## ANNEX D IMPLEMENTATION SCHEDULE

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location / Timing	Implementation Agent	Relevant Standard or	Im	plemer Sched	ule	Maintenance Agency	Implementation Status
	Reference				Requirement	D	C	0		
Water Qual	lity									
6.7	6.8.1	There should be no access to the shore or working from land within the Marine Park. No marine anchors shall be used within the Marine Park.	Marine Park / Pipeline Dredging	Contractor	TMEIA		Y		N/A	Pending
6.7	6.8.1	No hydraulic dredging within Marine Park.	Marine Park / Pipeline Dredging	Contractor	TMEIA		Y		N/A	Pending
6.7	6.8.1	Dredging for pipeline trench should be timed to coincide with maintenance dredging for Sha Chau AFRF marine access channel if relevant.	Sha Chau ARFR Marine access channel	Airport Authority	TMEIA		Y		N/A	Pending
6.4		The work rate for dredging should not exceed 4,000 m <sup>3</sup> /hr for the TSHD and 7,000 m <sup>3</sup> /day for the grab dredger.	Marine Park / Pipeline Dredging	Contractor	TMEIA		Y		N/A	Pending
6.7	6.8.1	Standard good dredging practice measures shall be written in the dredging contract.	Marine Park / Pipeline Dredging	Franchisee	TMEIA		Y		N/A	Pending
6.7	6.8.1	Use of Lean Material Overboard (LMOB) systems shall be prohibited. No mud overflow is to be permitted for dredging using TSHD.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending
6.7	6.8.1	Mechanical grabs shall be designed and maintained to avoid spillage and should seal tightly while being lifted.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending

EIA	EM&A	Environmental Protection Measures	Location /	Implementation	Relevant	In	nplementat		Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Schedule C	o	Agency	Status
6.7	6.8.1	Barges and hopper dredgers shall have tight fittings seals to their bottom openings to prevent leakage of material.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y	U	N/A	Pending
6.7	6.8.1	Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending
6.7	6.8.1	Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending
6.7	6.8.1	Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.		Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending
6.7	6.8.1	Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending
6.7	6.8.1	All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Pending

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	Im	-			Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D		hedu C	le O	Agency	Status
6.7	6.8.1	The works shall not cause foam, oil, grease, letter or other objectionable matter to be present in the water within and adjacent to the works site.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions			Y		N/A	Ongoing
6.7	6.8.1	Placement of pipeline trench backfill should be undertaken in a controlled manner to minimise impacts.  Backfilling with rock should be undertaken either down pipe or by a reverse grab operation or other controlled technique to ensure that this material does not mound on the seabed	Pipeline trench/ Pipeline Dredging	Contractor	TMEIA Minimise disturbance			Y		N/A	Pending
6.7	6.8.1	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Sewage effluent and discharges from onsite kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Storm drainage should be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sandbag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location / Timing	Implementation Agent	Relevant Standard or	In		emen	tation	Maintenance Agency	Implementation Status
Reference	Reference		Tilling	Agent	Requirement	D	30	C	O	Agency	Status
6.7	6.8.1	Silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Temporary access roads should be surfaced with crushed stone or gravel.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Open stockpiles of construction materials (e.g. aggregates and sand) o nsite should be covered with tarpaulin or similar fabric during rainstorms.		Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing

EIA	EM&A	Environmental Protection Measures	Location /	Implementation	Relevant	Im	-		ation		Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D		iedul C	le O	Agency	Status
6.7	6.8.1	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	All vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	The section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing
6.7	6.8.1	Vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal.		Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards			Y		N/A	Ongoing

EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	Im			ation		Implementation Status	
Reference		Timing	Agent		D			O	Agency	Status	
6.8.1	The contractors shall prepare	Land site/	Contractor	TMEIA					N/A	Ongoing	
	oil/chemical cleanup plan and ensure	Throughout		ProPECC Note						-	
	that leakages or spillages are contained	construction		1/94. WPCO							
	and cleaned up immediately.	period		TM on Effluent							
		-		Standards							
6.8.1	Waste oil should be collected and stored	Land site/	Contractor	TMEIA			Y		N/A	Ongoing	
	for recycling or disposal, in accordance	Throughout		ProPECC Note						-	
	with the Waste Disposal Ordinance.	construction		1/94. WPCO							
	•	period		TM on Effluent							
		-		Standards							
6.8.1	All fuel tanks and chemical storage areas	Land site/	Contractor	TMEIA			Y		N/A	Ongoing	
	should be provided with locks and be	Throughout		ProPECC Note						0 0	
		construction		1/94. WPCO							
		period		TM on Effluent							
	capacity equal to 110% of the storage	•		Standards							
6.8.1	Surface run-off from bunded areas	Land site/	Contractor	TMEIA			Y		N/A	Ongoing	
	should pass through oil/grease traps	Throughout		ProPECC Note						0 0	
	prior to discharge to the stormwater										
	system.	period		TM on Effluent							
		•		Standards							
6.8.1	Wastewater from pipe commissioning	Tank	Franchisee	TMEIA			Y		N/A	Ongoing	
		Farm/Tank		WPCO TM on						0 0	
	site and for chemical analysis and safe	farm		Effluent							
	disposal in accordance with the WPCO.	commissioning		Standards							
Section 6	•		Contractor	EM&A Manual			Y		N/A	Ongoing	
										0 0	
		construction									
	~	period									
Section 6	Submarine section of aviation fuel	Submarine	Franchisee	TMEIA	Y		Y		Franchisee	Pending	
	pipeline shall be covered with rock	pipeline		Rock armour to						Ü	
	* *	• •		minimum							
	-			thickness of 1m							
	natural seabed.										
	6.8.1 6.8.1 6.8.1 Section 6	6.8.1 The contractors shall prepare oil/chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately.  6.8.1 Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.  6.8.1 All fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank.  6.8.1 Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.  6.8.1 Wastewater from pipe commissioning dewatering exercises shall be stored on site and for chemical analysis and safe disposal in accordance with the WPCO.  Section 6 All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.  Section 6 Submarine section of aviation fuel	6.8.1 Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.  6.8.1 All fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank.  6.8.1 Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.  6.8.1 Wastewater from pipe commissioning dewatering exercises shall be stored on site and for chemical analysis and safe disposal in accordance with the WPCO.  Section 6 All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.  Section 6 Submarine section of aviation fuel pipeline shall be covered with rock armour protection which shall not	Reference	Reference	Reference	Requirement   Requirement	Reference   Land site   Contractor   TMEIA   Y   Y   Y   Non-Effluent   Standards   Stan	Reference   Land site   Contractor   TMELA   Note   Note	Reference	

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location / Timing	Implementation Agent	Relevant Standard or	Im	plement Schedu		Maintenance Agency	Implementation Status
Reference	Reference		Tilling	Agent	Requirement	D	C	O	Agency	Status
6.7	Section 6	Detailed emergency response procedures shall be drawn up. These will include requirements to maintain floating oil booms, absorbent materials and skimmers on site at all times.	All facilities	Franchisee	TMEIA Industry Standards e.g. Oil Companies International Marine Forum			Y	Franchisee	Pending
6.7	Section 6	Coupling points on the jetty will be protected with slop collection utilities.	Jetty	Franchisee	TMEIA Rock armour to minimum thickness of 1m		Y		Franchisee	Pending
6.7	Section 6	Auxiliary tanks shall be permanently maintained at the tank farm for recovered fuel and slops.	Tank farm	Franchisee	TMEIA			Y	Franchisee	Pending
6.7	Section 6	Oily drainage systems and slop collection systems will connect to an oil/water separator.	Tank farm	Franchisee	TMEIA Industry Standards e.g. Oil Companies International Marine Forum		Y		Franchisee	Pending
6.7	Section 6	All tanks shall be bunded to a capacity of at least 150% of the largest individual tank in each compound by 2040. Tank pits shall be protected by an impermeable bed (e.g. geotextile sheeting) to prevent seepage of aviation fuel to ground. A leak detection system shall be installed beneath the containment membrane.	Tank farm	Franchisee	TMEIA Hong Kong Code of Practice for Oil Installations, 1992		Y		Franchisee	Pending
6.7	Section 6	There shall be no direct outlet from the bund. A collection pump shall be included in the base. Removal of accumulated rainwater shall be activated manually and discharged to storm drain via an oil/water separator.	Tank farm	Franchisee	TMEIA		Y		Franchisee	Pending

