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1. INTRODUCTION

Abrasive blasting activities are undertaken on Pilbara Ports Authority’s (PPA) lands and (over) waters, often as part of the construction and maintenance of assets / infrastructure.

The Western Australian Environmental Protection (Abrasive Blasting) Regulations 1998 (the Abrasive Blasting Regulations) defines abrasive blasting as: “cleaning or abrading the surface of an object using an abrasive material propelled by compressed air, water or steam or by a wheel”.

This procedure details the relevant legislation, roles and responsibilities and minimum health, safety and environmental requirements that must be met when undertaking abrasive blasting on PPA’s lands and over water. This procedure also provides an overview of the process for obtaining an Abrasive Blasting Permit from PPA’s Environment and Heritage team.

2. SCOPE

This procedure applies to all abrasive blasting activities (as defined in the Abrasive Blasting Regulations) occurring in PPA controlled areas (Appendix 1) and/or carried out by PPA or its contractors on PPA marine infrastructure. PPA controlled areas include all port secure areas, as well as roads, road reserves and vacant lease areas on PPA land. PPA marine infrastructure includes channel markers and navigational aids, as well as the following:

- Nelson Point tug pens (Port Hedland)
- Service jetty, commercial jetty and public jetty (Port Hedland)
- Berths 1, 2, 3 and 4 (Port Hedland)
- Dampier Cargo Wharf (Dampier)
- Bulk Liquids Berth (Dampier)

2.1 Exclusions

This procedure does not apply to abrasive blasting carried out within any leased and licensed lands outside PPA port secure areas.

3. LEGISLATIVE REQUIREMENTS

Key driving legislation and codes of practice relevant to abrasive blasting activities in Western Australia include:

- Occupational Health & Safety Regulations 1996;
- Environmental Protection (Abrasive Blasting) Regulations 1998;
- Mines Safety and Inspection Regulations 1995;
- Worksafe Western Australia Commission, Code Of Practice Abrasive Blasting (June 2000); and

Abrasive Blasting Activities shall meet the requirements of, and conform to these legislation and codes of practice

4. ROLES AND RESPONSIBILITIES

Table 1 outlines the roles and responsibilities pertaining to this procedure.

Table 1: Responsibilities and accountabilities under PPA Abrasive Blasting Procedure

<table>
<thead>
<tr>
<th>PARTY</th>
<th>RESPONSIBILITY/ACCOUNTABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPA Environment and Heritage Team</td>
<td>The Environment and Heritage Team is responsible for</td>
</tr>
<tr>
<td></td>
<td>• reviewing and approving all Abrasive Blasting Permits</td>
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<td></td>
<td>• undertaking environmental inspections of abrasive blasting sites to</td>
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<td></td>
<td>audit compliance to this procedure both during the activity and following the completion</td>
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<tr>
<td></td>
<td>of clean-up works (on a risk based approach)</td>
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<td>• external reporting in the event that there is a breach (by PPA or our contractors) of the</td>
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<td></td>
<td>Environmental Protection (Abrasive Blasting) Regulations 1998</td>
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<tr>
<td>The Applicant</td>
<td>The applicant is responsible for</td>
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<td></td>
<td>• Submitting a completed and signed application for an Abrasive Blasting Permit together with</td>
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<td>all required documentation (as detailed in this Procedure and the Permit), to PPA’s</td>
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<td></td>
<td>Environment and Heritage team no less than <strong>two business days</strong> prior to the proposed</td>
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<td>works start date.</td>
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<td>• Ensuring all information provided in the Permit is accurate.</td>
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<td>• Ensuring the abrasive blasting operation is carried out in accordance with the approved</td>
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<td></td>
<td>permit and associated risk assessments.</td>
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<td></td>
<td>• Ensuring that personnel involved in the abrasive blasting have received adequate training</td>
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<td>and are competent to perform the necessary tasks and have adequate supervision.</td>
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<td></td>
<td>• Any and all emissions from the abrasive blasting activity.  This includes emissions to air,</td>
</tr>
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<td>land and water.</td>
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<td></td>
<td>• Ensuring all waste materials are cleaned up or, when previously approved, contained at the</td>
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<td></td>
<td>end of each day, and cleaned up completely at the conclusion of each abrasive blasting</td>
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<td></td>
<td>operation.</td>
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<td></td>
<td>• Notifying PPA’s Environment and Heritage team immediately of any incidents and hazards,</td>
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<td>in accordance with PPA’s Incident Management Procedure, and Hazard Management Procedure.</td>
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<tr>
<td></td>
<td>• Advising PPA’s Environment and Heritage Team as soon as practicable when the abrasive</td>
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<tr>
<td></td>
<td>blasting activity and clean-up is complete.</td>
</tr>
</tbody>
</table>
PARTY | RESPONSIBILITY/ACCOUNTABILITY
--- | ---
The Supervisor / Person in Charge (PIC) | • The PIC - in charge of the operation is to ensure that personnel receive adequate training; supervision and retraining as necessary to enable them to safety execute the specified task.
• The PIC is responsible to ensure personnel are competent in the tasks they are being asked to perform and to inspect the worksite to ensure the hazards as identified on the JHA and risk assessment have adequate controls and the work is being performed as stated on the permit/ the SWI, and / or the JHA.
• The PIC is to have read and understood the task requirements of the Abrasive Blasting Permit pertaining to the specifics of the task to be performed and the requirements of:
  - Code of Practice Abrasive Blasting June 2000; WorkSafe WA;
5. ABRASIVE BLASTING PERMITS

