



## **Frontera Space Emergency Procedure: Personnel Injury & Rescue**

**Revision: 01**

Frontera Space Document: 000014

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## 1 PURPOSE

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The purpose of Document 000014 is to define the required actions for personnel injury response, rescue operations, first aid, and emergency medical coordination at the PTSD (Portable Test Stand by Dan).

This document establishes:

- First-aid procedures and immediate medical response
- Confined-space and limited-access rescue workflows
- Integration with local EMS, fire services, and poison control
- Documentation, incident reporting, and follow-up requirements

This procedure ensures effective, timely, and compliant response actions to protect injured personnel and maintain operational safety.

## 2 SCOPE

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This document applies to:

- All personnel working in or around the PTSD test stand, including technicians, observers, and contractors
- All injuries, including chemical exposure, thermal burns, mechanical injury, inhalation exposure, or physiological distress
- All rescue operations in confined, enclosed, or restricted-access areas of the stand
- All coordination with external EMS, hospitals, and poison control centers
- All personnel must comply with the requirements outlined in this document and participate in training as directed.

## 3 IMMEDIATE FIRST-AID RESPONSE

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All injuries—minor or severe—must be addressed using standardized response steps to ensure rapid stabilization and protection of both the victim and responders.

### 3.1 Initial Response Workflow

Upon discovery of an injury:

1. **Announce “Medical Emergency”** via radio or verbal call
2. **Stop all hazardous operations immediately**
3. **Isolate the area**—halt flow, shut valves, and safe the stand
4. **Approach only if safe** based on chemical and vapor readings

5. **Don required PPE posture**
  - Posture B for non-contaminated mechanical injuries
  - Posture C for suspected chemical exposure
6. **Provide first aid** appropriate to the injury type
7. **Activate EMS** if injury exceeds on-site treatment capability

The Safety Officer assumes control until EMS arrives.

## 3.2 Chemical Exposure Response

For exposure to MMH, MON-3/N<sub>2</sub>O<sub>4</sub>, or byproducts:

- Move the victim to fresh air immediately
- Remove contaminated PPE or clothing using gloves
- Flush skin or eyes with water at the emergency shower/eyewash station for **15 minutes**
- Administer supplemental oxygen (SCBA pack) if trained and required
- For inhalation symptoms, notify EMS and poison control immediately

All non-PPE exposures must be evaluated by medical professionals—no field clearance is permitted.

## 3.3 Thermal Burns, Mechanical Injury, and Lacerations

For non-chemical injuries:

- Stop bleeding with direct pressure
- Immobilize fractures
- Apply burn dressings (non-adhesive)
- Keep patient warm and stable
- Do not provide food or drink if EMS is en route

Any injury involving the face, head, spine, or loss of consciousness requires EMS activation.

## 4 RESCUE PLAN

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There are no designed confined-space hazards at the PTSD. However, injuries may occur:

- On elevated working platforms
- Inside the test-stand structure
- Around equipment with limited maneuvering space
- In areas obstructed by hardware, lines, or structural elements

Rescue procedures focus on safe access and removal

## 4.1 Scene Safety Assessment

Before approaching or removing an injured person:

- Confirm the stand is in a safed configuration
- Verify no toxic vapor hazards using portable monitors
- Confirm equipment is shut down and immobilized
- Establish a hazard-free rescue path

Rescue shall only begin when the area is confirmed safe

## 4.2 Rescue Personnel Requirements

Rescue personnel must:

- Be trained in stand-access rescue techniques
- Wear appropriate PPE posture based on hazard (chemical or mechanical)
- Maintain constant communication with the Safety Officer
- Use lifting/sliding equipment if required for safe extraction

## 4.3 Extraction Procedure

1. Verify safety of the area
2. Approach victim with appropriate PPE
3. Stabilize the injured person
4. Package or support the victim for movement
5. Move the victim along the predetermined safe path
6. Transfer to EMS for medical evaluation

All extraction efforts must prioritize rescuer safety.

# 5 COORDINATION WITH EXTERNAL MEDICAL RESOURCES

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## 5.1 Local EMS Integration

EMS shall be called for:

- Any non-PPE chemical exposure
- Respiratory distress or inhalation symptoms

- Major trauma, burns, or severe bleeding
- Loss of consciousness
- Any injury requiring advanced treatment

A designated escort must meet EMS at the access point and guide them to the stand.

## 5.2 Poison Control Coordination

Poison Control must be contacted for:

- MMH exposure
- MON-3/N<sub>2</sub>O<sub>4</sub> or NO<sub>2</sub> inhalation
- Any chemical-related respiratory symptoms

Provide chemical information, exposure details, symptoms, and first-aid actions taken.

## 5.3 Hospital Notification

If transport is required:

- Provide SDSs for all involved chemicals
- Warn transport personnel of possible residual contamination
- Ensure contaminated PPE/clothing is isolated before transport

# 6 DOCUMENTATION & INCIDENT REPORTING

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## 6.1 Immediate Documentation

After victim stabilization:

- Document incident time, location, and personnel involved
- Record detector readings and environmental conditions
- Note system status and actions taken
- Preserve any evidence relevant to the cause

## 6.2 Formal Incident Report

A formal written report must be completed within 24 hours and include:

- Narrative description
- Timeline

- Witness statements
- Photos (if safe)
- PPE used
- Medical outcome
- System behavior and alarms

## 6.3 Root-Cause Analysis & Corrective Actions

Root-cause analysis is required for:

- EMS-transport cases
- Chemical exposures
- Any injury linked to system or procedural failures

Corrective actions must be:

- Assigned
- Tracked
- Verified to closure
- Added to training or procedures as required

## 7 RETURN-TO-OPERATIONS AUTHORIZATION

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Operations may resume only when:

- The area is verified safe
- No vapor hazards remain
- All systems have been inspected
- Documentation is completed
- Corrective actions are in progress
- The Test Director issues formal authorization

## 8 PROGRAM MAINTENANCE

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Document 000014 shall be:

- Reviewed annually
- Updated after any injury requiring EMS or stand rescue
- Revised when procedures or system configurations change