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	Im	plement		Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Schedu C	le O	Agency	Status
6.7	Section 6	Contingency procedures shall be drawn up to ensure containment and safe disposal of any fuel lost from tanks or pipework. Suitable absorbent materials (e.g. sand or earth) shall be kept on site to deal with spillages.	Tank farm	Franchisee	TMEIA Hong Kong Code of Practice for Oil Installations, 1992		C	Y	Franchisee	Pending
6.7	Section 6	Valves shall be installed within the storm drainage system to facilitate the retention of spillages.	Tank farm	Franchisee	TMEIA		Y		Franchisee	Pending
6.10	Section 6	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen.	Design monitoring stations as defined in EM&A Manual, section 6. Construction period when dredging takes place within 1000m of Marine Park and along entire length of the pipeline	Contractor	EM&A Manual		Y		N/A	Pending

EIA	EM&A	Environmental Protection Measures	Location /	Implementation	Relevant	Im	plement		Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Schedu C	le O	Agency	Status
6.10	Section 6	Routine water quality monitoring in the vicinity of the PAFF site to check the effectiveness of the proposed precautionary measures implemented for on-site spill control. The details of the monitoring to be undertaken will be prepared by the Franchisee as part of the PAFF Operations Manual and the details will be agreed with the relevant authorities within 3 months of the commencement of operation of the PAFF. Monitoring should include but not be limited to the parameters of TPH and PAH and reference should be made to the existing monitoring programme undertaken for the fuel tank farm on the HKIA platform.		Franchisee	EM&A Manual			Y	N/A	Pending
Ecology										
7.8	5.3	Undertake post construction dolphin abundance monitoring.	Construction	Contractor	TMEIA		Y		N/A	Pending
7.8	5.3	A 250m dolphin exclusion zone shall be implemented and dredging shall not begin until the observer has confirmed that the area has been clear for 30 minutes.	250m around dredger/throug hout dredging in Marine Park and along the length of pipeline	Contractor	TMEIA		Y		N/A	Pending

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	Im	plemer			Implementation
Reference	Manual		Timing	Agent	Standard or	-	Sched		Agency	Status
= 0	Reference	*** 1 111	m 1 .		Requirement	D	C	0	> 7 / A	D 11
7.8	5.3	Works will be restricted to a daily maximum of 12 hours within daylight hours.	Throughout dredging in Marine Park and along the length of the pipeline except for the section crossing	Contractor	TMEIA		Y		N/A	Pending
			Urmston Road							
7.8	5.3	Avoidance of dolphin main calving season between March and August.	Channel Throughout dredging in Marine Park and along the length of the pipeline	Contractor	TMEIA		Y		N/A	Pending
Landscape	& Visual									
8.10	7.2.1	The construction programme for the PAFF should be reduced to the shortest possible period.	PAFF site / throughout construction period	Contractor	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	The extent and periphery of the works areas should be managed so that they are as small as possible and do not appear cluttered, untidy and unattractive, particularly to road traffic along Lung Mun Road.	PAFF site / throughout construction period	Contractor	TMEIA		Y	Y	N/A	Ongoing
8.10	7.2.1	Temporary hoarding barriers should be of a recessive visual appearance in both colour and form.	PAFF site / throughout construction period	Contractor	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	Materials should be stored in areas with the least obstruction to residents, pedestrians and traffic.	PAFF site / throughout construction period	Contractor	TMEIA		Y	Y	N/A	Ongoing

