow in N1	1	27NOV2013	27NOV2013	01NOV2013	01NOV2013			-22d	Divert Flow in N1	
	Backfill and Remove Sheet Piling N2 to N1	24	24NOV2013	17DEC2013	24NOV2013	17DEC2013			0	Dealefill and	d Remove She

 Start date
 14JUL2010

 Finish date
 04JUN2014

 Data date
 24NOV2013

 Run date
 24NOV2013

 Page number
 3A

 Project name
 PR39

 2 Primavera Starts Inc.

PPSTW Programme R7B- Progress up to 24 Nov 13 - Remaining Works

? Primavera Systems, Inc.

I FEB	2014 MAR	APR	MAY UI
SHB: Erect working platforr			
	e existing finishes	1	
	Touch up external c	oncrete surface	
	SHB: Plastering to		
		SHB: Bonnite finishe	es to external wall
I I	1	SHB: Rer	nove working platform to
	1		
1	I		1 I
1	1		
1	1	1	1
1	1		
Divert sewage to bypa			
down of OPS	1		
ne 1			i i
st. Weir 1 at Extg Outfall N	lanhole		
Flowmeter: Rep	lace Pipeline 2	i	i
Flowmeter: Con	st. Weir 2 at Extg Ou	tfall Manhole	
	Flowmeter: I	Backfil	i i
Boundary	Wall: Provision of Ne	w U-channel	
I			Con
CEPT & DOUB)	I		
(N of CEPT & DOUB)	1	1	I I
1	I.		
1	I <u> </u>	1	
!	! <b>_ _</b>	Formation	of Access M002 0+80
	1		Construction
n of Access M002 0+00 to		I	
1	struction of Access N	4002 0+00 to 0+80	i i
Access M010			
	on of Access M010		
Formation	of Access M006 0+0		
		uction of Access M006 Formation of Access M	
		<u> </u>	
I.			tion of Access M006 0+5
	<b> </b> _		Construction of A
I		Access around new P	
5	· · · · · · · · · · · · · · · · · · ·		I VV I
		FS: Construction of A	
, i	I		
		Illation of Sitewide Dra	
g manhole			
	Co	nnection to extg Pump	Station
able duct			
cable duct	;	ii	ii-
	1		
		Demolition	n of Existing Admin Build
	Demolish E&M Wor	1	
	ment of Demolishing	-	
			molish Extg Structures o
I.	1	1	
heet Piling N2 to N1	i I		
~	1		
		Early ba	
		Progres	
		Critical	
		Summa Summa	
			lestone point nilestone poin
		• IIII3III	meatine poin

Activity ID	Description	Original Duratior	Early Start	Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float <mark>∋</mark>	
CWM202130B	Backfill and Reinstatement	24	24NOV2013	17DEC2013	24NOV2013	17DEC2013			0	0 Backfill and Reinstatement
CWM202330B	Backfill and Remove Sheet Pile at B5	24	24NOV2013	17DEC2013	24NOV2013	17DEC2013			0	0 Backfill and Remove Sheet Pile at B5
CWM202340B	Reinstate Roadwork at B5	7	18DEC2013	24DEC2013	18DEC2013	24DEC2013			0	0 Reinstate Roadwork at B5
CWM202350B	Decommissioning of PTW	0	23JAN2014*		07FEB2014				9d	d i 🔶 Decommissioning of PTW
CWM202360B	Abandon extg DN2100 in transit box	14	23JAN2014	11FEB2014	07FEB2014	20FEB2014			9d	d Abandon extg DN2100 in transit box
		24	15NOV2013	12DEC2013	15NOV2013	12DEC2013	15NOV2013		0	0 Backfill and Remove sheet pile
		35	13DEC2013	16JAN2014	13DEC2013	16JAN2014			0	0 Break Opening at OPS
	Connection from UV to OPS	35	02NOV2013	25NOV2013	02NOV2013	09NOV2013	02NOV2013		-16d	Connection from UV to OPS
CWM202570	Handover Connection Manhole to OPS for E&M	0	0211012010	16JAN2014		16JAN2014			0	$\sim$ Handover Connection Manhole to OPS for E&M
		18	24NOV2013	11DEC2013	28JAN2014	20FEB2014			65d	
		10	02NOV2013	28NOV2013	02NOV2013	28NOV2013	02NOV2013			0 Access M004: Foul Drain bet Extg A10 to F10
	<u> </u>	12	02NOV2013	26NOV2013	02NOV2013	26NOV2013	02NOV2013			0 Access M002: Foul Drain bet F2B to F15 / Skip
		24								<u> </u>
		18	11NOV2013	28NOV2013	11NOV2013	28NOV2013	11NOV2013			0 Access M002: Foul Drain bet F12 to OPS
CWM214010B		35	250CT2013	26NOV2013	250CT2013	26NOV2013	250CT2013		0	O Access M003: Storm Drain bet S14 to S15
		25	04NOV2013	01DEC2013	04NOV2013	07FEB2014	04NOV2013		62d	
CWM215010B		28	24NOV2013	21DEC2013	25JAN2014	27FEB2014			62d	
CWM215060B	Access M002: Storm Drain bet S18 to S19	24	24NOV2013	17DEC2013	03JAN2014	26JAN2014			40d	d Access M002: Storm Drain bet S18 to S19
CWM215070B		24	06DEC2013	29DEC2013	15JAN2014	13FEB2014			40d	d Access M002: Storm Drain bet S19 to CP19
CWM215080B	Access M002: Storm Drain bet CP19 to CP19A	24	21DEC2013	13JAN2014	05FEB2014	28FEB2014			40d	d Access M002: Storm Drain bet CP19 to CP19A
CWM215110B	Stockpile Area: Storm Drain bet S19 /CP20 to S20	51	24NOV2013	13JAN2014	14JAN2014	11MAR2014			51d	d Stockpile Area: Storm Drain bet S19 /CP20 to S20
CWM215120B	Stockpile Area: Storm Drain bet S20 to S21	30	12DEC2013	10JAN2014	07FEB2014	08MAR2014			51d	d Stockpile Area: Storm Drain bet S20 to S21
CWM215130B		30	27DEC2013	25JAN2014	22FEB2014	23MAR2014			51d	d Stockpile Area: Storm Drain bet S21 to S22
		30	11JAN2014	15FEB2014	09MAR2014	07APR2014			51d	<u> </u>
		30	29NOV2013	28DEC2013	29NOV2013	28DEC2013			0.0	0 Access M006: Storm Drain bet S28 to S17
CWM215610B		16	24NOV2013	09DEC2013	24NOV2013	09DEC2013				0 Access M006: Storm Drain bet EB4 to CP12A
		10	10DEC2013	25DEC2013	10DEC2013	25DEC2013				0 Access M006: Storm Drain bet CD12A to CD12
		10					470500040			
		16	17DEC2013	09DEC2013	17DEC2013	06FEB2014	17DEC2013		53d	
	0	23	24NOV2013	16DEC2013	290CT2013	20NOV2013			-26d	
		24	11DEC2013	03JAN2014	15NOV2013	08DEC2013			-26d	
CWM216030B	Access M004: Storm Drain bet R1 to S3	28	30DEC2013	26JAN2014	04DEC2013	31DEC2013			-26d	
CWM216040B		24	22JAN2014	20FEB2014	27DEC2013	19JAN2014			-26d	
CWM216050B	Access M004: Storm Drain bet S2B to S2	24	17FEB2014	12MAR2014	16JAN2014	14FEB2014			-26d	Access M004: Storm Drain bet S2B to S2
CWM216110B	Access M003: Storm Drain bet S2 to S2A	16	24NOV2013	09DEC2013	06JAN2014	21JAN2014			43d	d Access M003: Storm Drain bet S2 to S2A
CWM216120B	Access M003: Storm Drain bet S2A to CP2A / CP2B	25	10DEC2013*	03JAN2014	22JAN2014	21FEB2014			43d	Access M003: Storm Drain bet S2A to CP2A / CP2B
CWM216130B	Access M003: Storm Drain bet S2A to CP2E / CP2D	25	22DEC2013	15JAN2014	09FEB2014	05MAR2014			43d	d Access M003: Storm Drain bet S2A to CP2E / CP2D
CWM217000B	U channel	125	12OCT2013	01APR2014	12OCT2013	08MAY2014	12OCT2013		37d	d U channel
	LV Cable Ducts East of Extg PTW after demolish	30	06MAR2014	04APR2014	06MAR2014	04APR2014			0	0 LV Cable Ducts East of Extg PT
	ELV Cable Ducts South side of CEPT	16	10NOV2013	26NOV2013	10NOV2013	12DEC2013	10NOV2013		16d	
	ELV Cable Ducts around stockpile area	24	09DEC2013*	01JAN2014	03DEC2013	26DEC2013	1011012010		-6d	
	ELV Cable Ducts South East side of DOU A	10	24NOV2013*	11DEC2013	24NOV2013	11DEC2013			-00	0 ELV Cable Ducts South East side of DOU A
		18								
	ELV Sitewide Cable Ducts for PCCW	95	01MAR2013	24NOV2013	01MAR2013	07JAN2014	01MAR2013		44d	
	Watermain from PTW to South of CEPT/DOU B	21	24NOV2013*	14DEC2013	25NOV2013	15DEC2013	ļ		1d	d Vatermain from PTW to South of CEPT/DOU B
	Watermain from DOUB to RWPS	18	24NOV2013	11DEC2013	02NOV2013	19NOV2013			-22d	
	Water meter cabinet near EB1	14	22AUG2013	26NOV2013	22AUG2013	26NOV2013	22AUG2013		0	0 Water meter cabinet near EB1
	Irrigation System at stockpile area	21	16FEB2014	08MAR2014	08APR2014	28APR2014	ļ		51d	
CWM228840	BW: ChB0+00 to ChB0+30 Type B	20	24NOV2013	13DEC2013	24NOV2013	13DEC2013			0	0 I BW: ChB0+00 to ChB0+30 Type B
CWM229020	BW: ChC0+00 to ChC0+122.4 Type B	30	15MAR2014	13APR2014	02APR2014	01MAY2014			18d	
CWM229200	BW: Main Gate at ChC0 / ChB0 Type B	7	14APR2014	20APR2014	02MAY2014	08MAY2014			18d	l I I BW: Main Gate at Ch
	BW: ChD0+00 to ChD0+90 Type B	30	24NOV2013*	23DEC2013	12DEC2013	10JAN2014			18d	d BW: ChD0+00 to ChD0+90 Type B
	BW: ChD0+90 to ChD0+150 Type B	20	24DEC2013	12JAN2014	11JAN2014	05FEB2014			18d	
	BW: ChD0+150 to ChD0+200 Type B	25	13JAN2014	12FEB2014	06FEB2014	02MAR2014	1	İ	18d	
	BW: ChD0+200 to ChD0+407.89 Type B	60	13FEB2014	13APR2014	03MAR2014	01MAY2014	1	1	18d	
	Construction of Car Park	28	15APR2014	22MAY2014	31MAR2014	011/01/01/01/01/01/01/01/01/01/01/01/01/			-12d	
\	Formation of Weighbridge at Egress	28	10FEB2014	26FEB2014	10FEB2014	26FEB2014	<u> </u>	1		0 Formation of Weighbridge at Egress
t date 14J sh date 04J a date 24N	IUL2010 IUN2014 NOV2013 NOV2013					•	s up to 24	4 Nov 13	- Rema	naining Works

