

PPA HOT WORK PROCEDURE

A694240

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1. OBJECTIVE

The objective of the procedure is to outline the responsibilities and processes when conducting hot work to prevent harm to personnel, the environment and infrastructure.

2. SCOPE

All personnel accessing PPA controlled areas and undertaking PPA controlled works are required to comply with this procedure, including employees, contractors and licensees.

When hot work activities are undertaken on board a vessel berthed at a PPA site, they shall follow the Safety Management System of the vessel for hot work processes.

3. DEFINITIONS

TERM	DEFINITION
Atmospheric Testing Officer	A person who tests the atmosphere prior to or continuously during hot work activities.
Custody	Directly responsible for the care and control of an area. The custody of the area can change dependant on the operations undertaken. (This may be PPA, PPA Licensees or contractors)
Designated Hot Work Areas	An area approved by the Maintenance Manager, where hot work can be carried out and which has been determined to be a low fire risk.
Hot Work	An activity that has the ability to produce heat or spark that has the potential to cause ignition. It includes but is not limited to welding, grinding, thermal or oxygen cutting or heating. Note: Using a poly welder, concrete cutting saw, electric soldering iron or electric hot air gun is not generally considered as a hot work activity.
Permit Authoriser	A PPA representative who authorises and issues hot work permits. The permit authoriser cannot be the same person as the permit holder. (This definition is being clarified and updated)
Permit Holder	A person involved in the task and who accepts a hot work permit from the Permit Authoriser and ensures all details on the permit are implemented.
Spotter	The person whose sole duty is to watch for any outbreak of fire, raise the alarm and respond to the fire within their capabilities.
Total Fire Ban	Day declared by Department of Fire & Emergency Services (DFES) due to extreme weather conditions or when widespread fires are seriously stretching firefighting resources.

4. RESPONSIBILITIES

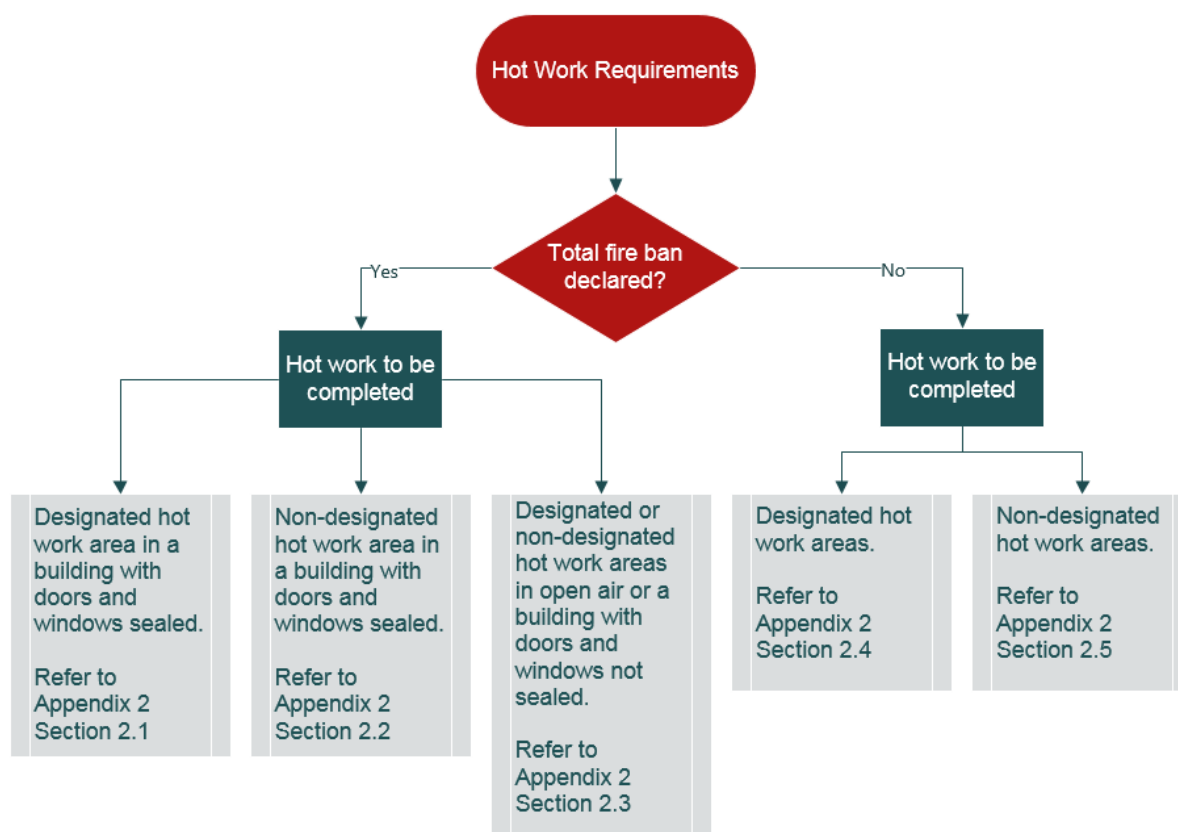
ROLES	RESPONSIBILITIES
Managers, Superintendents and Supervisors	Personnel under their control are aware of, understand and comply with the requirements of this procedure.
Employees and contractors	Comply with the requirements of this procedure.
Licensees	Managers and those in supervisory positions must understand and comply with the requirements of this procedure and seek advice from PPA's Health and Safety Department should they not understand any of the requirements. They also must ensure their personnel comply with the requirements of this procedure.

