10. Appendix 1 WPCG Activity Matrix

This activity matrix should be used as guidance to support interpretation of the requirements of this procedure for specific tasks. It is not exhaustive of all possible tasks. If the requirements are not clear, WPCG should be consulted.

	ENERGY ISOLATION **(refer to WPCG Member Company and local regulations for additional requirements relating to isolation of services)**													
TASK	**Contractor JSA / SWMS**	**Work Clearance**	**Minor Hot Work Minimum Controls Checklist**	**Minor Work @ Height Minimum Controls Checklist**	**Minor Ground Disturbance Minimum Controls Checklist**	**Work Permit**	**Senior Work Permit Officer**	**Hot Work Certificate**	**Work @ Height Certificate**	**Ground Disturbance Certificate**	**CSE Certificate**	**Lifting Certificate**	**Isolation Plan**	**OTHER**
Isolation of energy (e.g. mechanical, process, and electrical) carried out by an approved contractor. This includes blinding and de-blinding, electrical isolation, removal of rotating equipment.	✓	✓											✓	
Any cold work involving breaking containment of a flammable or combustible liquid storage system in situ where it has been confirmed the system is no longer under pressure. This includes breaking flanges on tanks and piping.	✓	✓											✓	
Breaking Containment where it cannot be confirmed that the equipment has been depressurised	✓	✓				✓							✓	
Opening storage or process plant/equipment where there is a risk of uncontrolled discharge of hazardous product or the work is not covered by a normal operating procedure	✓	✓				✓							✓	
Work on LPG storage tanks (above or below ground) which involves venting, flaring or purging of gas	✓	✓				✓	✓						✓	
Lower risk work on LPG systems, such as maintenance, removal or replacement of LPG system parts which have isolation valves that eliminate the need for breaking containment, depressurising or venting of gas.	✓	✓											✓	
Work on diesel or petrol storage tanks (above or below ground) which involves purging	✓	✓				✓								
Isolation and removal of safety critical equipment if associated with equipment that will remain in service. Includes any work that requires the by-passing or over-riding of critical protective devices. Examples may include breaching the integrity of a tank bund wall, isolating a section of a fire water piping, removal of pressure/thermal relief valves, overriding alarms, isolating emergency shutdown components that render it inoperable, removing or covering tank vents, etc.	✓	✓				✓	✓						✓	Follow member company procedures for MOC & overriding safety critical controls, as applicable.
Work on high voltage (>1000V) electrical system covered by a High Voltage Electrical Permit under the supervision of a Specialist Contractor.	✓	✓				✓							✓	HV Forms (from specialist contractor)
Live Electrical Work, other than fault finding	✓	✓				✓								Work to be conducted in accordance with specific WPCG member requirements for live electrical work
Other electrical work that is not hot work in a hazardous area, for example: - Work on or near energised electrical conductors less than 50 V AC or 120 V DC (Extra low voltage electrical system) - Work on isolated electrical equipment within safe approach distance of other energised components less than (<1000 V AC or <1500 V DC i.e. low voltage electrical system) - Fault finding	✓	✓												Work to be conducted in accordance with specific WPCG member requirements for fault finding

GROUND DISTURBANCE

(refer to WPCG Member Company and local regulations for additional requirements relating to Ground Disturbance)

TASK	Contractor JSA / SWMS	Work Clearance	Minor Hot Work Minimum Controls Checklist	Minor Work @ Height Minimum Controls Checklist	Minor Ground Disturbance Work Minimum Controls Checklist	Work Permit	Senior Work Permit Officer	Hot Work Certificate	Work @ Height Certificate	Ground Disturbance Certificate	CSE Certificate	Lifting Certificate	Isolation Plan	OTHER
Excavations/Trenching to a depth <1.2m (other than drilling, boring or coring)	✓	✓			✓								*	
Excavations/Trenching ≥1.2m deep (other than drilling, boring or coring)	✓	✓				✓				✓			*	
Underground horizontal directional drilling and boring	✓	✓				✓				✓			*	
All other ground disturbance conducted in **full compliance** with the requirements of the WPCG Minor Ground Disturbance Minimum Control Checklist. Examples include NDD, hand digging, drilling, boring, coring, concrete cutting	✓	✓			✓								*	Refer also to additional requirements for hot work.
All other ground disturbance that **cannot or will not** be conducted in compliance with the requirements of the WPCG Minor Ground Disturbance Minimum Control Checklist.	✓	✓				✓				✓			*	

