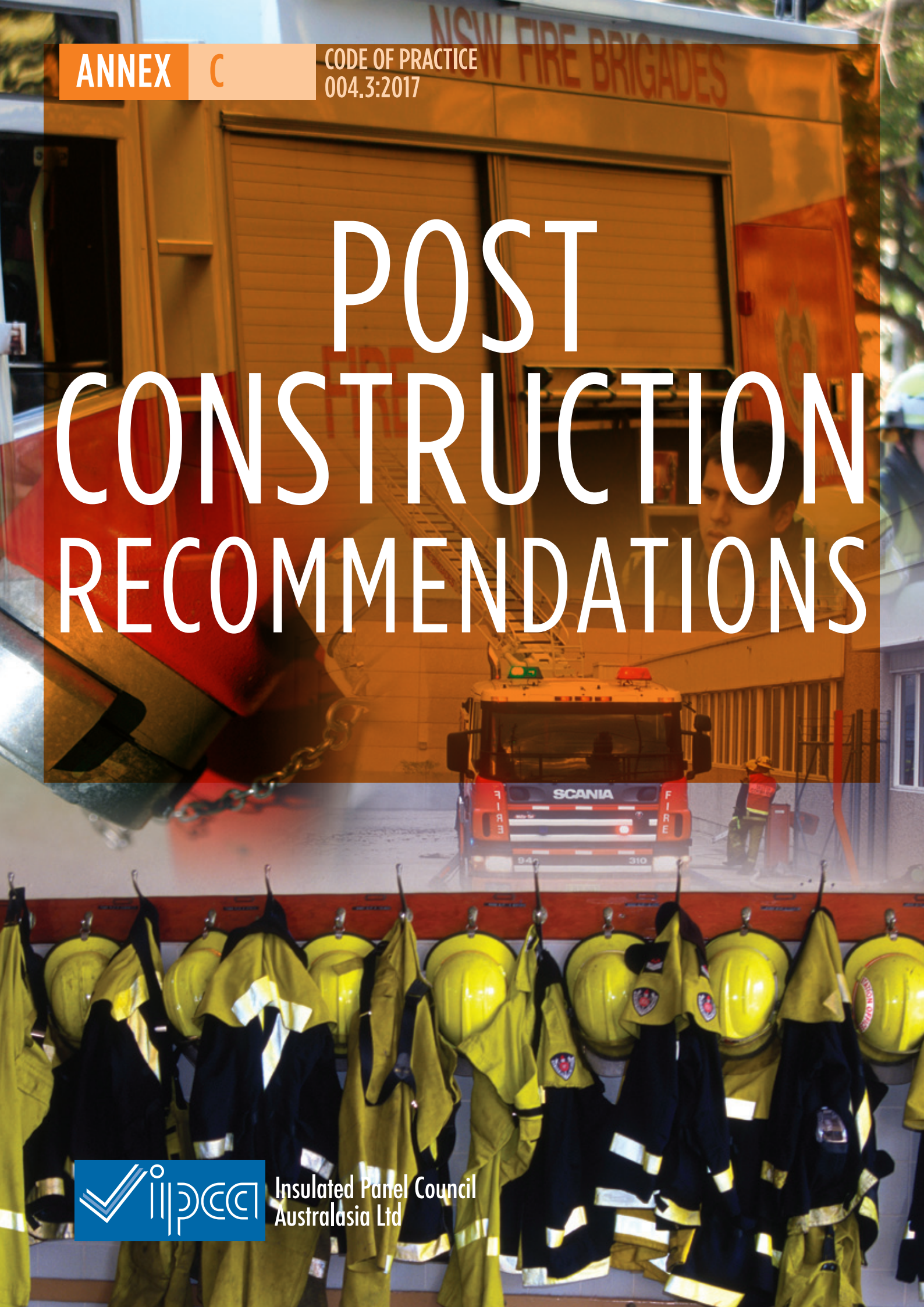
ANNEX C

CODE OF PRACTICE
004.3:2017

POST CONSTRUCTION RECOMMENDATIONS



Insulated Panel Council Australasia Ltd

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POST CONSTRUCTION RECOMMENDATIONS