5. HAZARD AND RISK ASSESSMENT

Prior to the execution of any work a risk assessment shall be carried out in accordance with the Hazard Management Procedure. The principles of the Hierarchy of Controls shall be used, that is, PPE is used as a last priority control measure. All personnel shall continuously monitor and review control measures to ensure that they remain effective in reducing the risk of a fire.

In addition, as part of the risk assessment process consideration must be given to hot works during a DFES fire ban in line with the PPA exemption certificate.

5.1 PPA Controlled Hot Work Requirements Flow Chart



Note: This procedure is applicable to PPA employees and direct contractors. Port Users who are required to undertake hot works outside of their designated lease must complete an approved permit.

6. HOT WORK PERMIT

All hot work shall have an authorised Hot Work Permit except when the hot work is undertaken in Designated Hot Work Areas, all details on the permit shall be filled out and submitted to a Permit Authoriser with the relevant JHA. The permit must be reviewed and approved by the Permit Authoriser before work can commence. Refer to section 9 which outlines the approved designated hot work areas.

Hot work that is to be performed in a confined space or at heights shall be done in accordance with the Confined Space Procedure and Fall Prevention Procedure respectively.

6.1 Permit Validity

Each Hot Work Permit shall be valid for a maximum of one shift. If the permit expires before the hot work being performed is completed, a new permit shall be applied for.

6.2 Hot Work Permit Approval

Hot Work Permits can only be issued by a Permit Authoriser. Hot work permits will be issued based upon the residual risk rating.

Note: Landside Operations approval is required for all hot work conducted on berths or in laydown areas under their custody.

6.3 Hot Work Permit Authorisation Levels

Minimum authorisation is required for certain hot work tasks.

Table 1: Hot Work Permit Authorisation Levels

RISK LEVEL	HOT WORK PERMIT AUTHORISATION LEVELS
GREEN LOW	PPA Team Representative must; - PPA Team Representative must review the Hot Work Permit and - verify with the Permit Holder that identified controls are fully implemented. - Work group may proceed with caution but be prepared to reassess the risk.
YELLOW MODERATE	PPA Supervisor must; - review the Hot Work Permit and - verify with the Permit Holder that identified controls are fully implemented. - Work group may proceed with caution but be prepared to reassess the risk. Minimum Authorisation – Hot works whilst Working at Height or in Confined Spaces
ORANGE HIGH	PPA One-up Line Manager. - review the Hot Work Permit and - verify with the Permit Holder that identified controls are fully implemented. - Work group may proceed with caution but be prepared to reassess the risk. * For Example: Operations – Operations Superintendent / Maintenance – Maintenance Superintendent / Marine – Shipping Superintendent / Engineering – Engineer Minimum Authorisation – Hot works within 8 metres of fuel storage areas, fuel line valves, breathers & flanges, working in transformer bays and during a Total Fire Ban
RED EXTREME	Task must not proceed. Further controls must be implemented to reduce the risk to low, moderate or high.

