
	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057				
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.		0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit		0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code		D-COM sh.1 of 22		
		Rev.		0		1	



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX F

HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL

1	14/09/2023	REISSUED FOR USE	[REDACTED]	[REDACTED]	[REDACTED]
Rev.	Date	Description	Prepared	Checked	Approved

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057			
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.2 of 22	
		Rev.	0	1		

Revision control sheet

1	14/09/2023	REISSUED FOR USE
0	26/4/2023	ISSUED FOR USE
Revision No	Date	Revision Details

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.





	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057			
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.3 of 22	
Rev.			0	1		

Table of Contents

1	EXECUTIVE SUMMARY	4
2	ABBREVIATIONS AND DEFINITIONS	5
3	KEY EXECUTION PLANS & PROCEDURES	7
4	PROJECT DETAILS.....	7
4.1	Plant overview.....	8
4.2	Client information	10
4.1	Scope & Context.....	10
4.2	Purpose of this Plan	11
4.3	Plan Review	11
4.4	Responsibility	12
5	ENVIRONMENTAL APPROVALS.....	13
5.1	Part IV Approval	13
6	MITIGATION MEASURES.....	13
6.1	Management Protocols.....	13

	OWNER	Contractor Job No.: PN835057			
	PERDAMAN CHEMICALS AND FERTILIZERS	Doc. No.	0000-ZA-E-09071		
	PLANT LOCATION: BURRUP, AUSTRALIA	Unit	0000		
	PROJECT: PROJECT CERES	D.A. Code	D-COM	sh.4 of 22	
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL	Rev.	0	1	

1 EXECUTIVE SUMMARY

This Hydrocarbons & Hazardous Substances Management Protocol (HHSMP) has been prepared by the CONTRACTOR to comply with the requirement of the Ministerial Statement No. 180 (MS 1180), provisions of the Perdaman Solid and Liquid Waste Management Plan (PCF-PD-EN-SLWMP) and the management controls specific to the CONTRACTOR construction methodology that will be applied by the CONTRACTOR during the construction program relating to Project CERES.



The HHSMP describes the Scope of Work, addresses all requirements related to management of hydrocarbons and hazardous substances by the Project, and establishes the strategies, methods, processes which will be adopted by CONTRACTOR to provide certainties in delivering successful execution of the project while adhering to environmental objectives for the Project.

The Hydrocarbons & Hazardous Substances Management Protocol presents in detail:

- Address relevant conditions of the Project Approvals and confirmed management plans.
- Provide employees and SUBCONTRACTORS with a clear and concise description of their responsibilities in relation to controls to minimise environmental impacts from hydrocarbons and hazardous substances for the duration of the construction works.
- Consider all relevant legislation, standards and technical guidelines when developing preventative controls.
- Detail the CONTRACTOR monitoring requirements during construction.

The HHSMP is prepared and maintained by the CONTRACTOR Environmental Team or designated delegate. It is a “live” Protocol and as such may be reviewed periodically and revised as needed.



This HHSMP must be read and implemented in conjunction with the most recent and approved version of the Perdaman Solid and Liquid Waste Management Plan and the CONTRACTOR CEMP it is appended to. It aims to provide the construction team with clear actions, management, and monitoring responsibilities under these plans during the construction program.

 PERDAMAN	OWNER		PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057	
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
 SAIPEM clough <small>— SCJV —</small>	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.5 of 22	
Rev.			0	1		

