ACAPMA

Best Practice Guidelines

Retail Fuel Site Flood Preparation and Response

ACAPMA
The Voice of Downstream Petroleum

ACAPMA
Australasian Convenience and Petroleum Marketers Association

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1. SCOPE OF CONSIDERATION

This Guideline has been developed to provide guidance for operators and/or owners of retail service station site(s) to:

- prepare their site(s) in advance of a flood event
- minimise damage to the site equipment and their business reputation during and as a result of a flood inundation
- minimise the disruption to trade period
- ensure all site systems and products are safe and fit for purpose before recommencing operation.

The focus of this Guideline is the site fuel system and related equipment. The preparation and post inundation inspection of these items will involve activities and work by specialist trades that will also be able to inspect/ assess the condition for safe operation of many of the site systems and equipment for shop and food sales at the same time. For this reason, the work guidelines cover all aspects of the site operation.

This Guideline does not provide fully detailed workplace health & safety requirements and trades requirements specific to individual States and Territories of Australia. The work practices provided in this Guideline should be read in conjunction with these specific requirements applicable in your location(s).

2. OVERVIEW

2.1 POTENTIAL IMPACT OF A FLOOD EVENT

When floods occur, the primary objective of business owners is to recommence trading as soon as possible. The pressure to re-open quickly is further intensified for businesses that provide services that are “essential” to the community’s recovery process including grocery businesses, chemists and service stations. But in their haste to reopen, service station businesses risk creating situations that can have long term reputational consequences i.e., selling fuel that is contaminated with water.

Should this occur the impact on business trading revenue will linger well after the flood waters have gone. The best approach is to avoid selling contaminated fuel in the first place. That requires taking all reasonable precautions and completing all appropriate checks before re-opening the service station to the public.

Many of the recommended checks are common sense:

- the flooded site should be cleaned and inspected for signs of obvious damage
- No-one should enter the site if there are obvious signs of structural damage to the canopy or building, if overhead wiring is down, or if access and egress to the site is impeded by flood debris or damaged road and site pavement

Once these critical and obvious issues have been addressed work can progress to the more detailed inspections, assessments and repair of individual site services, equipment items and systems. This activity is presented in detail in Sections 3 & 4 of this Guideline.

A flood event can impact the site, installed mechanical/ electrical equipment and products for sale in several ways. There is potential damage from immersion in water, silt and mud ingress into equipment, physical damage from the velocity of the muddy water flowing across the site and physical impact damage from water borne debris collision with site structures and equipment items. All of the site, structures, equipment, products and services should be inspected, assessed and repaired/ replaced for all of these potential sources of damage.

2. OVERVIEW

2.2 DIFFERENT LEVELS OF FLOODING

The Guideline has been developed to cover 3 different levels of flood inundation over a site. These levels have been chosen as they represent the different impacts on site equipment and the differing level of inspection, assessment and remedial work likely as a result of the flood inundation.

Stage 1

Water over the site paving and fuel forecourt, may also enter buildings covering the floor - nominal <0.5m depth. At this depth water should not impact electronics of fuel dispensing equipment.

Stage 2

Water enters buildings, not into roof space & submerges the forecourt fuel dispensing equipment – nominal >0.5m to 3m depth

Stage 3

Water enters building roof space & submerges the fuel tank vent pipes – nominal >3m depth

2.3 PREPARATION FOR FLOODING

Preparation is difficult as often there is limited warning of what will occur. Warnings cannot always be precise as storms are natural events and often vary from prediction. Flood levels following storm(s) are more reliable as the volume of water 'dumped' on the catchment is known allowing accurate assessment of water run-off and timing of river level peaks as the flood water flows through the catchment and along the streams and rivers.

As you will see in Section 3 of the Guideline many of the recommended preparations require urgent work on site from your maintenance support contractors. These contractors are not exclusively available to you and are likely to be in heavy demand when a flood event is imminent. If preparation work is not possible for the forecourt fuel dispensers, then try to complete the structure and shop stock and records preparation and protection.

In the event that Stage 2 or Stage 3 flooding is predicted and you are unable to remove and relocate the forecourt fuel dispensers then we recommend you contact your fuel system service contractor and/ or a dispenser manufacturer to investigate earliest availability of replacement equipment.

2.4 HAZARDS

Flood inundation of a site can create a wide range of hazards:

- Water immersion of electrical and electronic equipment
- Slip, trip fall potential from slippery, wet mud and silt across the site
- Silt and mud ingress into equipment preventing operation of mechanical items
- Silt/ mud clogging of flameproof electrical enclosures for equipment like forecourt fuel dispensers. NOTE: flameproof does not mean waterproof.
- Physical damage to site structures from running water and water borne debris
- Electrocution from damaged overhead wiring in the street and building connections, active site power generation from solar power systems and similar, with or without battery, or from water ingress to the site electrical switchboard and equipment
- Pavement damage and erosion
- Damage to site drainage and sewer connections
- Fuel product degradation from water ingress to storage tanks and pipe systems. This is a more critical hazard for ethanol blended petrol stocks causing phase separation.
- Fuel product pollution from flooding of pump and tank containment pits, forecourt effluent storage/ treatment equipment and pits
- Fuel product pollution from flood water floating accumulated minor fuel product spills/ releases from the site soil
- Accumulated rubbish washed onto site
- Animals like snakes, toads, rats seeking shelter from flood waters

All these hazards MUST be considered and managed during post flood inspections and remedial works. Refer to the Site Inspection Checklists attached for specific assistance with managing these hazards.

You must also carefully consider the economic hazards of cleaning and repair of equipment against the age of the equipment, recommendations of the manufacturer(s) and replacement costs. It is expensive to inspect and restore flame proof electrical enclosures on equipment installed and operated in hazardous areas. It is also expensive and time consuming to clean the heat dissipating fins (radiators) on HVAC equipment. Often the clean and refurbish time and costs exceed the replacement cost of an item.

2.5 LEGAL OBLIGATIONS

As a retail trader of fuel and food products legal obligations exist in 4 key areas of Regulation:

- WHS Regulations – provide a safe workplace
- Pollution Regulation – under the POEO legislation the site operation must protect the environment and not knowingly pollute
- ACCC – must only sell products that are fit for sale at a reasonable price.
- Food safety – applies to any business that handles any type of food for sale or the sale of food. The standards impose health and hygiene obligations on food handlers

Your obligations as an employer, site owner/ operator in these areas apply through your preparation of the site for a flood event and also through the inspection, assessment and remedial action works carried out after the flood inundation is over. As noted in the Inspection Process Checklists you must confirm structural integrity and safety and the electrical safety of the site before any personnel enter the site and commence any other inspection works.

Your obligations to prevent pollution will be a difficult compliance issue as all petrol and diesel fuels are lighter than water and will float out of pits, drains and the ground and can be carried anywhere across the site and downstream of the site in a flood event.

Your food safety obligations cover storage of food items in preparation for and during the event and the restocking of your site and sale of food items after the flood event. This may lead to difficult situations with your customers, post the flood event. Food supplies may be short in your area and you may have non-perishable food items that have suffered flood immersion but have not been inspected and approved for sale.

2.6 COMMERCIAL CONSIDERATIONS

The pressure to re-open quickly is intensified for businesses that provide services that are “essential” to the community’s recovery process including grocery businesses, chemists and service stations. Do not be too hasty to reopen. If you do, service station businesses risk creating situations that can have long term reputational consequences i.e., such as selling fuel that is contaminated with water.

Should this occur the impact on business trading revenue will linger well after the flood waters have gone. The best approach is to avoid selling contaminated fuel or suspect food items in the first place. That requires taking all reasonable precautions and completing all appropriate checks before re-opening the service station to the public.

If your site sells E10 and or E85 petrol it is unlikely you will be able to provide those fuels for sale at the same time as standard petrol and diesel fuel grades. This may be seen by some customers as delaying the availability of the lower cost fuel grades. Please try to make them aware of the potential impact of water ingress to storage tanks containing ethanol blended fuels and the need for extended checking processes and potential resupply of the product after a flood event. The ethanol in the fuel likes to mix with water, not float on it and will phase separate if water is present in the tank. As the petrol is lighter than the water or phase separated fuel it sinks to the bottom of the tank where the fuel pipe intakes are positioned. The customers vehicle will not run on a mix of water and ethanol. The reason for the additional checking processes is to avoid damaging the customer’s vehicle fuel system, not deliberately withholding the lower cost fuel grades.

3. PREPARING THE SITE

3.1 EMERGENCY EVENT INFORMATION

It is strongly recommended that the site owner(s)/ operator(s) monitor all emergency services warnings and information broadcasts in advance of an impending weather and flooding event to be fully informed of the possible impact on their site(s) and in the event of flooding the expected depth of inundation over the site(s).

This will require constant attention as the emergency event develops as available information will change and updates are posted regularly. Early awareness of potential flooding over a site allows the maximum time to prepare the site and minimise potential damage to the site facilities and operation.

Stage 1 flooding should not impose physical damage on the site. This event should not require substantial preparation effort. Sandbagging of building entrances & lifting stock off the floor should be sufficient.