***Note:** In order to safely perform the work and confirm isolations are completed, any services identified on the Ground Disturbance Certificate as requiring isolation prior to work commencing **may also require a separate isolation plan**, depending on the complexity of isolations required, in accordance with WPCG Member company requirements.

Refer also to additional requirements for hot work, where applicable, as some forms of ground disturbance inside hazardous areas will require the WPCG Minimum Control Checklist for Minor Hot Work or a WPCG Work Permit and Hot Work Certificate depending on the work, equipment and controls in place.

CONFINED SPACE ENTRY

(refer to WPCG Member Company and local regulations for additional requirements relating to Confined Space Entry)

TASK	Contractor JSA / SWMS	Work Clearance	Minor Hot Work Minimum Controls Checklist	Minor Work @ Height Minimum Controls Checklist	Minor Ground Disturbance Work Minimum Controls Checklist	Work Permit	Senior Permit Officer	Hot Work Certificate	Work @ Height Certificate	Ground Disturbance Certificate	CSE Certificate	Lifting Certificate	Isolation Plan	OTHER
Entry into a confined space (as defined by State regulations) except for storage tanks, LPG vessels or process vessels (above or below ground). Examples include storm water management systems, oil-water separators with open tops or lids/covers, tank or vessel turrets/chambers, or grease traps. Also includes entry with associated cold work.	✓	✓				✓					✓		*	
Entry into storage tanks, LPG vessels or process vessels including enclosed oil-water separators eg SPEL units (above or below ground). Also includes entry with associated cold work.	✓	✓				✓	✓				✓		*	
Entry into a confined space with associated hot work (as defined by State regulations).	✓	✓				✓		✓			✓		*	A Senior Permit Officer is required if the confined space is a storage tank, LPG vessel or process vessel (above or below ground).
Entry into a confined space with work at height	✓	✓				✓			✓		✓		*	A Senior Permit Officer is required if the confined space is a storage tank, LPG vessel or process vessel (above or below ground).
Entry into an excavation which is deemed a confined space	✓	✓				✓					✓		*	A Ground Disturbance Certificate may be required for the excavation.
Entry into underground aviation valve chambers	✓	✓				✓	✓				✓		*	A Work At Heights Certificate may be required.
Inert Entry	Not allowed without specific WPCG Member Company Authorisation													

***Note:** In order to safely perform the work and confirm isolations are completed, any services identified on the Confined Space Certificate as requiring isolation prior to work commencing **may also require a separate isolation plan**, depending on the complexity of isolations required, in accordance with WPCG Member company requirements.

LIFTING OPERATIONS

(refer to WPCG Member Company and local regulations for additional requirements relating to Lifting Operations)

