PLAN

Title: Adverse Weather Management - Aus

DOCUMENT CONTROL			
Doc. Reference	PL-AUS-HSEQ-012	**Function**	HSSEQ
Creation Date	03/01/2017	**Group Owner**	Director Operations and Safety AUS
Rev. Number	6	**Group Approver**	Group Head of HSSEQ
Rev. Date	22/08/2019		

APPROVED VARIANCE

Variation to support GOP-HSEQ-012 Emergency Response Planning.

SAFETY CRITICAL

There are no safety critical tasks or roles in this Plan.

DOCUMENT REFERENCES

Internal References	• ERP-AUS-HSEQ-001 - Emergency Response Plan - DMSB • ERP-AUS-HSEQ-002 - Emergency Response Plan - DOSB • ERP-AUS-HSEQ-003 - Emergency Response Plan - DWSB • ERP-AUS-HSEQ-004 - Emergency Response Plan - PFSB • ERP-AUS-HSEQ-005 - Emergency Response Plan - DPSB • ERP-AUS-HSEQ-008 - Emergency Response Plan - Dongara Camp • ERP-AUS-TR-001 - Emergency Response Plan - Transport • ERP-AUS-HSEQ-007 - Emergency Response Management Plan • GOP-HSEQ-048 - Toolbox Talk • GOP-HSEQ-019 - Hazard Identification and Control • PL-AUS-HSEQ-002 - Heat Stress Management Plan • PL-AUS-HSEQ-008 - Cyclone Management Plan - West Australia • PL-AUS-HSEQ-009 - Cyclone Management Plan Darwin
External References	• Australian Bureau of Meteorology (BoM) • Code of Practice; Managing the work environment and facilities 2018

DOCUMENT SCOPE

The Scope of this Plan is for ASCO operations within Australia including

- Perth Supply Base
- Dampier Supply Base
- Darwin Supply Base
- Darwin Marine Supply Base
- Darwin Onshore Supply Base

REVISION HISTORY

Rev	Date	Comment
1	03/01/2017	Creation of procedure
2	18/01/2017	General Review
3	29/06/2017	New document template
4	25/06/2018	Link documents
5	28/09/2018	Annual review
6	22/08/2019	Full review of document, combine WA and NT Plans

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1.0 Purpose

The purpose of the Plan is to define the preparedness, response, and recovery requirements in relation to adverse weather events.

ASCO is committed to conducting Business Unit (BU) Operations in as safe and risk-free manner as possible. This shall be achieved by the use of safe working practices in a safe working environment. It is the responsibility of all staff to ensure that safe working practices is undertaken during daily activates.

The aim is to ensure;

- Ensure the safety of all people associated with operations
- Minimise the impact the environment, as a result of the ASCO's operations
- Protection of the ASCO and Client assets
- Provide strong leadership and effective management in the event of an adverse weather occurrence
- Ensure a quick response to a severe weather events.

2.0 Roles and Responsibilities

Supply Base Manager/s

- Overall responsibility for the site/ operations
- Communication of this Plan to personnel, ensuring workers are aware of the requirements within
- Coordinate any response to incident caused by a severe weather event
- Provide timely and accurate information to ASCO personnel, Client and stakeholders in response to a severe weather emergency.

HSSEQ

- Ensure the plan is reviewed annually, in consultation with Supply Base Manager
- Review inspection checklists to ensure adequacy for the workplace.

3.0 Adverse Weather

Adverse weather can be considered abnormal climatic conditions such as;

- heavy rain/ hail / flood/ storm surge
- lightning
- cyclone
- extreme temperature (heat) / extreme humidity
- high wind
- dust storm / fog.

or may involve a combination of the above of which it is either not reasonable or not safe for employees exposed to continue working.

Examples of adverse weather events that could affect Business unit locations.

4.0 Emergency Management

If adverse weather situation warrants partial or full site evacuation, the evacuation processes within the site ERP shall come into effect. Refer to Section 16.0.

BU's will maintain and continually review all emergency contact information and responsibilities, to ensure suitable and sufficient adverse weather response and using the FRM-ERP-CMP-HSEQ-01.01 Emergency Evacuation Checklist.

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5.0 Planning

When reviewing business unit activities, weather forecasts, warnings are to form part of this process, ensuring all weather warnings prior to, and where possible during the activity, are taking into consideration.

Severe Weather Warnings
The Bureau of Meteorology issues weather warnings via their website at http://www.bom.gov.au/wa/warnings/ when weather conditions are developing or occurring in a specific area.

These warnings are provided when adverse weather is expected to produce dangerous or damaging conditions.