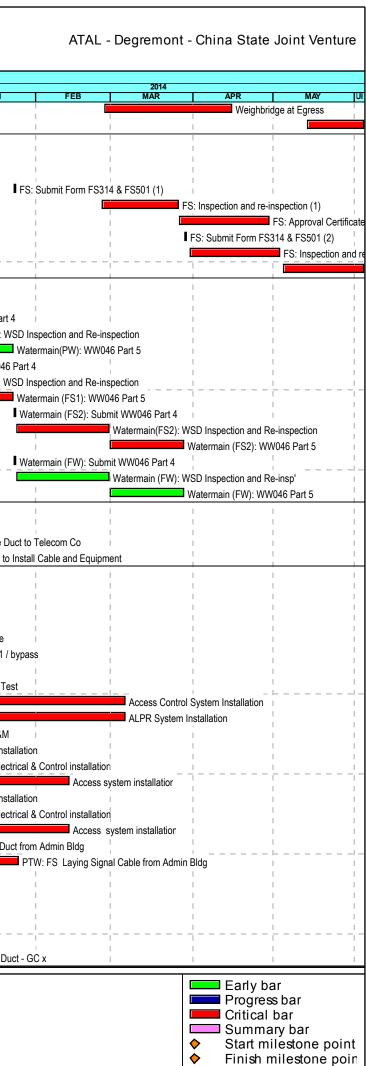
Design, Build and Operate Pillar Point Sewage Treatment Works

Activity	Description	Driginal		Early	Late	Late	Actual	Actual	Total		201	3	
ID		Juration		Finish	Start	Finish	Start	Finish	Float	эст	NOV	DEC	JAN
CXT995425	Weighbridge at Egress	40	27FEB2014	15APR2014	27FEB2014	15APR2014			0	i i		1	1
CXT995430	Remaining Roadwork at Access M001 and M003	18	14MAY2014	04JUN2014	12APR2014	08MAY2014			-22d			1	1
Statutory Works										i.		i.	i
Fire Services - F Building and S												1	1
SSF200410				24JAN2014	14FEB2014	14FEB2014			424	1		1	1
SSF200410 SSF200420	FS: Submit Form FS314 & FS501 (1) FS: Inspection and re-inspection (1)	25	24JAN2014 26FEB2014	24JAN2014 26MAR2014		15MAR2014			13d -9d			1	1
SSF200420	FS: Approval Certificate (1)	25	27MAR2014	2010/AR2014 29APR2014	27MAR2014	29APR2014			-90	1		1	1
SSF200430	FS: Submit Form FS314 & FS501 (2)		29MAR2014	29MAR2014	04MAR2014	04MAR2014			-22d	i		1	1
SSF200520	FS: Inspection and re-inspection (2)	25	31MAR2014	03MAY2014	05MAR2014	02APR2014			-22d	1		1	1
SSF200530	FS: Approval Certificate (2)	25	05MAY2014	04JUN2014	03APR2014	08MAY2014			-22d	i ·		÷	- i
Plumbing - WSE			0011/11/2014	0-1001 1201-		0010/07/2014			1 220			1	
Building and S										i.			i
SSP200510	Watermain (PW): Submit WW046 Part 4	1	25NOV2013	25NOV2013	25NOV2013	25NOV2013			0	1	I w	/atermain (PW): Sub	omit WW046 Part
SSP200520	Watermain (PW): WSD Inspection and Re-inspection	25	210CT2013	23DEC2013		30DEC2013	210CT2013		4d				atermain (PW): W
SSP200530	Watermain(PW): WW046 Part 5	24	24DEC2013	23JAN2014		28JAN2014			4d	1			,
SSP201510	Watermain (FS1): Submit WW046 Part 4	1	02DEC2013	02DEC2013	02DEC2013	02DEC2013			0	1		Watermain (FS1)	): Submit WW046
SSP201520	Watermain(FS1): WSD Inspection and Re-inspection	25	210CT2013	23DEC2013	210CT2013	27NOV2013	210CT2013		-22d				, atermain(FS1): W
SSP201530	Watermain (FS1): WW046 Part 5	24	24DEC2013	23JAN2014	28NOV2013	27DEC2013			-22d			· · · · · · · · · · · · · · · · · · ·	
SSP202510	Watermain (FS2): Submit WW046 Part 4	1	24JAN2014	24JAN2014	28DEC2013	28DEC2013			-22d	i		1	i i
SSP202520	Watermain(FS2): WSD Inspection and Re-inspection	25	25JAN2014	28FEB2014	30DEC2013	28JAN2014			-22d	1		1	1
SSP202530	Watermain (FS2): WW046 Part 5	24	01MAR2014	28MAR2014	29JAN2014	03MAR2014			-22d	i.		i	i
SSP203510	Watermain (FW): Submit WW046 Part 4	1	24JAN2014	24JAN2014	05MAR2014	05MAR2014			29d	I		1	- I
SSP203520	Watermain (FW): WSD Inspection and Re-insp	25	25JAN2014	28FEB2014	06MAR2014	03APR2014			29d	i.		i.	i.
SSP203530	Watermain (FW): WW046 Part 5	24	01MAR2014	28MAR2014	04APR2014	08MAY2014			29d			1	1
Telecommunicati										1		1	1
Building and S			•		•		•					1	1
SST200610	Handover Plant Room and Cable Duct to Telecom Co	6		30NOV2013		14JAN2014			35d			Handover Plant R	
SST200620	Telecom Co to Install Cable and Equipment	30	01DEC2013	30DEC2013	15JAN2014	13FEB2014			45d				Telecom Co to
E&M Works	d baskall after											1	1
Procurement and										i.		i.	i.
Building and S			470 0040		470 0040		470,0040	1	L 00-I			) O Demotorale Tarat	1
	A N2 Penstock Test	/			17NOV2013 31OCT2013		17NOV2013		-20d	1		2 Penstock Test	I Diank Diata
	3 Install & WT of Additional Blank Plate	25				300CT2013	450070042		-21d			stall & WT of Additio	
EMW001120	Penstocks / Stoplog for Manholes N1 / bypass	2		26NOV2013		310CT2013	150012013	1	-22d -22d	1		enstocks / Stoplog fo enstocks N1 / bypa	
EMW00120	Penstocks N1 / bypass Test A Penstock from UV to outfall PS Test			02DEC2013	-	20NOV2013			-220 -10d	1		Penstock from U	
EMW163000		80		06MAR2014		15FEB2014			- 100 - 16d	!			
EMW164000		80	25NOV2013	06MAR2014	1	15FEB2014			- 16d	i i			
EMW164500		0	10DEC2013		04DEC2013				-100 -5d	1		WB. Civil F	Handover to E&M
EMW165010		14	10DEC2013	27DEC2013	04DEC2013	19DEC2013			-5d	i.			Weighbridge inst
EMW165020		14	28DEC2013	14JAN2014	20DEC2013	08JAN2014			-5d				Elec
EMW165030		21	15JAN2014	13FEB2014	09JAN2014	07FEB2014			-5d	i		<u>+</u>	
EMW165110		14	10DEC2013	27DEC2013	04DEC2013	19DEC2013			-5d				Weighbridge inst
EMW165120		14	28DEC2013	14JAN2014	20DEC2013	08JAN2014			-5d	i		1	Elec
EMW165130		21	15JAN2014	13FEB2014	09JAN2014	07FEB2014			-5d			1	
EMW181550/		0	19DEC2013		19DEC2013				0	1		PTW	/: FS CS H/O Du
EMW181550		30	19DEC2013	25JAN2014	1	25JAN2014			0	!		+	
EMW185240		20		25NOV2013	1	25NOV2013	21JUN2013		0		P	TW: FRP Cover - FS	s !
EMW185250		20		25NOV2013	1	25NOV2013			0			TW: FRP Cover - G	1
EMW185340		20			1	25NOV2013			0			TW: DO Duct Suppo	
EMW185350		20		25NOV2013	1	04JAN2014	10JUL2013		32d			TW: DO Duct Suppo	
EMW185440		30		25NOV2013	-	06JAN2014	11JUL2013		33d			TW: DO Duct - FS x	
EMW185450		30	26NOV2013		06JAN2014	14FEB2014		İ	32d				🗖 PTW: DO Du

Start date14JUL2010Finish date04JUN2014Data date24NOV2013Run date24NOV2013Page number5AProject namePR39

? Primavera Systems, Inc.