In comparison Stage 2 or 3 flooding will put the site at risk of major damage and sustained disruption to ability to trade. Every effort should be made to complete the recommended preparation and protection of the site.

3.2 CONTRACTOR SUPPORT

Your site(s) will not be the only site(s) potentially impacted by the predicted flood event. Many of the recommended site preparation actions require work by specialist contractors. This is most critical for fuel system preparation work.

It is strongly recommended that you establish and maintain a good working relationship with your service support contractors and especially your fuel system maintenance contractor. Contractors are more likely to respond to requests for assistance from business operators they know and work for regularly.

3.3 EMERGENCY SERVICES ASSITANCE

All states and territories in Australia have an SES, a State Emergency Services organisation.

The SES, while trained in emergency management and assistance activity they are not fully trained in work site hazards unique to a service station. Use of SES personnel on a site as part of the preparation for a flood event will require supervision and awareness training in hazard zones, restrictions for smoking on site and restrictions for use of spark generating equipment items.

If you are unable to provide the site induction training and supervision of SES personnel or their team leader(s) then their assistance should be limited to the supply of and potentially the installation of sandbags and protective plastic sheeting.

3. PREPARING THE SITE

3.4 RECOMMENDED ACTIONS

Suggested key tasks in preparation for a flood are outlined below and are included in the Pre Flood Checklist in the Attachments. Key tasks include:

- Turn off power to all non-critical areas – retain power only to food fridges & freezers if the stock can't be relocated. Alternate is to move food stock into a refrigerated/ freezer shipping container off site.

  If your site has a solar power system or solar with battery storage system shut the system down to prevent solar power generation & battery sourced power being supplied into damaged/ still submerged electrical equipment once the sun starts shining again after the initial storm(s).

- Check condition and replace as required cap seals on UST dip tubes, fill pipes and all other tank fittings such as ATG and interstitial space monitoring sensors.
- If you have a multi-point fill box or secondary contained individual tank fills place sandbags on the fill point lid(s) to prevent them being opened by flood waters & flushing out any residual fuel or providing an entry point for water into the fuel tanks.
- Dip and water paste test all fuel tanks on site to provide check reference for product and water levels for comparison to post flood inspection. If the site has ATG run tank report with this information.
- If possible disconnect and remove forecourt pumps to prevent destruction from water entering the electronics. Excluding the old BP Apollo pumps which have the pump equipment in a pit below the forecourt, most dispensers can cope with flood immersion to say 600mm before electronic components are at risk.
- If disconnecting pumps, cap or plug all exposed fuel product pipes and VR2 vapour return pipes at each removed dispenser. Where a pipe is fitted with an isolation valve at the connection to the dispenser/ pump make sure the valve is closed to prevent ingress of water to the pipework.
- Check all tank turret driveway covers are fully bolted down. Bolts can go missing and/ or be left out as the threaded hole is clogged with dirt. It is important to have all bolts in place as the force of the flood water could dislodge the cover providing water entry path to the tank or causing minor pollution or filling the turret with silt further delaying post flood inspections and site return to service.
- Move all shop stock offsite, to higher ground or to shipping containers as these can be sealed to remain water proof**. Tether/ anchor the containers so they cannot be floated away by flood waters.**
- Remove/ relocate all paperwork from office to waterproof storage or off-site storage
- Remove or secure all loose items & accumulated dross on site to avoid flood removal of the debris causing additional damage downstream of the site.
- Install protective boards or shutters to the glass shopfront and/ or windows to protect from flood transported debris impact damage. If you have one or more of the proprietary flood barrier systems, door dam protection systems on site deploy the barrier equipment to the site to protect from/ reduce potential water penetration to building(s) & equipment.
- If time permits, to minimise pollution risks as a result of a flood inundation of the site have any site forecourt pollution treatment system pits and/ or kitchen grease traps pumped out and potentially contaminated sediments removed. If this is not possible place plastic sheeting and sandbags on the pit lids to minimise the risk of water flooding the pit(s)
- If time permits disconnect and relocate low level electronic signs such as LED digit price board(s).
- Depending on the expected flood level consider opening doors & windows to allow passage of water through the structure.

4. INSPECTING THE SITE

4.1 LEVEL OF INUNDATION

The work required on site after flood inundation varies depending on the depth and velocity of the flood water impacting the site. The level of silt and debris in the flood water will also impact the potential site damage and remedial work required. This Guideline provides recommended site inspection checklists for the 3 nominated stages of flood inundation. The checklists are presented in 4 formats aligned to the level of inundation. A Consolidated checklist covering all 3 levels of inundation is provided, with comments on inspection items/ actions specific to the 3 different levels of flood inundation. In addition 3 separate checklists are provided with the Stage 1 flood inspection list as a base list, applicable to all sites and the Stage 2 & 3 inspection checklists adding extra over items to be undertaken as the depth of the flooding at the site increases.

4.2 INSPECTION TEAM MEMBERS

Not all listed personnel will be required for every flooded site.

Suggested team members:

- **Company Personnel**

  This 'Company Personnel' list will likely apply to site(s) within a major national network.
  - Site construction team
  - FMG (Facilities Management Group/ maintenance team)
  - IT (POS/BOS assessment)
  - WHS Specialist (optional)
  - Business channel representative (BM) optional

  This 'Company Personnel' list will likely apply for smaller networks and single site operators;
  - an owner/operator or their representative
  - civil/ structural engineer

- **Maintenance Service Provider to the Site(s)/ Company for**
  - Fuel system
  - Electrician – recommend electrician has hazardous area qualifications
  - Plumbing & drainage
  - Signage (if Stage 2 or 3 flood inundation)

- **Consultant Specialist/ Equipment manufacturer or supplier representatives**
  - Civil/structural Engineer
  - Hazardous Area licensed electrical contractor
  - Forecourt fuel system equipment manufacturer/supplier representatives (optional)
  - Shop equipment manufacturer/supplier representatives (optional)

- **Insurance Loss Adjuster**

4. INSPECTING THE SITE

4.3 INSPECTION PROCESS

Please refer to the attached Stage 1, Stage 2 and Stage 3 Flood Inspection/ remedial action Process Checklists in the ATTACHMENTS section.

These are provided as print friendly separate pages to assist you when preparing to undertake a post flood site inspection/ assessment.

As part of the inspection process, it is recommended that the inspector/ inspection team is supplied with current site documents detailing, as much as possible:

- Site layout showing location of all service connections, isolation points and drainage discharges
- Electrical power supply grid connection, on site generated power including solar, meter panel and switchboard
- Site UPSS (fuel system) plan
- HAZMAT manifest – including updates if any of the listed hazardous materials that were removed from site in advance of the flood event, i.e., the LPG Swap-n-Go cage.
- Site asset list
- Insurance claim process and claim forms.

4.4 REMEDIAL ACTIONS

Required remedial action will depend on the damage identified in the inspection. Specialist trades and equipment suppliers will need to be engaged to carry out all identified repairs. This is critical for building structural, plumbing and electrical work, only licensed trades personnel may complete work in their respective areas of expertise. Only experienced competent contractors should be engaged to carry out repairs to the site fuel system. Electrical repairs to the fuel system must be carried out by a specialist hazardous area electrical contractor.

As outlined in Section 2.4 Hazards, you must also carefully consider the economic case for cleaning and repair of equipment against the age of the equipment, recommendations of the manufacturer(s), potential long-term reliability of equipment and replacement costs. It is both expensive and time consuming to inspect and restore flame proof electrical enclosures on equipment installed and operated in hazardous areas. It is also expensive and time consuming to clean the heat dissipating fins (radiators) on HVAC equipment. Often the clean and refurbish time and costs exceed the replacement cost of the damaged item. Many suppliers/ manufacturers of equipment will not warrant items that have been immersed in flood waters even when their clean and refurbish instructions are followed.

5. SUMMARY

When floods occur, the primary objective of business owners is to recommence trading as soon as possible. The pressure to re-open quickly is further intensified for businesses that provide services that are “essential” to the community’s recovery process including grocery businesses, chemists and service stations. But in their haste to reopen, service station business owners/ operators risk creating situations that can have long term reputational consequences, i.e., selling fuel that is contaminated with water.

This Guideline has been developed to provide guidance for operators and/or owners of retail service station site(s) to minimise their business reputation risks and to:

- prepare their site(s) in advance of a flood event
- minimise damage to the site equipment and their business reputation during and as a result of a flood inundation
- minimise the disruption to trade period
- ensure all site systems and products are safe and fit for purpose before recommencing operation.

As a retail trader of fuel and food products legal obligations exist in 4 key areas of Regulation:

- WHS Regulations – provide a safe workplace
- Pollution Regulation – under the POEO legislation the site operation must protect the environment and not knowingly pollute
- ACCC – must only sell products that are fit for sale at a reasonable price.
- Food safety – applies to any business that handles any type of food for sale or the sale of food. The standards impose health and hygiene obligations on food handlers

Your obligations as an employer, site owner/ operator in these areas apply through your preparation of the site for a flood event and also through the inspection, assessment and remedial action works carried out after the flood inundation is over.

This Guideline includes for your assistance:

- Details of suggested/ recommended site preparation actions
- Detailed Flood Inspection Process Checklists, scaled to the 3 different flood inundation levels that can potentially impact your site(s)
- Equipment manufactures recommendations for the cleaning, drying and or replacement of flood inundated items.