TASK	Contractor JSA / SWMS	Work Clearance	Minor Hot Work Minimum Controls Checklist	Minor Work @ Height Minimum Controls Checklist	Minor Ground Disturbance Work Minimum Controls Checklist	Work Permit	Senior Permit Officer	Hot Work Certificate	Work @ Height Certificate	Ground Disturbance Certificate	CSE Certificate	Lifting Certificate	Isolation Plan	OTHER
Higher Risk Critical Lifts, including: • The approach/removal slew path for the lift is obstructed. • The lift involves a mobile crane with a crane utilisation ≥80%. • The lift involves lifting personnel (i.e. in a "man cage" / workbox). • The load has a centre of gravity above the lifting point, or a high centre of gravity with the potential to become unstable. • The lift has a restricted boom clearance (<1m) • The load is to be lifted directly over an occupied building or above ground equipment/plant containing flammable or combustible fuels, with a crane utilisation ≥70% • The lift may be affected by proximity hazards (i.e. public road, within powerline • exclusion zones as defined by local regulators, etc.). Refer local regulations and Safe Work Australia guides for working in the vicinity of overhead electric lines. • Tandem/multiple crane lifts in which at least one crane cannot take the full load. • The load is extremely valuable or irreplaceable. • The load contains bulk quantities of hazardous material. • The lift involves jacking above ground tank walls/roofs or any load that is not self-supporting. • The load is a non-rigid object (e.g. underground tank that has lost structural integrity, or above ground Depot tank shell). • The lift involves Concrete Tilt Panel erection.	✓	✓				✓	✓					✓		Lift plan. Some more complex lifts may require an Engineering Lift Study to determine how to lift the load. Refer also to additional requirements for hot work, work at heights and/or confined space entry, where applicable
Critical Lifts, including: • The lift is blind. • The lift is conducted into/out of a confined space or excavation. • The load is an awkward shape or has a large sail area. • The load is unevenly distributed, whereby the suspension point is not directly above the load centre of gravity. • The load is fragile, its integrity uncertain, or is it difficult to sling. • The lift requires slings to be used at an angle of below 60° from horizontal. • The lift involves jacking tank walls/roofs or any load that is self-supporting. • The lifting points to be used are NOT certified. • It is a multi-crane lift where both cranes can individually take the full load. • The load is to be lifted directly over an occupied building or above ground equipment/plant containing flammable or combustible fuels, with a crane utilisation of <70% • An excavator, forklift or telehandler will be used with temporary installed attachments to lift the slung load.	✓	✓				✓						✓		Lift plan Refer also to additional requirements for hot work, work at heights and/or confined space entry, where applicable.
Simple lifting operations, to which none of the above apply. For example: • The load is pre slung or very easily slung, with no external factors that complicate the operation with the use of forklift, non-slewing crane (e.g. Franna), vehicle loading crane (e.g. HIAB) • Personnel involved are competent and well-practiced in the lifting operation • The load has certified anchor points • Lifting package goods including drums and IBC's Includes lifting of monolith signs and small/simple lifts for general maintenance works, unless aspects of the lift meet the classification criteria above as a critical or higher risk critical lift.	✓	✓												Refer also to additional requirements for hot work, work at heights where applicable.

WORKING AT HEIGHT

(refer to WPCG Member Company and local regulations for additional requirements relating to Working at Height)

TASK	Contractor JSA / SWMS	Work Clearance	Minor Hot Work Minimum Controls Checklist	Minor Work @ Height Minimum Controls Checklist	Minor Ground Disturbance Work Minimum Controls Checklist	Work Permit	Senior Permit Officer	Hot Work Certificate	Work @ Height Certificate	Ground Disturbance Certificate	CSE Certificate	Lifting Certificate	Isolation Plan	OTHER
Work in an EWP 11m or more above ground level.	✓	✓				✓			✓					Refer also to additional requirements for hot work, where applicable
Erection, modification and dismantling of scaffolding >4m or any suspended scaffold.	✓	✓				✓			✓					
Major work at height (≥ 2m in bp and Ampol, or ≥ 1.8m in Viva Energy) within 2m of an exposed edge, including the use of Industrial Rope Access systems	✓	✓				✓			✓					
Use of Industrial Rope Access systems	✓	✓				✓			✓					
Working from a workbox (man basket) attached to a lifting device such as a crane or forklift.	✓	✓				✓	✓		✓					Refer also to additional requirements for hot work and lifting operations, where applicable
All other work at height conducted in **full compliance** with the requirements of the WPCG Minor Work at Height Minimum Control Checklist. Examples include: • Use of EWPs (cherry pickers, boom lifts, scissor lifts) <11m above the ground, • Basic scaffolding from ground level: erecting, dismantling or modifying up to 4m in height • Erecting, dismantling or modifying of portable staging (mobile scaffolding) up to 4m in height • Working from within a scaffold or portable staging (mobile scaffold) • Roof access for minor maintenance within 2m of an unprotected edge • Use of portable ladders	✓	✓		✓										Refer also to additional requirements for hot work, where applicable
All other work at height that **cannot or will not** be conducted in compliance with the requirements of the WPCG Minor Working at Height Minimum Control Checklist.	✓	✓				✓			✓					Refer also to additional requirements for hot work, where applicable