2 ABBREVIATIONS AND DEFINITIONS



DEFINITIONS	
CONTRACT	Contract agreement entered between OWNER and CONTRACTOR.
CONTRACTOR	SAIPEM CLOUGH JOINT VENTURE
DEVELOPMENT ENVELOPE	The Project Development Envelope to which the Part IV of the EP Act and EPBC Act assessments relate shown in Figure 2-1 of the ERD
DISTURBANCE AREA	The area within the Development Envelope (DE) covered by the urea production plant that will be cleared for plant construction and laydown areas
ENVIRONMENTAL LEAD	Includes the Environmental Representative and Lead for the CONTRACTOR team, who are responsible for carrying out the responsibilities as they relate to the CONTRACTOR.
ENVIRONMENTAL ADVISOR	Includes the Environmental Advisor/s for the CONTRACTOR team, who are responsible for carrying out the responsibilities as they relate to the CONTRACTOR and as directed by the Environmental Lead and or the HSSE Deputy.
PERDAMAN ENVIRONMENTAL REPRESENTATIVE	The Environmental Representative includes Perdaman's ENVIRONMENT AND HERITAGE MANAGER, the ENVIRONMENTAL COORDINATOR or their delegated representative that represents Perdaman and is accountable for Perdaman responsibilities during construction.
ENVIRONMENT AND HERITAGE MANAGER	The ENVIRONMENT AND HERITAGE MANAGER is Perdaman's site based Environmental Representative who has the authority and responsibility for managing the implementation, compliance, and effectiveness of the Project's environmental and heritage requirements.
GROUND DISTURBANCE PERMIT	A GROUND DISTURBANCE PERMIT (GDP) is a permit issued to a SUBCONTRACTOR, by the CONTRACTOR, enabling Works within defined battery limits to manage any impacts on native vegetation, heritage, or other environmentally sensitive values. It includes the key approval commitments and obligations obtained by or issued to the CONTRACTOR or OWNER by regulators, tenure holders and other third parties.
INFRASTRUCTURE ZONE	East West Service Corridor is the common-user corridor disturbed / cleared by WA government and the Project footprint in Dampier Port
LICENSOR	HALDOR TOPSOE for AMMONIA, SAIPEM for UREA, THYSSENKRUP for GRANULATION
MAY	Indicates that the SUBCONTRACTOR is permitted to do something, or the CONTRACTOR reserves the right to dosomething according to the text.
MUST	Indicates a requirement or action that must be followed to comply with legal framework for the Project and environmental approval conditions.
NO-GO ZONES	NO-GO ZONES are defined areas within the Project's footprint which ARE NOT ENTERED AND OR DISTURBED by Project activities. These areas

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER		PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057	
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.6 of 22	
Rev.			0	1		

	are established to protect environmental, cultural heritage, infrastructure and other values from damage or other detrimental impacts.
OWNER / PROPONENT	PERDAMAN CHEMICALS AND FERTILIZERS PTY LTD.
PROJECT	BURRUP UREA PROJECT - PROJECT CERES (Plant to be supplied, erected and commissioned by CONTRACTOR under the CONTRACT).
PROJECT PERSONNEL	PROJECT PERSONNEL includes all persons working on the Project directly employed by PERDAMAN, or its CONTRACTORS.
PROJECT WORK SITES	The Project work sites include Area C, Area F, the causeway linking these two areas, the conveyor corridor to the port and the port storage and loading infrastructure. It can also include any other Project relevant location under operational control of PERDAMAN.
REGISTRAR	REGISTRAR of ABORIGINAL HERITAGE SITES, Western Australia Department of Planning, Lands and Heritage.
SHALL	Indicates that a statement is mandatory.
SHOULD	Indicates a recommendation.
SUBCONTRACTOR	Any supplier, consultant or CONTRACTOR engaged by the CONTRACTOR to carry out specific activities or tasks on behalf of the CONTRACTOR during construction (i.e., Dewatering Sub-CONTRACTOR, Clearing Sub-CONTRACTOR etc).
UREA PLANT DEVELOPMENT ENVELOPE (UPDE)	Comprises Site C, Site F and the causeway as shown in Figure 4.1.
VENDOR	Entity that provides equipment and related services part of the WORK according to purchase order
WILL	Indicates a requirement or action that Perdaman or the CONTRACTOR will be implementing during the Project activities to ensure compliance with legal framework for the Project and environmental approval conditions.
WORKS	All work which the CONTRACTOR and or its SUBCONTRACTORS are required to perform to comply with its obligations under the CONTRACT.
ABBREVIATIONS	
BMIEA	Burrup & Maitland Industrial Estates Agreements
BSIA	Burrup Strategic Industrial Area
CAR	Compliance Assessment Report
CEMP	Construction Environmental Management Plan
DE	Development Envelope
DCCEEW	The Federal Department of Climate Change, Environment, Energy and Water.
DPLH	Department of Planning, Lands and Heritage
EMS	Environmental Management System
EP Act	<i>Environmental Protection Act 1986</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER		Contractor Job No.: PN835057			
	PERDAMAN CHEMICALS AND FERTILIZERS		Doc. No.		0000-ZA-E-09071	
	PLANT LOCATION: BURRUP, AUSTRALIA		Unit		0000	
	PROJECT: PROJECT CERES		D.A. Code		D-COM	sh.7 of 22
HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		Rev.		0	1	