1. ISP AND EPS-FR PANEL SYSTEM INSPECTION AND MAINTENANCE MANAGEMENT

SCOPE

This procedure requires a regular inspection to be conducted of all areas containing ISP and EPS-FR Panel Systems to ensure that Panels are maintained in good condition, and exposure to potential fire ignition sources is minimised. Defects identified during these inspections must be recorded and an action plan completed to ensure these defects are rectified as a matter of urgency. A written record of these inspections and any rectification work must be kept on file for future reference.

IMPLEMENTING AN ISP AND EPS-FR PANEL SYSTEM MAINTENANCE INSPECTION PROCEDURE:

1. A nominated manager shall be appointed to coordinate the conducting of ISP Maintenance Inspections, and allocate appropriate staff to perform inspections.
2. Each site may be broken down into a number of smaller specific areas, to facilitate making these inspections easier to perform. Numbering each area on a master plan for all the Insulated Sandwich Panel and Expanded Polystyrene Panel Systems within the overall structure would ensure all Panel installed is included in the inspection and maintenance procedures.
3. Each area will be inspected at least every three months.
4. The performance of these inspections, and all identified defects, will be recorded on a Standardised Inspection Form (example on following pages).
5. An action plan will also be recorded on the Inspection Form, detailing all required remediation work, who will be responsible for performing each action, and the date the actions are completed.
6. A copy of the Inspection Form will be provided to all persons required to perform actions on the action plan, and the person conducting the original inspection will also inspect all work on the action plan after completion.
7. Completed Inspection Forms will be returned to the nominated manager for review, and to ensure all appropriate remediation work has been completed.
8. All completed ISP Maintenance Inspection Forms will be kept on file for a minimum of two years.

N.B. It is critical that the core of installed Panel never be left exposed, and rectification work to repair damaged Panels and/or exposed core must always be given a high priority.

Location (Area/Building/Floor) No: _____

_____

Name of Inspecting Officer: _____

Signature of Inspecting Officer: _____

Date of this Inspection: (DD/MM/YYYY) ☐☐ ☐☐ ☐☐☐☐

Date of Previous Inspection: (DD/MM/YYYY) ☐☐ ☐☐ ☐☐☐☐

N.B. To be included with approved Maintenance Management

POST CONSTRUCTION RECOMMENDATIONS

MAINTENANCE CHECKLIST FOR:

PANEL CEILINGS INSPECTION REQUIREMENT	PASS	FAIL
Vapour Seal: Inspect the ceiling and all the joints to make sure that a vapour barrier is maintained. Ice build up on the inside skin shows that there is a vapour seal leak. The vapour seal is on the outside or warmer side of the building.	☐	☐
Ceiling Levels: Check for excessive sagging of the ceiling Panels using a string line or a dumpy level. Excessive sagging may indicate that ice (additional weight) is building up inside the Panels. Immediate action is required as additional weight on ceiling Panels is a safety hazard.	☐	☐
Panel Joints: Check for any corrosion, ice, sweating and inadequate seal.	☐	☐
Ceiling Suspension: Check for corrosion, damage and excessive tightness. Suspension wire or chain should be firm not taut.	☐	☐
Panel Buckling: Check for Panel buckling (structural or thermal). Immediate action is required as buckling in Panels is a safety hazard.	☐	☐
Ceiling to Wall Intersection: Check the Panels, trims, rivets for any corrosion, ice, sweating and structural stress.	☐	☐
Ceiling Penetrations: Check to see if the penetration is properly sealed on the outside surface of the Panel. Check to make sure that there is no load being applied to the Panel.	☐	☐
Water Ponding: Check for water ponding on the ceiling Panels. This is caused by a water leak in the roof or from pipes. Water ponding on the Panels causes them to rust, so immediate action is required.	☐	☐
Safety Signs: Signs showing the safe loading on the ceiling Panels should be clear and visible at all access points to the ceiling.	☐	☐