In all cases of flood inundation, you must carefully consider the economic hazards of cleaning and repair of equipment against the age of the equipment, recommendations of the manufacturer(s) and replacement costs. Often the clean and refurbish time and costs exceed the replacement cost of an item.

6. GLOSSARY OF TERMS

ACCC	Australian Competition and Consumer Commission
ATG	Automatic Tank Gauge
E10	E10, common term for E10ULP a blend of unleaded petrol with 10% ethanol by volume.
E85	E85ULP which is a blended fuel with 85% ethanol & 15% unleaded petrol
HVAC	Heating, Ventilation, refrigeration & Air Conditioning equipment.
PLLD	Pressure Line Leak Detector, an electronic item connected in or near to an STP in a pressure fuel system that continuously monitors the pressure within the fuel product pipe(s) to alarm if pressure drops in the pipe system indicating a potential leak.
POEO	Protection of the Environment Operations Act. This is the governing legislation at State & Federal levels to protect public health and the environment from potential harm. The key premise of the POEO Act is, you shall not knowingly pollute.
PV Valve	Pressure vacuum valve, normally fitted to the petrol tank vent stack on a site with full VR2 equipment or pressure controlled VR1.
SES	State Emergency Services, is a State or Territory based volunteer organisation trained to deal with floods, storms and tsunamis, but can also assist in other emergencies, such as vertical rescue and road crash rescues, missing persons searches, and medical evacuations. In other scenarios the SES may provide a support role to other agencies, particularly police and fire.
STP	Submersible Turbine Pump. Refers to the pumping unit that is installed into a fuel tank to transfer fuel to the forecourt dispensing pumps in a pressure fuel system
ULP	Unleaded petrol, normally 91 octane rating
UPSS	Underground Petroleum Storage System(s). Refers to the underground equipment (i.e., tanks, pipes, pumps & valves) that are used to receive, store and transport fuel to the forecourt dispensing pumps
VR	Vapour Recovery equipment. Sites are equipped with potentially 2 different sets of VR equipment: – VR1 – Stage I VR, captures petrol vapours displaced from the site petrol fuel tanks when they are being filled, directing these vapours back into the fuel delivery tanker – VR2 – Stage II VR, captures petrol vapours displaced from the customer's vehicle fuel tank when the vehicle is being filled with petrol, directing them back into the site petrol storage tanks.
WHS	Workplace Health and Safety, at times also referred to as occupational health and safety, covers the assessment and management of risks to health and safety of everyone in your workplace.

7. USEFUL REFERENCES

Dispenser manufacturer fact sheets re use of equipment after flood immersion:

- PEC - https://acapma.com.au/wp-content/uploads/2023/05/Gallagher-FS-pump-flood-damage-checks.pdf
- Dover Fuel Systems (Wayne) - https://acapma.com.au/wp-content/uploads/2023/05/Dover-Wayne-Pump-TECHNICAL-NOTE_Rev1.pdf

Flood effected site power supply electrical inspection SWMS & template inspection report format

- supplied by NECA (National electrical & Communication Association - https://www.neca.asn.au/sites/default/files//Disaster%20Recover%20Guides/NECA%20Flood%20Relief_Licenced%20NECA%20Member%20Electrical%20Contractor%20Flood%20Disaster%20Recovery%20Guide_0322.pdf

See manufacturers website for fuel system equipment fact sheets for reuse/ assessment of equipment after flood immersion:

- submersible turbine pumps (STPs) & pressure leak detectors
- tank gauges (ATG)
- VR2 PV valves & pressure gauges
- Underground fuel tanks
- Above ground diesel or LPG tanks & related pumping equipment & fittings.

HVAC equipment manufacturer fact sheets for reuse/ assessment of equipment after flood immersion for site fridges, freezers, A/C & ventilation fans – refer equipment manufacturers website(s) for details

Commercially available flood barrier/ protection equipment to consider:

- Bluemont - 'Boxwall' - https://www.bluemont.com.au/flood-prevention/noaq-boxwall
- 'Dameasy' door barriers & other products - https://dameasyfloodbarriers.com/en-au
- Floodcontrol demountable barriers - https://floodcontrolinternational.com/
- Flooding Solutions – range of products - https://www.floodingsolutions.com.au/

8. ATTACHMENTS

- PRE FLOOD CHECKLIST
- CONSOLIDATED – ALL STAGES OF FLOOD – INSPECTION PROCESS CHECKLIST
- STAGE 1 FLOOD – INSPECTION PROCESS CHECKLIST
- STAGE 2 FLOOD – INSPECTION PROCESS CHECKLIST
- STAGE 3 FLOOD – INSPECTION PROCESS CHECKLIST

PRE FLOOD CHECKLIST

Area of Concern	Comment
Power	
Turn off power to all non-critical areas – retain power only to food fridges & freezers if the stock can't be relocated. Alternate is to move food stock into a refrigerated/ freezer shipping container off site. *If your site has a solar power system or solar with battery storage system shut the system down to prevent solar power generation & battery sourced power being supplied into damaged/ still submerged electrical equipment once the sun starts shining again after the initial storm(s).*	
Fuel System	
Check condition and replace as required cap seals on UST dip tubes, fill pipes and all other tank fittings such as ATG and interstitial space monitoring sensors.	
If you have a multi-point fill box or secondary contained individual tank fills place sandbags on the fill point lid(s) to prevent them being opened by flood waters & flushing out any residual fuel or providing an entry point for water into the fuel tanks.	
Dip and water paste test all fuel tanks on site to provide check reference for product and water levels for comparison to post flood inspection. If the site has ATG run tank report with this information.	
Disconnect and/or remove forecourt pumps to prevent destruction from water entering the electronics. Excluding the old BP Apollo pumps which have the pump equipment in a pit below the forecourt, most dispensers can cope with flood immersion to say 600mm before electronic components are at risk. Check with pump manufacturer for exact height for your model if unsure.	
If removing pumps, cap or plug all exposed fuel product pipes and VR2 vapour return pipes at each removed dispenser. Where a pipe is fitted with an isolation valve at the connection to the dispenser/ pump make sure the valve is closed to prevent ingress of water to the pipework.	
Check all tank turret driveway covers are fully bolted down. Bolts can go missing and/ or be left out as the threaded hole is clogged with dirt. It is important to have all bolts in place as the force of the flood water could dislodge the cover providing water entry path to the tank or causing minor pollution or filling the turret with silt further delaying post flood inspections and site return to service.	
Shop & Office	
Move all shop stock offsite or to higher ground or shipping containers onsite as these can be sealed to remain water proof. Tether/ anchor the containers so they cannot be floated away by flood waters.	
Remove/ relocate all paperwork from office to waterproof storage or off-site storage.	
Site General	
Remove or secure all loose items & accumulated dross on site to avoid flood removal of the debris causing additional damage downstream of the site.	
Install protective boards or shutters to the glass shopfront and/ or windows to protect from flood transported debris impact damage. If you have one or more of the proprietary flood barrier systems, door dam protection systems on site deploy the barrier equipment to the site to protect from/ reduce potential water penetration to building(s) & equipment.	
If time permits, to minimise pollution risks as a result of a flood inundation of the site have any site forecourt pollution treatment system pits and/ or kitchen grease traps pumped out and potentially contaminated sediments removed. If this is not possible place plastic sheeting and sandbags on the pit lids to minimise the risk of water flooding the pit(s).	
If time permits disconnect and relocate low level electronic signs such as LED digit price board(s).	
Depending on the expected flood level consider opening doors & windows to allow passage of water through the structure.	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

Site Inspected	
Address/ Site #	
Inspector/ Team leader	
Date	

Note on using this CONSOLIDATED Checklist

This CONSOLIDATED Checklist brings together the elements of concern and the key activities when addressing all types of floods.

Certain elements of this Checklist will only apply depending on the Stage of the flood, with the most extreme flooding (Stage 3) applying to all elements and several elements being 'not applicable' for Stage 1 or 2 floods.

STAGE 1

Water over the site paving and fuel forecourt, may also enter buildings covering the floor - nominal <0.5m depth. At this depth water should not impact electronics of fuel dispensing equipment.

