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Mr David Robertson  
Project Manager  
Airservices Australia

Dear David,

Thank you for your letter to the Union dated the 28/06/2016 regarding the Internal Access Vehicle - Operational Specification. The UFU appreciates the opportunity to give feedback to ARFF on this proposed vehicle and your agreement to extending the time to reply. The Union would like to note however that there has been very little input from end users in the nearly three years since consultation about the IAV took place and on this basis the UFU believes that there are many areas of the project that seem to have been omitted, or overlooked. The areas of concern are detailed in our submission below.

**Several key omissions from this project include:**

- Compressed Air Foam Systems (CAFs)
- Penetrating Branches
- One Aerial Specialist Vehicle (ASV) only instead of three with an option for four.

**CAFs:** The inclusion of CAFs on the IAV would have provided an efficiency gain in fire suppression capability of over 33%. The results of using the CAFs system for fire suppression would also result in reduced ability for re-ignition and a safer more permanent fire extinction. The other significant safety advantage that would have been realised is a large reduction in the weight of the attack line. This would result in reduced work rate, reduced fatigue, increased safety and capability of CABA operators and reduced likelihood of manual handling injuries.

**Penetrating Branches:** Currently ARFF does not have any capability to provide defensive operations at an aircraft incident. There were three of these penetrating branches in service at one time but these are now mainly thought to be relegated to sitting in store rooms at Melbourne and Brisbane and no longer operational. The provision of a penetrating branch capability allows the Fire Commander to make an intervention safely when it is deemed too hostile to make entry into a fuselage, cargo area or avionics bay. Reducing the fire intensity from a safer, external position would have provided a much safer option than committing ARFF crews into intense fire conditions.

**One IAV:** While it appears that the ARFF plan is to purchase one IAV and located it in Melbourne to be shared between the Learning Academy and Melbourne Station in order to rate its effectiveness and fitness for purpose in an assessment phase. The station with the highest operational risk is clearly Sydney with more A380 movements per day than all the other three stations combined. Sydney has not had their Morita on line since February 2016, and from the information the UFU has received it does not look likely be returned to service any time soon. This has caused very grave concerns for ARFF operational staff at Sydney, from an operational and WHS perspective. Is there a LOA in place with either the airlines or FRNSW? If not the UFU believe that Airservices could be in breach of their own risk assessments and WHS obligations.

Another area of concern is the fact that Brisbane does not have an aerial capability at all and relies on the QFES to provide an aerial capability. This UFU understands that here is no training on aerial

vehicles at Brisbane even though staff there would be required to assist with the setup of and be part of the use of such an operational asset. Given the amount of training our staff are required to do to remain proficient on the Morita. Without any training aid for QFES and our staff to practice docking techniques and aircraft entry skills, this agreement to use their aerial in an unfamiliar environment, without any practice is unsafe and highly unlikely to work effectively on the day of an incident. There is not even any guarantee that the QFES vehicle will even be there and not deployed elsewhere.

**WHS concerns with the current situation in Sydney and Brisbane:**

**Regulation 34-38:** In order to manage risk under the WHS Regulations, a duty holder **must**:

- identify **reasonably foreseeable hazards** that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk – minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control
- **maintain the implemented control measure so that it remains effective**
- review, and if necessary revise, risk control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

The other concern to the UFU is how long will this 'assessment' phase last? ARFF could have sent operational staff to Frankfurt, Heathrow, Paris or Singapore Airports and spent a week or two assessing those IAV vehicles there? Given the Airservices track record with the Morita the UFU has grave fears that this one off vehicle for assessment will be dumped in Melbourne and forgotten about leaving the other stations with the current less than ideal solutions.

The improvements required to make the Morita's more effective and capable of combined rescue and fire attack as noted in the PIR have never eventuated. The UFU believes that the half Life servicing of the Morita's is due or overdue. Has ARFF management considered that it is highly likely all three will be sitting in the workshops unserviceable by the time this new ASV arrives? If this did eventuate Airservices would arguably be in breach of WHS regulation 34-38. What happens then? Back to pretending we can safely rescue passengers off a 9m ladder? More letters of agreement with brigades that are highly unlikely to work?