6.4 Hot Work Permit Issue and Transfer

The Hot Work Permit must be approved by the Permit Authoriser and accepted by the Permit Holder before any person can conduct hot work.

A Hot Work Permit may be transferred from one Permit Holder to another i.e. where the Permit Holder is called away to another job.

An approved Hot Work Permit must be present at the location of the hot work activity at all times.

Note: The Permit Authoriser and Permit Holder cannot be the same person.

6.5 Hot Work Permit Close Out

Prior to returning a Hot Work Permit the Permit Holder must inspect the work area to confirm all person/s, equipment, and material have been removed.

If any person, equipment or materials are present, or the work area is otherwise in a condition unable to be returned to service, this shall be noted on the permit before returning to the Permit Authoriser.

A Permit Holder can return a Hot Work Permit to a Permit Authoriser under three conditions:

Not Completed – where hot work tasks are incomplete, and the area is not yet safe to return to normal operations;

Completed – where all hot work tasks are complete, and the area has been made safe to return to normal operations; or

Cancelled – where hot works were not undertaken on this permit.

7. TRAINING AND COMPETENCY

Personnel performing hot work shall be appropriately trained and competent in the use of equipment for the task that is been undertaken. Recognised trade qualifications and experience may be considered appropriate.

All personnel responsible for performing work, issuing permits, holding permits, atmospheric testing or spotting activities should be instructed in the Hot Work Permit and this Procedure.

Table 2: Minimum Training Requirements

ROLE	TRAINING
Atmospheric Testing Officer	A nationally recognised course in gas testing atmospheres.
Permit Authoriser	PPA Hazard Management Training.
Permit Holder	Understands the requirements of the Hot Work Procedure.
Person completing hot work	Trained or experienced in using firefighting equipment. (Only required when working in a Designated Hot Work Area as there will be no spotter).
Spotter	Trained or experienced in using firefighting equipment.

8. SPOTTER

A spotter is required for all work that requires a Hot Work Permit. A spotter is not required when hot work is being performed in a Designated Hot Work Area. The spotter shall not be involved in any task other than keeping a fire watch. The spotter shall be located as close as practical to the task and with a clear view of the immediate area. Areas can be wet down during and at completion of hot work tasks to control any fire hazards.

Table 3: Spotter Requirements

RISK LEVEL	SPOTTER REQUIREMENTS
GREEN LOW	Spotter required. Spotter shall monitor hot work area for 15 minutes once work has finished.
YELLOW MODERATE	Spotter required. Spotter shall monitor hot work area for 15 minutes once work has finished.
ORANGE HIGH	Spotter required. Spotter shall monitor hot work area for 30 minutes once work has finished.

Hot work performed under a Hot Work Permit during a Total Fire Ban shall have a Spotter. Once hot work is finished two people shall monitor the hot work area for 30 minutes. Refer to Appendix 1 Total Fire Ban Exemption Notice.

When working at heights and completing hot work activities only one spotter is required providing, they meet the spotter training requirements outlined in the Fall Prevention Procedure and in section 6 of this procedure.

9. DESIGNATED HOT WORK AREAS

Designated Hot Work Areas do not require a Hot Work Permit unless under the following circumstances:

- Total fire ban has been declared (this only applies to designated hot work areas in open air refer to section 10. Total Fire Ban.)
- Hot works are being conducted by contractors or port users which are not conducted for PPA (e.g. Qube (Port User) conducting hot works on their equipment or a contractor conducting hot works on equipment for Qube)

Landside Operations approval is required when Laydown Area 1, Laydown Area 3 or the Gobi Designated Hot Work Areas are under their custody.

Designated Hot Work Areas shall be identifiable by signage and/or floor demarcation where practicable, and on a Designated Hot Work Area map. Designated Hot Work Areas shall be of low fire risk and will have appropriate shields and other specific safety requirements in place where required.