EPC	Engineering Procurement Construction
ERD	Perdaman Urea Project, Environmental Review Document. Assessment No.2184(WA) – 2018/8383 (Commonwealth)
GDA	Ground Disturbing Activities
GDP	Ground Disturbance Permit
HHSMP	Hydrocarbons & Hazardous Substances Management Protocol
MAC	Murujuga Aboriginal Corporation
MS 1180	Ministerial Statement No. 1180
NAC	Ngarluma Aboriginal Corporation
NYFL	Ngarluma and Yindjibarndi Foundation Limited
OEMP	Operational Environmental Management Plan
PUP	Perdaman Urea Project

3 KEY EXECUTION PLANS & PROCEDURES

Following are the list of key execution plan documents serving as guidelines for respective execution domains.

Document No.	Document Title
0000-ZA-E-09071	Construction Environmental Management Plan
PCF-PD-EN-SLWMP	Perdaman Solid & Liquid Waste Management Plan

4 PROJECT DETAILS

OWNER is focused on the development of a urea fertilizer plant, called as Project CERES with a nominal daily production capacity of 6,200 tons, equating to 2.140 million tons per annum at Sites C and F in the Burrup Strategic Industrial Area in Western Australia.

The plant will be located approximately 10km from Dampier and 20km North-West of Karratha on the North-West coastline of Western Australia.



	OWNER	PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057	
	PLANT LOCATION:	BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071
	PROJECT:	PROJECT CERES		Unit	0000
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.8 of 22
Rev.			0	1	



Figure (4.0) Location map

4.1 Plant overview

The Plant areas include Site C, Site F, the causeway, conveyor, and Port storage and loading Facilities. Figure (4.1) Project site areas below illustrates the project site areas.

Site C is relatively undeveloped except for some access roads. The site is situated adjacent to the Yara Ammonia Plant to its East, to the North are steep rocky outcrops and to the South the saline coastal flat area. Drainage from the site flows in a southerly direction towards the saline coastal flat between Hearson Cove and King Bay.

Once developed Site C will include the main process plant, associated infrastructure and a 75,000-tonne urea storage shed.



	OWNER	PERDAMAN CHEMICALS AND FERTILIZERS				Contractor Job No.: PN835057				
	PLANT LOCATION:	BURRUP, AUSTRALIA				Doc. No.	0000-ZA-E-09071			
	PROJECT:	PROJECT CERES				Unit	0000			
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL					D.A. Code	D-COM		sh.9 of 22	
Rev.						0		1		





Fig (4.1) Project site areas

Site F is situated to the South of Site C, on the opposite side of the saline coastal flat. It includes Hearson Cove Road and a significant proportion of previously disturbed area. Drainage from this area flows primarily North into the saline coastal flat.

During the construction phase of the Project, this area will be used as laydown for equipment and modules. The East portion of Site F will be developed to include the Perdaman Urea Plant’s administration, maintenance, storage and warehousing facilities.

The causeway, which links Sites C and F, extends across the saline coastal flat. The causeway will be built above the flat with regular culverts to ensure the structure does not impede natural drainage or tidal action, whilst providing continuous access between Sites C and F.

The 3.2km conveyor will transport urea from the storage shed at Site C to the Port loading shed. From Site C the conveyor will be constructed on relatively undisturbed land, to the West of the existing Water Corp pipeline corridor. It will extend North, connecting to the existing Burrup East West Services Corridor (EWSC).

	OWNER		Contractor Job No.: PN835057			
	PERDAMAN CHEMICALS AND FERTILIZERS		Doc. No.		0000-ZA-E-09071	
	PLANT LOCATION: BURRUP, AUSTRALIA		Unit		0000	
	PROJECT: PROJECT CERES		D.A. Code		D-COM sh.10 of 22	
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		Rev.		0 1	

The EWSC is a bitumen sealed corridor that already includes the Yara Pilbara Fertilizer's ammonia pipeline which extends to the bulk liquids jetty adjacent to the Project's Port facilities. The Project's conveyor will be positioned within this corridor and where possible use existing culverts to avoid roads and other infrastructure. Where the conveyor crosses Woodside's Haul Road the road will be built up to allow the conveyor to pass under.

The Port Area includes a 75,000-tonne storage shed, conveyor and ship loader. The storage shed will be located within an existing quarry and the ship loader on a wharf which will be constructed by others engaged by Pilbara Port Authority (PPA). The Conveyor will be situated on cleared area associated with the new wharf and quarry, and a 0.2-hectare section of undisturbed rocky ground between these two areas.