STAGE 2

Water enters buildings, not into roof space & submerges the forecourt fuel dispensing equipment – nominal >0.5m to 3m depth

STAGE 3

Water enters building roof space & submerges the fuel tank vent pipes – nominal >3m depth

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
1	**Access Safety**		
	– Overhead wiring down across site & or in contact with any site structures	– If any visible check with supply authority before proceeding onto site	
	– **Is the site on mains power or locally generated power – solar, generator set or fuel cell**	– Check if site has solar power supply as it may still be generating power – **Damaged equipment may be live from site generated power even if the supply authority has confirmed power is not connected from the grid** – Check status of any battery storage units, review with site owner deactivate until further checks/ inspection completed	
	– **Hazardous areas on site changed** – **STAGE 1** – High probability of fuel contaminated effluents/ residues across all site & drains – **STAGE 2** - Low probability of additional fuel contaminated effluents/ residues &/or released fuel from damaged UPSS over those noted in Stage 1 inspection checklist. Check for presence of fuel contaminated effluents/ residues within the site **including shop, buildings and price board(s),** submerged section of main ID Sign(s) & any other illuminated low level advertising signs – **STAGE 3** – Low probability of additional fuel contaminated effluents/ residues &/or released fuel from damaged UPSS across those noted in Stage 1 inspection checklist. Check for presence of fuel contaminated effluents/ residues within the building **roof space, gutters & downpipes & within site signage elements including site Main ID Sign(s), building & canopy fascia sign boxes/ lighting systems**.	– Treat all site as Zone 2 & all pits & drains as Zone 1 until tested/confirmed otherwise o Flood water inundated most pits, drains, fill box & forecourt effluent storage pits/tanks o Fuel contamination in effluent containment areas could have floated out and been carried across/off site & into site stormwater & sewer system	
	– Observe all working at heights safety requirements **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**	– Exercise caution as roof coverings & fascia materials may be compromised, loose, silt covered etc	
	– Manage removal & disposal of any hazardous residues on site	– this may include sludge from flooding, products of combustion or bio-hazards from rotting organic matter – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations	
	– No obvious impact damage to signs or structures	– ID & other site perimeter signs appear vertical – Canopy columns appears vertical	
	– Paving intact & trafficable	– No areas of surface missing – Paving joints minimal deflection/ relatively continuous and at same levels across joints – No apparent undermined sections – Paving over fuel tanks sound not deflected/ broken/ raised. – Drain grates in place – Access covers to fuel system equipment in place	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
2	**Structure Integrity**		
	– Check all signs – Check canopy columns – Check all buildings footings	– Signs/columns vertical – Impact damage – Holding down bolts – Erosion of soil around footings	

	– Check all building walls - **CAUTION ASBESTOS**
	
	NOT APPLICABLE FOR STAGE 1
		– Impact damage & build-up of debris
		  – Asbestos may be present in flotsam debris accumulated on site
		  – Fibre cement sheeting containing asbestos has been used in the past on sites for wall cladding, linings to work bays, wet area ceiling sheets, fascia weather proofing, eave soffits, roof sheeting, gutters & downpipes and linings to electrical meter panels/switch boards
		– Check all framing
		– Inspect/ assess condition of all cladding and internal linings	

	– Check all site retaining walls for damage, movement, stability **NOT APPLICABLE FOR STAGE 1**	– Confirm that all groundwater drains still in place & operational – may need to flush outlets openings & pipes to clean	
	– Check condition of all floor coverings **NOT APPLICABLE FOR STAGE 1**		
	– Check all joinery & shop fittings **NOT APPLICABLE FOR STAGE 1**		
	– Check all building roofs & canopy roof **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**	– Impact damage/ silt & debris build-up on roof(s) – Note canopy may have parapet fascia all round – if downpipes & gutter overflows blocked by silt/debris then roof could be holding large volume of water, silt & debris – Inspect wall cavities for silt & debris build-up	
	– Check condition of all ceilings & roof sheeting **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**	– Check ceiling tiles & suspension grids for stability, connection and possible silt/debris retained in ceiling space – Check all set ceilings for same – Check all flashings, confirm in place & building weather proof – Check all roof sheeting for damage & that all sheets properly connected to structure	
	– Report immediate priority works for 'make safe'/prevent further damage		

SAFETY STOP

DO NOT PROGRESS FURTHER WITH INSPECTION UNTIL STUCTURE DECLARED SAFE TO ACCESS BY ENGINEER AND ELECTRICAL SUPPLY CONNECTION TO SITE IS SAFE.

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
3	**Site Services - Electrical**		
	– Site Power supply is available but not connected – **STOP / THINK/ IDENTIFY/ PLAN all as noted in attached NECA electrical inspection document -** https://www.neca.asn.au/sites/default/files//Disaster%20Recover%20Guides/NECA%20Flood%20Relief_Licenced%20NECA%20Member%20Electrical%20Contractor%20Flood%20Disaster%20Recovery%20Guide_0322.pdf – All circuit breakers in off position	– Confirm with supply authority that power to site is inactive – Does the site have any on site power generation capacity like solar panels, with or without battery that could be active even when grid power is disconnected or shut off? – Identify all power sources to site & confirm all are inactive before commencing switchboard & equipment detailed inspection/ assessments	
	– Check inside main switchboard is clean & dry	– Check that water/sediment has not entered switchboard via pipe conduits from site external &/or the fuel system conduit runs	
	– Check all electrically powered equipment in buildings including service yards for water & silt damage & water ingress along the cables – Note equally applicable to equipment control room/ cubicle on unattended diesel fuel sites **NOT APPLICABLE FOR STAGE 1**	– Check voids in electrically powered equipment such as refrigerator compressor spaces for silt accumulations – Equipment manufacturers/ distributors should be consulted if doubt exists with any electrically powered equipment	
	– Check all power points, light switches, equipment isolation switch enclosures & conduit junction boxes **NOT APPLICABLE FOR STAGE 1**	– Remove GPO's & light switches from walls (up to flood level plus 300mm) to confirm clean & dry, confirm the wall cavity is not full of water &/or debris/silt or other vermin – Open all switch enclosures & junction box covers to confirm clean & dry	
	– Check all in roof & on roof equipment **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**	– Check voids in electrically powered equipment such as heat exchanger grills & compressor spaces for silt accumulations – Equipment manufacturers/ distributors should be consulted if doubt exists with any electrically powered equipment	
	– Check all ceiling & eave light fittings **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**		
	– **Test cables that have been submerged for water ingress** – Note: submerged cables with bare copper ends can permit water entry by capillary action along voids between copper strands & between copper & insulation	– MUST test all cables that have been submerged – If water has entered the cable run it will travel back out when the cable is energised & warms up, discharging water onto live electrical contacts	
	– **Emergency power supply** – If, as a result of the flood, there is power supply network damage – consider temporary local power generation for site – OPTIONS include diesel generator/ hydrogen fuel cell or solar and battery array	– Check/ confirm with supply authority time required to restore grid power – Engage required specialists to install and connect the selected power generation system safely – Liaise with site supply authority for permission and instructions to connect to site switchboard or alternate connection(s) – Check phase rotation of all 3 phase motors connected to site equipment. (Diesel generator or other temporary power sources may impact the operation of any 3 phase motors.) These may be installed in the fuel system, shop fridges & freezers and the car wash equipment. – Recheck phase rotation of all 3 phase motors when temporary power disconnected & site returned to mains power.	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
3	**Site Services – Electrical** *continued*		
	– **ONLY AFTER COMPLETING INSPECTION AND REMEDIATION OF POWER SUPPLY ROUTE TO SWITCHBOARD** activate power supply to the board	– Arrange with supply authority to reconnect – Turn on main switch at board – Turn on all circuit breakers on the switch board	
	– Check and turn off all light switches, power points and equipment isolation switches – Turn on lighting in shop circuit by circuit – Turn on canopy lighting – Turn on site signs & external lighting – Turn on shop A/C – Turn on other equipment power circuits – Turn on the power to refrigeration – Activate UPS for POS equipment – Activate ATM (if on site) – Turn on all electrical equipment in shop and confirm in working order i.e. HAC, coffee, ice cream freezer, ice freezer, bait freezer, hand dryers, remote activated locks, LED price lines in sign(s) – Repeat for Car Wash/ Workshop/ other site operations as applicable	– progressively increase load on system in order nominated to avoid/minimize potential damage – if a circuit breaker trips when lights or equipment switched on leave it alone & report to maintenance for further investigation/service by electrician – for older style board with fuses if lights or equipment do not operate when switched on: o remove & examine the fuse o If fuse wire broken/damaged put the fuse carrier back in the board – note the damaged unit & report to maintenance for further investigation/service by electrician. **DO NOT** replace fuse wire there may be other problems. – for workshop & other site operations may need to liaise/coordinate actions with the facility operator (often tenant operator not the same as the shop operator)	

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System**		
	– Check/confirm tanks have not moved	– Buoyancy impact on tanks could cause ground/paving heave – If tanks have moved in ground MOST LIKELY need to rebuild UPSS – As a minimum for tanks that have moved - fuel system EIT required to confirm system is leak free before return to service.	
	– Check for water ingress to tanks	– Dip tanks to confirm stock & no/minimal water – Check all ethanol blend tanks for free water & phase separated product – Follow industry or Company E10 site handling procedures for managing any phase separated product removal – **CRITICAL THAT ALL PHASE SEPARATED PRODUCT IS REMOVED FROM E10 TANK(S) and the tank is let stand overnight and retested for water/ phase separated product, confirmed dry before return to service** – Check all dip caps sealed & dry – Check all fill points sealed & dry	
	– Check for fuel escape from tanks (note: less likely with Stage 1, but checks should be completed for verification)	– Check fuel level in each tank on dipstick. If below tank SFL there should be no issue – If liquid is present in the dip tube riser when cap removed fuel may have escaped – Check for liquids in the fill pipe immediately under the access lid – Water paste test the tank to estimate the volume of fuel lost against the water now in tank against pre flood stock levels – include in inspection report.	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System** *continued*		
	– Check condition of Fill point box/ individual secondary contained fill points/ direct fills	– Fill points should be free of sediment & water, ready for use – Test operation of fill point drain valve(s) – Test electrical earthing of the fills.	