HOT WORK

(refer to WPCG Member Company and local regulations for additional requirements relating to Hot Work)

TASK	Contractor JSA / SWMS	Work Clearance	Minor Hot Work Minimum Controls Checklist	Minor Work @ Height Minimum Controls Checklist	Minor Ground Disturbance Work Minimum Controls Checklist	Work Permit	Senior Permit Officer	Hot Work Certificate	Work @ Height Certificate	Ground Disturbance Certificate	CSE Certificate	Lifting Certificate	Isolation Plan	OTHER
Use of equipment certified for use in the hazardous area that the work is to be undertaken	✓	✓												
Hot work outside hazardous areas and without the potential to impact on hazardous areas.	✓	✓												
Use of air driven tools or equipment, with air compressor located outside the hazardous area.	✓	✓												
Hot work in a hazardous area **conducted in full compliance** with the WPCG Minor Hot Work Minimum Controls Checklist. Examples include: • Use of diesel powered equipment or tools • Use of mains or battery powered equipment or tools that are not certified for hazardous areas • Use of diesel powered or electrically driven mobile plant	✓	✓	✓											Refer also to additional requirements for ground disturbance or work at height, where applicable
Opening certified enclosures of hazardous area rated equipment inside a hazardous area if the equipment will not be electrically isolated.	✓	✓				✓		✓						
Hot work in hazardous areas that involves the use of matches or lighters, or creation of open flames and uncontrolled sparks. This type of work includes use of blow torches, oxy acetylene, grinding, soldering, naked flames, welding or any similar activity that creates an uncontrolled ignition source.	✓	✓				✓		✓						
Petrol or LPG driven/powered equipment including mobile plant, generators, chainsaws, etc. in hazardous areas. Use of combustible engines indoors	✓	✓				✓		✓						
Use of combustible engines indoors	✓	✓				✓		✓						Refer also WPCG Member requirements
High pressure water blasting on live equipment containing fuel (including LPG).	✓	✓				✓		✓						
All other water blasting (e.g. pressure cleaning concrete forecourt with water, or hydro-blasting of isolated and drained equipment)	✓	✓												Refer also to additional requirements for hot work e.g for the use and location of equipment
Abrasive blasting (e.g. garnet or grit blasting) on structural steel, outside hazardous area.	✓	✓				✓								
Abrasive blasting (e.g. garnet or grit blasting) on live or non-isolated equipment in fuel service	✓	✓				✓	✓	✓						
All other abrasive blasting in hazardous areas	✓	✓				✓		✓						
Inter-tank transfers of fuel (including product filtering) or bulk petroleum product transfers to/from road vehicles not covered by oil company procedures including transfer of contaminated or cross over (shandy) products.	✓	✓				✓		✓						
Removing water from diesel or petrol tanks using an air diaphragm pump	✓	✓												Refer also to additional requirements for hot work e.g for the use and location of equipment
Environmental Remediation Systems - Restarts after non-routine shut downs & commissioning of new systems. Note: Each project's safety plan will indicate what constitutes a routine shut down cause. All other shut down causes are deemed non-routine and will require a Work Permit prior to restarting.	✓	✓				✓		✓						
Environmental Remediation Systems - Restarts, operation and shut downs under routine operating conditions and in accordance with WPCG Minimum Controls Checklist. Note: Each project's safety plan will indicate what constitutes a routine shut down cause. All other shut down causes are deemed non-routine and will require a Work Permit prior to restarting.	✓	✓	✓											
Use of vacuum trucks to remove materials containing combustible or flammable materials irrespective of hazardous area rating (including fuel spills, shandy contamination and fuel/water mixes)	✓	✓				✓		✓						Refer also WPCG Member requirements
Hot tapping – includes hydrocarbon/chemical or toxic service and non-hazardous service	✓	✓				✓	✓	✓						Refer also WPCG Member requirements
Any other hot work inside a hazardous area that **cannot or will not be** undertaken in compliance with WPCG Minor Hot Work Minimum Controls Checklist.	✓	✓				✓		✓						

