DEPARTMENT OF THE AIR FORCE **Confined Space Master Entry Plan (MEP)** **MAN 003**
OO-ALC/MAN
Commodities Division **12 May 2003**
Ogden Air Logistics Center (AFMC)
Hill Air Force Base, Utah 84056

This Master Entry Plan (MEP) covers procedures for members of the Confined Space Entry Team from the Aircraft Landing Gear Maintenance Shop (MADPML) to perform preventative maintenance or repair in Collector Dust Out PM 009672.

1. Location: Dust Collector is located outside Building 505, East side**.**

2. Description of Workplace: This dust collector is elevated 12 feet off the ground and requires a man lift to reach the access panel they enter to perform their tasks. There are two access panels that are 3.5 feet by 3.5 feet. The dust collector is of metal fabrication and the overall outside diameter is 8 feet high by 8 feet long by 5 feet wide. This dust collector is used to filter a sandblasting agent, abrasive grains and powders (garnet).

3. Tasks/Operations to be Performed: MADPML maintenance personnel enter the dust collectors to perform periodic maintenance or repair on the equipment. The following tasks will be accomplished in accordance with job plans and work control documents for preventative maintenance or repair of dust collectors:

NOTE: *Coordinate with production foreman prior to working on equipment.*

WARNING: Any person working on this equipment must be continuously alert to all the safety rules and precautions when servicing or performing any maintenance.

3.1. Every 30 days the following will be accomplished:

3.1.1. Check photohelic gauge on dust collector if reading is above 6.5 and stays there, the filters need to be changed or there is another problem that needs to be dealt with. Check pulse valves, clean or replace filters or valves as needed (P/N: 620-020-25).
If filters need replacing, change filters. Refer to operator's manual section 3.4.
Also replace stone filter located inside the collector door, toward the top and on the same side as the motor. This filter is connected to the photohelic gauge. The dust collector filters need to be seasoned after installation. Refer to section 3.1.5 in the operator's manual. Filter P/N: 240-050-01.

4. Chemicals Used: No chemicals are introduced into this confined space.
Are there any lub oils or leak detector used in Paragraph 3? If so list as chemicals.
Note: *If any chemicals are needed to accomplish repairs, the MSDS will be reviewed, the Base Confined Space Program Team (CSPT) will be notified for guidance and approval, and the chemical will be listed on the permit.*

5. Technical Data Required: AFOSH STD 91-25**,** *Confined Spaces;* AFMC 21-127, *Depot Maintenance Plant Management; AFOSH STD 48-137, Respiratory Protection Program; Respirator Protection Program OI for PEG 5073C; Manufacturer's* Tech Data; the MSDSs and the current Bioenvironmental Engineering Survey for PEG 507C3.

6. Prevention of Unauthorized Entry: The dust collector doors are labeled **CONFINED SPACE – ENTRY BY PERMIT ONLY**. Confined space entrance will be roped off and posted with restricted entry signs. Attendant will monitor entry point.

7. Potential Hazards: Engulfment, dust inhalation, and oxygen depletion explosion and entrapment

7.1. Potential Hazard Description:

7.1.1. Engulfment - Dust.

7.1.2. Dust inhalation - Inhalation of dust particles

7.1.3. Oxygen - Depleletion

7.1.4. Explosion - Dust particles.

7.1.5. Entrapment - Converging areas in the interior of the collector and airlines

7.2. Control of Hazards: All hazards are controlled with methods consistent in the current Bio Survey; MSDSs on all products approved for use in this confined space. No chemicals are listed? See paragraph 4.
Lockout/tag out requirements will be complied with to eliminate the potential for electrical shock, engulfment, and hazardous dust atmospheres in the confined space. Entrants must be cognizant of areas of the confined space in which they may become entrapped such as protruding collector structure and converging areas of the interior of the confined space. Atmospheric conditions must be monitored and PPE, including a MSA full-face air-purifying respirator with P100 cartridges, will be worn during confined space entry. The P100 cartridges are to be changed out every two hours. In case of a fall, entrants must wear a rescue harness and lifeline for retrieval. Take precautions for explosions by not introducing a source of ignition or a lot of static electricity. How is static electricity going to be prevented? If work tasks include riveting, welding, cutting, burning, heating, or grinding, a hot work permit will be obtained from the Fire Department.