	– Check water ingress/condition of any tank access turrets (normally only on pressure systems)	– Open turrets
		– Remove any sediment & water from turret(s)
		  – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations
		  – May be able to process water through site separator
		– Confirm integrity of all pipe fittings/ turret penetration seals
		– Check STP on pressure system ready to operate
		  – Open & inspect electrical junction box
		  – Inspect/test pressure transducer for PLLD unit
		  OR
		  – Inspect/test mechanical line leak detectors	

	– Check for immersion damage to other tank equipment – ATG, tank interstitial space sensor(s) & any other sensors on the UPSS	– Check the probe riser cap seal is intact – if damaged water/ silt may have entered the tank/ damaged the probe – Check seals & condition of the probe canister – they are not designed for prolonged immersion – Check all probe junction wiring boxes for water/ silt/ fuel ingress. – Clean or replace as required. Wiring connections may need to be redone to eliminate damage & future operation connection issues.	
	– Check cathodic protection system	– Inspect sacrificial anode wells are clear & wires still connected/anodes in place – For impressed current system have specialist visit site and confirm system still operating correctly	
	– Check for contaminants in all monitoring wells	– Check ground water wells (where installed) – Check tank pit observation wells – If fuel found report immediately to the Company representative who engaged you to undertake this inspection/ assessment	
	– Check that the tank vents are open to the air **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**	– Water can enter into the vent pipe if submerged. – If correctly laid the vent pipe will drain all water direct into the fuel tank no additional work required over checking tanks – If line not correctly laid or ground damage has caused subsidence in the line - can create a water blockage in line	

	– **If evidence of tank movement & the vents have been under water introduce alternate direct air venting of the tanks until vents can be checked**
	NOT APPLICABLE FOR STAGE 1
	NOT APPLICABLE FOR STAGE 2
		– **Open the tank fill points first then dip points (provided the points are not under water)**
		  – **Caution tanks may already be under pressure**
		  – **Open dip points after the fills are open to minimise possible pressure surge up dip tube**
		– If the site has VR2 or in the NSW enhanced VR1 zone check the P/V vent & orifice plate are clear & operational	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System** *continued*		
	– Check water ingress/condition of any under pump/dispenser sumps – Check also sumps for VR2 pipe system, if installed at site	– Open pump body panels & inspect sumps/pans (if installed) – Remove any sediment & water from sumps/pans – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations – May be able to process water through site separator – Confirm integrity of all pipe fittings/ sump penetration seals	
	– Check water ingress/condition of any fuel pipe/forecourt pump valve pits	– Open pit covers & inspect – Remove any sediment & water from pits – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations – May be able to process water through site separator	
	– Check all forecourt pumps dispensers ready to operate – petrol, diesel & LPG as installed	– Confirm integrity of all pipe fittings – Remove cover from any electrical junction box that has been wet – **Note, flame proof is not waterproof** – Need to drain any water from junction box – Need to clean all sediment from box & vapour path spaces	
	– Pump/dispenser meters & display head **NOT APPLICABLE FOR STAGE 1**	– Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation – Minimum, open the pump display head & check clean & dry – If meter opened & cleaned need to recalibrate	
	– Check operation of Fuel Emergency Stop points in shop & external	– Emergency stop buttons are critical to site operation safety.	
	– Test operate forecourt pumps/dispensers – Check VR2 pump is operational, if installed	– Place each pump in 'standalone' mode for power on & function testing – Need to lift all nozzles to confirm all activate and send required signals – **AFTER standalone testing** repeat operate all nozzles to POS system.	
	– Check equipment within building related to ATG, STP control centres & VR2 monitoring for water & silt damage **NOT APPLICABLE FOR STAGE 1**		

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
5.1	**Site Services – Water/Sewer**		
	– Confirm water supply to site	– Confirm with supply authority – Check that site water meter in place & undamaged – Check that stop cock is turned on – Check back flow prevention valve in place, undamaged & operational	
	– Confirm plumbing undamaged & water acceptable quality for customers	– run cold water taps till water appears clean at all shop internal taps – check hot water system is on run hot water taps till clean (need to delay to allow water to heat)	
	– Confirm all building drainage clear & operational **NOT APPLICABLE FOR STAGE 1**	– Check all floor wastes & tundishes clear of silt & drain freely – Check that hot water service(s) operational – Confirm insulation on water heaters is in "fit to operate" condition, not saturated with water/ silt – Check operation of pressure relief valve & drain	
	– Confirm sewer service for site operational	– Confirm with supply authority – Check surcharge gully clear not blocked by sediment – flush toilets to confirm they are working.	
	– If installed - confirm on-site sewer treatment system operational	– Arrange for inspection & assessment by manufacturer's/ service agent's representative for the installed system	
5.2	**Site Services – Compressed Air**		
	– Confirm compressor operational – Check LPG system operational once compressor at working pressure.	– Check & drain any condensate from the air receiver – Compressed air critical to operation of LPG dispensers and emergency shut-off systems – Check air service point operational for tyre inflation – Check air point(s) operational on canopy columns – Compressor may be common service to on site workshop – Clean any silt from the cooler fins on the compressor **NOT APPLICABLE FOR STAGE 1** – Check crank case lubrication of compressor for presence of water or silt **NOT APPLICABLE FOR STAGE 1**	
5.3	**Site Services – Pollution Control & Drains**		
	– Check the effluent level & condition in the forecourt separator holding pit &/OR – Check the effluent level in the forecourt holding tank (blind sump) – Visually inspect forecourt separation/ containment drains – Visually inspect site entry crossing drains as for forecourt separation drains	– Note different styles of forecourt effluent systems required by local regulations – Forecourt drains should be clean, free of water & debris so they can correctly operate	
	– Check all roof gutters & downpipes **NOT APPLICABLE FOR STAGE 1** **NOT APPLICABLE FOR STAGE 2**	– Remove silt/debris build-up & run water through pipes to confirm clear & operational	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
6	**Point of Sale**		
	– Equipment cases/ service ducts clean & dry **NOT APPLICABLE FOR STAGE 1**	– Open all equipment cases/ remove covers to inspect/clean – Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation	
	– Activate BOS – Activate primary POS terminal – Activate secondary POS terminal(s) – Send test messages from site to Company operations groups via all online systems **NOT APPLICABLE FOR STAGE 1**	– Use shift start procedure for start up and confirmation that all start points values correct from last close – Test messages required to confirm all system links working	

STEP	Area or Concern	Critical Actions or Response	Notes
7	**Communications**		
	– Equipment cases/ service ducts clean & dry **NOT APPLICABLE FOR STAGE 1**	– Open all equipment cases/ remove covers to inspect/clean – Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation.	
	– Check phones/ fax/ internet as applicable to site – Check public phone operational – Check operation of security alarms back-to-base functioning including staff pendant – Confirm ATM communication is operational **NOT APPLICABLE FOR STAGE 1**	– Critical to have all communications operational for site security, convenience and ensuring all emergency contacts and business messages/alerts can get through	

STEP	Area or Concern	Critical Actions or Response	Notes
8	**Site Security Equipment and Safe**		
	– Equipment cases/ service ducts clean & dry **NOT APPLICABLE FOR STAGE 1**	– Open all equipment cases/ remove covers to inspect/clean – Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation	
	– Check DVR operational – Check all cameras operational – Check display screens operational – Check cash vending/ time delay access safe working as applicable to site **NOT APPLICABLE FOR STAGE 1**	– Critical to have all site security equipment fully operational for staff safety	

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
9	**Image and Signage**		
	– Check condition of all sign faces & boxes, including fascia cladding **NOT APPLICABLE FOR STAGE 1**	– Inspect all free-standing signs – Inspect wall mounted signs – Inspect building facia – Inspect canopy fascia	
	– Open face of all signs to check lighting & electrical is clean & dry **NOT APPLICABLE FOR STAGE 1**	– Inspect power & lighting in all signs – Inspect/assess scrolling price digit systems – Inspect/assess LED price line systems – If correctly laid the vent pipe will drain all water direct into the fuel tank no additional work required over checking tanks	
	– Check & confirm also for all canopy & building fascia lighting tracks **NOT APPLICABLE FOR STAGE 1**	– Check lighting systems on all illuminated fascia – Inspect/ confirm stability of canopy lighting track (support bracket system could be damaged/ partially dislodged)	

STEP	Area or Concern	Critical Actions or Response	Notes
10	**Miscellaneous**		
	– Check for vermin/ snakes toads etc in pits, drains, service yard, store room office etc.. – Check garbage bins/skips still on site as applicable to site	– Take extreme care vermin/wild life could be found	
	– Check service yard equipment is in place and clear airflow across the mechanical equipment heat exchanger units		
	– Check all fences for damage & stability **NOT APPLICABLE FOR STAGE 1**		
	– Fire/spill equipment in place on forecourt.	– All safety/spill equipment in place and ready to operate prior to re-opening	
	– Check condition of the site dossier in the Hazchem/Hazmat box on site	– Replace all damaged documents as required	

STEP	Area or Concern	Critical Actions or Response	Notes
11	**Report**		
	– Prepare report for the Company facilities management group (FMG) team/site redevelopment team or nominated site maintenance contractor(s)		

	– Advise additional works required before site can be returned to service. Report to include
	  – All reported make safe works
	  – Debris removal & cleaning
	  – Pavement & drainage works
	  – Demolition/reconstruction
	  – Fuel system work
	  – Fit out work
	  – Equipment repairs/replacements
	  – Signage/image repairs/replacements
	  – Fences/walls/yard work		

CONSOLIDATED
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
11	**Report** *continued*		
	– Report to estimate volume of any fuel that may have been lost from site tanks		
	– Confirm OK to access site & commence detail clean-up/ prepare site to trade		
	– SIRA Service Provider (if 3rd Party specialist engaged)	– Advise SIRA provider of – flood event & level of inundation – Site closure date pre flood – Confirm dips & meters from last trade – Site reopen to trade date – Volume of water/ degraded fuel removed from fuel tanks – Volume of fuel delivered prior to reopening	

Inspection Team Notes

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

Site Inspected	
Address/ Site #	
Inspector/ Team leader	
Date	

STAGE 1

Water over the site paving and fuel forecourt, may also enter buildings covering the floor - nominal <0.5m depth. At this depth water should not impact electronics of fuel dispensing equipment.