The UFU would like Airservices to take their operational and WHS accountabilities seriously and purchase four of these IAV's to meet the requirements of the risks clearly identified in the CONOPS for the A380. Those same serious Cat 10 aircraft operational risks that were Endorsed and Approved by ARFF senior managers. It is hard to understand how a Cat 10 remission factor risk assessment can make these risks disappear. These risks do not just stop at the A380. The B747 series continues with B747's still in service/production and flying into Cat 8-10 airports around Australia. None of our members can survive an 8 metre fall from these aircraft, there is no safe way to rescue passengers or to access these planes without the aid of mechanical assistance.

In fact, the UFU now believes that the safety of its members at all airports should be considered with a more holistic view when it comes to gaining access to ACFT during in an emergency. The UFU believes that a full review, involving HSR's and the UFU, of ARFF ACFT entry techniques should be undertaken in accordance with the WHS Act 2011. At a height of over 2.7 metres falling out of B737 in full PPE, while carrying equipment and wearing CABA has the potential to cause serious and permanent, if not fatal injuries to our members or the passengers they are attempting to rescue. Ladder rescues with no safety equipment or fall arrest are a thing of the past and Airservices have not replaced this option with any other safe or approved rescue technique. The UFU would like to

know what plan if any Airservices has for safely removing injured passengers at all airports, one of our key roles? The UFU believes that at least as an interim measure ARFF management should ensure that formal agreements (LOA) with airlines / ACFT service agents / local emergency services are in place and not just hope that a platform or set of stairs will be available if required. It should not be something that is done on the hop by the OIC on the day. That is setting OIC's up for failure when there is a known hazard identified.

Airservices should consider the acquisition of smaller more basic air stairs based on an F350 chassis that have a height range between B737 (2.5m) to mid deck A380 (5.2m) and base them at all ARFF stations. This would better meet Airservices **legal obligations** under the Commonwealth WHS Regulations in particular:

### **79 Specific requirements to minimise risk of fall**

- (1) This regulation applies if it is not reasonably practicable for the person conducting a business or undertaking at a workplace to eliminate the risk of a fall to which regulation 78 applies.
- (2) The person **must minimise the risk of a fall by providing adequate protection** against the risk in accordance with this regulation.
- (3) The person provides adequate protection against the risk if the person provides and maintains a safe system of work, including by:
  - (a) providing a fall prevention device if it is reasonably practicable to do so; or
  - (b) if it is not reasonably practicable to provide a fall prevention device, providing a work positioning system; or
  - (c) if it is not reasonably practicable to comply with either paragraph (a) or (b), providing a fall arrest system, so far as is reasonably practicable.

Examples: A safe system of work could include:

- 1 Providing temporary work platforms.
- 2 Providing training in relation to the risks involved in working at the workplace.
- 3 Providing safe work procedures, safe sequencing of work, safe use of ladders, permit systems and appropriate signs.

Note: A combination of the controls set out in this sub-regulation may be used to minimise risks so far as is practicable if a single control is not sufficient for the purpose.

The Queensland Government Working at Height Guideline 2014 States: What do I have to do to manage fall from heights risks?

To manage the risk of falls, you are required to **follow the hierarchy of controls for work at height** as follows:

1. avoid the risk by not working at height (e.g. work from an existing platform, **use extendable equipment** etc.). If it is not practicable to do the work safely in some other way then:
2. use work equipment or other measures to prevent falls (i.e. isolate worker from a fall); or
3. where the risk of a fall cannot be eliminated, use further controls to minimise the distance and consequences of a fall should one occur.

Remember that **minimisation is only acceptable when you have exhausted elimination and isolation**. Doing nothing is not an option.

**Operations within the Critical Area:** As the IAV is expected to operate from within the critical area the UFU would like to raise the issue of Carbon Fibre particles (CFM) contamination and the possibility of damage to micro circuits or computers used in the IAV if they become contaminated with these products. ENVIRONMENTAL, SAFETY, AND HEALTH CONCERNS FOR ADVANCED COMPOSITES Lt J. M. Olson (28 Oct 93). Are the circuitry and computers used in IAV secure against this contamination? Once again this is a known hazard that has been identified.

**Platform tilt test is Non-Compliant:**

FPS 4.3.2.1 The IAV shall pass a **13 degree** tilt test when the access stairs are fully extended and **unloaded**.

**NFPA 414 Standard for Aircraft Rescue and Fire-Fighting Vehicles 2012 Edition Chapter 5 Aircraft Interior Access Vehicle 5.5.2:** The vehicle shall pass a **15 degree** tilt test with stairs fully extended and **loaded** to the manufacturer's recommended weight capacity.

