

NATIONALLY AGREED STANDARD OPERATING PROCEDURE (NASOP)

Title: Decontamination of large equipment

Version: 1.0

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Approved by: Animal Health Committee

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NASOPs support national consistency and provide guidance to response personnel undertaking operational tasks.

1. Purpose

- To describe the actions and practices to be taken by staff involved in the planning or process of decontaminating large equipment, including vehicles.

2. Application/scope

- A control centre is likely to use a vast array of equipment to complete its many tasks, such as destruction, disposal and decontamination. Much of this equipment is likely to be heavy machinery, or similar. It is essential that this equipment be cleaned and disinfected after exposure/potential exposure to the disease causing agent.
- Decontamination of machinery such as excavators, bulldozers, backhoes, bobcats and even lesser equipment such as generators will require a significant commitment of resources and time.
- To minimise the need to decontaminate the heavy machinery, it is important to consider the deployment of the machinery in the first place, for example, if it takes two days to decontaminate a bulldozer, it may be more appropriate to use a single dozer even though the activity requires more time, rather than contaminate two and thus the need to clean two.
- Equipment and machinery must be decontaminated before leaving an infected premises (IP)/ dangerous contact premises (DCP) or on leaving the Restricted Area (RA).
- If a machine has worked on an IP/DCP and its next task is on an IP/DCP, it will only require sufficient decontamination to prevent contamination occurring during transport (it is possible to move between properties of like status without full decontamination with approval from the operations centre).
- A Movement Permit is required when moving between properties.

NOTE: Prior to deployment of machinery, it is important the owner/contractor is aware of the decontamination procedures to which the machinery will be exposed and the time required. Does the contract rate e.g. rate/hour include down time whilst machinery is being disinfected.

3. Resources/equipment

3.1. General

- appropriate personal protective equipment (PPE) issue for personnel entering property
- additional PPE for the prescribed activity—wet weather top and bottom, weather proof gloves, hard hat, respiratory and eye protection as per material safety data sheet (MSDS)

NOTE: eye protection must be worn during the decontamination procedure even if not specified by MSDS to prevent foreign matter in eyes.

- work area with good drainage at wash down site and hard surface located near or at exit for final decontamination / disinfection
- wash down area with liquid waste capturing and holding tanks or similar, with potential need for soil trap
- water supply for pumps—and any equipment to maintain supply
- high pressure cleaner—complete, with long hose and lance
- volume pump, hose, and nozzle for spraying disinfectant
- supply of suitable detergent to assist the cleaning process
- tank to mix disinfectant, and any specific mixing equipment (or proportioner in built with pump)
- disinfectant (as per AUSVETPLAN or directions provided by the operations centre) – at least one day's use on the 'inside'
- optional—scraper or broom for tough jobs
- access to any first aid as recommended by MSDS or material packaging
- possibly need support such as scaffolding or cherry picker for working at heights

NOTE: some items (electrical equipment) may require fumigation as opposed to liquid disinfection

3.2. Documentation

- audit forms
- restricted area movement and surveillance (RAMS) exit form
- MSDSs for all chemicals used
- procedural checklist (Appendix 1)

4. Warnings

- Fatigue
 - It is important personnel involved in such tasks are given the opportunity for reasonable breaks as working in PPE can be debilitating.
 - Tiredness can be exaggerated by dehydration. Staff employed on these duties must be closely monitored.
- Foreign matter in eyes may result from the scrapping/other actions to remove built up soil etc. Eye protection must be worn for such tasks.
- Manual handling
 - Much of the equipment in use and also consumables such as the disinfectant may be heavy. Efforts should be made to minimise the need for heavy items to be moved either alone or without assistance.
- Slips, trips and falls
 - The working environment is wet, typically uneven, and potentially a different structure each time. Every effort should be made to prevent slips, trips and falls by personnel undertaking the disinfection. Checks should be made on non-slip footwear, non-slip work surfaces, and low risk work practices e.g. not climbing on

painted metal surfaces. Where operations are in the dark, supplementary lighting should be provided.