Where the Designated Hot Works Area is inside a workshop/shed then the area will be properly ventilated and where relevant, ensure adequate fume extraction is in place as close as practicable to the point where works are being completed.

No Spotter is required when hot work is being performed in a Designated Hot Work Area unless under a Hot Work Permit.

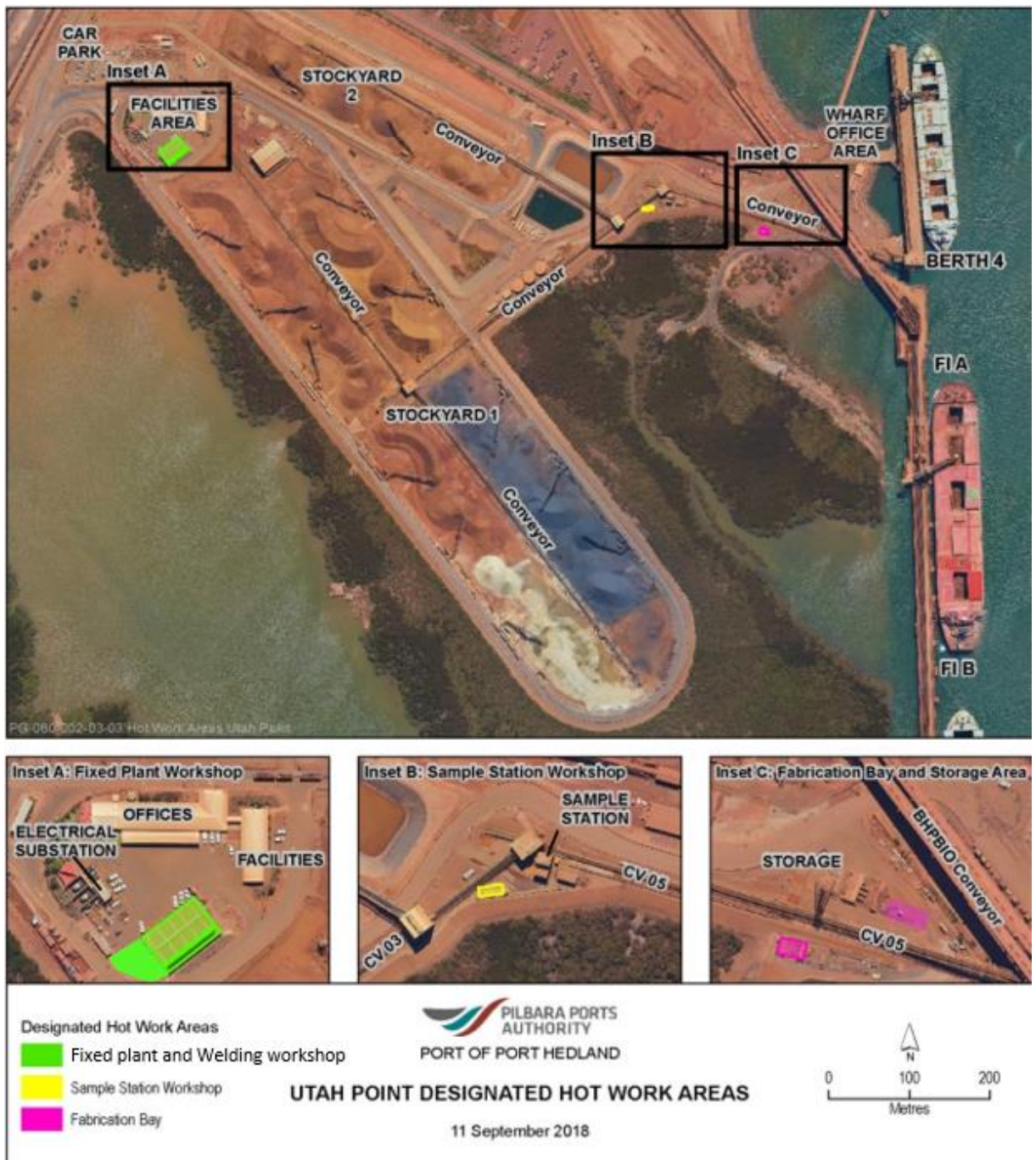
Water quality sample points, as identified in PPA's Potable Water Quality Management Plan, are considered as designated hot works areas for the purpose of sterilisation by flaming, which involved heating the tap to boiling then immediately flushing with cool water without production of sparks or embers.