EIA Reference	EM&A Manual	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or	Im	plement Schedu		Maintenance Agency	Implementation Status
	Reference		Ö	o .	Requirement	D	C	O	0 7	
8.10	7.2.1	All material stockpiles should be covered with an impermeable material and sandbagging diversions should be placed around exposed soil.	PAFF site / throughout construction period	Contractor	TMEIA		Y	Y	N/A	Ongoing
8.10	7.2.1	Conservation of existing and imported soil resources.	PAFF site / throughout construction period of fuel tank expansion	Contractor	TMEIA			Y	N/A	Ongoing
8.10	7.2.1	A landscape perimeter bund comprising containment bund-wall, access road and planting buffer shall be built and maintained around the tank farm.	PAFF site / throughout construction period	Project Proponent	TMEIA	Y	Y	Y	Franchisee	Ongoing
8.10	7.2.1	The design of the PAFF should incorporate materials, details and textures which are visually recessive.	PAFF site / design	Project Proponent	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	Colours should be of low chromatic intensity to reduce the potential contrast between the structure and their background.	PAFF site tanks / design	Project Proponent	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	Visually permeable security fencing should be used around the perimeter.	Site perimeter	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing
8.10	7.2.1	Minimum amount of lighting for the tanks shall be used, only applied for safety at the key access points and staircases.	Tanks / Operational phase	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing
8.10	7.2.1	Limited lighting intensity on the site.	PAFF site / Operational phase	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing
8.10	7.2.1	Directional down lighting is suggested to minimise light spill to the surrounding area.	*	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	In D	pleme Sched C	ntation lule O	Maintenance Agency	Implementation Status
Cultural H	eritage				<u>*</u>					
9.8.1	9.2.1	Undertake a watching brief during dredging of the pipeline within 25m either side of anomalies SS1 and SS2. This should comprise:	Within vicinity of SS1 and SS2	Franchisee	TMEIA		Y		N/A	Pending
		Dredge operators to be made aware of the potential presence of cultural heritage material. The operators would be required to report to the AMO any unusual resistance and/or recovery of timbers, anchors or other wreck related material. Any obstacles encountered during the dredging that are of timber should be reported to the marine archaeologist. The obstacle should be avoided and not removed until it has been assessed by the marine archaeologist as to whether the obstacle is of cultural heritage importance;								
		A marine archaeologist shall be on board the dredging barge during dredging within 25m either side of SS1 and SS2 in the event of any unusual resistance occurring or blockages which requires the dredge head to be bought on deck for								

Reference	EM&A Manual	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or	Im		nenta iedul		Maintenance Agency	Implementation Status
	Reference		3	o .	Requirement	D	(	C	О	0 ,	
		Dredging to cease in the nominated area SS1 after 3 meters of sediment									
		removal and after 1 metre for SS2.  A dive survey will then be undertaken to examine the trench for possible cultural remains.									
9.8.2	9.2.1	During the course of the watching brief, if the targets are identified as being potentially archaeologically important, then an immediate marine archaeological impact assessment in accordance with EIAO TM Annex 19 will be required to be undertaken by a qualified marine archaeologist.	With vicinity of SS1 and SS2	Franchisee	TMEIA		•	Y		N/A	Pending
9.8.4	9.2.1	Any changes, additions or alterations to the dredging method and alignment should be further assessed by marine archaeologist to determine if any further assessment is required.	Pipeline alignment	Franchisee	TMEIA		•	Y		N/A	Pending
Fuel Spill R	Risk	1									
11.4.1	10.2	Tank farms will be constructed in a bunded area surrounding the tanks which will have collection capacity of 150% of the maximum content of the largest tank.	Tank farm / Design Phase	Franchisee	TMEIA	Y				N/A	Pending
11.4.1	10.2	Emergency shut down valves shall be installed within the wider site storm drainage system.	Tank farm / Design Phase	Franchisee	TMEIA	Y				N/A	Pending
11.4.1	10.2	An impermeable membrane shall be installed in the tank foundation beneath the tank bottom.	Tank farm / Design Phase	Franchisee	TMEIA	Y				N/A	Pending
11.4.1	10.2	Pipeline to be covered with a protective rock armour layer.	Pipelines/ Design Phase	Franchisee	TMEIA	Y				Franchisee	Pending

EIA	EM&A Manual	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant Standard or		olementa Schedul		Maintenance	Implementation
Reference	Reference		Timing	Agent	Requirement	D	C	O	Agency	Status
11.4.1	10.2	An integrated leak detection system shall be installed to all pipelines to provide early detection of any leak.	Pipelines/ Design Phase	Franchisee	TMEIA	Y			N/A	Pending
11.4.1	10.2	An automatic shut-off system shall be implemented for pipelines.	Pipelines/ Design Phase	Franchisee	TMEIA	Y			N/A	Pending
11.4.1	10.2	A workboat shall be on standby at the jetty during tanker berthing.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y		Y	N/A	Pending
11.4.1	10.2	Skimmers shall be available for quick deployment in case of a spill.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y		Y	N/A	Pending
11.4.1	10.2	An emergency response plan shall be prepared prior to the operation of the PAFF.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y		Y	N/A	Pending
11.4.1	10.2	Operator-training programme shall be implemented.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y		Y	N/A	Pending
11.6	10.4	During the planning of the later phase of the tank farm development, in order to ensure that the required mitigation measures are undertaken at that time, review the EIA report only if the latest technology, industrial standards and statutory requirements have changed by that time.	During planning stage for future tank construction	Franchisee	TMEIA			Y	N/A	Pending