STEP	Area or Concern	Critical Actions or Response	Notes
1	**Access Safety**		
	– Overhead wiring down across site & or in contact with any site structures	– If any visible check with supply authority before proceeding onto site	
	– **Is the site on mains power or locally generated power – solar, generator set or fuel cell**	– Check if site has solar power supply as it may still be generating power – **Damaged equipment may be live from site generated power even if the supply authority has confirmed power is not connected from the grid** – Check status of any battery storage units, review with site owner deactivate until further checks/ inspection completed	
	– **Hazardous areas on site changed** – **STAGE 1** – High probability of fuel contaminated effluents/ residues across all site & drains	– Treat all site as Zone 2 & all pits & drains as Zone 1 until tested/confirmed otherwise ○ Flood water inundated most pits, drains, fill box & forecourt effluent storage pits/tanks ○ Fuel contamination in effluent containment areas could have floated out and been carried across/off site & into site stormwater & sewer system	
	– Manage removal & disposal of any hazardous residues on site	– this may include sludge from flooding, products of combustion or bio-hazards from rotting organic matter – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations	

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
1	**Access Safety** *continued*		
	– No obvious impact damage to signs or structures	– ID & other site perimeter signs appear vertical – Canopy columns appears vertical	
	– Paving intact & trafficable	– No areas of surface missing – Paving joints minimal deflection/ relatively continuous and at same levels across joints – No apparent undermined sections – Paving over fuel tanks sound not deflected/ broken/ raised. – Drain grates in place – Access covers to fuel system equipment in place	

STEP	Area or Concern	Critical Actions or Response	Notes
2	**Structure Integrity**		
	– Check all signs – Check canopy columns – Check all buildings footings	– Signs/columns vertical – Impact damage – Holding down bolts – Erosion of soil around footings	
	– Report immediate priority works for 'make safe'/prevent further damage		

SAFETY STOP

DO NOT PROGRESS FURTHER WITH INSPECTION UNTIL STUCTURE DECLARED SAFE TO ACCESS BY ENGINEER AND ELECTRICAL SUPPLY CONNECTION TO SITE IS SAFE.

STEP	Area or Concern	Critical Actions or Response	Notes
3	**Site Services - Electrical**		
	– Site Power supply is available but not connected – **STOP / THINK/ IDENTIFY/ PLAN all as noted in attached NECA electrical inspection document -** https://www.neca.asn.au/sites/default/files//Disaster%20Recover%20Guides/NECA%20Flood%20Relief_Licenced%20NECA%20Member%20Electrical%20Contractor%20Flood%20Disaster%20Recovery%20Guide_0322.pdf – All circuit breakers in off position	– Confirm with supply authority that power to site is inactive – Does the site have any on site power generation capacity like solar panels, with or without battery that could be active even when grid power is disconnected or shut off? – Identify all power sources to site & confirm all are inactive before commencing switchboard & equipment detailed inspection/ assessments	
	– Check inside main switchboard is clean & dry	– Check that water/sediment has not entered switchboard via pipe conduits from site external &/or the fuel system conduit runs	
	– **Test cables that have been submerged for water ingress** – Note: submerged cables with bare copper ends can permit water entry by capillary action along voids between copper strands & between copper & insulation	– MUST test all cables that have been submerged – If water has entered the cable run it will travel back out when the cable is energised & warms up, discharging water onto live electrical contacts	

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
3	**Site Services – Electrical** *continued*		
	– **Emergency power supply** – If, as a result of the flood, there is power supply network damage – consider temporary local power generation for site – OPTIONS include diesel generator/ hydrogen fuel cell or solar and battery array	– Check/ confirm with supply authority time required to restore grid power – Engage required specialists to install and connect the selected power generation system safely – Liaise with site supply authority for permission and instructions to connect to site switchboard or alternate connection(s) – Check phase rotation of all 3 phase motors connected to site equipment. (Diesel generator or other temporary power sources may impact the operation of any 3 phase motors.) These may be installed in the fuel system, shop fridges & freezers and the car wash equipment. – Recheck phase rotation of all 3 phase motors when temporary power disconnected & site returned to mains power.	
	– **ONLY AFTER COMPLETING INSPECTION AND REMEDIATION OF POWER SUPPLY ROUTE TO SWITCHBOARD** activate power supply to the board	– Arrange with supply authority to reconnect – Turn on main switch at board – Turn on all circuit breakers on the switch board	
	– Check and turn off all light switches, power points and equipment isolation switches – Turn on lighting in shop circuit by circuit – Turn on canopy lighting – Turn on site signs & external lighting – Turn on shop A/C – Turn on other equipment power circuits – Turn on the power to refrigeration – Activate UPS for POS equipment – Activate ATM (if on site) – Turn on all electrical equipment in shop and confirm in working order i.e. HAC, coffee, ice cream freezer, ice freezer, bait freezer, hand dryers, remote activated locks, LED price lines in sign(s) – Repeat for Car Wash/ Workshop/ other site operations as applicable	– progressively increase load on system in order nominated to avoid/minimize potential damage – if a circuit breaker trips when lights or equipment switched on leave it alone & report to maintenance for further investigation/service by electrician – for older style board with fuses if lights or equipment do not operate when switched on: o remove & examine the fuse o If fuse wire broken/damaged put the fuse carrier back in the board – note the damaged unit & report to maintenance for further investigation/service by electrician. **DO NOT** replace fuse wire there may be other problems. – for workshop & other site operations may need to liaise/coordinate actions with the facility operator (often tenant operator not the same as the shop operator)	

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System**		
	– Check/confirm tanks have not moved	– Buoyancy impact on tanks could cause ground/paving heave – If tanks have moved in ground MOST LIKELY need to rebuild UPSS – As a minimum for tanks that have moved - fuel system EIT required to confirm system is leak free before return to service.	

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System** *continued*		
	– Check for water ingress to tanks	– Dip tanks to confirm stock & no/minimal water – Check all ethanol blend tanks for free water & phase separated product – Follow industry or Company E10 site handling procedures for managing any phase separated product removal – **CRITICAL THAT ALL PHASE SEPARATED PRODUCT IS REMOVED FROM E10 TANK(S) and the tank is let stand overnight and retested for water/ phase separated product, confirmed dry before return to service** – Check all dip caps sealed & dry – Check all fill points sealed & dry	
	– Check for fuel escape from tanks (note: less likely with Stage 1, but checks should be completed for verification)	– Check fuel level in each tank on dipstick. If below tank SFL there should be no issue – If liquid is present in the dip tube riser when cap removed fuel may have escaped – Check for liquids in the fill pipe immediately under the access lid – Water paste test the tank to estimate the volume of fuel lost against the water now in tank against pre flood stock levels – include in inspection report.	
	– Check condition of Fill point box/ individual secondary contained fill points/ direct fills	– Fill points should be free of sediment & water, ready for use – Test operation of fill point drain valve(s) – Test electrical earthing of the fills.	

	– Check water ingress/condition of any tank access turrets (normally only on pressure systems)	– Open turrets
		– Remove any sediment & water from turret(s)
		  – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations
		  – May be able to process water through site separator
		– Confirm integrity of all pipe fittings/ turret penetration seals
		– Check STP on pressure system ready to operate
		  – Open & inspect electrical junction box
		  – Inspect/test pressure transducer for PLLD unit
		  OR
		  – Inspect/test mechanical line leak detectors	

	– Check for immersion damage to other tank equipment – ATG, tank interstitial space sensor(s) & any other sensors on the UPSS	– Check the probe riser cap seal is intact – if damaged water/ silt may have entered the tank/ damaged the probe – Check seals & condition of the probe canister – they are not designed for prolonged immersion – Check all probe junction wiring boxes for water/ silt/ fuel ingress. – Clean or replace as required. Wiring connections may need to be redone to eliminate damage & future operation connection issues.	