PANEL WALLS INSPECTION REQUIREMENT	PASS	FAIL
Vapour Seal: Inspect the walls and all the joints to make sure that a vapour barrier is maintained. Ice build up on the inside skin shows that there is a vapour seal leak. Vapour seals are on the outside or warmer side of the Panel.	☐	☐
Wall Alignment: Check walls for straightness; discount the normal thermal bow due to the difference in the inside/outside temperature.	☐	☐
Panel Joints: Check for any corrosion, ice, sweating and inadequate seal.	☐	☐
Panel Corner Joints: Check the Panels, trims, rivets for any corrosion, ice, sweating, inadequate seal and structural stress.	☐	☐
Panel to Floor Joints: Check for corrosion, ice, sweating and inadequate seal.	☐	☐
Panel Expansion Joints: Check for corrosion, ice and sweating.	☐	☐
Wall Panel to Floor Coving: Check for corrosion, ice, sweating and inadequate seal.	☐	☐
Girt Fixings: Check for corrosion, ice, sweating and inadequate seal.	☐	☐
Panel Buckling: Check for Panel buckling (structural or thermal). Immediate action is required as buckling in Panels is a safety hazard.	☐	☐
Pressure Relief Ports: Check for corrosion, excess ice, sweating, inadequate seal and check that the relief port vanes open and close freely. Check that the heater cable for the relief port is operational. Check that there is not an excess of pressure occurring. Examples of insufficient pressure relief include: Difficulties in opening doors and a rush of air when the door is opened.	☐	☐

POST CONSTRUCTION RECOMMENDATIONS

DOORS INSPECTION REQUIREMENT	PASS	FAIL
Door and Door Frames: Check for corrosion and damage from collisions.	☐	☐
Heater Cables (where fitted): Check door and threshold heater cables are operating and are not damaged.	☐	☐
Door Rollers and Tracks: Check that the nylon wheels are running smoothly and freely and there is no wear. Check for corrosion and that the track is straight and there are adequate fixings.	☐	☐
Gaskets and Seals: Check that the seals are not damaged (ripped, torn, out of shape) and that there is an adequate seal and no sweating and no icing up.	☐	☐
N.B.: Gaskets may be cleaned with a mild solution of warm soapy water, and then flushed with water to remove all soap. Solvents should not be used to clean the gaskets and seals.	☐	☐
Safety Bells: Check for corrosion and that the bell is functioning properly.	☐	☐
Swing Doors: Check that the hinges, magnets and locking assembly are free from corrosion and are working properly.	☐	☐
Vertical Up Lift Doors: Check chains, sprockets, linkages, nylon wheels and tracks for corrosion and wear.	☐	☐
Vapour Barrier: Check that the vapour barrier is maintained on the outer skin of the doors. Check the Panels in the doors for damage, as damage can lead to ice and water building up inside the doors, reducing insulation efficiency and increasing weight (subsequently increasing wear of moving parts).	☐	☐

If any of the inspection requirements are marked as a fail, you must complete the Action Plan below.

Comments:

ACTION PLAN

REQUIRED ACTION	BY WHOM	TARGET DATE	COMPLETED DATE

A copy of this report must be provided to each person nominated in the action plan.
When actions are completed, these copies will be returned to the person conducting the inspection for sign off.

I have inspected the above work and to the best of my knowledge, it has been completed satisfactorily.

Inspecting Officer: _____ Print: _____ Signature: _____

Completed forms need to be returned to the Operations Manager for review and filing.

POST CONSTRUCTION RECOMMENDATIONS

2. RISK MANAGEMENT PLANNING

To ensure that the integrity of installed ISP and EPS-FR Panel Systems is maintained, rigorous risk management procedures need to be implemented and strictly followed. These procedures are aimed at preventing potential ignition sources coming in contact with Panels, or exposed inner core materials and ensuring that all normal operational activities as well as other work carried out in areas containing ISP and EPS-FR Panel Systems is controlled and performed in a safe manner.

