



This Unexpected Finds Protocol (the Protocol) has been developed to determine the work requirements in the event of unexpected finds occurring in the remediation works areas. The aim of this Protocol is to manage the risk of potential exposure to asbestos/hazardous materials and limit disturbance during the unexpected finds works. All PCBUs associated with the remediation works are to adopt the recommended protocol into their own site specific SWMS based on individual tasks and associated risks.

Potential Unexpected Finds

Based on findings of previous works undertaken at the site and site history, unexpected finds which could reasonably occur within the site are summarised in Table 1.

Table 1: Summary of Non-specific Unexpected Finds

Potential Unexpected Find	Observed Characteristic
Buried dry waste materials	May include a variety of waste materials including wood, plastic, metal fragments, building rubble (e.g. concrete, brick, asphalt, forms of asbestos etc.).
Buried putrescible wastes	Putrescible waste materials typically comprise decomposed organic waste materials intermixed within the fill materials on site, with an associated characteristic rotten egg type odour. Such materials should not be confused with decomposed plant matter and/or marine sediments found within the natural sandy soils.
Structures or conduits containing deleterious materials	Could be identified as follows: <ul style="list-style-type: none"> • A buried tank or former process pipelines; • Deeper sand fill sometimes with visual/olfactory indications of contamination • Presence of small concrete footings surrounding by odorous or visually impacted soils and/or groundwater.
Ash or slag deposits	Ash materials typically light weight, black, grey and/or white and generally gravel sized (1mm to 10mm) particles. Slag materials can be varied in consistency and colour and may comprise pale grey to blue/green/grey/black, and be loose or cemented. Slag gravels can be very angular and appear to have a vesicular (i.e. 'honeycomb') texture.



Potential Unexpected Find	Observed Characteristic
Separate Phase Gasworks Waste & Tar (SPGWT) / Confirmed Impacted Material (CIM)	<p>SPGWT / CIM as the definition implies, refers to:</p> <ul style="list-style-type: none"> • Tar Containing Materials (TCM), which are defined as described below; and • Dense Non-Aqueous Phase Liquids (DNAPLs) <p>The presence or otherwise of TCM is based on comparison of observed site conditions and analytical data to the following criteria:</p> <ul style="list-style-type: none"> • Greater than 10% visible coal tar (where coal tar is a phase separated hydrocarbon by-product from coal gasification); and/or • Contaminant concentrations exceeding the following: <ul style="list-style-type: none"> ○ Polycyclic Aromatic Hydrocarbons (PAHs): 2,000 mg/kg; or ○ Benzo(a)Pyrene (B(a)P): 150 mg/kg. <p>SPGWT / Tar impacted material is generally black in colour and may be solidified or liquid formation, and may have a sheen, and will have a distinctive mothball odour.</p>
Hydrocarbon Compounds	<p>May be identified by a hydrocarbon odour which may vary in strength from weak (just detectable) to very strong (easily detectable at a distance from the source).</p> <p>The odour may or may not be accompanied by specific areas of dark staining (black-grey) or larger scale discolouration of strata from a previously identified 'natural colour' e.g. staining of orange and brown clay to dark grey and green.</p> <p>May also be visible as a distinct coloured sheen on water within an excavation.</p>
Other unusual odours	<ul style="list-style-type: none"> • Solvent odour • Acetone odour • Alcohol odour • Caustic odour <ul style="list-style-type: none"> • Acidic (Acetic/Formic/Citric) odour. • Ammonia odour • Sulfur (rotten egg) odour (possibly associated with ASS)

Process

Step 1 - Consultation:

- Lendlease is to notify Workplace Health and Safety Committee of the unexpected finds and associated proposed works.
- All workers involved in proposed works are to be inducted into the area and task specific SWMS.
- All workers involved are to be briefed on decontamination protocols by Subcontractor Hygienist.
- Contact the Subcontractor Validation Consultant (SVC) and Lead Validation Consultant (LVC) for advice and request a site visit for assessment of the unexpected find.
- LL and the LVC will determine if the Site Auditor should be informed of the find.

Step 2 – Preparation Works:

- At the discretion of the Subcontractor Hygienist (SCH), establish a fenced exclusion zone surrounding the work area.
- Install signs to clearly designate the work area boundaries to prevent unauthorised access.
- Identify delineation between people and plant movements.
- SCH to install asbestos fibre air monitoring pumps (or other contaminant specific monitors) on the perimeter fence of the work area.
- Where SPGWT or CIMs are identified the SCH to install PID air monitors (or other contaminant specific monitors) on the perimeter fence of the work area. Handheld PID and Nasal Ranger monitoring may also be undertaken. The frequency of this monitoring will be determined by the SCH.
- SCH to identify relevant PPE for the unexpected find with adequate and appropriate PPE located at the entry point into the work area.
- The appropriate PPE is to be documented in the relevant Safe Work Method Statement (SWMS).
- Exit point from the work area are to be through designated decontamination area, the following decontamination protocols should be adopted (this will be assessed by the SCH throughout the process to accommodate site conditions):
 - A water supply with a hose head attached will be used to wash steel cap/gum boots.
 - A misting unit (using water) to spray used disposable coveralls prior to removing/exiting the work area.
 - Waste bags (200µm thick plastic) for the disposal of disposable gloves, coveralls and respirators will be adjacent to the entry area.
 - Provide water for dust suppression and vehicle decontamination where necessary.

Step 3 – Unexpected Finds Works:

- If asbestos contaminated material is identified, the Licensed Asbestos Removal Contractor (LARC) is to remove asbestos under controlled conditions and all materials to be disposed of as asbestos waste.
- LARC to ensure all known and potential contamination are contained within the immediate exclusion zone.
- SCH to inspect materials to identify any visual asbestos containing materials and provide NATA accredited analysis as necessary.
- Independent contractor to undertake waste classification sampling and reporting where required.
- Implement actions identified by the SVC/LVC or Site Auditor as required.
- SVC/LVC will assess the unexpected find and provide advice regarding:
 - Preliminary assessment of the contamination and need for immediate risk reduction.
 - What further assessment and/or risk reduction works are required and how such works are to be undertaken in accordance with the RAPs and/or contaminated site regulations and guidelines.
 - Risk reduction works required (where applicable).
 - Validation works required in accordance with the relevant Remedial Action Plan (RAP) following risk reduction works (if applicable).



Unexpected Finds Protocol

Monitoring of Works:

- SCH is to set up asbestos fibre air monitoring prior to proposed works each day.
- SCH to ensure the licensed asbestos removalist provides full time site supervision and monitor existing controls.
- If asbestos contamination is identified, LARC to provide full time supervision, manage personnel and vehicle decontamination.

Certification of Works:

- On completion of the unexpected finds remedial works, all excess materials are to be cleared from the work area and all plant/equipment is to be cleaned (if asbestos is identified) to the satisfaction of the SCH prior to issuing a clearance certificate. The
- SVC/LVC to ensure the remedial works have been undertaken in accordance with the relevant RAP requirements.
- Once a clearance certificate is issued the area may be re-opened for works under normal site conditions.

Works are not to recommence in the affected area until appropriate advice has been obtained from the SVC/LVC and relevant information has been provided to the Site Superintendent / Principal Contractor to issue notification to recommence.