PPSTW Programme R7B- Progress up to 24 Nov 13 - Remaining Works



Activity ID	Description	Original Duratior	Early Start	Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float		013		I FEB	2014 I MAR	I APR	I MAY
EMW206114	CEPT: Tank 4 FRP DO covers Installation	15	29JUL2013 A		29JUL2013 A	25NOV2013	29JUL2013		0		CEPT: Tank 4 FRP [	O covers Installation				
EMW206115	CEPT: Tank 5 FRP DO covers Installation	15	02NOV2013	25NOV2013	02NOV2013	25NOV2013	02NOV2013		0		CEPT: Tank 5 FRP [	O covers Installation		1		1
EMW206200	CEPT: DO Duct Install PT CEPT/SDB/DOU B	20	10MAY2013	25NOV2013	10MAY2013	02NOV2013	10MAY2013		-19d			II PT CEPT/SDB/DO		i.	i I	I.
	CEPT: FS CS H/O Duct from Admin Bldg	0	12DEC2013	20110/2013	12DEC2013	0211072013	10101/41/2013			· -!		S CS H/O Duct from				L
EMW208550B		30	30NOV2013	07JAN2014		07JAN2014							aying Signal Cable fr	om Admin Blda		l.
	CEPT: FS Laying Signal Cable from Admin Bldg				-					1	UV: DO Cover Ins		aying Signal Cable II		1	1
	UV: DO Cover Installation	30		30NOV2013	06JUL2013 A		06JUL2013							1		1
	UV: DO Duct support	20	11JUL2013 A			27NOV2013	11JUL2013		0		UV: DO Duct supp	1	I	i.	I	l
	UV: DO Duct Installation	30	03AUG2013	02DEC2013	03AUG2013	02DEC2013	03AUG2013		0		UV: DO Duct li					
	UV: DO Cover Installation	15		02DEC2013		02DEC2013	14SEP2013		0		UV: DO Cover		1	1		1
EMW312000	UV: Duct install in PT bet UV / DOU B and Skip	30	05JUN2013 A	26NOV2013	05JUN2013 A	02NOV2013	05JUN2013		-20d		UV: Duct install in P	T bet UV / DOU B and	d Skip	L	I	I
EMW322300D	RWPS: E&M Installation	98	27JUN2013 A	25NOV2013	27JUN2013 A	25NOV2013	27JUN2013		0		RWPS: E&M Installa	tion		1		1
EMW322400	RWPS: DAF Installation	60	27JUN2013 A	05DEC2013	27JUN2013 A	05DEC2013	27JUN2013		0		RWPS: DAF I	nstallation	I	i i	I	I
EMW322600	RWPS: BS Installation	30	08AUG2013	25NOV2013	08AUG2013	25NOV2013	08AUG2013		0		RWPS: BS Installatio	n ¦	1	1	1	1
EMW322641	RWPS: MVAC Installation H/L	30		25NOV2013	29JUL2013 A		29JUL2013		0		RWPS: MVAC Insta	lation H/L				L – – – – . I
EMW322645	RWPS: MVAC Installation LL	30		25NOV2013	21SEP2013 A		21SEP2013		-14d		RWPS: MVAC Insta		I.	I	I	L
EMW322651	RWPS: FS Installation H/L	30		25NOV2013	29JUL2013 A		29JUL2013				RWPS: FS Installatio			1		1
					-				104				1		1	1
EMW322655	RWPS: FS Installation LL	30		25NOV2013	29JUL2013 A	USINUVZUIJ	29JUL2013		-13d		RWPS: FS Installation		1	I.	1	1
	RWPS: FS CS H/O Duct from Admin Bldg	0	25NOV2013		25NOV2013			1	0	· -¦	RWPS: FS CS H/O		•	·		
		30	25NOV2013	31DEC2013	25NOV2013	31DEC2013			0	·			g Signal Cable from A	dmin Bldg	I	I
EMW322661	RWPS: P&D Installation H/L	30		25NOV2013	21SEP2013 A	25NOV2013	21SEP2013		0		RWPS: P&D Installat	ion H/L	1	1	1	1
EMW322665	RWPS: P&D Installation L/L	30	21SEP2013 A	25NOV2013	21SEP2013 A	08NOV2013	21SEP2013		-14d		RWPS: P&D Installa	tion L/L		1		1
EMW322671	RWPS: EL Installation H/L	35	28SEP2013 A	25NOV2013	28SEP2013 A	25NOV2013	28SEP2013		0		RWPS: EL Installatio	n H/L	i	i i		i.
EMW322675	RWPS: EL Installation L/L	35	28SEP2013 A	04DEC2013	28SEP2013 A	25NOV2013	28SEP2013		-8d		RWPS: EL Ins	tallation L/L	1	1	1	1
EMW322700	RWPS: Control system Installation (ref)	60	16JUL2013 A		16JUL2013 A		16JUL2013		-2d		RWPS: C	ontrol system Installat	tion (ref)			L – – – – . I
EMW322785	RWPS: MCC Control Cable Laying and Fixing	60	05AUG2013	25NOV2013	05AUG2013	25NOV2013	05AUG2013					Cable Laying and Fix	. ,	i.	l	I.
EMW322787	RWPS: MCC Control Cable Termination	30	28AUG2013	25NOV2013	28AUG2013	25NOV2013	28AUG2013			[	RWPS: MCC Control	, .	, ing	1	1	1
														1	1	1
EMW323520	RWPS: RVMCC EB3 Power Cable Laying	40	30AUG2013	25NOV2013	30AUG2013	25NOV2013	30AUG2013					3 Power Cable Laying	I	I	I	L
EMW323530	RWPS: ALL Cable Test and Termination	30		25NOV2013	09SEP2013 A	25NOV2013	09SEP2013		0		RWPS: ALL Cable T		·			
EMW323800	RWPS: Duct install in PT between RWPS/OPS	30	28AUG2013	25NOV2013	!	08NOV2013	28AUG2013		-14d	1	RWPS: Duct install in	PT between RWPS/	OPS		1	1
EMW506550A	Chemical: FS CS H/O Duct from Admin Bldg	0	25NOV2013		25NOV2013				0	_! <b>1</b>	Chemical: FS CS H	O Duct from Admin E	Bldg	I	1	1
EMW506550B	Chemical: FS Laying Signal Cable from Admin Bldg	30	25NOV2013	31DEC2013	25NOV2013	31DEC2013			0			Chemical: FS Lay	ing Signal Cable from	n Admin Bldg		1
EMW506910	Chemical: PV structure Installation	20	02OCT2013	25NOV2013	02OCT2013	25NOV2013	02OCT2013		0		Chemical: PV structu	re Installation	i.	i.		i.
EMW506920	Chemical: PV panel Installation	30	04NOV2013	14DEC2013	04NOV2013	14DEC2013	04NOV2013		0		Chemic	al: PV panel Installati	ion	1	1	1
EMW506930	Chemical: PV Inverter Installation	20		25NOV2013	25SEP2013 A	25NOV2013	25SEP2013		0		Chemical: PV Inverte	r Installation				
	Chemical: PV panel cabling Installation	20			02OCT2013		020CT2013		-24		Chemical: PV panel		L	I	I	L
		30			010CT2013		010CT2013					ng Signal Cable from	Admin Blda			1
EMW608950	Sludge: DO Duct Installation G/L	25			29JUN2013 A						Sludge: DO Duct In		I		1	i I
					-						•		I	I.	1	1
	Sludge: DO Duct Installation B/L	25			08JUL2013 A		08JUL2013				Sludge: DO Duct In					
EMW611950	Sludge SkipHS: DO Duct Installation	15			29JUL2013 A		29JUL2013		0		Sludge SkipHS: DC		1	i.	I	I
	Sludge: DO Duct install in PT CEPT/SDB/DOU B I	30			29JUL2013 A		29JUL2013		0		Sludge: DO Duct in			1	1	1
EMW613500	Skip Storage Bldg.: E&M Installation works	30		1	04NOV2013		04NOV2013		-6d		Skip Storage Bldg .:		s	1		1
EMW717100	DOU A: SCADA System Installation	50	15JUL2013 A	30NOV2013	15JUL2013 A	22NOV2013	15JUL2013		-7d		DOU A: SCADA S	System Installation	I.	I	I	I
EMW718550A	DOU A: FS CS H/O Duct from Admin Bldg	0	25NOV2013		25NOV2013				0	- ¦	DOU A: FS CS H/O	Duct from Admin Bld	g	1		1
	DOU A: FS Laying Signal Cable from Admin Bldg	30		31DEC2013	25NOV2013	31DEC2013			0			DOU A: FS Laying		Admin Bldg		
	DOU B: E&M Installation (ref)	155	28MAY2013	17DEC2013	28MAY2013		28MAY2013				DOU	B: E&M Installation (re		l Č	1	I.
	DOU B: Odour Duct connection	70	21AUG2013	25NOV2013	-		21AUG2013	i	- 		DOU B: Odour Duct	•	·	1		1
	DOU B: Control & Cable Installation (MCC to Eqt)	60	27MAY2013	29NOV2013	27MAY2013		27MAY2013					Cable Installation (M	C to Eat)	i i	I	I
				-			-	I		I				1	1	1
	DOU B: SCADA System Installation	50		29NOV2013	09AUG2013	29INUV2013	09AUG2013					•				
	DOU B: FS CS H/O Duct from Admin Bldg	0	25NOV2013	 	25NOV2013		1		0		DOU B: FS CS H/O		-		I.	I.
	DOU B: FS Laying Signal Cable from Admin Bldg	30		-	25NOV2013			l	0	I		DOU B: FS Layin		Admin Bldg		1
	DOU B: DO Duct install in PT CEPT/SDB/DOU B J	30	10MAY2013	28NOV2013			10MAY2013		0			stall in PT CEPT/SD				1
EMW802268	All Area: SCADA Install PLC LCP OFPS	65	04SEP2013 A	02DEC2013	04SEP2013 A	02DEC2013	04SEP2013		0		All Area: SCAD	A Install PLC LCP OF	PS	I	I.	I
EMW804060	Admin Bldg Service: Lift Issue of form 5	0		23NOV2013		09DEC2013			13d	<b>♦</b>	Admin Bldg Service:	Lift Issue of form 5	1	1		
	Decommission Control of PTW at Extg Admin Bldg	6	08JAN2014	-	28JAN2014	08FEB2014			17d				nission Control of PT	W at Extg Admin Blde		·
sh date 04. a date 241 date 241 e number 6A	JUL2010         Page 6A of 10A           NOV2013         NOV2013           NOV2013         A		PPSTW	/ Program	nme R7B-	Progress	s up to 24	4 Nov 13	- Rem	aining Wor	ks				Early b Progres Critical Summa	s bar bar