4.2 Client information

Perdaman Chemicals and Fertilizers Pty Ltd., ABN 31121263 741 of Level 17, 58 Mounts Bay Road, Perth, Western Australia.

Perdaman is a multinational group based in Western Australia with a long-standing track record in involvement within a diverse range of markets. Perdaman Industries (Chemicals & Fertilizers division) has current focus on the production of urea, the most commonly traded nitrogenous fertilizer.



The plant named as project CERES will be located at Karratha, Western Australia. The planned capacity of the Urea plant is two million ton per annum with most of the urea produced by the plant will be exported.

4.1 Scope & Context

This Hydrocarbons & Hazardous Substances Management Protocol (HHSMP) has been developed as an appendix to the CONTRACTOR Construction Environmental Management Plan (CEMP) and aligns with the following Perdaman Management Plans:

- Solid & Liquid Waste Management Plan (PCF-PD-EN-SLWMP)

The HHSMP describes the Scope of Work, addresses all requirements related to management of hydrocarbons and hazardous substances by the Project, and establishes the strategies, methods, processes which will be adopted by CONTRACTOR to provide certainties in delivering successful execution of the project while adhering to environmental objectives for the Project.

	OWNER	Contractor Job No.: PN835057			
	PERDAMAN CHEMICALS AND FERTILIZERS	Doc. No.	0000-ZA-E-09071		
	PLANT LOCATION: BURRUP, AUSTRALIA	Unit	0000		
	PROJECT: PROJECT CERES	D.A. Code	D-COM	sh.11 of 22	
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL	Rev.	0	1	

4.2 Purpose of this Plan

This protocol has been developed to guide activities associated with the construction of the Perdaman Urea Project such that impacts from hydrocarbons and hazardous substances at the Project is minimised and ensure compliance with the conditions set out in the Project Approvals and Contract.

The Hydrocarbons & Hazardous Substances Management Protocol presents in detail:

- Address relevant conditions of the Project Approvals and confirmed management plans.
- Provide employees and SUBCONTRACTORS with a clear and concise description of their responsibilities in relation to controls to minimise environmental impacts from hydrocarbons and hazardous substances for the duration of the construction works.
- Consider all relevant legislation, standards and technical guidelines when developing preventative controls.
- Detail the CONTRACTOR monitoring requirements during construction.



The HHSMP is prepared and maintained by the CONTRACTOR Environmental Team or designated delegate. It is a “live” Protocol and as such may be reviewed periodically and revised as needed.

This HHSMP must be read and implemented in conjunction with the most recent and approved version of the Perdaman Solid and Liquid Waste Management Plan and the CONTRACTOR CEMP it is appended to. It aims to provide the construction team with clear actions, management, and monitoring responsibilities under these plans during the construction program.

Mitigation measures related to the construction team are presented within this protocol. This protocol contains specific references to the Perdaman Solid & Liquid Waste Management Plan, where the reader may have to review the Perdaman Solid & Liquid Waste Management to obtain the correct context of a requirement.

4.3 Plan Review

This protocol can be reviewed as updated independently of the CEMP and should be treated as an Appendix to the CEMP, particularly where there are changes to the construction methodology affecting hazardous material management, and if there are changes to management or monitoring required where management actions and targets are not achieved (refer to the Perdaman Solid & Liquid Waste Management Plan for further details).

	OWNER	Contractor Job No.: PN835057			
	PERDAMAN CHEMICALS AND FERTILIZERS	Doc. No.	0000-ZA-E-09071		
	PLANT LOCATION: BURRUP, AUSTRALIA	Unit	0000		
	PROJECT: PROJECT CERES	D.A. Code	D-COM	sh.12 of 22	
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL	Rev.	0	1	

This protocol will be reviewed and amended any time the Perdaman Solid & Liquid Waste Management Plan has been reviewed and amended, to ensure all Plans appropriately correspond to one another, particularly upon identification of additional risks during the plant design and construction planning stage.

Any review to this protocol will be submitted to Perdaman for review and approval. The Perdaman Environment & Heritage Manager may direct the CONTRACTOR to further amend the protocol where necessary.

4.4 Responsibility

The mitigation measures presented in Section 6 below are the responsibility of the CONTRACTOR and their SUBCONTRACTORS to carry out and implement during Project construction, unless otherwise indicated within the specific control or measure. Further details on the CONTRACTOR role specific authorities and responsibilities can be sighted in section 9 of the CEMP. Appendix D of the CEMP includes Project Organisation Charts.