8. Entry Procedures:

8. 1. Entry Permit Requirement – An AF Form 1024, Confined Space Entry Permit, is required for all entries. Permit will not be issued until confined space meets requirements and acceptable entry conditions specified in paragraphs 8.2 and 8.3 are met. All permits must be coordinated with the OO-ALC/MANLBP Supervisor or alternate.

8.2. Engineering Controls and Isolation Methods (Lockout/Tagout):

Lockout/Tagout procedures will be followed to lockout electricity and air for dust collectors in accordance with OO-the ALC Form 215 attached to the applicable dust collector prior to entering the dust collectors to perform maintenance or repair.

8.2.1. PM 009672 ELECTRICAL E1- CB Panel is located in the middle of frame 5 ft up What frame?. Pull switch to off. Place lockout padlock and tag through switch. E2- main CB for PM 9634. Where is this located and what is it ? Knife switch on west side of PM 009634. Pull switch to off. Place lockout padlock and tag through switch. Dust Collector PM 9672 is de-energized when Sand Blast Machine PM 9634 main CB is off and locked out which is located inside building 505. Whole paragraph needs more description what- where- how.

8.3. Acceptable Entry Conditions:

8.3.1. All lockout/tagout procedures must be complied with. Authorized attendant must be present. Oxygen levels must not be less than 19.5% nor greater than 23.5% in the confined space. Proper PPE including respiratory equipment must be worn including a full-face air-purifying respirator with P100 cartridges. The entrant will wear a rescue harness attached to a lifeline attached to retrieval device. The confined space LEL must be less than 10%. Is there an LEL Potential **?** Availability of Fire Department Emergency Rescue Services confirmed by calling 7-3021. Hot Work permit signed by Fire Department, when required. Permit is signed by all members of the confined space entry team and posted before work begins in the confined space.

9. Authorization:

9.1. Confined Space Entry Team: Will consist of trained and authorized personnel from the Landing Gear Support Shop/MADPML. (See Authorized Entry Supervisor Listing, attachment 1.) The team will consist of four people: The entry supervisor, the entrant, the attendant, and the runner.

9.1.1. Entry Supervisor:

9.1.1.1. Responsible for isolation of the area, the assigning of tasks and briefing the team before entry.

9.1.1.2. Insures acceptable entry conditions listed in paragraph 8.2 and 8.3 are complied with.

9.1.1.3. Ensures personnel who are ill or on medication that may affect their ability to safely perform assigned tasks are excused from the operation.

9.1.1.4. Ensures emergency rescue personnel are available.

9.1.1.5. Ensures the entry permit is complete, dated and signed by all members of the confined space entry team prior to the entry and cancels the permit if conditions are no longer acceptable**.**

9.1.1.6. Insures confined space team is task, respirator atmospheric testing equipment, and confined space trained.

9.1.1.7. Insures equipment necessary for entry is available and is serviceable

9.1.1.8. Ensures proper PPE is available and worn, including respirators

9.1.1.9. Authorizes the confined space entry permit.

9.1.1.10 Maintains the Confined Space Master Entry Plan

9.1.1.11. Revoke confined space entry permits when entry conditions are not consistent with the MEP.

9.1.1.12. Entry Supervisor will act in accordance with duties outlined in AFOSH STD 91-25

9.1.2. Attendant:

9.1.2.1. Responsible for monitoring the entry area and maintaining effective communication with the entrant(s).

9.1.2.2. Must be able to summon help in case of an emergency.

9.1.2.3. Limit entry only to those authorized.

9.1.2.4. In the event of an emergency, order the evacuation of the confined space directs the runner to notify emergency response personnel. Remains at the attendant's post and not leave for any reason except self-preservation unless replaced by an equally qualified person.

Note: *The attendant may assist the entrant in self-rescue only when assistance can be rendered without his/her body breaking the plane of the confined space entry.*

9.1.3. Entrant:

9.1.3.1. Understands task to be performed.

9.1.3.2. Reviews the permit before entry, complying with entry procedures, ensures acceptable conditions exist, wears PPE, alerts attendant of changes in condition.

9.1.3.3. Responds immediately to the attendant's evacuation orders.

9.1.4. Runner:

9.1.4.1. Notifies emergency rescue services calling 911 via base telephone or 777-1911 via cell phone when alerted to do so by the attendant.