An Abrasive Blasting Permit approved and issued by PPA’s Environment and Heritage team is required prior to any abrasive blasting activity commencing within PPA’s controlled areas (Appendix 1). An overview of the process for acquiring an Abrasive Blasting Permit is outlined in Figure 1.

PPA’s Environment and Heritage team will determine the length of time an Abrasive Blasting Permit will be issued for (as appropriate), in consultation with the Applicant and the work area owner.

Each Abrasive Blasting Permit must be supported by an appropriate task based risk assessment and a work method statement (if required).

Each new abrasive blasting activity requires a new Abrasive Blasting Permit form to be completed and submitted to the Environment and Heritage team for review / approval. If an Abrasive Blasting Permit expires prior to the completion of the abrasive blasting activity, a new Permit must be submitted, supported by a new task based risk assessment and work method statement (if required).

Where abrasive blasting operations are occurring over waters in PPA’s Ports either from a vessel and/or on a navigation aid, the Applicant will be required to seek separate approval from the Harbour Master (or delegate).

Where abrasive blasting operations are occurring on a public berth or within the cargo laydown areas the Applicant must also separately consult with and seek the approval of the PPA Landside Operations Manager or his delegate for these works.

It is a requirement of a valid Abrasive Blasting Permit that a copy of the Permit is to be kept at the work’s site at all times (i.e. the location of the abrasive blasting activity). PPA will issue an immediate stop work notification for any abrasive blasting works being undertaken without a hard copy of the Permit available at the work’s site.
The Applicant completes an Abrasive Blasting Permit form (A232171) and submits with Work Method Statement to Environment and Heritage team:

**Port Hedland:** environment.porthedland@pilbaraports.com.au

**West Pilbara:** environment.westpilbara@pilbaraports.com.au

**Important Note:** Please submit documentation **at least** two business days prior to the proposed start date of the activity:

PPA Environment and Heritage team review Abrasive Blasting Permit and Work Method Statement in conjunction with Work Area Owner

- **PERMIT APPROVED:**
  - Permit signed and returned to Applicant

- **PERMIT DENIED:**
  - Feedback provided to the Applicant. The Applicant can resubmit Permit once feedback is addressed.

The Applicant commences abrasive blasting as per approved Abrasive Blasting Permit. PPA Environment and Heritage team may inspect work area to ensure compliance to permit conditions and **Environment Protection (Abrasive Blasting) Regulations 1998.**

The Applicant must notify PPA Environment and Heritage team upon completion of abrasive blasting and clean up. The team may conduct a final inspection of area to confirm waste management meets PPA and legislative requirements.

**Figure 1: Overview of PPA's Abrasive Blasting Permit Application Process**
6. HEALTH AND SAFETY CONSIDERATIONS

In order to ensure the safety of persons engaged with or in the vicinity of abrasive blasting activities, the following considerations should be made and evidenced in the relevant risk assessments:

6.1 EQUIPMENT

Equipment used for the purposes of abrasive blasting at the workplace must be designed so that the person operating the nozzle can control the flow of abrasive material through the nozzle. It must have hose whip checks or hose coupling safety locks or both. Where hoses are joined or connect to compressors or deliver nozzles, hoses must be fitted with positively locking couplings and be fitted with both whip checks and safety pins if such a provision is available.

In the case of equipment used for dry abrasive blasting, there must be an efficient means for the discharge of static electrical charge from the abrasive blasting nozzle.

In the case of equipment used for wet abrasive blasting, the water flow rate must be sufficient to prevent the generation of dust.

Where practicable, the equipment used shall include a device designed to cut off the flow of abrasive material through the nozzle automatically if the person operating the nozzle becomes unable to do so. If this is not practicable, procedures must be in place, which enable another person to cut off the flow of abrasive material if the person operating the nozzle becomes unable to do so.