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location / Timing	Implementation Agent	Relevant Standard or	Im	plemen Schedu		Maintenance Agency	Implementation Status
reference	Reference			1190111	Requirement	D	C	0	rigency	Status
11.6	10.4	Regular inspections and audits will be undertaken by the Franchisee during the operational phase of the facility:	Operation	Franchisee	TMEIA			Y	N/A	Pending
		Two inspections every year of the tank farm, jetty and pipelines including one undertaken pursuant to the Joint Inspection Group (JIG) explained above;								
		• Inspection of the whole sub sea pipelines every 5 to 10 years;								
		<ul> <li>Health, Safety and Environmental audit of the facility once every 3 years; and,</li> </ul>								
		• Inspection of the structural integrity of the tanks once per year.								
11.6	10.4	Prepare an Environmental Management Plan to ensure the on-going adequacy of the fuel spill contingency plan and that it is being implemented as required and that the above mitigation measures have been incorporated and are effective.	Within 3 months of start of operation of the PAFF with audits every 24 months	Franchisee	TMEIA			Y	N/A	Pending
Land Conta	mination									
13.5.1	10.2	Bunding shall be provided by all fuel storage areas to at least 150% of largest individual tank in each compound.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.1	10.2	Relevant design standards for storage tanks, pipework, containment and drainage shall be adhered to.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.1	10.2	Plant inspections and maintenance shall be undertaken once per month.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant		lement			Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Schedu C	le O	Agency	Status
13.5.1	10.2	Impermeable lining shall be provided for	Tank farm /	Franchisee	TMEIA	Y			N/A	Pending
		all tank pits.	Design							Ü
13.5.1	10.2	Leak detection systems shall be provided	Tank farm /	Franchisee	TMEIA	Y			N/A	Pending
		to all valves.	Design							
13.5.1	10.2	Surface drainage shall be contained and	Tank farm /	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
		treated prior to discharge.	Design							
13.5.1	10.2	Emergency spill response plans shall be	Tank farm /	Franchisee	TMEIA	Y		Y	N/A	Pending
		prepared.	Design							
13.5.1	10.2	Spill control materials and equipment	Tank farm /	Franchisee	TMEIA	Y		Y	N/A	Pending
		shall be provided on site.	Design							
13.5.1	10.2	Runoff from the rood of site buildings	Tank farm /	Franchisee	TMEIA	Y		Y	N/A	Pending
		and landscaped areas shall be conveyed	Design							
		in closed drains to the nearest storm								
		water drain to prevent the generation of								
		excessive quantities of surface water which may be polluted.								
13.5.5	10.2	Suitable absorbent materials (e.g. sand or	Tank farm /	Franchisee	TMEIA	Y			N/A	Pending
13.3.3	10.2	earth) shall be kept on site to deal with	Design	Tranchisee	INILIA	1			IV/A	1 ending
		spills. Chemical dispersants shall not	Design							
		be employed.								
13.5.5	10.2	The facility shall be designed,	Tank farm /	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
		constructed, operated and maintained in								9
		full accordance with the Code of Practice	O							
		for Oil Installations, 1992.								
13.5.5	10.2	Tank pressure testing shall be carried out	Tank farm /	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
		routinely to check for possible tank leaks.	Design							
		Product inventory monitoring shall be								
		integrated into site management								
		procedures to check for any abnormal or								
		unexpected product loss.								
13.5.5	10.2	Tank overfill monitoring systems shall	Tank farm /	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
		be installed and regularly tested. Inlet	Design							
		valves shall be designed to automatically								
		shutdown on exceedance of "high-high								
		level" to prevent over-filling.								