Any SUBCONTRACTOR engaged to carry out works on behalf of the CONTRACTOR during the construction works must comply with the CEMP and the management measures stated within this protocol.

In certain circumstances a SUBCONTRACTOR working under the CONTRACTOR will be primarily responsible for the implementation of management measures, as indicated per the work packages they will be executing on the Project and will be doing so under the CONTRACTOR authority and oversight.

Any SUBCONTRACTOR carrying out works on behalf of the CONTRACTOR will be required to complete the applicable inductions and training as well as participate in pre-starts and toolbox talks (refer to the CEMP for detail) as well as applicable risk analysis for work activities. The responsibilities of SUBCONTRACTORS are further detailed within the CEMP. The CONTRACTOR will monitor the environmental performance of the SUBCONTRACTORS against the implementation of applicable management measures during environmental inspections and during SUBCONTRACTOR audits (refer to the CEMP for detail).

Where a conditional requirement or a management measure is the responsibility of the OWNER, the measure or conditional requirement (MS No. 1180) will state this.

It is important to note that overall accountability lies with the OWNER for ensuring the conditions of the EPBC 2018/8383 Approval and MS 1180 are met throughout the Project phases, including construction. CONTRACTOR are responsible for carrying out certain

	OWNER		Contractor Job No.: PN835057			
	PERDAMAN CHEMICALS AND FERTILIZERS		PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No. 0000-ZA-E-09071	
	PROJECT: PROJECT CERES		Unit		0000	
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code		D-COM sh.13 of 22	
Rev.			0 1			

management and controls to ensure compliance with these approvals. The OWNER is accountable for reporting to regulatory bodies. CONTRACTOR must ensure reporting of data and information is provided to the OWNER to ensure reporting can be carried out within the applicable timeframes.

SUBCONTRACTORS must provide all relevant information and data requested by CONTRACTOR to the Environmental Lead within the specified timeframe to ensure regulatory reporting, incident investigations and corrective actions can be implemented.

5 ENVIRONMENTAL APPROVALS

5.1 Part IV Approval

The Project has approval under the *Environmental Protection Act 1986* to carry out the implementation of the Project as per the conditions within the Ministerial Statement 1180.

The EPA identified potential impacts to Key Environmental Factors from hydrocarbons and hazardous substances stored during construction and operation stages of the Project. The Minister for the Environment suggests reasonable and practicable measures should be taken to minimise the impact from hydrocarbons and hazardous substances to achieve objectives and comply with legislation relating to protection of environmental values.



This HHSMP will communicate the relevant aspects that are within the Perdaman Solid & Liquid Waste Management Plan that relate to the construction works. Where a particular objective, trigger, threshold, management action, monitoring event or reporting requirement within the Perdaman Solid & Liquid Waste Management Plan relates to the direct implementation of a control detailed within the Protocol, it will be stated within Table 6-1.

Overall accountability lies with the OWNER for ensuring the conditions of the MS 1180 are complied with throughout the Project phases, including construction. CONTRACTOR are responsible for carrying out certain management and controls to ensure compliance.

6 MITIGATION MEASURES

6.1 Management Protocols

Mitigation measures presented in Table 6-1 provide the CONTRACTOR team and its SUBCONTRACTORS with minimum standard controls to mitigate impacts associated with the CONTRACTOR construction methodology to minimize impacts from hydrocarbons and hazardous substances emissions. These mitigation measures have been adopted from the

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057				
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.		0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit		0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code		D-COM sh.14 of 22		
		Rev.		0 1			

OWNER PEMP environmental protocols, and the Perdaman Solid & Liquid Waste Management Plan.





	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057	
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071
	PROJECT: PROJECT CERES		Unit	0000
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM sh.15 of 22
			Rev.	0 1