Potential weather shall be discussed as part of Toolbox and recorded on the applicable toolbox form, in accordance with GOP-HSEQ-048 Toolbox Talk.

Supervisors are to monitor weather systems and be prepared to stop activity when required.

6.0 Risk Assessment

When conducting a task-based risk assessment the effects and controls of environmental conditions including adverse weather conditions should be incorporated within the assessment.

Risk assessment is conducted in accordance with GOP-HSEQ-019 Hazard Identification and Control ensuring controls are considered in order of the hierarchy of control as follows;

1. Eliminate; Remove workers from the conditions, whenever reasonably practicable
2. Isolate; isolate workers from conditions / shorten the duration of the task
3. Engineer; use controls to modify conditions/ climate
4. Administrate; provide training, risk assessment tools and awareness of conditions
5. PPE to assist in conditions.

7.0 Hot Conditions

Heat stress may affect people in all parts of Western Australia during our summer months and may affect workers at some workplaces throughout the year. The effects of heat stress range from discomfort to life threatening illnesses such as heat stroke. Refer to PL-AUS-HSEQ-002 Heat Stress Management Plan

When undertaking activities in extreme temperatures;

- The environmental conditions exceed the ability of the personnel to perform safely
- Anyone is showing signs or symptoms of a temperature-related illness
- Personal factors which may be exacerbated by extreme temperatures
- Consider moisture (humidity) for hot conditions
- Ensure all pre-task assessments have included frequent rest and food breaks to prevent fatigue and associated injury and medical conditions.

8.0 Cyclone

Refer to site specific Cyclone Management plan for steps taken in the event of a cyclone

- PL-AUS-HSEQ-008 Cyclone Management Plan - West Australia
- PL-AUS-HSEQ-009 Cyclone Management Plan - Darwin

9.0 Rain Event / Monsoons

On the receipt of an impending Storm/ Severe Rain Event, ASCO will ensure all material as far as practical is covered or placed within the warehouse. All ASCO personnel and machinery will be restricted to only working within warehouse areas) where safe to do so.

9.1 DMSB Additional Controls

Rain Event

- Open the valves on the waste and DG bunds to allow water to release
- Vessels alongside are notified by Harbour Control of warnings issued by the Bureau of Meteorology on Channel 10 or 16. DMSB Security monitor these channels. If advice is received from the Bureau of Meteorology and the information is not broadcast by Harbour Control, then contact will be made to the vessel by DMSB Security
- DMSB Coordinator to check vessel schedule and tidal window report to ensure that vessels can depart at 4Hrs notice. If there are tidal restrictions, then the vessel must be referred to EAW
- DMSB Manager is to attend the Darwin Port pre-cyclone management forum to discuss the weather plan and processes in case a cyclone forms during the wet season.

Storm Surge

- Surge Threat will be monitored by the DMSB Manager and updates will be given to clients, third party operators and employees
- When it is apparent that there is a confirmed risk of surge flooding BU critical equipment will require protection (computers, communications Data Files etc.). These systems will be protected and relocated as required
- A supply of sandbags will be obtained and made available these will be used to form a barrier by doors and strategic locations around the site
- The leadership group will set up emergency control in a suitable location refer to ASCO Business Continuity Plan to monitor all developments and keep all parties informed.

Lightning

The Darwin Marine Supply Base utilises the Weather Zone system to provide updates and warnings to DMSB users. This system enables the facility to track lightning strikes and provide direction to facility users.

Process steps to be followed;

- Assessment of Weather Zone for distance and direction by DMSB management
- Above 10kilometrs - notify DMSB users and continue to track movement
- Below 10kilometrs - second notification and assessment to be conducted by DMSB and Berth PIC, tracking movement of lightning to assess likely hood of interaction within DMSB boundary's
- Within 5 kilometres - Assess direction of Storm and notify to cease operations and seek shelter
- Weather tracker lightning colour results will determine when work can resume
    - White indicator represents within the 0 - 10minutes since last strike
    - Pink indicator represents within 10 - 20 minutes since last strike (risk assessment conducted by MSB and Berth PIC to review Return to work)
    - Red indictor represents 20 - 40 minutes since last strike
    - Purple/blue indicators represent 40 - 60 minutes since last strike.

Note

- All weather determinations will be determined by the Weather zone system only, no other alert systems will be considered during assessments
- After-hours assessments will be conducted by DMSB security personnel in consultation with Task PIC and DMSB management personnel that is on-call
- All vessels managed by ASCO outside the Boundary of the DMSB will follow direction and guidance from this Adverse weather management plan

- Communication channels will be agreed before task with PIC and MSB personnel.