Design, Build and Operate Pillar Point Sewage Treatment Works

Equipment at Extg Admin Bldg tilities at Extg Admin Bldg M Equipment Installation (Non Crit) M Installation (Ref.) owmeter Installation (Ref.) owmeter - Verification stall Stoplog Extg Pipeline 1 OPS stall Stoplog Extg Pipeline 2 OPS stall Meter 1 & Pipeline in Chamber stall Meter 2 & Pipeline in Chamber esume OFPS to twin pipeline ainning Season 2014 8M Aux Installation (Ref) Removal of existing LVSBA1 new LVSBA1 reinstate and testing Divert LVSBA1 to PTW MCC1 Energization of DOUB SWRS B1B2 panel Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	12         40         48         30         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         20         20         7         20         20         15         20         50         30         15         10         10	15JAN2014 15JAN2014 14OCT2013 25NOV2013 25NOV2013 26FEB2014 15NOV2013 28DEC2013 28DEC2013 05FEB2014 26FEB2014 26FEB2014 26FEB2014 26FEB2013 18DEC2013 18DEC2013 15JAN2014 26JUL2013A 25NOV2013 12OCT2013 12OCT2013 12OCT2013 28SEP2013A 25NOV2013	17DEC2013 26NOV2013 26NOV2013 26NOV2013 26NOV2013	10FEB2014 10FEB2014 140CT2013 11JAN2014 07FEB2014 14MAR2014 15NOV2013 05JAN2014 19FEB2014 25NOV2013 26NOV2013 15JAN2014 25NOV2013 15JAN2014 26JUL2013A 25NOV2013 15JAN2014 26JUL2013A 25NOV2013 17OCT2013 12OCT2013	22FEB2014 22FEB2014 02DEC2013 13MAR2014 13MAR2014 25MAR2014 07DEC2013 29JAN2014 29JAN2014 29JAN2014 28MAR2014 28MAR2014 28MAR2014 28JAN2014 18DEC2013 14JAN2014 22JAN2014 22JAN2014 26NOV2013 26NOV2013 26NOV2013	14OCT2013 14OCT2013 15NOV2013 15NOV2013 15NOV2013 15NOV2013 15NOV2013 15NOV2013 17OCT2013 12OCT2013		Proat     Set       17d     17d       17d     38d       56d     14d       14d     14d       12d     26d       26d     0       1d     1       0     0       0     0       0     0       0     0       0     0       0     0       0     0       0     0	Flowmeter: Install Stoplog Extg Pipeline Flowmeter: Install Stoplog Extg Pipeline Flowmeter: Install Stoplog Extg Pipeline Elect Bldg 1: Removal of Elect Bldg 3: Energization of DOUB SV
M Equipment Installation (Non Crit) M Installation (Ref.) owmeter Installation (Ref.) owmeter - Verification stall Stoplog Extg Pipeline 1 OPS stall Stoplog Extg Pipeline 2 OPS stall Meter 1 & Pipeline in Chamber stall Meter 2 & Pipeline in Chamber esume OFPS to twin pipeline minning Season 2014 M Aux Installation (Ref) Removal of existing LVSBA1 newLVSBA1 reinstate and testing Divert LVSBA1 to PTW MCC1 Energization of DOUB SWRS B1B2 panel Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	40       48       30       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       18       1       0       48       20       20       7       20       20       20       15       20       50       30       15       10	14OCT2013 25NOV2013 25NOV2013 26FEB2014 15NOV2013 15NOV2013 28DEC2013 05FEB2014 26FEB2014 26FEB2014 26FEB2014 25NOV2013 15JAN2014 26JUL2013 A 25NOV2013 17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	02DEC2013 22JAN2014 31DEC2013 08MAR2014 25NOV2013 25NOV2013 18JAN2014 25FEB2014 26FEB2014 26FEB2014 28MAR2014 22JAN2014 17DEC2013 13JAN2014 22JAN2014 22JAN2014 22JAN2014 26NOV2013 26NOV2013 26NOV2013 26NOV2013	140CT2013 11JAN2014 07FEB2014 14MAR2014 15NOV2013 09JAN2014 19FEB2014 28MAR2014 28MAR2014 28MAR2014 28NOV2013 19DEC2013 19DEC2013 15JAN2014 26JUL2013A 25NOV2013 02NOV2013 17OCT2013 12OCT2013	02DEC2013 13MAR2014 13MAR2014 25MAR2014 07DEC2013 29JAN2014 29JAN2014 11MAR2014 28MAR2014 28MAR2014 28MAR2014 22JAN2014 18DEC2013 14JAN2014 22JAN2014 26NOV2013 26NOV2013	15NOV2013 15NOV2013 15NOV2013 26JUL2013 26JUL2013 02NOV2013 17OCT2013		0 38d 56d 14d 11d 53d 9d 12d 26d 0 0 1d	SHB Bldg: E&M Equipment Installa Flowmeter: Install Stoplog Extg Pipeline Flowmeter: Install Stoplog Extg Pipeline Flowmeter: Install Stoplog Extg Pipeline Elect Bldg 1: Removal of Elect Bldg 3: Energization of DOUB SV OFPS: Install B1B2 pane OFPS: Cable Containment Installation
M Installation (Ref.)         owmeter Installation (Ref.)         owmeter - Verification         stall Stoplog Extg Pipeline 1 OPS         stall Stoplog Extg Pipeline 2 OPS         stall Meter 1 & Pipeline in Chamber         stall Meter 2 & Pipeline in Chamber         stall Meter 2 & Pipeline in Chamber         stall Meter 2 & Pipeline in Chamber         esume OFPS to twin pipeline         ainning Season 2014         SM Aux Installation (Ref)         Removal of existing LVSBA1         newLVSBA1 reinstate and testing         Divert LVSBA1 to PTWMCC1         Energization of DOUB SWRS         B1B2 panel         Containment Installation         Laying         Test and Termination         stem Installation         cation of LV Switchboard B         control from LVSB-B to new SCADA sy         ting East of PTWArea         ting South of CEPT Area	48         30         10         10         10         10         10         10         10         18         18         18         20         20         7         20         20         7         20         20         50         30         15         30         15         10	25NOV2013 25NOV2013 26FEB2014 15NOV2013 15NOV2013 28DEC2013 05FEB2014 26FEB2014 26FEB2014 25NOV2013 15JAN2014 25NOV2013 15JAN2014 26JUL2013 A 25NOV2013 17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	22,JAN2014 31DEC2013 08MAR2014 25NOV2013 25NOV2013 18,JAN2014 25FEB2014 26FEB2014 26FEB2014 28MAR2014 22,JAN2014 17DEC2013 13,JAN2014 22,JAN2014 22,JAN2014 22,JAN2014 22,JAN2014 26NOV2013 26NOV2013 26NOV2013 26NOV2013	11JAN2014           07FEB2014           14MAR2014           15NOV2013           05JAN2014           19FEB2014           28MAR2014           25NOV2013           25NOV2013           19DEC2013           15JAN2014           25NOV2013           19DEC2013           15JAN2014           26NOV2013           17OCT2013           12OCT2013	13MAR2014         13MAR2014         25MAR2014         07DEC2013         29JAN2014         29JAN2014         11MAR2014         28MAR2014         28MAR2014         28MAR2014         28MAR2014         28MAR2014         28MAR2014         22JAN2014         18DEC2013         14JAN2014         26NOV2013         26NOV2013	15NOV2013 15NOV2013 15NOV2013 26JUL2013 26JUL2013 02NOV2013 17OCT2013		56d 14d 11d 53d 9d 12d 26d 0 0 1d	Flowmeter: Install Stoplog Extg Pipeline Flowmeter: Install Stoplog Extg Pipeline Flowmeter: Install Stoplog Extg Pipeline Elect Bldg 1: Removal o Elect Bldg 3: Energization of DOUB SV
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newLVSBA1 reinstate and testing Divert LVSBA1 to PTWMCC1 Energization of DOUB SWRS B1B2 panel Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTWArea ting South of CEPT Area	20 7 20 20 15 20 50 50 30 15 10	18DEC2013           15JAN2014           26JUL2013 A           25NOV2013           02NOV2013           17OCT2013           12OCT2013           20AUG2013           28SEP2013 A           25NOV2013	13JAN2014           22JAN2014           26NOV2013           17DEC2013           26NOV2013           26NOV2013           26NOV2013           26NOV2013           26NOV2013           26NOV2013           26NOV2013	19DEC2013           15JAN2014           26JUL2013 A           25NOV2013           02NOV2013           17OCT2013           12OCT2013	14JAN2014 22JAN2014 26NOV2013 17DEC2013 26NOV2013 26NOV2013	02NOV2013 17OCT2013			Elect Bldg 3: Energization of DOUB SV
Divert LVSBA1 to PTW MCC1 Energization of DOUB SWRS B1B2 panel Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	7 7 20 20 15 20 50 50 30 15 10	15JAN2014 26JUL2013 A 25NOV2013 02NOV2013 17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	22JAN2014 26NOV2013 17DEC2013 26NOV2013 26NOV2013 26NOV2013 26NOV2013	15JAN2014 26JUL2013 A 25NOV2013 02NOV2013 17OCT2013 12OCT2013	22JAN2014 26NOV2013 17DEC2013 26NOV2013 26NOV2013	02NOV2013 17OCT2013			Elect Bldg 3: Energization of DOUB SV
Energization of DOUB SWRS B1B2 panel Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	7 20 20 15 20 50 50 30 15 10	26JUL2013 A 25NOV2013 02NOV2013 17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	26NOV2013 17DEC2013 26NOV2013 26NOV2013 26NOV2013 26NOV2013	26JUL2013 A 25NOV2013 02NOV2013 17OCT2013 12OCT2013	26NOV2013 17DEC2013 26NOV2013 26NOV2013	02NOV2013 17OCT2013			OFPS: Install B1B2 pan
B1B2 panel Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	20 20 15 20 50 50 30 15 10	25NOV2013 02NOV2013 17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	17DEC2013 26NOV2013 26NOV2013 26NOV2013 26NOV2013	25NOV2013 02NOV2013 17OCT2013 12OCT2013	17DEC2013 26NOV2013 26NOV2013	02NOV2013 17OCT2013			OFPS: Install B1B2 pan
Containment Installation Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	20 15 20 50 30 15 10	02NOV2013 17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	26NOV2013 26NOV2013 26NOV2013 26NOV2013	02NOV2013 17OCT2013 12OCT2013	26NOV2013 26NOV2013	17OCT2013			
Laying Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	15 20 50 30 15 10	17OCT2013 12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	26NOV2013 26NOV2013 26NOV2013	170CT2013 120CT2013	26NOV2013	17OCT2013			
Test and Termination stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	20 50 30 15 10	12OCT2013 20AUG2013 28SEP2013 A 25NOV2013	26NOV2013 26NOV2013	12OCT2013					OFPS: Cable Laying
stem Installation cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	50 30 15 10	20AUG2013 28SEP2013 A 25NOV2013	26NOV2013		2010/2013				OFPS: Cable Test and Termination
cation of LV Switchboard B control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	30 15 10	28SEP2013 A 25NOV2013		20AUG2013	1 20N 0V 2012	20AUG2013		0	OFPS: Cable Test and Termination
control from LVSB-B to new SCADA sy ting East of PTW Area ting South of CEPT Area	15 10	25NOV2013			26NOV2013			0	OFPS: BS System Installation OFPS: Modification of LV Switchboard
ting East of PTW Area ting South of CEPT Area	10	-		28SEP2013 A	26NOV2013	28SEP2013			
ting South of CEPT Area		1 11DEC2013	11DEC2013	19DEC2013	08JAN2014			21d	OFPS: divert control from L
	10		21DEC2013	02DEC2013	12DEC2013			<u>-8d</u>	Outdoor: Lighting East
		23DEC2013	06JAN2014	13DEC2013	24DEC2013			<u>-8d</u>	Outdoor: L
ting near existing OFPS	10	07JAN2014	17JAN2014	27DEC2013	08JAN2014			-8d	
ting West of Skip Hse Area	10	18JAN2014	29JAN2014	09JAN2014	20JAN2014			-8d	