RISK MANAGEMENT PLAN

The nature of the industry and/or operational activities of the occupier may also create the potential for high fire risk conditions and the issue of 'Safe Work' Permits and 'Hot Work' Permits should be enforced. Cleanliness, i.e. managing dust, waste build up or general storage as well as managing all potential ignition sources associated with plant and equipment or high temperature activities such as cooking, grinding, welding, etc, should all be included in Risk Management Planning along with the issuing of the special permits. Hot Work and Safe Work Permits need to apply to both staff and external contractors.

The following are some of the main causes of ignition that need to be considered in a Risk Management Plan:

(a) Arson;

(b) Poor Electrical Installation;

(c) Hot Working and Welding;

(d) Hot Cooking Processes and Associated Ductwork;

(e) Deep Fat Continuous Fryers;

(f) Ductwork Flues and Filters;

(g) Refrigerator Defrost Systems;

(h) Process Gases;

(i) Rubbish Stored against Walls; and

(j) Battery Charging Areas.

An example of a Risk Management Plan is on the following pages.

INSULATED SANDWICH PANEL 'SAFE WORK' PERMIT

The establishment of an Insulated Sandwich Panel 'Safe Work' Permit System is required to ensure that all work involving ISP and EPS-FR Panel is conducted in a safe manner. This procedure will also ensure that Panels are returned to a safe condition after completion of any work, particularly in regards to the correct sealing of all core materials. It is critical that this procedure be strictly enforced with both staff and external contractors who will be conducting work on or nearby any installed Panels.

An example of an ISP and EPS-FR Panel 'Safe Work' Permit form is attached.

HOT WORK PERMIT

The establishment of a Hot Work Permit System is required as a tool for controlling risks associated with Hot Work performed by staff or external contractors. Hot Work is defined as welding, thermal or oxygen cutting or heating, or other related heat-producing or spark-producing operations, such as grinding. Permitted activities should be strictly supervised and controlled to reduce the risk of fire.

An example of a 'Hot Work Permit' procedure and form are attached.

POST CONSTRUCTION RECOMMENDATIONS

INSULATED SANDWICH PANEL RISK MANAGEMENT INSPECTION

Location (Area/Building/Floor) No: _____

_____

Name of Inspecting Officer: _____

Signature of Inspecting Officer: _____

Date of this Inspection: (DD/MM/YYYY) ☐☐☐☐☐☐☐☐

Date of Previous Inspection: (DD/MM/YYYY) ☐☐☐☐☐☐☐☐

POST CONSTRUCTION RECOMMENDATIONS

LOCATION OF POTENTIAL IGNITION SOURCES	YES	NO
Are Forklift battery rechargers located within 5 metres of Panels?	☐	☐
Is any electrical equipment recess mounted in Panels?	☐	☐
Is any surface mounted electrical equipment less than IP54 Rated?	☐	☐
Has hot cooking equipment and associated ductwork been inspected and maintained?	☐	☐
Have deep fryers been inspected and maintained?	☐	☐
Are flammable gases stored safely?	☐	☐
Have ductwork flues and filters been maintained and cleaned?	☐	☐
Have refrigeration and defrost systems been inspected and maintained?	☐	☐
Is heat producing equipment, or any similar fire hazard, located within 5 metres of Panels?	☐	☐

If the answer to any of the above questions is YES, you must complete the action plan below.

Comments:

ACTION PLAN

REQUIRED ACTION	BY WHOM	TARGET DATE	COMPLETED DATE

A copy of this report must be provided to each person nominated in the action plan. When actions are completed, these copies will be returned to the person conducting the inspection for sign off.

I have inspected the above work and to the best of my knowledge, it has been completed satisfactorily.

Inspecting Officer (print name): _____

Signature: _____

Completed forms need to be returned to the Operations Manager for review and filing.