OTHER WORK

(refer to WPCG Member Company and local regulations for additional requirements)

TASK	Contractor JSA / SWMS	Work Clearance	Minor Hot Work Minimum Controls Checklist	Minor Work @ Height Minimum Controls Checklist	Minor Ground Disturbance Work Minimum Controls Checklist	Work Permit	Senior Permit Officer	Hot Work Certificate	Work @ Height Certificate	Ground Disturbance Certificate	CSE Certificate	Lifting Certificate	Isolation Plan	OTHER
Meter proving and calibration in retail sites	✓	✓												
Meter proving and calibration at fuel Depot gantries using volumetric method	✓	✓				✓								
Meter proving and calibration at fuel Depot gantries using in-line master meter	✓	✓												
Removal of gaskets manufactured from asbestos containing material, performed in accordance with WPCG member company procedures	✓	✓												
The physical disturbance, removal or demolition, by certified Asbestos Contractors, of structures or materials that may contain Asbestos, excluding sampling. This includes: • Any work involving bonded asbestos (e.g. asbestos cement sheeting), removal and disposal in compliance with approved contractor procedures, or by a certified asbestos contractor. • Any work involving friable Asbestos removal and disposal by an approved and certified asbestos contractor.	✓	✓				✓								
General maintenance and construction cold work or hot work outside hazardous areas and not listed in another category that is not conducted in accordance with a WPCG member company procedure for the site. Examples include: • Asbestos sampling in accordance with the relevant code of practice • Regular servicing of fire extinguishers, testing of emergency shutdown switches and fire pumps conducted • Minor plumbing repairs without interruption of water supply to fire systems • Installing/replacing signage at ground level with hand tools only. • Visual inspections performed • Gardening using hand tools • Painting by hand brush • Asbestos sampling • Simple demolition of small/simple structures such as sheds with hand tools	✓	✓												
Complex demolition such as: • Demolition of large/complex structures such as canopies, houses, workshops and buildings. • The use of controlled collapse techniques, shearing and breaking. • Removal of load bearing walls or structures.	✓	✓				✓								
Use of ionizing radiation (e.g. radio graphing welds)	✓	✓				✓								
Work on structures containing leaded paint where the work does disturb the paint	✓	✓				✓								
Work on structures containing leaded paint where the work does NOT disturb the paint	✓	✓												
Pressure / leak / hydro testing of hydrocarbon service equipment (EIT) in line with manufacturer requirements and applicable company standards/procedures	✓	✓												Refer also to additional requirements for hot work or work at height, where applicable.
Pressure / leak / hydro testing of pipelines and pressure vessels above the Maximum Allowable Operating Pressure (MAOP)	✓	✓				✓								Refer also to additional requirements for hot work or work at height, where applicable.
Work in the Excluded areas as defined in the WPCG Permit to Work Procedure. This includes work under the management and control of a Principal Contractor if the requirements of Section 5.1 are met.	✓													

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