ting Test	20	05FEB2014	27FEB2014	21JAN2014	18FEB2014			-8d	
E&M Installation	30	01MAR2014	04APR2014	20MAR2014	28APR2014			16d	
ndary Wall CCTV Installation	30	01MAR2014	04APR2014	20MAR2014	28APR2014			16d	
ndary Wall CCTV Test & Commissioning	7	07APR2014	14APR2014	29APR2014	08MAY2014			16d	I I
g and Commissioning (ref)	180	27MAY2013	10FEB2014	27MAY2013	11FEB2014	27MAY2013		1d	
ase 1: Site Test - Inlet Pump System	40	02JUN2013 A	-	02JUN2013 A		02JUN2013		0	PTW T&C Phase 1: Site Test - Inlet Pur
: Dry Testing of Inlet Pump System	25	28JUL2013 A		28JUL2013 A		28JUL2013		0	PTW Phase 2: Dry Testing of Inlet Pump
Wet Testing of PTWCS FS & GC	30	23AUG2013		23AUG2013	!	23AUG2013		-24d	PTW Phase 3: Wet Testing of PTW CS
: Wet Testing Inlet Pump	30		25NOV2013	09AUG2013		09AUG2013		0	PTW Phase 3: Wet Testing Inlet Pump
: Remove Recirculation System	1		26NOV2013	26NOV2013	26NOV2013				■ PTW Phase 3: Remove Recirculation
: Manual Testing of PTW-system	30	08SEP2013 A		08SEP2013 A		08SEP2013			PTW Phase 3: Manual Testing of PTW
: Automatic Testing of Sub-system	30	23SEP2013 A		23SEP2013 A	1	23SEP2013		-24d	PTW Phase 3: Automatic Testing of Su
						2001 2010			PTW Phase 4: Introduce Process Flui
					-				PTW Phase 4: Introduce Process Flu
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n from exsist PI vV to CEPI	7	23JAN2014	290AN2014	UZJAN2014	1 USJAN2014			-210	
g	007					070 40 (0040			
g		-							
g sting and Commissioning (ref)		-						75d	CEPT Tank Phase 3: Wet Testing of Ind
g esting and Commissioning (ref) hase 3: Wet Testing of Individual Eqt	1 00	-						0	CEPT Tank Phase 3: Manual Test Sub-
g esting and Commissioning (ref) hase 3: Wet Testing of Individual Eqt hase 3: Manual Test Sub-system		190CT2013	26NOV2013	190CT2013	02NOV2013	19OCT2013		-24d	CEPT Tank Phase 3: Automatic Test S
	Introduce Process Fluid (Sewage) Introduce Process Fluid (Start Test Auto and Process Commissioning Verification from exsist PTW to CEPT sting and Commissioning (ref) ase 3: Wet Testing of Individual Eqt	Introduce Process Fluid (Sewage)       1         Introduce Process Fluid (Start Test       1         Auto and Process Commissioning       30         Verification       25         of rom exsist PTW to CEPT       7         sting and Commissioning (ref)       237         ase 3: Wet Testing of Individual Eqt       30	Introduce Process Fluid (Sewage)       1       27NOV2013         Introduce Process Fluid (Start Test       1       28NOV2013         Auto and Process Commissioning       30       29NOV2013         Verification       25       29DEC2013         ofform exsist PTW to CEPT       7       23JAN2014         sting and Commissioning (ref)       237       27MAY2013         ase 3: Wet Testing of Individual Eqt       30       28AUG2013         ase 3: Manual Test Sub-system       30       28AUG2013	Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013           Introduce Process Fluid (Start Test         1         28NOV2013         28NOV2013           Auto and Process Commissioning         30         29NOV2013         28DEC2013           Verification         25         29DEC2013         22JAN2014           Infromexsist PTW to CEPT         7         23JAN2014         29JAN2014           Infromexsist PTW to CEPT         7         23JAN2014         29JAN2014           Infromexsist PTW to CEPT         7         23JAN2014         29JAN2014           Infromexsist PTW to CEPT         7         23JAN2013         06FEB2014           ase 3: Wet Testing of Individual Eqt         30         28AUG2013         24NOV2013           ase 3: Manual Test Sub-system         30         28AUG2013         25NOV2013           ase 3: Automatic Test Sub-system         30         19OCT2013         26NOV2013	Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013           Introduce Process Fluid (Start Test         1         28NOV2013         28NOV2013         02NOV2013           Auto and Process Commissioning         30         29NOV2013         28DEC2013         08NOV2013           Verification         25         29DEC2013         22JAN2014         08DEC2013           Infromexsist PTW to CEPT         7         23JAN2014         29JAN2014         02JAN2014           sting and Commissioning (ref)         237         27MAY2013         06FEB2014         27MAY2013           ase 3: Wet Testing of Individual Eqt         30         28AUG2013         24NOV2013         28AUG2013           ase 3: Manual Test Sub-system         30         28AUG2013         26NOV2013         28AUG2013           ase 3: Automatic Test Sub-system         30         19OCT2013         26NOV2013         19OCT2013	Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013         02NOV2014         02NOV2013         17FEB2014           ase 3: Wet Testing of Individual Eqt         30         28AUG2013         24NOV2013         28AUG2013         25NOV2013 <t< td=""><td>Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013         02NOV2014         02NOV2013         <th02nov2013< th="">         02NOV2013         02NOV2013<!--</td--><td>Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013         02NOV2014         02NOV2013         01AN2014         0<!--</td--><td>Introduce Process Fluid (Sewage)       1       27NOV2013       27NOV2013       02NOV2013       02NOV2013       -25d         Introduce Process Fluid (Start Test       1       28NOV2013       28NOV2013       02NOV2013       02NOV2013       -26d         Auto and Process Commissioning       30       29NOV2013       28DEC2013       08NOV2013       07DEC2013       -26d         Auto and Process Commissioning       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         Verification       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         of from exsist PTW to CEPT       7       23JAN2014       29JAN2014       08JAN2014       08JAN2014       -21d         sting and Commissioning (ref)       237       27MAY2013       06FEB2014       27MAY2013       17FEB2014       27MAY2013       11d         ase 3: Wet Testing of Individual Eqt       30       28AUG2013       24NOV2013       28AUG2013       07FEB2014       28AUG2013       75d         ase 3: Manual Test Sub-system       30       19OCT2013       26NOV2013       19OCT2013       29NOV2013       19OCT2013       29AUG2013       -24d</td></td></th02nov2013<></td></t<>	Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013         02NOV2014         02NOV2013         02NOV2013         02NOV2013         02NOV2013         02NOV2013         02NOV2013         02NOV2013         02NOV2013         02NOV2013         02NOV2013 <th02nov2013< th="">         02NOV2013         02NOV2013<!--</td--><td>Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013         02NOV2014         02NOV2013         01AN2014         0<!--</td--><td>Introduce Process Fluid (Sewage)       1       27NOV2013       27NOV2013       02NOV2013       02NOV2013       -25d         Introduce Process Fluid (Start Test       1       28NOV2013       28NOV2013       02NOV2013       02NOV2013       -26d         Auto and Process Commissioning       30       29NOV2013       28DEC2013       08NOV2013       07DEC2013       -26d         Auto and Process Commissioning       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         Verification       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         of from exsist PTW to CEPT       7       23JAN2014       29JAN2014       08JAN2014       08JAN2014       -21d         sting and Commissioning (ref)       237       27MAY2013       06FEB2014       27MAY2013       17FEB2014       27MAY2013       11d         ase 3: Wet Testing of Individual Eqt       30       28AUG2013       24NOV2013       28AUG2013       07FEB2014       28AUG2013       75d         ase 3: Manual Test Sub-system       30       19OCT2013       26NOV2013       19OCT2013       29NOV2013       19OCT2013       29AUG2013       -24d</td></td></th02nov2013<>	Introduce Process Fluid (Sewage)         1         27NOV2013         27NOV2013         02NOV2013         02NOV2014         02NOV2013         01AN2014         0 </td <td>Introduce Process Fluid (Sewage)       1       27NOV2013       27NOV2013       02NOV2013       02NOV2013       -25d         Introduce Process Fluid (Start Test       1       28NOV2013       28NOV2013       02NOV2013       02NOV2013       -26d         Auto and Process Commissioning       30       29NOV2013       28DEC2013       08NOV2013       07DEC2013       -26d         Auto and Process Commissioning       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         Verification       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         of from exsist PTW to CEPT       7       23JAN2014       29JAN2014       08JAN2014       08JAN2014       -21d         sting and Commissioning (ref)       237       27MAY2013       06FEB2014       27MAY2013       17FEB2014       27MAY2013       11d         ase 3: Wet Testing of Individual Eqt       30       28AUG2013       24NOV2013       28AUG2013       07FEB2014       28AUG2013       75d         ase 3: Manual Test Sub-system       30       19OCT2013       26NOV2013       19OCT2013       29NOV2013       19OCT2013       29AUG2013       -24d</td>	Introduce Process Fluid (Sewage)       1       27NOV2013       27NOV2013       02NOV2013       02NOV2013       -25d         Introduce Process Fluid (Start Test       1       28NOV2013       28NOV2013       02NOV2013       02NOV2013       -26d         Auto and Process Commissioning       30       29NOV2013       28DEC2013       08NOV2013       07DEC2013       -26d         Auto and Process Commissioning       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         Verification       25       29DEC2013       22JAN2014       08DEC2013       01JAN2014       -21d         of from exsist PTW to CEPT       7       23JAN2014       29JAN2014       08JAN2014       08JAN2014       -21d         sting and Commissioning (ref)       237       27MAY2013       06FEB2014       27MAY2013       17FEB2014       27MAY2013       11d         ase 3: Wet Testing of Individual Eqt       30       28AUG2013       24NOV2013       28AUG2013       07FEB2014       28AUG2013       75d         ase 3: Manual Test Sub-system       30       19OCT2013       26NOV2013       19OCT2013       29NOV2013       19OCT2013       29AUG2013       -24d