6.2 PROTECTIVE EQUIPMENT

Where abrasive blasting is not conducted in a blasting cabinet, a supplied air respirator fitted with an inner bib, and a shoulder cape, jacket, or protective suit shall be worn.

A risk assessment shall be conducted and the selected protective equipment shall provide the personnel conducting the work adequate protection from the hazards and risks as discussed and identified in the legislated documents and guidance notes.

7. ENVIRONMENTAL CONSIDERATIONS

In order to ensure requirements of the Environmental Protection (Abrasive Blasting) Regulations 1999 are met, the following elements should be considered when completing an Abrasive Blasting Permit:
7.1 AIR QUALITY

Dry blasting must be carried out inside a blasting chamber. The operator must ensure that no visible dust escapes the blasting chamber (if used) or premises at which the blasting is being carried out (if a blasting chamber is not used). The operator should give consideration to the weather conditions when constructing the blasting chamber to ensure there will be no escape of visible dust.

A permit can be suspended by PPA if a suitable blasting chamber is available but not utilised by the operator or if visible dust is escaping the blasting chamber or premises at which blasting is being carried out.

7.2 FAUNA

There is the potential for abrasive blasting of channel markers and other marine infrastructure to impact birds that can utilise these structures for nesting (e.g. Ospreys).

The operator must thoroughly inspect the work site prior to commencing abrasive blasting to determine whether there is any evidence of bird nesting. If a bird’s nest is found (active or inactive), the Applicant must immediately inform the Environment and Heritage team.

An Abrasive Blasting Permit will be suspended immediately by PPA if abrasive blasting operations are demonstrated to be impacting fauna.

7.3 NOISE SENSITIVE RECEPTORS

Some PPA sites are located in close proximity to noise sensitive receptors.

All abrasive blasting is to be carried on in accordance with the Western Australian Environmental Protection (Noise) Regulations 1997. Contact a member of the site Environment and Heritage Team for further information.

An Abrasive Blasting Permit can be suspended by PPA if the abrasive blasting activity is carried on in a manner which contravenes the Environmental Protection (Noise) Regulation 1997.

7.4 CLEAN UP AND WASTE DISPOSAL

Adequate clean-up and disposal of waste material is necessary to prevent dust emissions and reduce the risk of discharging potential contaminants to port lands and waters.

The permit holder must ensure that:

- all waste material is cleaned up at the end of each operational day, or where a full clean-up is not practicable, all waste material is sufficiently contained within the work area
• all waste material is cleaned up immediately at the conclusion of each abrasive blasting operation
• no waste material escapes from the designated work area
• all waste material is disposed of at an appropriately licenced landfill site or waste treatment facility.
• documented evidence must be retained and available to PPA (on request) of waste receipts.

An Abrasive Blasting Permit can be immediately suspended and future permits denied by PPA if abrasive blasting is carried on in a manner where the clean-up and disposal of waste material does not meet PPA and legislative requirements.

7.5 AQUATIC ENVIRONMENTS

This section only applies to abrasive blasting operations taking place in or near aquatic environments that involve the removal of organotins or other heavy metal protective coatings.

Abrasive blasting must not be conducted in or near an aquatic environment unless the size, shape, position or location of the object being blasted makes it impracticable to move the object out of, or away from, that environment.

Where abrasive blasting in or near an aquatic environment is carried out, the operator must ensure that all water which may contain waste material is drained into, and contained in, an impervious holding sump until it is disposed of.

The operator must ensure that:
• any overflow from the holding sump will drain into a soakwell
• the holding sump and soakwell are emptied as often as necessary to ensure their efficient operation.

Permits will be immediately suspended by PPA if abrasive blasting is carried out in such a manner that waste material is discharged to port waters in PPA’s ports.

8. PROCESS OWNER

The Director Environment and Heritage has overall responsibility for this procedure.

Date approved: 17 August 2018  Review date: 17 August 2020
Version: 1  Approved by: Director Environment and Heritage
APPENDIX 1 – MAPS ILLUSTRATING PPA CONTROLLED AREAS IN DAMPIER AND PORT HEDLAND, WHICH REQUIRE AN ABRASIVE BLASTING PERMIT
This map is intended for generalised interpretation. The information depicted on this map is indicative only and in no event shall the PPA be liable for any incident or consequential damage that may result.
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Appendix 1 – Port of Dampier

August 2018

Scale 1:10,000 (at A3)

Legend:
- Leased areas
- Port Authority Land
- Areas where Abrasive Blasting may be carried out under an approved PPA Abrasive Blasting Permit