Table 6-1 Hydrocarbon and Hazardous Material Mitigation Measures



Requirements	Project Area
Project areas = CF – Site C & F / Ca – Causeway / Co – Conveyor / P – Port	
Up to date Safety Data Sheets for all chemicals used on site will be readily accessible to all Project Personnel and emergency services authorities.	CF, Ca, Co, P
A register of all hydrocarbon and hazardous substances stored on site will be prepared and will be readily accessible to all Project Personnel and reviewed regularly.	CF, Ca, Co, P
Chemicals are to be stored on or within a bunded structure – capacity 110% of largest container, impermeable walls and floor (soil floors not sufficient) and roofed in accordance with Australian Standard AS1940:2004 The storage and handling of flammable and combustible liquids.	CF, Ca, Co, P
Hydrocarbon and chemical storage sheds must be located where they will not pose a risk to the environment.	CF, Ca, Co, P
Hydrocarbon and chemical storage areas will include appropriate signage and labels, in accordance with relevant legislation and Australian Standards.	CF, Ca, Co, P
The amount of fuels and chemicals that are stored on-site will be minimised as far as practicable. Chemicals that are no longer required will be removed from site by approved transport and disposal methods.	CF, Ca, Co, P
Spill kits will be located around the site, in particular at chemical storage locations and where fuels are transferred or decanted. The contents of the spill kit will be relevant to the area and the potential spill.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS	Contractor Job No.: PN835057			
	PLANT LOCATION: BURRUP, AUSTRALIA	Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES	Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL	D.A. Code	D-COM	sh.16 of 22	
		Rev.	0	1	



Spill response procedures will be developed, communicated to all Project Personnel and implemented across the site.	CF, Ca, Co, P
Fuel to support mobile plant and equipment at the site will be stored in bunded areas and or in self bunded tanks. Appropriate licensing will be sought prior to operation of fuel storage systems. Volumes will not exceed threshold limits specified in relevant legislation without appropriate licensing.	CF, Ca, Co, P
Refuelling mobile plant and equipment is to be undertaken within bunded refuelling areas suitably designed and operated to capture any spill or overflow associated with the refuelling process. The system must be installed to ensure surface water is excluded from the bund and any rain falling into the bund is safely held, without the risk of overflow, before being decanted and disposed of at a suitable waste management facility.	CF, Ca, Co, P
Mobile refuelling procedures will be developed and implemented to minimise risk of harm to the environment. This includes but is not limited to ensuring mobile bunding is placed under the fuel delivery vehicle, the plant / machinery being refuelled and any joins in fuel delivery hoses to capture any spills or leaks associated with the refuelling process. The mobile refuelling procedure must form part of the induction for plant machinery operators and fuel delivery operators.	CF, Ca, Co, P
Only manual trigger fuel nozzles are to be used during refuelling of plant and equipment. The operator is to manually hold the delivery trigger in the open position and must not lock the trigger to prevent it from automatically shutting off when the trigger is released.	CF, Ca, Co, P
Any spills or leaks into bunded areas will be decanted and cleaned from the bund immediately after they occur. No further fuelling, transfer or decanting is to occur until the spill is cleaned up and reported.	CF, Ca, Co, P
All appropriate licenses and permits, including but not limited to those required for the storage of fuel and chemicals, will be achieved prior to site storage of those products.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

 PERDAMAN	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057			
	PLANT LOCATION: BARRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
 SAIPEM clough — SC JV —	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.17 of 22	
			Rev.	0	1	



All removals shall be recorded, and receipts will be kept as per methods in non-hazardous waste controls. Controlled Waste Tracking Forms/Controlled Waste Tracking numbers shall be kept and recorded for the removal of each load of controlled waste.	CF, Ca, Co, P
Hazardous waste materials and dangerous goods will be disposed of in accordance with the relevant legislation and Project requirements at approved and certified facilities.	CF, Ca, Co, P
Appropriate licences and management controls shall be in place for the transport, handling, storage and disposal of DGs in Minor Storage, Placarding and Manifest quantities prior to the delivery and activity being undertaken. All DGs shall be handled and transported in accordance with the <i>Dangerous Goods Safety Act 2004</i> , Australian Dangerous Goods Code and other supporting regulations. The driver and vehicle must be licenced to carry HazMat's and DG (if applicable volumes are reached).	CF, Ca, Co, P
Liaise with, obtain approvals from and keep all relevant Authorities fully informed of any hazardous materials stored on the site and of the contingency plans to be adopted for any spills.	CF, Ca, Co, P
When selecting materials for the Project, the least hazardous substances will be selected in preference for the project, and risk assessments will be required for substances posing potential risk during use, as per the ChemAlert rating.	CF, Ca, Co, P
All HazMat's will be correctly labelled in compliance with National Code of Practice for the Labelling of Workplace Substances NOHSC 2012:1994 to allow substances to be used in the safest manner that shall protect the environment. Signage shall be in accordance with Australian standard AS 1319	CF, Ca, Co, P
Adhere to Safety Data Sheets for all handling, use and storage of chemicals and hazardous materials.	CF, Ca, Co, P
SDS must be issued with Australian emergency contact details and be less than 5 years old, in addition to being supplied to waste contractors as per Guidelines of Controlled Waste Generators.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