 Data date
 24NOV2013

 Run date
 24NOV2013

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 7A

 Project name
 PR39

 ? Primavera Systems, Inc.

PPSTW Programme R7B- Progress up to 24 Nov 13 - Remaining Works

FEB N	2014 IAR	APR	MAY UI
Remove E&M Equipment at E	xtg Admin Bldg		
Disconnect Utilities at Extg Ad	min Bldg	i i	
lation (Non Crit)	I I	1	
Flowmeter: E&M Installation (Ref.)			
lowmeter Installation (Ref.)			
	wmeter: Flowmeter -	Verification	
ne 1 OPS			
ne 2 OPS	in Chambor	1	
Flowmeter: Install Meter 1 & Pipeline	in Chamber : Install Meter 2 & Pij	neline in Chambor	! -
	r: Resume OFPS to f		
		of Rainning Season	2014
Flowmeter: E&M Aux. Installation			
of existing LVSBA1		1	
t Bldg 1: new LVSBA1 reinstate and	testing		
Elect Bldg 1: Divert LVSBA1 to PT	•	1	
WRS	1	1	
nel	l l	1	
	1	1	
		1	
d B	I I	1	
VSB-B to new SCADA sy			
ast of PTW Area	1		1
Lighting South of CEPT Area	1		
utdoor: Lighting near existing OFPS		i	
Outdoor: Lighting West of Ski		1	
	Lighting Test	House: E&M Installa	
		House: E&M Installa oor: Boundary Wall (	
		Outdoor: Boundary Wall	
	1	1	
		l.	
PTWS: Testing and (	Commissioning (ref)	1	
ump System		1	1
np System	1		
S FS & GC	1	1	
)			
System			
V-system		l.	
ub-system	l I	1	
uid (Sewage)	1	1	
uid (Start Test		<u>_</u>	
Auto and Process Commissioning	1		
PTW Phase 4: Verification			
Flow Diversion from exsist P1	vv to CEPT	1	
		1	
CEPT Tank Testing and	Commissioning (ref		
dividual Eqt		/	
b-system	1		
Sub-system	1		
	•	1	1
		Early bar	
		Progress bar	
		Critical bar	
		Summary ba Start milesto	
		Finish milest	
	· ·		

