Standard Operating Procedure

Purpose
This procedure addresses the process and tactical considerations for emergency responders to EV Fires in Confined Spaces

Scope
Applies to all fire crew/ personnel at incidents involving Electric Vehicles in confined spaces, such as garages and indoor parking complexes, underground car parks and enclosed structures.

Initial Response Procedure
- OIC conduct a Size Up
- Ensure full PPE, c/w Breathing Apparatus
- Identify and note location, access points, and ventilation routes of incident
- Confirm the presence and type of electric vehicle involved (if possible)
- Assess danger to public and responders, trapped persons, exposures
- Utilise TIC to identify risk
- Delegate roles (ventilation, reconnaissance, entry)
- Liaise with site management for floor plans, power isolation

Key Priority: Early control of the environmental conditions (smoke and heat) using mechanical ventilation.

OIC and F&R Actions
- Identify or create a suitable exhaust point for smoke release
- Position early Positive Pressure Ventilation (PPV) at exhaust exit
- Deploy water lines near exhaust vents to suppress and control turbulent heated gases, if required.

Firefighting Tactics:
- Utilise gas cooling tactics Ie short, pulsed fog sprays
- Monitor rollover, and gas layering
- Do not directly engage vehicle fire until conditions are stabilised
- Deploy `*Car Fire Blanket*` over vehicle.
- Monitor air quality if in enclosed underground systems

Safety Considerations:
- Maintain emergency egress routes and backup teams
- Fire Blankets do not extinguish battery cell fires but contain rapid heat growth
- Thermal runaway
- Toxic smoke
- Re-ignition potential
- Hidden burning in battery casing

Post-Containment Actions
When conditions are stable:
- Evacuate crews and monitor smoke and gas clearance through ventilation
- Conduct full risk assessment for potential towing or relocation of the vehicle
- Consider surrounding vehicle repositioning to prevent further exposure
- Remain aware of ongoing re-ignition risk from battery system