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System** *continued*		
	– Check cathodic protection system	– Inspect sacrificial anode wells are clear & wires still connected/anodes in place – For impressed current system have specialist visit site and confirm system still operating correctly	
	– Check for contaminants in all monitoring wells	– Check ground water wells (where installed) – Check tank pit observation wells – If fuel found report immediately to the Company representative who engaged you to undertake this inspection/ assessment	
	– Check water ingress/condition of any under pump/dispenser sumps – Check also sumps for VR2 pipe system, if installed at site	– Open pump body panels & inspect sumps/pans (if installed) – Remove any sediment & water from sumps/pans – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations – May be able to process water through site separator – Confirm integrity of all pipe fittings/ sump penetration seals	
	– Check water ingress/condition of any fuel pipe/forecourt pump valve pits	– Open pit covers & inspect – Remove any sediment & water from pits – potential hydrocarbon contaminated water/sediments dispose of in accordance with local environmental regulations – May be able to process water through site separator	
	– Check all forecourt pumps dispensers ready to operate – petrol, diesel & LPG as installed	– Confirm integrity of all pipe fittings – Remove cover from any electrical junction box that has been wet – **Note, flame proof is not waterproof** – Need to drain any water from junction box – Need to clean all sediment from box & vapour path spaces	
	– Check cathodic protection system	– Inspect sacrificial anode wells are clear & wires still connected/anodes in place – For impressed current system have specialist visit site and confirm system still operating correctly	
	– Pump/dispenser meters & display head **NOT APPLICABLE FOR STAGE 1**		
	– Check operation of Fuel Emergency Stop points in shop & external	– Emergency stop buttons are critical to site operation safety.	
	– Test operate forecourt pumps/dispensers – Check VR2 pump is operational, if installed	– Place each pump in 'standalone' mode for power on & function testing – Need to lift all nozzles to confirm all activate and send required signals – **AFTER standalone testing** repeat operate all nozzles to POS system.	

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
5.1	**Site Services – Water/Sewer**		
	– Confirm water supply to site	– Confirm with supply authority – Check that site water meter in place & undamaged – Check that stop cock is turned on – Check back flow prevention valve in place, undamaged & operational	
	– Confirm plumbing undamaged & water acceptable quality for customers	– run cold water taps till water appears clean at all shop internal taps – check hot water system is on run hot water taps till clean (need to delay to allow water to heat)	
	– Confirm sewer service for site operational	– Confirm with supply authority – Check surcharge gully clear not blocked by sediment – flush toilets to confirm they are working.	
	– If installed - confirm on-site sewer treatment system operational	– Arrange for inspection & assessment by manufacturer's/ service agent's representative for the installed system	
5.2	**Site Services – Compressed Air**		
	– Confirm compressor operational – Check LPG system operational once compressor at working pressure.	– Check & drain any condensate from the air receiver – Compressed air critical to operation of LPG dispensers and emergency shut-off systems – Check air service point operational for tyre inflation – Check air point(s) operational on canopy columns – Compressor may be common service to on site workshop	
5.3	**Site Services – Pollution Control & Drains**		
	– Check the effluent level & condition in the forecourt separator holding pit &/OR – Check the effluent level in the forecourt holding tank (blind sump) – Visually inspect forecourt separation/ containment drains – Visually inspect site entry crossing drains as for forecourt separation drains	– Note different styles of forecourt effluent systems required by local regulations – Forecourt drains should be clean, free of water & debris so they can correctly operate	

STEP	Area or Concern	Critical Actions or Response	Notes
6	**Point of Sale**		
	NOT APPLICABLE FOR STAGE 1		

STEP	Area or Concern	Critical Actions or Response	Notes
7	**Communications**		
	NOT APPLICABLE FOR STAGE 1		

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
8	**Site Security Equipment and Safe**		
	NOT APPLICABLE FOR STAGE 1		

STEP	Area or Concern	Critical Actions or Response	Notes
9	**Image and Signage**		
	NOT APPLICABLE FOR STAGE 1		

STEP	Area or Concern	Critical Actions or Response	Notes
10	**Miscellaneous**		
	– Check for vermin/ snakes toads etc in pits, drains, service yard, store room office etc.. – Check garbage bins/skips still on site as applicable to site	– Take extreme care vermin/wild life could be found	
	– Check service yard equipment is in place and clear airflow across the mechanical equipment heat exchanger units		
	– Fire/spill equipment in place on forecourt.	– All safety/spill equipment in place and ready to operate prior to re-opening	
	– Check condition of the site dossier in the Hazchem/Hazmat box on site	– Replace all damaged documents as required	

STEP	Area or Concern	Critical Actions or Response	Notes
11	**Report**		
	– Prepare report for the Company facilities management group (FMG) team/site redevelopment team or nominated site maintenance contractor(s)		
	– Advise additional works required before site can be returned to service. Report to include – All reported make safe works – Debris removal & cleaning – Pavement & drainage works – Demolition/reconstruction – Fuel system work – Fit out work – Equipment repairs/replacements – Signage/image repairs/replacements – Fences/walls/yard work		
	– Report to estimate volume of any fuel that may have been lost from site tanks		
	– Confirm OK to access site & commence detail clean-up/ prepare site to trade		

STAGE 1
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
11	**Report** *continued*		
	– SIRA Service Provider (if 3rd Party specialist engaged)	– Advise SIRA provider of – flood event & level of inundation – Site closure date pre flood – Confirm dips & meters from last trade – Site reopen to trade date – Volume of water/ degraded fuel removed from fuel tanks – Volume of fuel delivered prior to reopening	

Inspection Team Notes

STAGE 2
FLOOD INSPECTION PROCESS CHECKLIST

Site Inspected	
Address/ Site #	
Inspector/ Team leader	
Date	

Note on using this STAGE 2 Checklist

This checklist is to be read in conjunction with the STAGE 1 Checklist. The items shown in this Checklist are ONLY the additional items that need to be reviewed when the flood level rises to STAGE 2. The STAGE 1 items must still be reviewed.

STAGE 2

Water enters buildings, not into roof space & submerges the forecourt fuel dispensing equipment – nominal >0.5m to 3m depth

STEP	Area or Concern	Critical Actions or Response	Notes
1	**Access Safety**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– **Hazardous areas on site changed** – **STAGE 1** – High probability of fuel contaminated effluents/ residues across all site & drains – **STAGE 2** - Low probability of additional fuel contaminated effluents/ residues &/or released fuel from damaged UPSS over those noted in Stage 1 inspection checklist. Check for presence of fuel contaminated effluents/ residues within the site **including shop, buildings and price board(s),** submerged section of main ID Sign(s) & any other illuminated low level advertising signs.	– Treat all site as Zone 2 & all pits & drains as Zone 1 until tested/confirmed otherwise o Flood water inundated most pits, drains, fill box & forecourt effluent storage pits/tanks o Fuel contamination in effluent containment areas could have floated out and been carried across/off site & into site stormwater & sewer system	

STAGE 2
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
2	**Structure Integrity**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Check all site retaining walls for damage, movement, stability	– Confirm that all groundwater drains still in place & operational – may need to flush outlets openings & pipes to clean	

STEP	Area or Concern	Critical Actions or Response	Notes
2	**Structure Integrity**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		

	– **Check all building walls - CAUTION ASBESTOS**	– Impact damage & build-up of debris
		  – Asbestos may be present in flotsam debris accumulated on site
		  – Fibre cement sheeting containing asbestos has been used in the past on sites for wall cladding, linings to work bays, wet area ceiling sheets, fascia weather proofing, eave soffits, roof sheeting, gutters & downpipes and linings to electrical meter panels/switch boards
		– Check all framing
		– Inspect/ assess condition of all cladding and internal linings	

	– Check condition of all floor coverings		
	– Check all joinery & shop fittings		

SAFETY STOP

DO NOT PROGRESS FURTHER WITH INSPECTION UNTIL STUCTURE DECLARED SAFE TO ACCESS BY ENGINEER AND ELECTRICAL SUPPLY CONNECTION TO SITE IS SAFE.