Activity ID	Description	Original Duratior	Early Start	Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float DC	2013 CT   NOV	DEC	JAN	FEB	2014 MAR	APR	MAY
EMT204100	CEPT Tank Phase 4: Introduce Process Sewage	7	29NOV2013	05DEC2013	03NOV2013	09NOV2013			-26d	CE	PT Tank Phase	4: Introduce Process	Sewage			
	CEPT: Phase 4 Auto Testing Process Commissioning	35	12DEC2013	15JAN2014	21NOV2013	25DEC2013			-21d			CEPT: Phas	e 4 Auto Testing	Process Commissior	ning	
	CEPT Tank Phase 4: Verification	14	16JAN2014	29JAN2014		08JAN2014			-21d	1	1		PT Tank Phase		1	1
V Disinfection Fa												1			1	1
Building and Stru	ictures									1	1	I.		1	I.	1
EMT300000	UV: Testing and Commissioning (ref)	221	22JUL2013 A	17FEB2014	22JUL2013 A	17EEB2014	22JUL2013		0				UV: Te	sting and Commissio	ning (ref)	1
	UV: Phase 1 - Installation Inspection			-	22JUL2013 A		22JUL2013			UV: Phase	1 - Installation	Inspection				I
	UV: Phase 2 - Dry Test of Individual Eq't	30	29AUG2013	24NOV2013		24NOV2013	29AUG2013				2 - Dry Test of I	· ·		1	1	
	UV: Phase 3 - Wet Test of Individual Eg't	30	16SEP2013 A		16SEP2013 A		16SEP2013				•	t of Individual Eq't		I	i.	I
	UV: Phase 3 - Manual Testing of Sub-system	30	080CT2013	01DEC2013	080CT2013	01DEC2013	080CT2013					Testing of Sub-syster	n		1	1
	UV: Phase 3 - Auto Testing of Sub-system	30	230CT2013	03DEC2013	230CT2013	09NOV2013	230CT2013		-24d			Festing of Sub-system			i	
	UV: Phase 4 - Introduce Process Sewage	0	06DEC2013		10NOV2013	0311072013	200012010		-24d			oduce Process Sewa			1	1
	UV: Phase 4 Auto Testing Process Commissioning	30	06DEC2013	04JAN2014	10NOV2013	09DEC2013			-200 -26d		v. i nase 4 - inu	UV: Phase 4 Auto T	-	ommissioning	1	1
				1					-200 -26d		1		UV: Phase 4 - V		1	1
	UV: Phase 4 - Verification	30	05JAN2014	03FEB2014	10DEC2013	08JAN2014			-200			· · · · · ·	UV. Phase 4 - V	eniication	1	
euse Water Pump										1	I	I		I	I	I
Building and Stru			400070040	04141100111	400070040		400070040				I			l	1	1
	RWPS: Testing and Commissioning (ref)	168	100CT2013	24JAN2014		24JAN2014	100CT2013				I		: Testing and Co	mmissioning (ref)	I	I
	RWPS: Phase 1 - Installation Inspection	20	100CT2013	26NOV2013	100CT2013	10NOV2013	100CT2013		-16d		hase 1 - Installa				1	1
	RWPS: Phase 2 - Dry Test of Individual Eq't	15	24NOV2013	08DEC2013	08NOV2013	22NOV2013			-16d			- Dry Test of Individua		I	I	
	RWPS: Phase 3 - Wet Test of RWP Sys' (exclu DAF)	15	25NOV2013	09DEC2013	08NOV2013	22NOV2013			-17d			- Wet Test of RWP S	• • • •	I	1	1
	RWPS: Phase 3 - Wet & Manual Testing of DAF	25	02DEC2013	26DEC2013	15NOV2013	09DEC2013			-17d			PS: Phase 3 -Wet & M		DAF		
EMT323210	RWPS: Phase 3 Auto Test of Reuse water pump	10	30NOV2013	09DEC2013	22NOV2013	01DEC2013			-8d	i 💻 F	RWPS: Phase 3	Auto Test of Reuse v	/ater pump	l	I	I
EMT323300	RWPS: Phase 3 - Auto Testing of DAF	30	22DEC2013	20JAN2014	10DEC2013	08JAN2014			-12d			RWPS: F	hase 3 - Auto Te	sting of DAF	1	
EMT324100	RWPS: Phase 4 - Introduce Process Sewage (DAF)	1	10DEC2013	10DEC2013	02DEC2013	02DEC2013			-8d	i i I	RWPS: Phase 4	- Introduce Process	Sewage (DAF)	I	I	1
EMT324200	RWPS: Phase 4 Auto Test Process RWP Sys Excl DAF	7	11DEC2013	17DEC2013	03DEC2013	09DEC2013			-8d		RWPS: Ph	ase 4 Auto Test Proce	ess RWP Sys Exe	d DAF	1	1
EMT324300	RWPS Phase 4 - Verification	30	27DEC2013	25JAN2014	10DEC2013	08JAN2014			-17d			RWP	S Phase 4 - Verif	ication	1	1
nemical Building				•	•											
Building and Stru	ictures										1	1		1	1	1
	Chemical: Testing and Commissioning (ref)	180	27MAY2013	01FEB2014	27MAY2013	08JAN2014	27MAY2013		-24d				Chemical: Testing	and Commissioning	(ref)	I
	Chemical: Phase 3 - Wet Test of Individual Eg't	30	28AUG2013	24NOV2013	28AUG2013	24NOV2013	28AUG2013			Chemical:	Phase 3 - Wet T	est of Individual Eg't		, u		1
	Chemical: Phase 3 - Manual Testing of Sub-system	30	28AUG2013	26NOV2013	28AUG2013	23NOV2013	28AUG2013		-3d			al Testing of Sub-sys	tem	1	l	I
	Chemical: Phase 3 - Auto Testing of Sub-system	30		26NOV2013	16SEP2013 A	02NOV2013	16SEP2013		 			Testing of Sub-syste			1	1
	Chemical: Phase 4 - Introduce Chemical Dosing	1	29NOV2013	29NOV2013	24NOV2013	24NOV2013			-5d			roduce Chemical Dos			i.	i.
	Chemical: Phase 4 Auto TestProcess Commissioning	20	30NOV2013	19DEC2013	25NOV2013	14DEC2013			-5d			: Phase 4 Auto TestP	0			
	Chemical: Phase 4- Verification	20	20DEC2013	13JAN2014		08JAN2014			-50				ase 4 - Verificatio	•	1	1
	and Skip Storage	2	20DEC2013	150AN2014	10DEC2013	00JAN2014			-50						1	-
Building and Stru												 		1	1	1
		407	00 11 11 0040 A							1	1	1	Chudaa	Testing and Commis		1
	Sludge: Testing and Commissioning (ref)		28JUL2013 A		28JUL2013 A		28JUL2013						Sludge:	Testing and Commis	sioning (ret)	
	Sludge: Phase 1 - Installation Inspection			-	28JUL2013 A		28JUL2013			-	nase 1 - Installat	· ·		I.	I.	I
	Sludge: Phase 1 - Sludge System Insp.				28JUL2013 A		28JUL2013				nase 1 - Sludge				1	1
	Sludge: Phase 1 - Polymer System Insp.			-	28JUL2013 A		28JUL2013				nase 1 - Polyme			- 	l.	
	Sludge: Phase 1 - Centrifuge Inspection			-	28JUL2013 A		28JUL2013				nase 1 - Centrifu					
	Sludge: Phase 1 - Convey sys. Inspection			-	28JUL2013 A		28JUL2013		0			. sys. Inspection		I	I	I
	Sludge: Phase 2 - Dry Test of Individual Eq't		26SEP2013 A		26SEP2013 A		26SEP2013		0			ry Test of Individual E			1	1
	Sludge: Phase 3 - Wet Test of Individual Eq't	30	08OCT2013			05DEC2013	08OCT2013		0		•	Net Test of Individual	•		1	1
	Sludge: Phase 3 - Manual Testing of Sub-system	30	24OCT2013	05DEC2013	240CT2013	05DEC2013	240CT2013		0			lanual Testing of Sub			I.	I.
EMT603300	Sludge: Phase 3 - Auto Testing of Sub-system	30	24OCT2013	05DEC2013	240CT2013	16NOV2013	240CT2013		-19d		-	Auto Testing of Sub-s	/stem			
EMT604100	Sludge: Phase 4 - Introduce Process	3	06DEC2013	08DEC2013	17NOV2013	19NOV2013			-19d	I 🗖 S	Sludge: Phase 4	- Introduce Process		1		1
	Sludge: Phase 4 Auto Test/Process Commissioning	20	09DEC2013		20NOV2013	09DEC2013			-19d		Slu	dge: Phase 4 Auto Te	st/Process Comr	nissioning	1	1
	Sludge: Phase 4 - Verification	30	29DEC2013		10DEC2013				-19d			Sluc	lge: Phase 4 - Ve	rification	I	I
eptic Waste Colle											 ,					
Building and Stru											1	 		1	1	1
	Septic Station: Testing and Commissioning (ref)	190	15JUL2013 A	21FFB2014	15JUL2013 A	21FFB2014	15JUL2013		0				Sen	tic Station: Testing a	nd Commissionina (	ref)
	Septic Station: Phase 1- Installation Inspection				15JUL2013 A					Sentic St	ation: Phase 1- I	nstallation Inspection	_ cob	 		.'
•		- 30	1300LZ013A					l						•		
sh date 04J a date 24N			PPSTW	Program	וme R7B-	Progres	s up to 24	4 Nov 13	- Rema	aining Works					Early b Progre Critical Summ Start m Finish	ss bar bar ary bar iilestone p