Sample sites located on Dampier Cargo Wharf and Dampier Bulk Liquids Berth are not considered to be designated hot works areas due to potential for flammable gasses associated with cargos.

9.1 East Side Designated Hot Work Areas Map



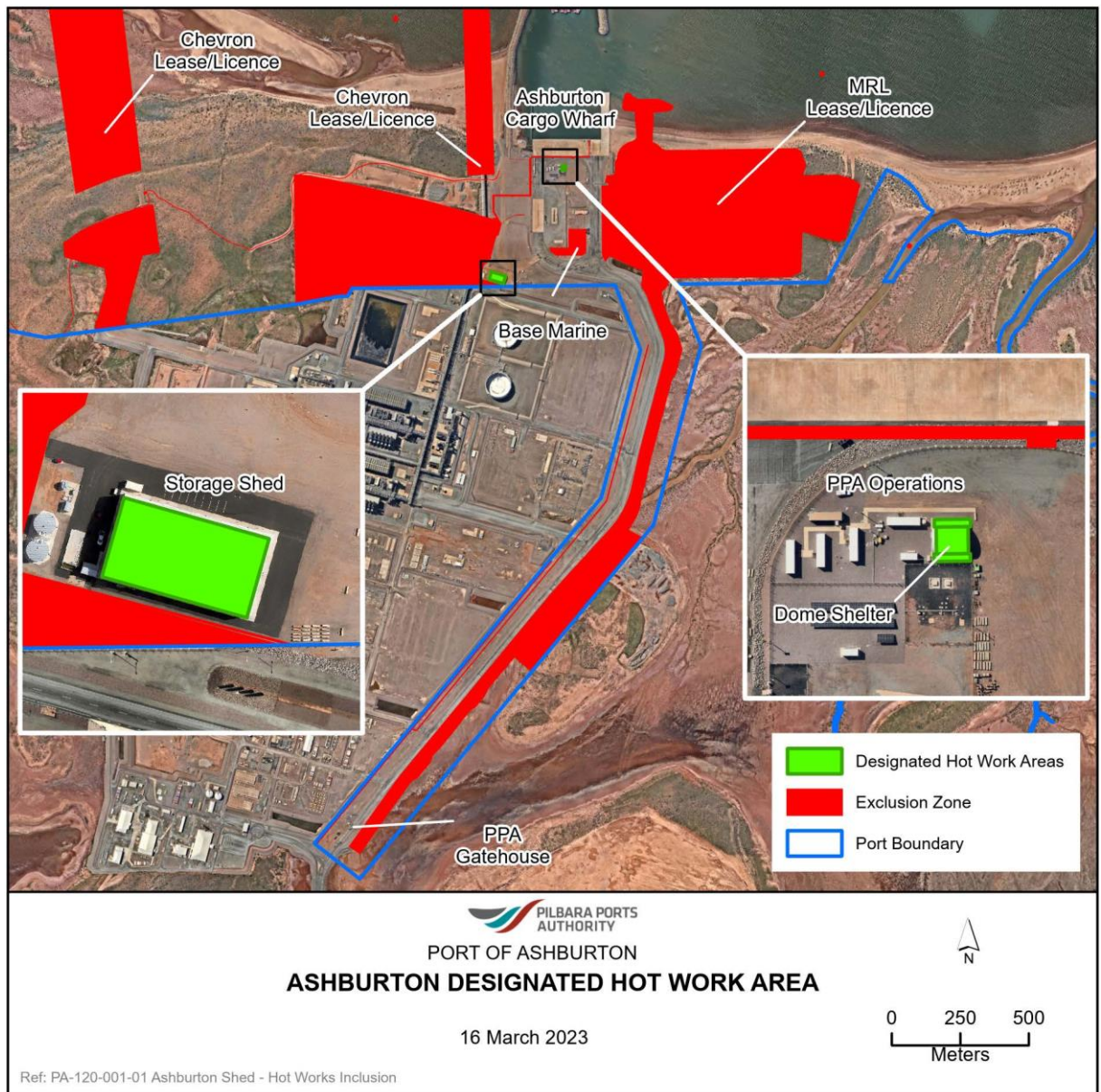
9.2 Utah Point Designated Hot Work Areas Map