POST CONSTRUCTION RECOMMENDATIONS

ISP AND EPS-FR PANEL 'SAFE WORK' PERMIT

Location (Area/Building/Floor) No: _____

_____

Type of work to be performed? _____

_____

What equipment is to be used? _____

_____

PENETRATIONS	YES	NO	N/A
Will penetrations be made through Panels or Panel outer skins? How will these penetrations be made?	☐	☐	
Will services such as electric cables or pipes be placed through penetrations? Type of services being installed (e.g. electrical, cold water, hot water, steam, etc.)	☐	☐	
Has consideration been given to ways of avoiding these Panel penetrations? What materials will be used to firstly cap, and then seal these penetrations?	☐	☐	
Are all electrical cables to be enclosed in conduits?	☐	☐	☐
Are metal collars being installed in penetrations for single conduits?	☐	☐	☐
Are penetrations for cable trays being capped, and are the remaining holes fire stopped?	☐	☐	☐
Are the above capping and sealing materials currently available on site? (if NO, permit should not be issued until materials are ordered and received on site)	☐	☐	
If hot flues are being installed, are they double jacketed?	☐	☐	☐
Are electrical switches, or similar items, being directly mounted on Panels?	☐	☐	
If YES, are all these switches, or similar items, at least IP54 Rated?	☐	☐	

WORK SITE MANAGEMENT	YES	NO
Has the area's supervisor and staff been advised of the work to be done?	☐	☐
Is all installed fire detection and suppression equipment functioning correctly?	☐	☐
Is an extra staff member required to perform 'Safety Watch' whilst work is performed?	☐	☐
Is a suitable portable fire extinguisher located within 5 metres of the work area?	☐	☐

POST CONSTRUCTION RECOMMENDATIONS

PROMINENTLY DISPLAY THIS ISP AND EPS-FR PANEL SAFE WORK PERMIT IN THE AREA WHERE WORK IS BEING DONE

This permit is valid from:_____ am/pm on: (DD/MM/YYYY) ☐☐ ☐☐ ☐☐☐☐

to: _____ am/pm on: (DD/MM/YYYY) ☐☐ ☐☐ ☐☐☐☐

Name of employee/contractor performing the work: _____

Person in charge of work (print name):_____

Signature:_____

Permit returned/cancelled by (print name): _____

Signature:_____

COMPLETE THIS SECTION AFTER PROPOSED WORK IS COMPLETED	YES	NO
Have all joiner strips, end, top, bottom and corner capping been replaced?	☐	☐
Have all Panel penetrations been capped and sealed?	☐	☐
Has all Panel core material been capped and sealed? (no core material exposed)	☐	☐
Has all work equipment been removed from the area?	☐	☐
Have all surplus sections of Panel been removed and disposed of?	☐	☐
Is the work area clean and tidy?	☐	☐
Have any required Hot Work Permits been signed off?	☐	☐

The worksite has been inspected by me at the expiry/cancellation of this INSULATED SANDWICH PANEL SAFE WORK PERMIT and declared safe for normal operations to resume.

Inspecting Officer (print name):_____

Signature:_____

THIS COMPLETED SAFE WORK PERMIT MUST BE KEPT ON FILE FOR FUTURE REFERENCE.

POST CONSTRUCTION RECOMMENDATIONS

3. HOT WORK PERMIT PROCEDURE

SCOPE

The establishment of a 'Hot Work' Permit System is required as a tool for controlling risks associated with hot work performed by staff or external contractors. 'Hot Work' is defined as welding, thermal or oxygen cutting or heating, or other related heat-producing or spark-producing operations, such as drilling and grinding. When these operations are conducted in areas containing flammable or combustible material, the risk of fire is significantly increased. External contractors, who are not familiar with the premises, are especially at risk of performing work which may endanger the safety of your company and its assets. Every effort should therefore be made to inform contractors and staff of the risks involved in performing 'Hot Work' on site. Permitted activities should be strictly supervised and controlled to reduce the risk of fire.