 PERDAMAN	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057			
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
 <small>— SC JV —</small>	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.18 of 22	
			Rev.	0	1	



When handling chemicals, the SDS must be in the immediate work area of the corresponding SWMS/JHA (SWMS/JHA must also be in the immediate work area). The SWMS/JHA document must consider environmental risks of using the chemical or DG (if applicable).	CF, Ca, Co, P
A hard copy of SDS's will be kept in the immediate work area and the location for Hazardous Substances or Dangerous Goods storage, and electronic copies of SDS's will also be kept in the Project HSE office.	CF, Ca, Co, P
HazMats and DG storage areas to be restricted access.	CF, Ca, Co, P
If the contents of a container are unknown, it shall be tagged as out-of-service until it can be identified and labelled.	CF, Ca, Co, P
Where substances are decanted at the construction site, the type of labelling shall depend on the period of time the product is consumed over. Where a product is not being spent immediately, the container the product must be decanted to must be labelled with: The name of the product The risk of the product to the environment (toxicity) The risk phrases The product HAZCHEM Code and Dangerous Good Code.	CF, Ca, Co, P
Ensure all storage sites for oil and other contaminant materials and plant maintenance areas, are confined to specially designed areas, bunded and away from drains, water courses, wetlands and floodplains in accordance with Law. These areas must be constructed to ensure that any spillage is confined in accordance with Law. In addition, all fuels and lubricants must be stored in a bunded area under laid with plastic. Adequate quantities of suitable material to counteract spillage must be kept on relevant premises.	CF, Ca, Co, P
Oily or contaminated products such as rags, filters, grease cartridges etc. are to be disposed into hydrocarbon bins or relevant containment and removed off-site by licenced contractor.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057			
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.19 of 22	
			Rev.	0	1	



Wastes that are not suitable to be disposed into provided waste receptacles i.e., product liquids, incompatible materials, impacted soils etc. will be containerised separately.	CF, Ca, Co, P
Septic waste is to be pumped into a licenced liquid waste transport vehicle and taken to a licensed facility.	CF, Ca, Co, P
Batteries will be stored on-site in bunding prior to being removed and recycled.	CF, Ca, Co, P
Used engine coolant and lubricating oils will be containerised (IBC), for recycling at licenced waste facility.	CF, Ca, Co, P
Waste oil to be stored on-site in a secure bunded area and periodically removed by a licenced waste contractor to a licenced waste facility.	CF, Ca, Co, P
Empty printer and toner cartridges will be segregated and removed to a recycling service provider.	CF, Ca, Co, P
Ensure tyres are not mixed with other waste streams and are to be removed by a licenced contractor for recycling. No greater than 100 tyres will be on-site at any time.	CF, Ca, Co, P
Ensure hydrocarbon and hazardous waste skips are appropriate to the waste type (i.e., fitted with lid and sealed).	CF, Ca, Co, P
Spills kits, drip-trays and other preventative devices shall be kept within fuel delivery vehicles at all times.	CF, Ca, Co, P
Mobile refuelling activities must only be from trailers fitted with twin skinned tanks and separately bunded. All refuelling must be conducted using spill protection (i.e., drip trays).	CF, Ca, Co, P
Spill trays and spill kits will be maintained on-site, available near fuel and other hazardous material storage and refuelling areas and be utilised to contain and clean-up any spills. Where inadequate stock in spill kits; immediately replace materials and stock in spill kits.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS	Contractor Job No.: PN835057			
	PLANT LOCATION: BURRUP, AUSTRALIA	Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES	Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL	D.A. Code	D-COM	sh.20 of 22	
		Rev.	0	1	