STEP	Area or Concern	Critical Actions or Response	Notes
3	**Site Services - Electrical**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Check all electrically powered equipment in buildings including service yards for water & silt damage & water ingress along the cables – Note equally applicable to equipment control room/ cubicle on unattended diesel fuel sites	– Check voids in electrically powered equipment such as refrigerator compressor spaces for silt accumulations – Equipment manufacturers/ distributors should be consulted if doubt exists with any electrically powered equipment	
	– Check all power points, light switches, equipment isolation switch enclosures & conduit junction boxes	– Remove GPO's & light switches from walls (up to flood level plus 300mm) to confirm clean & dry, confirm the wall cavity is not full of water &/or debris/silt or other vermin – Open all switch enclosures & junction box covers to confirm clean & dry	

STAGE 2
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Check equipment within building related to ATG, STP control centres & VR2 monitoring for water & silt damage		
	– Pump/dispenser meters & display head	– Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation – Minimum, open the pump display head & check clean & dry – If meter opened & cleaned need to recalibrate	

STEP	Area or Concern	Critical Actions or Response	Notes
5.1	**Site Services – Water/Sewer**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Confirm all building drainage clear & operational	– Check all floor wastes & tundishes clear of silt & drain freely – Check that hot water service(s) operational – Confirm insulation on water heaters is in “fit to operate” condition, not saturated with water/ silt – Check operation of pressure relief valve & drain	
5.2	**Site Services – Compressed Air**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Confirm compressor operational – Check LPG system operational once compressor as working pressure l	– See Stage 1 Checklist for Core Actions/Responses for compressor checks – Clean any silt from the cooler fins on the compressor – Check crank case lubrication of compressor for presence of water or silt	
5.3	**Site Services – Pollution Control & Drains**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		

STEP	Area or Concern	Critical Actions or Response	Notes
6	**Point of Sale**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Equipment cases/ service ducts clean & dry	– Open all equipment cases/ remove covers to inspect/clean – Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation	
	– Activate BOS – Activate primary POS terminal – Activate secondary POS terminal(s) – Send test messages from site to Company operations groups via all online systems	– Use shift start procedure for start up and confirmation that all start points values correct from last close – Test messages required to confirm all system links working	

STAGE 2
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
7	**Communications**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Equipment cases/ service ducts clean & dry	– Open all equipment cases/ remove covers to inspect/clean – Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation.	
	– Check phones/ fax/ internet as applicable to site – Check public phone operational – Check operation of security alarms back-to-base functioning including staff pendant – Confirm ATM communication is operational	– Critical to have all communications operational for site security, convenience and ensuring all emergency contacts and business messages/alerts can get through	

STEP	Area or Concern	Critical Actions or Response	Notes
8	**Site Security Equipment and Safe**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Equipment cases/ service ducts clean & dry	– Open all equipment cases/ remove covers to inspect/clean – Equipment manufacturers/ distributors should be consulted for inspection, clean, test procedure before ready to test operation	

STEP	Area or Concern	Critical Actions or Response	Notes
9	**Image and Signage**		
	– Check condition of all sign faces & boxes, including fascia cladding	– Inspect all free-standing signs – Inspect wall mounted signs – Inspect building facia – Inspect canopy fascia	
	– Open face of all signs to check lighting & electrical is clean & dry	– Inspect power & lighting in all signs – Inspect/assess scrolling price digit systems – Inspect/assess LED price line systems – If correctly laid the vent pipe will drain all water direct into the fuel tank no additional work required over checking tanks	
	– Check & confirm also for all canopy & building fascia lighting tracks	– Check lighting systems on all illuminated fascia – Inspect/ confirm stability of canopy lighting track (support bracket system could be damaged/ partially dislodged)	

STEP	Area or Concern	Critical Actions or Response	Notes
10	**Miscellaneous**		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		
	– Check all fences for damage & stability		

STAGE 2
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
11	Report		
	SEE STAGE 1 CHECKLIST FOR CORE ELEMENTS		

Inspection Team Notes

STAGE 3
FLOOD INSPECTION PROCESS CHECKLIST

Site Inspected	
Address/ Site #	
Inspector/ Team leader	
Date	

Note on using this STAGE 3 Checklist

This checklist is to be read in conjunction with the STAGE 1 Checklist and the STAGE 2. The items shown in this Checklist are ONLY the additional items that need to be reviewed when the flood level rises to STAGE 3. The STAGE 1 and STAGE 2 items must still be reviewed.

STAGE 3

Water enters building roof space & submerges the fuel tank vent pipes – nominal >3m depth

STEP	Area or Concern	Critical Actions or Response	Notes
1	**Access Safety**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– **Hazardous areas on site changed** – **STAGE 1** – High probability of fuel contaminated effluents/ residues across all site & drains – **STAGE 3** – Low probability of additional fuel contaminated effluents/ residues &/or released fuel from damaged UPSS across those noted in Stage 1 inspection checklist. Check for presence of fuel contaminated effluents/ residues within the building **roof space, gutters & downpipes & within site signage elements including site Main ID Sign(s), building & canopy fascia sign boxes/ lighting systems**.	– Treat all site as Zone 2 & all pits & drains as Zone 1 until tested/confirmed otherwise ○ Flood water inundated most pits, drains, fill box & forecourt effluent storage pits/tanks ○ Fuel contamination in effluent containment areas could have floated out and been carried across/off site & into site stormwater & sewer system	
	– Observe all working at heights safety requirements	– Exercise caution as roof coverings & fascia materials may be compromised, loose, silt covered etc	

STAGE 3
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
2	**Structure Integrity**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– Check all building roofs & canopy roof	– Impact damage/ silt & debris build-up on roof(s) – Note canopy may have parapet fascia all round – if downpipes & gutter overflows blocked by silt/debris then roof could be holding large volume of water, silt & debris – Inspect wall cavities for silt & debris build-up	

STEP	Area or Concern	Critical Actions or Response	Notes
2	**Structure Integrity** *continued*		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– Check condition of all ceilings & roof sheeting	– Check ceiling tiles & suspension grids for stability, connection and possible silt/debris retained in ceiling space – Check all set ceilings for same – Check all flashings, confirm in place & building weather proof – Check all roof sheeting for damage & that all sheets properly connected to structure	

SAFETY STOP

DO NOT PROGRESS FURTHER WITH INSPECTION UNTIL STUCTURE DECLARED SAFE TO ACCESS BY ENGINEER AND ELECTRICAL SUPPLY CONNECTION TO SITE IS SAFE.

STEP	Area or Concern	Critical Actions or Response	Notes
3	**Site Services - Electrical**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– Check all in roof & on roof equipment	– Check voids in electrically powered equipment such as heat exchanger grills & compressor spaces for silt accumulations – Equipment manufacturers/ distributors should be consulted if doubt exists with any electrically powered equipment	
	– Check all ceiling & eave light fittings		

STAGE 3
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
4	**Fuel System**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– Check that the tank vents are open to the air	– Water can enter into the vent pipe if submerged. – If correctly laid the vent pipe will drain all water direct into the fuel tank no additional work required over checking tanks – If line not correctly laid or ground damage has caused subsidence in the line - can create a water blockage in line	

	– **If evidence of tank movement & the vents have been under water introduce alternate direct air venting of the tanks until vents can be checked**	– **Open the tank fill points first then dip points (provided the points are not under water)**
		  – **Caution tanks may already be under pressure**
		  – **Open dip points after the fills are open to minimise possible pressure surge up dip tube**
		– If the site has VR2 or in the NSW enhanced VR1 zone check the P/V vent & orifice plate are clear & operational	

STEP	Area or Concern	Critical Actions or Response	Notes
5.1	**Site Services – Water/Sewer**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
5.2	**Site Services – Compressed Air**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
5.3	**Site Services – Pollution Control & Drains**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– Check all roof gutters & downpipes	– Remove silt/debris build-up & run water through pipes to confirm clear & operational	

STEP	Area or Concern	Critical Actions or Response	Notes
6	**Point of Sale**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		

STEP	Area or Concern	Critical Actions or Response	Notes
7	**Communications**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		

STEP	Area or Concern	Critical Actions or Response	Notes
8	**Site Security Equipment and Safe**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		
	– Check DVR operational – Check all cameras operational – Check display screens operational – Check cash vending/ time delay access safe working as applicable to site	– Critical to have all site security equipment fully operational for staff safety	

STAGE 3
FLOOD INSPECTION PROCESS CHECKLIST

STEP	Area or Concern	Critical Actions or Response	Notes
9	**Image and Signage**		
	– Check condition of all sign faces & boxes, including fascia cladding	– Inspect all free-standing signs – Inspect wall mounted signs – Inspect building facia – Inspect canopy fascia	
	– Open face of all signs to check lighting & electrical is clean & dry	– Inspect power & lighting in all signs – Inspect/assess scrolling price digit systems – Inspect/assess LED price line systems – If correctly laid the vent pipe will drain all water direct into the fuel tank no additional work required over checking tanks	
	– Check & confirm also for all canopy & building fascia lighting tracks	– Check lighting systems on all illuminated fascia – Inspect/ confirm stability of canopy lighting track (support bracket system could be damaged/ partially dislodged)	

STEP	Area or Concern	Critical Actions or Response	Notes
10	**Miscellaneous**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		

STEP	Area or Concern	Critical Actions or Response	Notes
11	**Report**		
	SEE STAGE 1 AND 2 CHECKLISTS FOR CORE ELEMENTS		

Inspection Team Notes

NOTES

ABOUT THIS DOCUMENT

This document is one in a series of *Best Practice Guidelines* that has been prepared by the Australasian Convenience and Petroleum Marketers Association (ACAPMA) to assist fuel retailers with the management of their retail fuel sites.

The material provided in this document is of a general nature only. It is not intended for use by suppliers of equipment and services to the fuel retail industry in Australia given that much of this information is already detailed in relevant Australian Industry Standards and related Legislative Guidelines.

Rather, the information contained in this document is intended to provide a *Plain English* summary of the best practice processes that fuel operators should consider with respect to the ongoing management of key aspects of their retail fuel sites.

Fuel retailers seeking detailed information in relation to the design and/or alteration of service station infrastructure are strongly advised to secure the services of a qualified fuel system designer and/or petroleum services contractor.

The contact details of such contractors can be obtained by visiting www.acapma.com.au or calling the ACAPMA Secretariat on 1300 160 270.

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