9.1.4.2. Assists emergency rescue by directing the rescue team to the location of the entrant.

10. Training: The confined space entry team entry supervisor, attendant, entrant, and runner must have the following training: MAWH Confined Space Course 0523, Annual Site Specific Training, Confined Space Awareness Training and Atmospheric Tester Training, and respiratory training. All training shall be documented on individual's AF Form 55, Employee Safety and Health Record.

11. Entry Equipment and PPE:

11.1. Atmospheric Testing Equipment.

11.2. PPE includes coveralls, nitrile gloves, safety glasses, safety shoes, and respiratory protection (MSA full-face respirator with P-100 cartridge). Anti static coveralls ? Rescue harness, retrieval line and retrieval device??

12. Testing: Atmospheres in confined space will be tested and documented by the confined space entry team. Oxygen levels will be tested first. Oxygen levels and must be between 19.5% and 23.5% followed by tests for LEL content. which will be maintained at 10% or less. Is there a LEL potential and what is it ? An Eagle Tester will be used to check and monitor atmospheres and must be calibrated every thirty days. and before use ? Can an Eagle tester measure dust LEL?

13. Communication and Observation: The attendant will stand directly outside the confined space opening and verbally communicate with the entrant. The attendant will verbally notify the runner to call Hill AFB Emergency rescue via base phone or cell phone when emergency rescue is required.

14. Rescue: The 75ABW/CEF provides rescue support for all confined space entries. The attendant will direct the runner to notify Hill AFB Fire Department Emergency Rescue by calling 911 on the nearest base phone or by calling 777-1911 on a cell phone The nearest base phone must be determined before entry and listed on the entry permit. The runner must be able to provide the dust collector location and the nature of the emergency to the 911 operators. The attendant cannot leave the confined space unless he/she is relieved by a trained and qualified person or for self-preservation. Upon the rescue teams arrival, the runner will direct the team to the entrant's location.

Warning: The use of a cell phone is limited to areas that do not have a potential for an explosive/flammable atmosphere.

15. Contractor Interface: Contractors must be informed that work is to be performed in a permit required confined space. Insure information is included in the statement of work. The entry supervisor must coordinate with the contractor on any existing permits and inform the contractor of potential hazardous conditions within the area to be entered. The contractor will immediately inform the owner of the confined space and the entry supervisor of hazards detected in the confined space, when work in the confined space has been terminated, before completion and when the work has been completed. The contractor must briefed on the contents of the AFOSH STD 91-25, Chapter 7.

16. Permit Routing and Control: Permits including cancelled permits will be kept on file in the MADPML Shop for one year. A copy must be forwarded to MAD safety who will in turn forward a copy to MAN Safety.

17. Amendment to the MEP: The MEP must be reviewed at least once a year by the entry supervisor and coordinated by Confined Space Program Team (CSPT) consisting of Bio-environmental Engineering /SGPB, Fire Department/CEF and Base Safety/SEG. Changes at any time to the MEP other than spelling and grammar will void the use of this MEP, require the termination of the confined space entry and must be brought to the attention of entry supervisor, organizational safety office and the CSPT. The Base Safety Office/SEG will make all corrections. Reviews will be coordinated by the CSPT.

18. Coordination:

OO-ALC/MADPML Chief/Entry Supervisor	Date
OO-ALC/MADPML Entry Supervisor	Date
OO-ALC/MADPML Entry Supervisor	Date
OO-ALC/MADPML Alternate Entry Supervisor	Date
OO-ALC/MADPML Alternate Entry Supervisor	Date
OO-ALC/MANLBP	Date
OO-ALC/MAN Safety	Date
OO-ALC/MAD Safety	Date
OO-ALC/MADP	Date
OO-ALC/SGPB	Date
75 CES/CEF	Date
OO-ALC/SEG	Date

Confined Space Entry Supervisor Authorization

The following personnel assigned to the Aircraft Landing Gear Maintenance Shop (MADPML) are authorized to approve and sign confined space entry permits for work to be performed in Collector Dust Out PM 009672**.** Permit is signed and posted before work begins in the confined space.

NAME	OFFICE	PRIMARY/ALTERNATE
James J. Steed	MADPML	Primary
Glen Anderson	MADPML	Primary
Robert Jordan	MADPML	Alternate
George Jones	MADPML	Alternate