10.0 Lightning

Lightning strikes can cause electrocution of personnel, plant and equipment and also be the ignition source of an electrical fire or equipment fire. In the event of either occurring the Emergency Response Plans will be put into action immediately

The 30/30 guide
When the time interval between observing the lightning flash and hearing the thunder is less than 30 seconds, stop work and seek shelter. Shelter may include substantial buildings or fully enclosed vehicle with windows up. Avoid solitary trees, water, open fields or high ground.

Note; If you cannot see the lightning, just hearing the thunder means you are most likely to already be within striking range, and it is time to seek whatever appropriate shelter is available. The "30-30 Rule" is best suited for existing thunderstorms moving into the area. However, it cannot predict or protect against a first lightning strike. Thunderstorms can develop overhead where there will be no prior notice that a storm is incoming. Be alert to changes in sky conditions portending thunderstorm development directly overhead.

Prevention is key; Regularly monitor weather conditions and local weather forecasts prior to scheduled activities.

11.0 High Wind

High gusts of winds are unpredictable and cause a range of workplace hazards associated with flying objects, working at heights and an increased risk of collapsed structures.

During periods of high winds BU management ensure activities are suspended when there is a present risk to facility/personnel and vessel during periods of high winds.

The following activities should not be performed during periods or potential periods of high winds

- Crane operations
- Working at Heights.

12.0 Fog and Dust Storm

Commonly the fog will disappear with the sunrise, however In the event that fog is present in the morning a risk assessment will be conducted by the Operational Team to determine the ability to operate MHE. If it is determined to be unsafe to operate MHE in the fog, regular checks (every 15min) will be conducted to review the level of visibility.

Dust storms are caused when strong, turbulent winds greater than 30km/hour, carry fine particles of dust from the surrounding area with the wind. While all people may feel discomfort, people with pre-existing illnesses such as respiratory or heart-related problems may have their existing symptoms aggravated. Dust storms can reduce visibility. Extra caution should be taken when driving a vehicle. If visibility is very low, park in a safe place to avoid collisions.

13.0 Adverse Weather Whilst Driving

Adverse Weather is not only a Safety Issue in the Supply Base, but it also affects the transportation of freight to and from client's premises. Weather phenomenon such as flooding, high wind speeds, fog and lightning all need to be taken into consideration when planning the transportation method and route.

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Prior to the commencement of any transport tasks all drivers are to take guidance from local weather bureau to ensure that the planned transport path is not hindered by flood or fire. Drivers are also obligated to drive to conditions and if necessary, cease driving in a safe location and await the adverse weather to pass.

In an emergency event, drivers are to refer to ERP-AUS-TR-001 Emergency Response Plan - Transport.

14.0 Stop the Job

If at any point the work being carried out is believed to be unsafe, each individual has a responsibility to Stop the Job and advise Supervisor of occurrence.

This should happen on ANY site that the employee is working at without exception. These should be recorded as a LiveSafe Intervention on the ASCO HSEQ Database as soon as they possibly can.

15.0 Recovery / All Clear

Following an acute adverse weather event such as storm/ wind gusts, work areas shall be inspected prior to resuming operations.

- Conduct an assessment of the site; inspect all areas of the site to determine the integrity and safety of the site
- Proceed with caution and check for ground hazards such as downed power lines, fallen trees, broken water or sewerage lines, loose roof sheeting and debris
- Co-ordinate an inspection of all buildings, work areas, facilities and equipment
- Supply Base Manager may appoint survey teams / third party to evaluate damage / safety to assets, facilities or interruption to operations where significant damage may have occurred
- Where areas are found to be damaged and/or potentially unsafe, a decision shall be as to what action is required to rectify the situation prior to the general 'return to work' notice being issued
- When satisfied that it is safe, provide the all clear for personnel to return to work.

16.0 Communication and Escalation

The communication protocols as per site specific evacuation plans shall be utilised when an evacuation is initiated

- ERP-AUS-HSEQ-001 Emergency Response Plan - DMSB
- ERP-AUS-HSEQ-002 Emergency Response Plan - DOSB
- ERP-AUS-HSEQ-003 Emergency Response Plan - DWSB
- ERP-AUS-HSEQ-004 Emergency Response Plan - PFSB
- ERP-AUS-HSEQ-005 Emergency Response Plan - DPSB
- ERP-AUS-HSEQ-008 Emergency Response Plan - Dongara Camp

Local authority contacts and internal contacts are available in the ERPs.

The Emergency Response Control Centre (ERCC) may be assembled to manage the aspects of any emergency beyond site capabilities or boundaries, in accordance with ERP-AUS-HSEQ-007 Emergency Response Management Plan.

17.0 Review

This plan shall be reviewed 2 yearly, in accordance with GOP-HSEQ-006 Control of Records.