ID	Description	Original Duratior		Early Finish	Late Start	Late Finish	Actual Start	Actual Finish	Total Float	2013 2014 CCT NOV DEC JAN FEB MAR APR MAY
EMT152100	Septic Station: Phase 2 - Dry Test Indiv Eq't	25	01NOV2013	03DEC2013	01NOV2013	03DEC2013	01NOV2013		0	DCT         NOV         DEC         JAN         FEB         MAR         APR         MAY           Image: Septic Station: Phase 2 - Dry Test Indiv Eq't         Image: Septic Station: Phase 2 - Dry Test Indiv Eq't         Image: Septic Station: Phase 2 - Dry Test Indiv Eq't         Image: Septic Station: Phase 2 - Dry Test Indiv Eq't
	Septic Station: Phase 3 - Wet Test of Indiv Eq.'t	25	02NOV2013	03DEC2013	02NOV2013	12NOV2013	02NOV2013		-21d	
	Septic Station: Phase 3 - Wet rest of Individual to	20		13DEC2013		22NOV2013	0211002013			
			24NOV2013						-21d	
	Septic Station: Phase 3 - Auto Test Sub-system	20	24NOV2013	13DEC2013		22NOV2013			-21d	
	Septic Station: Phase 4-Introduce Process Sewage		05DEC2013	11DEC2013		20NOV2013	1		-21d	
	Septic: Phase 4 Auto Test Process Commissioning	30	12DEC2013	10JAN2014	10DEC2013	08JAN2014			-2d	
	Septic Station: Phase 4 - Verification	30	11JAN2014	09FEB2014	09JAN2014	07FEB2014			-2d	Septic Station: Phase 4 - Verification
UA										
uilding and Stru			1							
	DOU A: Testing and Commissioning (ref)	190	15JUL2013 A	15FEB2014	15JUL2013 A		15JUL2013		0	DOU A: Testing and Commissioning (ref)
	DOU A: Phase 2 - Dry Test of Individual Eq't	30	28SEP2013 A	29NOV2013	28SEP2013 A	29NOV2013	28SEP2013		0	DOU A: Phase 2 - Dry Test of Individual Eq't
EMT713100	DOU A: Phase 3 - Wet Test of Individual Eq't	30	12OCT2013	29NOV2013	12OCT2013	02DEC2013	12OCT2013		3d	DOU A: Phase 3 - Wet Test of Individual Eq't
EMT713200	DOU A: Phase 3 - Manual Testing of Sub-system	25	08NOV2013	08DEC2013	08NOV2013	29NOV2013	08NOV2013		-9d	DOU A: Phase 3 -Manual Testing of Sub-system
EMT713300	DOU A: Phase 3 - Auto Testing of Sub-system	25	24NOV2013	18DEC2013	15NOV2013	09DEC2013			-9d	DOU A: Phase 3 - Auto Testing of Sub-system
	DOU A: Phase 4 - Introduce Foul Air	7	30NOV2013	06DEC2013	03DEC2013	09DEC2013			3d	
	DOU A: Phase 4 Auto Test/Process Commissioning	30	19DEC2013	17JAN2014	10DEC2013	08JAN2014			-9d	
	DOU A: Phase 4 - Verification	30	18JAN2014	16FEB2014	08FEB2014	09MAR2014			21d	
									1 210	
uilding and Stru	uctures									
	DOU B: Testing and Commissioning (ref)	170	30SEP2013 A	20000014	30SEP2013 A	20EEP2014	30SEP2013			DOU B: Testing and Commissioning (ref)
		30	30SEP2013 A		30SEP2013 A		30SEP2013 30SEP2013			DOUB. Testing and Commissioning (ref)
	DOU B: Phase 1 - Installation Inspection						305272013			
	DOU B: Phase 2 - Dry Test of Individual Eq't	20	24NOV2013	13DEC2013	24NOV2013					DOU B: Phase 2 - Dry Test of Individual Eq't
	DOU B: Phase 3 - Wet Test of Individual Eq't	20	24NOV2013	13DEC2013	06NOV2013	1			-18d	
	DOU B: Phase 3 - Manual Testing of Sub-system	25	24NOV2013	18DEC2013		09DEC2013			-9d	
	DOU B: Phase 3 - Auto Testing of Sub-system	25	24NOV2013	18DEC2013		09DEC2013			-9d	
	DOU B: Phase 4 - Introduce Foul Air	7	12DEC2013	18DEC2013		30NOV2013			-18d	
EMT724200	DOU B: Phase 4 Auto Test/Process Commissioning	30	19DEC2013	17JAN2014	10DEC2013	08JAN2014			-9d	
EMT724300	DOU B: Phase 4 - Verification	30	18JAN2014	16FEB2014	08FEB2014	09MAR2014			21d	DOU B: Phase 4 - Verification
ntrol System										
uilding and Stru	uctures									
EMT811118	Control/SCADA: Phase 1 - Insp PLC LCP DOUB	30	23AUG2013	27NOV2013	23AUG2013	27NOV2013	23AUG2013		0	Control/SCADA: Phase 1 - Insp PLC LCP DOUB
EMT811119	Control/SCADA: Phase 1 - Insp PLC LCP OFPS	30	29AUG2013	04DEC2013	29AUG2013	09DEC2013	29AUG2013		5d	Control/SCADA: Phase 1 - Insp PLC LCP OFPS
	Control/SCADA: Phase 2- SCADA Admin	30	25SEP2013 A			29NOV2013	25SEP2013		0	Control/SCADA: Phase 2- SCADA Admin
	Control/SCADA: Phase 2 - PLC LCP SDW	30	270CT2013				270CT2013		-11d	
	Control/SCADA: Phase 2 - PLC LCP DOUA	30				07DEC2013			84	Control/SCADA: Phase 2 - PLC LCP DOLLA
	Control/SCADA: Phase 2 - PLC LCP DOUB	30			28NOV2013		0011012010		0	Control/SCADA: Phase 2 - PLC LCP DOUB
	Control/SCADA: Phase 2 - PLC LCP OFPS	30		03JAN2014	10DEC2013	<u>.</u>			5d	
		0		0307112014	10DEC2013	1 000AN2014	1			
	Control/SCADA: Phase 4 Start	, v	27NOV2013		-		1		-17d	
	Control/SCADA: Phase 4 Auto Test/Process Comm		27NOV2013	26DEC2013	10NOV2013	09DEC2013			-17d	
EMT814290	Control/SCADA: Phase 4 Finish	0		26DEC2013		09DEC2013	1		-17d	
	Control/SCADA: Phase 4 Start	0	27NOV2013		10NOV2013				-17d	
EMT814310					10NOV2013	08JAN2014			-17d	
EMT814310 EMT814350	Control/SCADA: Phase 4 - Verification		27NOV2013	25JAN2014	1.0.1012010					
EMT814310 EMT814350 EMT814390		60 0	27NOV2013	25JAN2014 25JAN2014		08JAN2014			-17d	
EMT814310 EMT814350 EMT814390 ding Services	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish		27NOV2013			08JAN2014			-17d	
EMT814310 EMT814350	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish		27NOV2013			08JAN2014			17d	
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish			25JAN2014	080CT2013		080CT2013		17d	
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures	0	080CT2013	25JAN2014 24NOV2013	 -	24NOV2013	080CT2013 080CT2013		-17d	Control/SCADA: Phase 4 verif. Finish
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000 EMT833000	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't	0	080CT2013 080CT2013	25JAN2014 24NOV2013 27NOV2013	080CT2013 080CT2013	24NOV2013 27NOV2013	08OCT2013		-17d	Control/SCADA: Phase 4 verif. Finish Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000 EMT833000 EMT835000	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system	0 30 30 30	080CT2013 080CT2013 150CT2013	25JAN2014 24NOV2013 27NOV2013 06DEC2013	080CT2013 080CT2013 150CT2013	24NOV2013 27NOV2013 22NOV2013			0 0 -14d	Control/SCADA: Phase 4 verif. Finish Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000 EMT833000 EMT835000 EMT836000	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system Admin BS: Performance Testing of Sub-system	0 30 30 30 30 30	080CT2013 080CT2013 150CT2013 24NOV2013	25JAN2014 24NOV2013 27NOV2013 06DEC2013 23DEC2013	080CT2013 080CT2013 150CT2013 10NOV2013	24NOV2013 27NOV2013 22NOV2013 09DEC2013	08OCT2013		0 0 -14d	Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system Admin BS: Performance Testing of Sub-system
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000 EMT833000 EMT835000 EMT836000 EMT837000	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system Admin BS: Performance Testing of Sub-system Admin BS: Government Inspection	0 30 30 30 30 18	08OCT2013 08OCT2013 15OCT2013 24NOV2013 24DEC2013	25JAN2014 24NOV2013 27NOV2013 06DEC2013 23DEC2013 10JAN2014	080CT2013 080CT2013 150CT2013 10NOV2013 10DEC2013	24NOV2013 27NOV2013 22NOV2013 09DEC2013 27DEC2013	08OCT2013		0 0 - 14d - 14d - 14d	Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system Admin BS: Performance Testing of Sub-system Admin BS: Government Inspection
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000 EMT833000 EMT836000 EMT836000 EMT837000 EMT837100	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system Admin BS: Performance Testing of Sub-system Admin BS: Covernment Inspection Admin BS: Government Re-inspection	0 30 30 30 30 18 30	080CT2013 080CT2013 150CT2013 24NOV2013 24DEC2013 11JAN2014	25JAN2014 24NOV2013 27NOV2013 06DEC2013 23DEC2013 10JAN2014 09FEB2014	080CT2013 080CT2013 150CT2013 10NOV2013 10DEC2013 28DEC2013	24NOV2013 27NOV2013 22NOV2013 09DEC2013 27DEC2013 26JAN2014	08OCT2013		0 0 -14d -14d -14d -14d	Control/SCADA: Phase 4 verif. Finish  Admin BS: Funtional Test of Installation  Admin BS: Funtional Test of Individual Eq't  Admin BS: Funtional Testing of Sub-system  Admin BS: Performance Testing of Sub-system  Admin BS: Covernment Inspection  Admin BS: Government Re-inspection
EMT814310 EMT814350 EMT814390 ding Services uilding and Stru EMT832000 EMT833000 EMT835000 EMT836000 EMT837000 EMT837100 EMT838000	Control/SCADA: Phase 4 - Verification Control/SCADA: Phase 4 verif. Finish uctures Admin BS: Funtional Test of Installation Admin BS: Funtional Test of Individual Eq't Admin BS: Funtional Testing of Sub-system Admin BS: Performance Testing of Sub-system Admin BS: Government Inspection	0 30 30 30 30 18	08OCT2013 08OCT2013 15OCT2013 24NOV2013 24DEC2013	25JAN2014 24NOV2013 27NOV2013 06DEC2013 23DEC2013 10JAN2014	080CT2013 080CT2013 150CT2013 10NOV2013 10DEC2013 28DEC2013	24NOV2013 27NOV2013 22NOV2013 09DEC2013 27DEC2013	08OCT2013		0 0 - 14d - 14d - 14d	Control/SCADA: Phase 4 verif. Finish     Admin BS: Funtional Test of Installation     Admin BS: Funtional Test of Individual Eq't     Admin BS: Funtional Testing of Sub-system     Admin BS: Performance Testing of Sub-system     Admin BS: Performance Testing of Sub-system     Admin BS: Government Inspection     Admin BS: Government Re-inspection

Design, Build and Operate Pillar Point Sewage Treatment Works

Activity	Description	Driginal		Early	Late	Late	Actual	Actual	Total		2013	13 2014				
ID		Juration	Start	Finish	Start	Finish	Start	Finish	Float DCT	NOV	DEC	JAN	FEB	MAR	APR	May ui
EMT991000	CEPT Phase 5 submit new Discharge License insp.	30	04FEB2014	05MAR2014	09APR2014	08MAY2014			64d			1		CEPT Phase 5 submit new Discharge License insp.		
EMT995000	CEPT Phase 5 Optimisation period	30	04FEB2014	05MAR2014	09JAN2014	07FEB2014			-26d		i i	I		CEPT Phase 5 C	Optimisation period	
EMT995300	CEPT Phase 5 Proving Period	90	06MAR2014	03JUN2014	08FEB2014	08MAY2014			-26d			1	I I		• 	

PPSTW Programme R7B- Progress up to 24 Nov 13 - Remaining Works