9.3 Dampier Designated Hot Work Area Map



9.4 Ashburton Designated Hot Work Area Map



10. TOTAL FIRE BAN

When a Total Fire Ban is declared, hot work which cannot reasonably be postponed to a time with safer weather conditions shall be conducted when the Fire Danger Rating is **not** catastrophic using the DFES Total Fire Ban Activity Checklist ([Total-Fire-Ban-checklist-WA-Hot-Work.docx \(live.com\)](#)) and submitting a Total Fire ban hot work notification to DFES

When the Fire Danger rating forecast is catastrophic, Hot works can only be carried out as part of urgent works on infrastructure used in provisions for an essential service (Urgent works means repairs or maintenance necessary for the continued provision or restoration of the service).

Any hot works being completed inside a sealed building/workshop during a Total Fire Ban can continue with the correct fire prevention measures in place as listed in section 10.3 of this document

10.1 How to Check for a Total Fire Ban

Before commencing hot work, personnel should take into account current conditions and fire danger forecast. Fire danger forecasts and fire danger ratings. can be verified via the Department of Fire and Emergency Services (DFES) website <http://www.dfes.wa.gov.au/totalfirebans>, by phoning the Total Fire Ban information line on 1800 709 355, or via the DFES website link is available on the PPA intranet page under DFES – Total Fire Bans.

10.2 Total Fire Ban Hot Work Notification

Notification must be provided to the Department of Fire Emergency Services (DFES). The Notification is to be issued no later than 30 minutes prior to commencing hot works. A DFES online notification form can be found on the DFES website.

[Tickit on Demand - Department of Fire and Emergency Services \(tod.net.au\)](#)

If hot work is to be conducted within 3 km of land managed by the Department of Biodiversity, Conservation and Attractions' Parks and Wildlife Service, then notification to the respective local District or Regional Duty Officer of the Parks and Wildlife Service must be provided between 24 hours and 30 minutes prior to the commencement of the hot work

10.3 Fire Prevention Measures

Welding screens which comply with Australian standards 3957:2014 and of a height to prevent the escape of hot particles or sparks must be in place and marshalled around hot works.

The ground within a 10-meter radius of hot works must be clear of inflammable material and damped down with water.

The work site must meet the requirements of any fire break notice issued by relevant local government applicable to the work site.

There must be at least two approved fire extinguishers located near or within close proximity to the hot work. Fire extinguishers must be within service and be in proper working order.

If the hot work is carried out within 30 meters of any bush, crop, pasture, stubble or grassland, then the amount of firefighting water set out in the table below must be provided on site, in a water tank mounted to an approved firefighting vehicle.

FIRE DANGER FORECAST FOR THE WORK SITE	VOLUME OF FIREFIGHTING WATER REQUIRED (LITRES)
Low/Moderate	500L
High	1000 L
Very High	1500 L
Severe	2000 L
Extreme	2500 L

If fire fighting vehicles are to be used as a fire prevention measure, the firefighting vehicles must remain on site at all time while hot work is being carried out.

If there is no reticulated water supply available within 1 km of the work site, there must be a bulk water supply tanker carrying at least 5000L of additional water located on the site at all times while the hot work is being carried out, and for at least 30 minutes after the hot work is complete.

At all times when the hot work is being carried out, there must be at least one fire detection officer or spotter in close proximity to the hot work. A fire detection officer must;

- be an able-bodied person,
- other than the person carrying out the hot works,
- trained and competent in the operating a fire extinguisher, firefighting vehicle equipment,
- dedicated solely to detecting and suppressing any fire caused by the hot work.

For at least 30 minutes after the hot work activity is complete, the fire detection officer and at least one other able-bodied person must remain on the site with the approved firefighting vehicle(s), and they must not leave until they are satisfied there is no fire or anything likely to cause a fire on the site.

