

SYDNEY STREET PROJECTS

SWMS – RADIOACTIVE MATERIAL HANDLING – IONISATION
SMOKE DETECTORS

Doc Ref: SSP-SWMS-013
Version: 1.0 | 14/05/2026

<https://docs.google.com/document/d/1C3tJVJXZTCO9kuK2F4tYQnN2QR7k6k8o/edit?usp=sharing&ouid=117887710030781449498&rtpof=true&sd=true>

SWMS:

RADIOACTIVE MATERIAL HANDLING – IONISATION SMOKE DETECTORS

This Safe Work Method Statement must be read, understood, and signed by all workers before work commences.

It must remain on site and accessible at all times.

1.0 PROJECT & TASK DETAILS

Task / Activity	Radioactive Material Handling – Ionisation Smoke Detectors	SWMS Reference	SSP-SWMS-013
Site Address		Date of Works	
Supervisor on Site		Workers Consulted?	<input type="checkbox"/> Yes <input type="checkbox"/> No – cannot proceed

2.0 HIGH-RISK WORK DECLARATION

<input type="checkbox"/> Handling radioactive material (Americium-241)	<input type="checkbox"/> Transport of radioactive material (Radiation Control Act)
<input type="checkbox"/> Regulated waste requiring specialist disposal pathway	<input type="checkbox"/> None of the above applicable

3.0 TASK CONTEXT & SCOPE

i About this SWMS:

Radioactive Material Handling - Ionisation Smoke Detectors

Ionisation-type smoke detectors contain a small sealed source of Americium-241 (Am-241), a radioactive isotope.

While the radiation dose from an intact detector is extremely low during normal use, disassembling, crushing, or incinerating a detector releases radioactive particles.

This SWMS applies to the identification, safe handling, storage, and disposal of ionisation-type smoke detectors encountered during property clearances.

How to identify: ionisation detectors are typically circular disc-shaped units, marked 'contains radioactive material' or 'Americium-241' (check the back or inside the unit).

Photoelectric detectors do NOT contain radioactive material and can be disposed via general e-waste.

Regulatory framework: Radiation Control Act 1990 (NSW). Detectors must NOT be placed in general waste, skip bins, or recycling.

They require disposal through a licensed radioactive waste pathway only.

4.0 PERSONAL PROTECTIVE EQUIPMENT

i Minimum PPE for all SSP tasks

High-visibility vest/shirt, steel-capped safety boots, and disposable gloves are mandatory for ALL SSP field activities regardless of task type.

High-visibility vest (mandatory)

Safety glasses

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- Safety boots (mandatory)
- Nitrile disposable gloves

- Do NOT attempt to open, dismantle, or crush detector under any circumstances
- Wash hands thoroughly after handling

5.0 PLANT, EQUIPMENT & MATERIALS

Item / Equipment	Pre-Use Check Required	Condition Notes
Rigid sealed plastic container (for storage and transport)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Labels: 'Radioactive Material – Americium-241 – Do Not Open'	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Nitrile gloves	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Camera (documentation)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Licensed radioactive waste disposer contact details	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Radiation Control Act compliant transport documentation	<input type="checkbox"/> Yes <input type="checkbox"/> No	

6.0 RISK RATING REFERENCE

Risk Rating Reference

Consequence ↓ Likelihood →	Rare (1)	Unlikely (2)	Possible (3)	Likely (4)	Almost Certain (5)
Catastrophic (5)	5 MED	10 HIGH	15 HIGH	20 EXT	25 EXT
Major (4)	4 LOW	8 MED	12 HIGH	16 EXT	20 EXT
Moderate (3)	3 LOW	6 MED	9 MED	12 HIGH	15 HIGH
Minor (2)	2 LOW	4 LOW	6 MED	8 MED	10 HIGH
Insignificant (1)	1 LOW	2 LOW	3 LOW	4 LOW	5 MED

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EXT Stop & escalate **HIGH** Senior review before proceeding **MED** Monitor **LOW** Routine controls

7.0 TASK STEPS, HAZARDS & CONTROL MEASURES

i Hierarchy of Controls – apply in order

1. ELIMINATE
2. SUBSTITUTE
3. ISOLATE
4. ENGINEERING CONTROLS
5. ADMINISTRATIVE CONTROLS
6. PPE (last resort)

Think: Identify detector type → Do NOT open or dismantle → Label → Segregate in rigid sealed container → Transport via compliant pathway → Deliver to licensed disposer → Document transfer.

#	Task Step	Hazards & Risks	Control Measures (Hierarchy of Controls)	Initial Risk	Residual Risk	Person Responsible
				--- / --- ---	--- / --- ---	
				--- / --- ---	--- / --- ---	
				--- / --- ---	--- / --- ---	
				--- / --- ---	--- / --- ---	

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#	Task Step	Hazards & Risks	Control Measures (Hierarchy of Controls)	Initial Risk	Residual Risk	Person Responsible
				--- / ---	--- / ---	
				--- / ---	--- / ---	

(Add continuation sheets as required – reference this SWMS number on all sheets)

8.0 ENVIRONMENTAL CONTROLS

<input type="checkbox"/> Ionisation detectors identified and segregated from general waste <input type="checkbox"/> Detectors NOT opened, dismantled, incinerated, or placed in landfill <input type="checkbox"/> Stored in sealed rigid container – clearly labelled with radioactive material warning <input type="checkbox"/> Transport documentation completed per Radiation Control Act 1990	<input type="checkbox"/> Transfer to licensed radioactive waste disposer only – receipt obtained <input type="checkbox"/> Chain of custody record completed and retained <input type="checkbox"/> Number of units collected and disposed documented
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9.0 EMERGENCY PROCEDURES

First Aid Officer Name: Phone:	Nearest Hospital	EMERGENCY: 000
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FIRE	Evacuate. Call 000. Muster at: _____ . Do not re-enter.
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INJURY	Administer first aid. Call 000 if required. Do not move injured person unless in immediate danger. Complete incident report.
CHEMICAL SPILL	Contain if safe. Prevent drain entry. Reference SDS. Do not wash to drain. Call 000 if required.
DETECTOR DAMAGED / CRUSHED	Do not handle with bare hands. Ventilate area. Collect all fragments carefully with gloves. Seal in plastic bag. Label as radioactive waste. Do not allow dust to spread. Notify supervisor. Contact NSW Environment Protection Authority for guidance.
UNKNOWN DETECTOR TYPE	Treat as ionisation type until confirmed otherwise. Do not open or test. Check manufacturer markings on reverse. If marking unclear, dispose via regulated radioactive pathway to be safe.

10.0 MONITORING & REVIEW

i When must this SWMS be reviewed?

Stop work and review immediately if:

1. An incident or near-miss occurs
2. Site conditions change
3. New hazards are identified
4. A worker requests a review
5. Work methods change from what is described here.

11.0 WORKER SIGN-ON

i All workers must sign before starting

By signing, each worker confirms they have READ this SWMS in full, UNDERSTOOD all hazards and controls, and AGREE to work in accordance with it. Workers who have not signed may not commence work.

Full Name (print)	Signature	Role	Date

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