Ensure spills are controlled prior to entering drainage lines and watercourses through spill clean-up and Erosion and Sediment Controls.	CF, Ca, Co, P
Ensure all personnel working with hazardous materials are familiar with procedures, spill control and clean-up. Personnel will be trained in spill response procedures through inductions, Toolbox talks and additional training where required. Where spill is inadequately cleaned up, leaving unreported contaminated soils / water or improper disposal; provide additional training to personnel on clean-up and notification procedures, update incident report, rectify spill remediation and the handling of HazMats and DGs.	CF, Ca, Co, P
No vehicle or mobile plant refuelling shall occur within 50 m of a watercourse or intertidal zone.	CF, Ca, Co, P
Stationary plant (e.g., generators) shall be self-bunded. Bunds are to be inspected weekly and after heavy rains and emptied as required.	CF, Ca, Co, P
Fuel truck/trailer operators shall not leave area whilst refuelling equipment or filling a tank in case there is a need for emergency shut-off.	CF, Ca, Co, P
No ignition sources within at least a 10m radius of the fill point will be observed during refuelling	CF, Ca, Co, P
Petroleum products and used filters shall be drained into an appropriate container to remove any leftover product prior to disposal as solid hydrocarbon waste.	CF, Ca, Co, P
Ensure bunds do not contain liquids. Following rain events bunds will be inspected and pumped dry, and if required into a controlled waste IBC for contaminated/ oily water for appropriate removal, treatment or disposal.	CF, Ca, Co, P
In the case of a spill: Prevent spill from spreading by using booms/socks in spill kit or by making a makeshift bund and control access to spill area.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057	
	PLANT LOCATION: BURRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071
	PROJECT: PROJECT CERES		Unit	0000
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM sh.21 of 22
			Rev.	0 1

<p>Soak up the spill with absorbent material and ensure the surface is left clean. Collect used absorbent material in a heavy plastic bag or other suitable container and arrange for disposal at an appropriate facility.</p> <p>Soils contaminated by spills are to be removed to an appropriate stockpile location for remediation or disposal.</p> <p>Spills are to be contained immediately and remediated within 24 hours to minimise the potential for contaminants to enter groundwater.</p> <p>If a spill cannot be cleaned up immediately, ensure it is appropriately isolated and contained.</p> <p>Arrange to have a suitable third party available to attend to any major spill clean-up, not able to be adequately addressed with site spill kits.</p> <p>Report all spills as an environmental incident using InControl system.</p>	
Leaking vehicles must be reported and serviced before returning to the construction area. Where vehicles, equipment or containment showing evidence of leakage or wear; record in pre-start checklist, record as correction action, service vehicles, equipment and plant as per manufacturers specifications, repair and containment where applicable.	CF, Ca, Co, P
Inspections are to be undertaken of storage areas regularly. Where general containment standards and storage requirements are not being met; record as a corrective action or incident, rectify the issue with the responsible party.	CF, Ca, Co, P
No major vehicle or plant servicing shall be undertaken on-site, except in designated servicing areas. Servicing of mobile plant will be conducted within a designated and contained area to minimise risk to surrounding environment on-site. The area shall be identified on environmental control maps and site maps.	CF, Ca, Co, P
Servicing of vehicles must be kept up to date at all times, and in the case of a vehicle or plant being overdue for servicing, it is to be tagged out of operation until a service has been conducted.	CF, Ca, Co, P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.

	OWNER PERDAMAN CHEMICALS AND FERTILIZERS		Contractor Job No.: PN835057			
	PLANT LOCATION: BARRUP, AUSTRALIA		Doc. No.	0000-ZA-E-09071		
	PROJECT: PROJECT CERES		Unit	0000		
	HYDROCARBONS & HAZARDOUS SUBSTANCES MANAGEMENT PROTOCOL		D.A. Code	D-COM	sh.22 of 22	
			Rev.	0	1	

Where evidence of maintenance or refuelling of vehicles, plant machinery and equipment not occurring in designated areas or with adequate controls; record as corrective action or incident if required, reiterate to personnel involved in this aspect of works, tag out of operation until servicing is complete.	CF, Ca, Co, P
All contaminated stormwater (levels exceeding nominated criteria) i.e. runoff containing hydrocarbons >5ppm Total Petroleum Hydrocarbons (TPH) shall not be discharged into the environment without treatment under any circumstance.	CF, Ca, Co, P
Minimize the use of products containing CFCs, or products manufactured by processes in which CFCs are used.	CF, Ca, Co, P
Minimise impacts of contamination to marine water and surface water quality.	Co, P
Ensure personnel working within the PPA jurisdiction are competent in Oil Spill Incident Response Training (OSIRT). Where required, SCJV personnel working within the Port Area, could be required to undertake this training conducted through PPA.	P

This document is prepared by Saipem Clough Joint Venture for Perdaman Chemicals and Fertilizers Pty Ltd. It contains proprietary and confidential information of Saipem Clough Joint Venture and/or of the Technologies Licensors who will safeguard their rights according to the civil and criminal provisions of the law. It shall neither be disclosed to third parties nor used for purposes other than those for which it has been disclosed.