11. WORKING IN THE VICINITY OF FUEL STORAGE FACILITIES

All hot works undertaken in the vicinity of bulk fuel storage areas require additional controls and authorisation. Below outline the minimum requirements for working in these areas.

11.1 Fuel Pipeline

Hot work can be completed within 8 metres of a flange, valve or breather on a fuel line when:

- there is continuous atmospheric monitoring; and
- the lines are not under pressure when unloading / loading a vessel.

11.2 Diesel Fuel Bowser

Hot work can be completed within 8 metres of a diesel fuel bowser when:

- the bowser has been isolated;
- there is continuous atmospheric monitoring; and
- the diesel fuel bowser storage tank is not being filled.

11.3 A1 Jet Fuel Tank

Hot work can be completed within 8 metres of the A1 jet fuel storage tank when:

- there is continuous atmospheric monitoring; and
- the A1 jet fuel storage tank is not being filled.

11.4 Fuel Storage Locations

Hot work can be completed within 8 metres of a fuel storage location when;

- there is continuous atmospheric monitoring; and
- the fuel storage location is not being filled.

11.5 Combustible / Flammable Material

Inspect above, below and around the work area for any fire hazards including the presence of flammable or combustible materials, gases, vapours, dusts, fibres and liquids which may be ignited by hot work.

- Remove or control any identified hazards that are within a 15-metre radius, for example by using non-flammable materials such as fire blankets and water.
- Check for rubber linings and electrical cables that may cause a hazard during the work. These may not be visible if they are inside vessels or pipes.
- Plan to prevent any work off-cuts, hot metal slag and electrode stubs from lodging in places where there is a possibility of starting a fire. Have a bucket or container available to dispose of rubbish.
- Sewers, vents and drains shall be closed or covered. Fume extraction/ventilation shall be in place where required when natural ventilation is insufficient.

- Check for fire hazards that may be in the cavity spaces of walls and roofs or on the other side of walls and partitions.

12. COMMUNICATION

A suitable method of communication shall be established to raise the alarm in the event of an emergency.

All emergency events must be reported to the relevant emergency services organisation as required and PPA's Vessel Traffic Services Centre (VTSC) (refer to Table 1) by the most expedient means.

Table 4: Emergency Contact Details

EASTERN HARBOUR		
Emergency Services (Fire, Police and Ambulance)		000
Port Hedland VTSC – 24 Hours	Phone:	(08) 9173 9030 0438 303 708 0427 842 740
	VHF Radio:	CH 12 / CH 16
Eastern Harbour Security Gatehouse	Phone:	(08) 9173 9043

UTAH BULK FACILITY		
Emergency Services (Fire, Police and Ambulance)		000
Port Hedland VTSC – 24 Hours	Phone:	(08) 9173 9030 0438 303 708 0427 842 740
	VHF Radio:	CH 12 / CH 16
Utah Security Gatehouse	Phone:	(08) 9173 8911

DAMPIER		
Emergency Services (Fire, Police and Ambulance)		000
Dampier VTSC – 24 Hours	Phone:	(08) 9159 6556 0428 888 800
	VHF Radio:	CH 11 / CH 16

DAMPIER

Dampier Security Gatehouse

Phone: (08) 9159 6584

ASHBURTON

Emergency Services (Fire, Police and Ambulance)

000

Ashburton VTSC – 24 Hours

Phone: (08) 9159 6556

0428 888 800

VHF Radio: CH 14 / CH 16

Ashburton Security Gatehouse

Phone: (08) 9181 3601

13. FIRE HOSES, FIRE BLANKETS AND FIRE EXTINGUISHERS

As detailed by the risk assessment a fire hose, fire blankets and /or a fire extinguisher can either be set up at the work area or the nearest location must be known and documented on the Hot Work Permit.

Do not remove a fire extinguisher from a standing location provided for emergency purposes.