- Smoking
 - Smoking must not be allowed where decontamination is being carried out. Some disinfectants and fumigants are flammable as may be vehicle fuel.
- Vehicles
 - Where possible, if a driver has remained in the vehicle cab and there is minimum contamination, they are to remain in the cab until disinfection has been completed.
 - Ensure that the vehicle is parked securely, in gear with handbrake on. If the vehicle is in danger of rolling or on steep slope, ensure wheels are chocked.
- Visibility
 - All personnel operating in and around the gate, including the disinfection team should be readily visible e.g. reflective vests.
- Working with disinfectants and fumigants
 - A team should include one person who is trained in the use of hazardous substances. This will ensure the team is able to interpret the MSDS for the disinfectants in use and apply the interpretation.
 - No disinfectant or fumigant should be used without the relevant MSDS and all requirements of the MSDS must be followed. Specified contact times must be observed.
 - All relevant PPE must be available and used at all times. If specialised PPE is required e.g. breathing apparatus, then only trained and skilled operators are to use that PPE.
 - Particular attention should be given to the mixing of all chemicals (from concentrated to dilute form).
 - Where possible, chemicals used should not be capable of damaging the equipment being decontaminated. Where necessary chemicals must be washed off after contact period.
- Working at heights
 - There is a possibility some disinfection operations will require the crew to operate off the ground e.g. cabin of truck, boom of a crane.
 - Where personnel work at heights it is essential, all necessary steps are taken to prevent a fall, and provide protection in the event of a fall. This may mean providing a platform (fixed or cherry picker) for spraying/cleaning from, rather than actually climbing on the vehicle/equipment.
- Personnel involved in this task must wear a hard hat in addition to other specified PPE.

5. Description of activities

- Familiarise staff with equipment to be decontaminated and the areas in vehicles and equipment which require attention (Appendix 1).
- Remove excess soil and bio-organic matter—whilst in the contaminated area—prior to wash down.
- Relocate equipment to wash down site.
- Ensure wheels are chocked or similar to prevent vehicle moving.
- Spray external surfaces with disinfectant.
- Remove remaining gross contamination with wash/high pressure and/or detergent, followed by high pressure cleaner (control aerosols for specified diseases).
- Start at top and work down.
- Cabin—vacuum floor and spray/wipe all surfaces with appropriate disinfectant.
- Mangle air filters according to disease
- When wash down has been completed, relocate to exit site for final disinfection.
- Apply disinfectant and leave disinfectant for recommended contact time before rinsing with clean water.
- Ensure the equipment is not left in a location where it can become contaminated whilst waiting for transport.

NOTE: There will be a need to move machinery so all parts of wheels/tracks are accessed.

6. References

- AUSVETPLAN Decontamination Manual
 - AUSVETPLAN manuals are available at: <http://www.animalhealthaustralia.com.au>
- NASOP 01: *Personal decontamination—entry and exit procedures*
- NASOP 09: *Inspection of property before operations*
- NASOP 26: *Decontamination of groups of people—entry and exit procedures*
- NSW SOP (e.g. Decontamination of large equipment; Decontamination—vehicles)
- RAMS Exit Form

7. Appendices

- Appendix A: General guide to decontamination

GENERAL GUIDE TO DECONTAMINATION

1. Cabin and interior

- check carpets/mats
- tool boxes/bins and upper operator cabins
- boot area including spare tyre area
- other recesses in the rear of the vehicle

2. Engine bay

- radiator core and oil coolers
- grills
- top of transmission gearbox
- battery box and sump guards
- air pre-cleaners and dust unloaders

5. Underside

- wheel arches, wheel trims, flares, step treads and bumpers
- mud flaps
- rims, tyres and any gashes or cuts in tyres
- axels and differentials
- spare tyres stowed under vehicle are to be lowered for inspection

4. Chassis and body

- check inside of chassis rail ledges and back axle
- front/rear brake assemblies

5. Buckets, blades, booms

- attachments (buckets, blades, booms and rippers)
- cutting teeth, adaptors and wear plates on blades
- hydraulic arms supports for hollows

6. Plant and vehicle loads

- all loads are inspected as above
- all imported material declared and approved (particularly soils, seeds, plant matter)

7. Container and general cargo

- a visual check with vehicle loaded (especially forklift points)

The safety of inspectors/equipment operators and drivers must be taken into account at all times.

Do's:

1. all safety precautions carried out prior to inspection
2. inspection carried out at wash points where available
3. inspection conducted to allow time for rewashing as required
4. ensure all units and sub-units attached are inspected
5. persons carrying out inspections should be consistent throughout inspections
6. inspectors consider traffic congestion when planning inspection
7. consider water runoff and weed infestation at wash points
8. inspect all bulk and general cargo's where appropriate
9. pin, block or chock all attachments blades and booms
10. minimise use of water (consider water restrictions and volume of waste water to be retained/treated)
11. inspectors to wear high visibility vests
12. where possible carry out inspection in daylight.

Don'ts:

1. Don't conduct inspection with engines running.
2. Don't leave keys in vehicle when inspecting vehicle.
3. Where key cannot be removed inspectors are to ensure vehicles cannot be moved during inspections or washing.
4. Don't allow vehicles to be reversed without guides.
5. Don't carryout inspections on roadways.
6. Don't allow vehicles to avoid wash down and inspection.