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location / Timing	Implementation Agent	Relevant Standard or	_	olement Schedu		Maintenance Agency	Implementation Status
	Reference				Requirement	D	C	О		
13.5.5	10.2	Pipe leakages shall be routinely checked for by means of a pressure sensitive leak detection system and routine inventory control.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.5	10.2	Drainage from areas of hardstanding shall be treated by means of oil/water separators prior to discharge to storm drain. All surface drainage shall be fitted with closure valves to provided additional containment and facilitate clean up of any leaks.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.5	10.2	The delivery pipeline from the jetty and the supply line to the airport shall be fitted with pressure sensitive leak detectors.	Tank farm / Design	Franchisee	TMEIA	Y	Y		N/A	Pending
Waste Man	agement									
14.7.2	8.3.1	The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	The waste coordinator shall prepare and implement a Waste Management Plan which specifies procedures such as ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of waste does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposal.	Contract mobilisation	Contractor	TMEIA, Works Branch Technical Circular No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	In D	-	emer ched	ntation ule O	Maintenance Agency	Implementation Status
14.7.2	8.3.1	The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.	D		Y	0	N/A	Ongoing
14.7.2	8.3.1	No waste shall be burnt on site.	PAFF Site throughout construction period	Contractor	TMEIA			Y		N/A	Ongoing
14.7.2	8.3.1	Excavated material shall be used on site for purposes of landscaping or formation of bund walls as far as possible.	All site /	Contractor	TMEIA			Y		N/A	Ongoing
14.7.2	8.3.1	All material shall be reused on site as far as practicable, including formwork plywood, topsoil and excavated material.	All site / throughout	Contractor	TMEIA			Y		N/A	Ongoing
14.7.2	8.3.1	Suitable provisions shall be included in the construction contract to ensure that the Contractor sorts and recycles waste.	Contract preparation stage	HyD	TMEIA	Y	<u> </u>			N/A	Ongoing

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant		plementa		Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Schedul C	e O	Agency	Status
14.7.2	8.3.1	Re-use and recycling of waste must always be considered first. Waste disposal shall only be undertaken in the last resort. Any surplus material generated shall be sorted on site into construction and demolition (C&D) waste and the public fill fraction. A sorting facility shall be set up on the site.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	The C&D waste shall be disposed of at a licensed landfill or deposited at an authorised waste transfer facility and the material suitable for public fill delivered to a public filling area, public filling barging point or public fill stockpile area after obtaining the appropriate licence.	CEDD pubic fill stockpile in Mui		TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Stockpile material shall avoid vegetated areas.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location / Timing	Implementation Agent	Relevant Standard or	Im	-	menta hedul		Maintenance Agency	Implementation Status
	Reference		3	o .	Requirement	D		C	O	0 ,	
14.7.2	8.3.1	Stockpiles shall be covered by tarpaulin and/or watered as required.	All areas / throughout construction period, particularly during dry season	Contractor	TMEIA, Public Health and Municipal Services Ordinance (Cap 132) and the Public Cleansing and Prevention of Nuisances (Regional Council) By-			Y		N/A	Ongoing
14.7.2	8.3.1	Storage of material on site should be kept to a minimum.	All areas / throughout construction period	Contractor	laws TMEIA, Public Cleansing and Prevention of Nuisances (Regional Council) By- laws			Y		N/A	Ongoing

EIA	EM&A	Environmental Protection Measures	Location /	Implementation	Relevant	Im			Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	hedul C	le O	Agency	Status
14.7.2	8.3.1	Excavated material in trucks shall be covered by tarpaulins.	All areas, particularly at site exits / throughout construction period	Contractor	TMEIA, Reduce the potential for spillage and dust. Public Health and Municipal Services Ordinance (Cap 132) and the Public Cleansing and Prevention of Nuisances (Regional Council) Bylaws		Y		N/A	Ongoing
14.7.2	8.3.1	Wheel washing facilities shall be used by all trucks leaving the site to prevent the transfer of mud onto public roads.	Site entrances and exits/ throughout construction period	Contractor	TMEIA, Public Cleansing and Prevention of Nuisances (Regional Council) By- laws		Y		N/A	Ongoing
14.7.2	8.3.1	Suitable chemical waste storage areas should be formed at the works site for temporary storage pending collection.	Works site/ throughout construction period	Contractor	TMEIA, Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. A Guide to the Chemical Waste Control Scheme		Y		N/A	Ongoing