IMPLEMENTING A 'HOT WORK' PERMIT PROCEDURE:

(a) A Responsible Officer shall be appointed to be responsible for the safe execution of 'Hot Work' on site, and shall have the authority to direct staff and external contractors in the performance of the 'Hot Work'.

(b) Before a 'Hot Work' Permit is issued, the site shall be thoroughly inspected and made safe by the Responsible Officer. Alternatively, cold methods of carrying out the work shall be adopted.

(c) When the Responsible Officer is satisfied that the 'Hot Work' may safely proceed, he shall issue a 'Hot Work' Permit (example attached) which must be held for inspection, at the work site.

(d) 'Hot Work' shall only be conducted during the period stated on the Hot Work Permit.

(e) Operators conducting 'Hot Work' in hazardous locations shall not work alone, and shall be provided with assistance as considered necessary by the Responsible Officer.

(f) A suitable portable fire extinguisher shall be located not more than 5 metres from the work site whilst the 'Hot Work' is carried out.

(g) A final inspection of the site will be conducted by the Responsible Officer, after the work has been completed, to ensure that the area is safe and no smouldering materials remain. The Responsible Officer will then sign off the 'Hot Work' Permit.

(h) All completed 'Hot Work' Permit Forms will be kept on file for a minimum of two years.

Further information on 'Hot Work' Permits, 'Hot Work' in hazardous areas, and preparation for 'Hot Work' on equipment which has contained flammable or explosive substances, is contained in Australian Standard AS 1674.1—1997 'Safety in welding and allied processes'.

POST CONSTRUCTION RECOMMENDATIONS

HOT WORK PERMIT

Location (Area/Building/Floor) No: _____

What Hot Work is covered by this permit? _____

What equipment is to be used? _____

COMPLETE THIS SECTION BEFORE PROPOSED WORK IS COMPLETED	YES	NO
Have drains, pits and depressions been checked, isolated and sealed?	☐	☐
Have combustible materials been removed from the work area or made safe?	☐	☐
Have tanks, valves, vents and pipelines been blanked off or effectively isolated?	☐	☐
Is ventilation adequate?	☐	☐
Are spark/flash screens in place?	☐	☐
Have leaks from valve/pump glands, flanges etc. been controlled?	☐	☐
Have pressure relief valves been vented to safe areas?	☐	☐
Has contaminated ground been covered?	☐	☐
Has fire equipment been checked and laid out?	☐	☐
Is a fire pump or Fire Brigade on standby?	☐	☐
Is a fire watch required (30 minutes after completion of work) and organised?	☐	☐
Is wind direction satisfactory for 'Hot Work' to be done?	☐	☐
Has product movement been stopped in the 'Hot Work' area?	☐	☐
Has site of 'Hot Work' been isolated/roped off?	☐	☐
Are all wall and floor openings sealed?	☐	☐
Is 'Hot Work' equipment in good repair?	☐	☐
Are combustibles on other side of wall moved away?	☐	☐
Is construction non-combustible and without combustible coverings?	☐	☐

POST CONSTRUCTION RECOMMENDATIONS

HOT WORK PERMIT PROCEDURE FORM

This permit is valid from: _____ am/pm on: (DD/MM/YYYY) ☐☐ ☐☐ ☐☐☐☐

to: _____ am/pm on: (DD/MM/YYYY) ☐☐ ☐☐ ☐☐☐☐

Name of employee/contractor performing the work: _____

Permit received by (print name): _____

Signature: _____

Person in charge of work (print name): _____

Signature: _____

Permit returned/cancelled by (print name): _____

Signature: _____

PROMINENTLY DISPLAY THIS HOTWORK PERMIT IN THE AREA WHERE WORK IS BEING DONE.

The worksite has been inspected by me at the expiry/cancellation of this HOT WORK PERMIT and declared SAFE for normal operations to resume.

Responsible Officer (print name): _____

Signature: _____

THIS COMPLETED HOT WORK PERMIT MUST BE KEPT ON FILE FOR FUTURE REFERENCE.