FPS 4.3.2.2 From a 5 degree slope in the transverse direction, the IAV shall have the ability to auto-level the stairs and the platform to horizontal.

**NFPA Standard for Aircraft Rescue and Fire-Fighting Vehicles 2012 Edition Chapter 5 Aircraft Interior Access Vehicle 5.2.6** From a 15 degree side slope, the vehicle shall have the ability to auto level the stairs and docking platform within 5 degrees of horizontal. (10 degrees)

FPS 4.1.2.4 The IAV shall provide access from ground level to aircraft door sill heights of up to 8.5m

FPS 4.1.2.5 The IAV shall provide access from ground level to aircraft door sill heights down to **3.4m**

**NFPA Standard for Aircraft Rescue and Fire-Fighting Vehicles 2012 Edition Chapter 5 Aircraft Interior Access Vehicle 5.2.3\*** The vehicle shall provide access from ground level to aircraft door sill heights of between **0.6m (2ft)** and at least up to the lower aircraft door sills of the largest aircraft operating at the airport.

FPS 4.3.16.46 The IAV shall have capacity for stowage of 2x Breathing Apparatus sets (complete) at ground level.

4.9.23.7 Individual bucket seats shall be provided in the cabin.

**NFPA Standard for Aircraft Rescue and Fire-Fighting Vehicles 2012 Edition Chapter 5 Aircraft Interior Access Vehicle 5.2.4 The cab** shall provide seating for a minimum of two fire fighters in full protective gear **and breathing apparatus**.

Both the MOS and the CASR reference the NFPA 414 and the current FPS fails to comply with this NFPA code in several areas.

The other areas the UFU holds concerns over are the safety and procedural issues highlighted in the CONOPS document:

Operator accreditation and licensing, and Elevated Work Platform licensing and accreditation, we need this agreed by Comcare in writing before staff get trained on it and be non-compliant in either vehicle registration or operator licensing terms.

The UFU believes that development of the following SOP's should take place involving elected HSR's.

- Safe working inside foam blankets current SOP to be expanded to include walking/checking the foam blanket before driving the IAV into position.
- Slide removal/deflation procedures, SOP and detailed training packages required for specific acft types and to be included in Acft Famil visits.
- Precautionary disembarkation procedures, SOP and Training Packages required it should include Passenger (crowd) control in movement areas. Removing passengers from danger should not cause worse chaos on any active apron or taxiway or put them at further risk. Noting that it will all be on you tube, twitter and facebook before the airport buses get there.
- Safe transport of passengers away from scene, SOP or Letter of Agreement (LOA) with Airport to provide transport away from the movement area ASAP.
- Casualty handling (stairs/equipment/stretchers), ARFF needs restraint straps, stair chairs and scoop stretchers to get injured casualties out of the aircraft safely and without injuring ourselves or them. As per the: Code of Practice 2001 Manual tasks involving the handling of people. SOP's and Training packages are required. No services still rely on dragging people out the door if they can help it.
- Equipment handling (stairs/equipment/hoses), Quick Lay hose packs are coming with the vehicle so SOP and procedure on using them and Quick Lay also have a pack to add a length as the fuselage is longer than 30m these are required also. We need to have a procedure and training to use these.
- PPV positive pressure ventilation SOP, this capability was to be beyond just overhaul ventilation which means some significant training to introduce the use of PPV as part of offensive firefighting techniques.
- Defensive Firefighting strategy, SOP required, Penetrating Branches required, Sledge Hammer to remove acft windows required (NFPA training DVD), training packages required.
- Working around unstable fuselage/sections SOP and equipment required. If the fuselage is unstable how do we work on it? An A380 is a bit big for step chocks.
- Access to heights SOP, APU/High Engine/Wing access SOP's there is some guidance in the AFFM for the Morita but it will need to be modified. Training on how to use the IAV as a stable work platform to fight fires and inspect high areas.

David thank you for the opportunity to consult on the IAV project. We understand some of these issues may be outside the scope of the project however, the procurement and commissioning of this vehicle will involve all of the safety concerns we have raised and the UFU believes that they have to be addressed.

We look forward to hearing Airservices replies to our concerns.

Yours faithfully

Henry Lawrence  
Branch Secretary