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	In	•	entatior		Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Sche C	dule O	Agency	Status
14.7.2	8.3.1	A licensed contractor shall be employed to collect chemical waste for delivery to a licensed treatment facility.	Chemical waste treatment facility at Tsing Yi / throughout construction period		TMEIA, Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. A Guide to the Chemical Waste Control Scheme		Y		N/A	Ongoing
14.7.2	8.3.1	Temporary storage areas for general refuse should be enclosed to avoid environmental impacts.	All areas/ throughout construction period	Contractor	TMEIA, Public Health and Municipal Services Ordinance		Y	•	N/A	Ongoing
14.7.2	8.3.1	Sufficient dustbins should be provided for storage of waste.	All areas/ throughout construction period	Contractor	TMEIA, Public Cleansing and Prevention of Nuisances Ordinance (Regional Council) By- laws, Public Health and Municipal Services Ordinance		Υ		N/A	Ongoing
14.7.2	8.3.1	General refuse should be cleared daily and should be disposed of to the nearest licensed facility.	All areas, WENT landfill or NWNT refuse transfer stations/ throughout construction period	Contractor	TMEIA, Sanitation and Conservancy (Regional Council) By- laws		Υ		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Im D	•	entation edule C O	Maintenance Agency	Implementation Status
14.7.2	8.3.1	Waste oils, chemicals or solvents shall not be disposed of to drain.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	(	N/A	Ongoing
14.7.2	8.3.1	Good site practice shall be implemented to avoid waste generation and promote waste minimisation.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	(		Ongoing
14.7.2	8.3.1	Waste materials such as paper, metal, timber and waste oil shall be recycled as far as practicable.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	(	N/A	Ongoing
14.7.2	8.3.1	Temporary structures used during construction shall be provided in the form of proprietary Protakabin type units sited on areas of permanent hard paving units as far as practicable.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	(	N/A	Ongoing
14.7.2	8.3.1	Dredged marine mud shall be disposed of in a gazetted marine disposal ground under the requirements of the Dumping at Sea Ordinance.	PAFF site/ throughout construction period				Υ	(	N/A	Ongoing
14.7.2	8.3.1	All waste containers shall be in good condition and fitted with lids or covers to prevent waste from escaping or the ingress of water.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	(	N/A	Ongoing
14.7.2	8.3.1	All waste containers shall be in a secure area on hardstanding.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	(	N/A	Ongoing
14.7.2	8.3.1	Emergency equipment to deal with any spillage or fire shall be kept on site.	PAFF site/ throughout construction period		TMEIA		Υ	(	N/A	Ongoing

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	Im	-	entation	Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Sche	edule O	Agency	Status
14.7.2	8.3.1	All containers used for storage of chemical waste shall be maintained in good condition and clearly labelled in both English and Chinese.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	,	N/A	Ongoing
14.7.2	8.3.1	All storage areas for chemical waste shall be:	PAFF site/ throughout construction	Contractor	TMEIA		Υ	,	N/A	Ongoing
		• Clearly labelled;	period							
		• Enclosed on at least 3 sides;								
		<ul> <li>Have impermeable floor and bunding sufficient to fully retain any spillage or leakages;</li> </ul>								
		• Ventilated; and,								
		Covered to prevent rainfall from entering.								
14.7.2	8.3.1	All types of asbestos including sources (such as clutch linings) shall be treated as chemical waste. Asbestos containing wastes shall be kept separate from other wastes.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	,	N/A	Ongoing
14.7.2	8.3.1	All leaking containers shall be contained and removed from site an soon as is reasonably practicable.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	,	N/A	Ongoing
14.7.2	8.3.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.	PAFF site/ throughout construction period	Contractor	TMEIA		Υ	,	N/A	Ongoing

EIA	EM&A	<b>Environmental Protection Measures</b>	Location /	Implementation	Relevant	Im	Implementation		Maintenance	Implementation
Reference	Manual		Timing	Agent	Standard or		Schedu	le	Agency	Status
	Reference				Requirement	D	C	О		
14.7.2	8.3.1	EM&A of waste handling, storage,	All areas/	Contractor	TMEIA		Y		N/A	Ongoing
Section 5		transportation, disposal procedures and	throughout							
		documentation through the site audit	construction							
		programme shall be undertaken.	period							