14. DEMARCATION AND BARRICADING

Wherever practicable, physical demarcation should be used to separate hot work from other activities. If physical demarcation is not practicable, signage and warnings must be in place to warn all personnel who might enter the area. Refer to Demarcation and Barricading Procedure for more information

15. ATMOSPHERIC TESTING

Atmospheric testing shall be conducted when working in certain areas as determined by risk assessment and as required in Section 11 of this procedure. Relevant areas are to be tested which may include above and, in any pipe, drum, tank, vessel and piece of equipment adjacent to or involved in the hot work.

Atmospheres shall have the following readings

- safe oxygen range (range is from 19.5% to 23.5% by volume); and
- concentration of flammable airborne contaminants below 5% LEL.

When an atmosphere is above these ranges the hot works is not permitted to be completed.

Once off atmospheric testing can be conducted to check atmospheric conditions in the working environment.

Testing shall take place as late as practical before the hot work commences but no longer than two hours before hand. If the hot work does not commence within two hours of atmospheric testing, the testing shall be done again.

Continuous atmospheric testing shall be conducted when:

- working within 8 metres of fuel storage areas, this includes fuel bowzers;
- working within 8 metres of flanges, valves and breathers on fuel lines;
- there is risk of atmospheric contamination from the hot work or any other source;
or
- performing hot work in confined spaces as per Confined Space Procedure.

The management of equipment requiring calibration shall be conducted in accordance with Equipment Calibration Procedure

16. BARBEQUE USAGE

A Hot Work Permit is not required when using a barbeque on PPA operational sites. All flammable material must be cleared away from the barbeque for a distance of at least five metres.

Note: During a Total Fire Ban only electric and gas BBQ's with an enclosed flame can be used as long as all flammable material is 5 metres clear.

17. RECORD KEEPING

All records shall be managed in accordance with PPA Recordkeeping Plan and PPA Recordkeeping Policy.

18. REFERENCES

AS 1674 Set - 2007 Safety in welding and allied processes
Confined Space Entry Procedure
Equipment Calibration Procedure
Fall Prevention Procedure
Hazard Management Procedure
Health and Safety in Welding Technical Note No. 7
Hot Work Permit
Recordkeeping Plan
Recordkeeping Policy
Port of Port Hedland – Bulk Liquid Transfer Procedure
Western Australian Occupational Safety and Health Regulations 1996
Western Australia Bush Fires Act 1954
Western Australia Bush Fire Act 1954 Part VA – Total Fire Ban, Division 4 – Hot Work
Western Australia Bush Fires Regulations 1954 (regulations 24E-24J)
Work Health and Safety Act 2020

APPENDIX 1 – HOT WORK REQUIREMENTS FOR PPA CONTROLLED WORKS

SECTION	HOT WORK TASK	PERMIT/SPOTTER/APPROVAL REQUIREMENTS
2.1	Total Fire Ban Declared Hot work completed in designated hot work area in a building with doors and windows sealed.	- No requirement to notify DFES - No requirement to notify City of Karratha (Dampier only) - No requirement to use Hot Work Permit - No requirement to have a spotter
2.2	Total Fire Ban Declared Hot work completed in a non-designated hot work area in a building with doors and windows sealed.	- Requirement to use Hot Work Permit - Requirement to have a spotter - No requirement to notify DFES - No requirement to notify City of Karratha (Dampier Only)
2.3	Total Fire Ban Declared Hot work completed in designated or non-designated hot work area in open air or a building with doors and windows not sealed.	- Requirement to notify DFES (Port Hedland and Dampier) - Requirement to notify City of Karratha (Dampier Only) - Requirement to use Hot Work Permit - Spotter requirements as per the DFES exemption - Requirement to seek approval from Landside Operations when hot work being conducted on berths or laydown areas under their custody
2.4	Total Fire Ban Not Declared Hot work completed in designated hot work areas.	- Requirement to seek approval from Landside Operations when hot work being conducted on berths or laydown areas under their custody - No requirement to use Hot Work Permit - No requirement to have a spotter
2.5	Total Fire Ban Not Declared Hot work completed in non-designated hot work areas.	- Requirement to use Hot Work Permit - Requirement to have a spotter - Requirement to seek approval from Landside Operations when hot work being conducted on berths or laydown areas under their custody

19. DOCUMENT OWNER

The General Manager Terminal Operations is responsible for this procedure.