



Abrasive Blasting Management Procedure

Environmental

1 Purpose and Scope

This procedure specifies the operational environmental requirements relating to abrasive blasting management at the Roy Hill Project. This procedure applies to all personnel involved in activities at the Mine, Rail and Port operations that affect abrasive blasting management.

2 Procedure

2.1 Management Actions

2.1.1 General Requirements

1. Undertake all abrasive blasting in accordance with the *Environmental Protection (Abrasive Blasting) Regulations 1998*.
2. Ensure that any material containing 2% or more of free silica (crystalline silicon dioxide) is not used in abrasive blasting.
3. Ensure that corrosion inhibitors containing chromate, nitrate or nitrite are not used in wet abrasive blasting activities.


2.1.2 Blasting Chambers

1. Ensure blasting is only undertaken in a blasting chamber unless such a chamber cannot reasonably be used because of the size, shape, position or location of the object being blasted.
2. Ensure blasting chambers are completely sealed or fitted with a mechanical ventilation and dust extraction system which is operating so that no visible dust escapes from the blasting chamber;
3. Ensure all air from the blasting chamber passes through the ventilation and dust extraction system before being discharged into the environment;
4. Ensure air discharged into the environment does not contain any visible dust of more than 50 milligrams of particulate matter per cubic metre.
5. Where there is a wet scrubber in the ventilation and dust extraction system for a blasting chamber:
 - Ensure the wastewater from the scrubber drains into, and is contained in, settling tanks or ponds until all particulate matter has settled out; and
 - Empty the settling ponds or tanks (or if of suitable quality, in accordance with the requirements as outlined in the 'Dust Management Procedure' (OP-PRO-00180) for dust suppression or disposed in accordance with Item 2.1.5.3) as often as necessary to ensure their efficient operation.

2.1.3 Dust

1. Ensure that abrasive blasting is not carried out in the open unless it is conducted in such a manner that no visible dust escapes from the premises on which the blasting is carried out.

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2.1.4 Blasting Near Aquatic Environments

1. Ensure that any abrasive blasting involving the use or removal of organotin or any other heavy metal protective coatings is not to be carried out 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; and
 - All water that may have collected waste material is collected in an impervious holding sump until it is disposed of in accordance with 2.1.5.3.
2. Use appropriate shrouding, tarpaulins or other similar material to fully enclose the abrasive blasting operations and prevent airborne material/debris escaping the work area.
3. Board areas located over waters subject to abrasive blasting (or have similar effective containment) across the base and at edges to minimise abrasive material entering marine environment.

2.1.5 Waste

1. Clean up and contain all waste material at the conclusion of each abrasive blasting operation prior to removal from the Roy Hill Operational Areas.
2. Ensure no waste material escapes from the premises at which the blasting is carried out (or if there are no defined boundaries to the premises, ensure that no waste material escapes onto any place to which the public has access).
3. Dispose of all waste material within an appropriate landfill site or waste treatment facility where the occupier of which holds the relevant licence/s.

2.2 Training and Awareness

1. Familiarise all personnel associated with abrasive blasting management activities with the requirements of this procedure.
2. Include information on abrasive blasting management requirements in site inductions or site communications where relevant.
3. Conduct toolbox talks and develop environmental site notices and environmental awareness posters periodically highlighting abrasive blasting management requirements – this is the responsibility of the Superintendent Environment Mine or Port and Rail (or delegate where required).
4. Display relevant environmental site notices and environmental awareness posters at prominent workplace locations.
5. Update the training records of personnel in the Learning Management System once registered training has been completed (with the exception of toolbox talks).
6. Maintain records of toolbox training attendance onsite for audit and inspection purposes.

2.3 Monitoring Actions

1. Undertake monitoring in accordance with approval conditions and commitments, and ensure that all data required for regulatory reporting is captured.
2. Store all monitoring records within the Roy Hill Document Management System.
3. Monitor visible dust levels to ensure no visible dust escapes from the premises, where abrasive blasting is being undertaken in the open.

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2.4 Incidents, Audits and Inspections

1. Undertake regular inspections of the active work area against the requirements of this procedure.
2. Undertake regular compliance audits against the requirements of this procedure in accordance with the 'Environmental Audit Procedure' (OP-PRO-00018).
3. Schedule inspections and audits against the requirements of this procedure in accordance with the approved HSE Integrated Inspection and Audit Schedule.
4. Store copies of all audits and inspections within the Roy Hill Document Management System.
5. Undertake an investigation into the cause(s) of incidents reportable to regulators in accordance with the 'Incident Investigation Specification' (OP-SPC-00156) and develop actions to prevent recurrence of the incident.
6. Enter corrective and preventative actions from incidents, audits and inspections into the Roy Hill Incident Management System.

2.5 Contingency Actions

1. Implement contingency actions in accordance with this procedure where deficiencies are identified during inspections, audits and incident reporting.
2. Implement the 'Management of External Complaints Procedure' (EA-PRO-00002), where relevant.
3. Conduct a risk assessment to determine the most effective mitigation measures should additional contingency actions be required, and follow the change management process.

2.6 Reporting Requirements

1. Report all non-compliances with this procedure, all regulatory exceedances and all community complaints as an incident in the Roy Hill Incident Management System.
2. Close out all incidents and corrective actions in accordance with the 'Incident, Non-Conformance and Action Management Procedure' (OP-PRO-00702).
3. Complete all reporting required within the relevant EnviroSys data entry forms or in the 'Contractor Environmental Report' (CER) (OP-FRM-00305).

3 Accountabilities

Unless otherwise specified, the following roles are accountable or responsible for the activities outlined in this procedure.

Role	Responsibility
General Managers	Accountable for ensuring that resources are available to support the implementation of this procedure where it is relevant to their area of responsibility
Managers	Accountable for the implementation of this procedure where it is relevant to their area of responsibility
Superintendents	Responsible for the implementation of this procedure where it is relevant to their area of responsibility
Environment Team	Responsible for review and update of this procedure

Table 1: Accountabilities

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4 Abbreviations

Abbreviation	Definition
CER	Contractor Environmental Report
HSE	Health, Safety and Environment

Table 2: Abbreviations

5 Definitions

Term	Definition
Abrasive Blasting	Cleaning or abrading the surface of an object using an abrasive material propelled by compressed air, water or steam or by a wheel (in accordance with the <i>Environmental Protection (Abrasive Blasting) Regulations 1998</i>).
Aquatic environment	Watery environment including marine, estuarine and riverine environments.
Free silica	Crystalline silicon dioxide
Operational Environmental Requirements	A plan, procedure or work instruction that must be complied with.
Waste material	Used abrasive, abraded material, waste generated by cleaning an object prior to blasting, and any other waste products created during abrasive blasting, including waste collected in a dust extractor, settling pond or tank, or holding sump.

Table 3: Definitions

6 References

Document number	Title
OP-FRM-00305	Contractor Environment Report
OP-PRO-00180	Dust Management Procedure
OP-PRO-00018	Environmental Audit Procedure
OP-PRO-00702	Non-Conformance and Action Management Procedure

Table 4: References

Note that up-to-date environmental documents should be accessed from the e-Care Roy Hill intranet portal to ensure that the current version is being used.

7 Review

This Procedure is to be reviewed as follows:

- Following the grant of or modification to relevant approvals;
- Annually; or
- As a result of findings or actions identified through inspections, audits and incident reporting.

Reviews are to examine the appropriateness of this Procedure, taking into consideration corporate, system and compliance requirement changes since the last review was undertaken.

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