OPERATIONAL AGREEMENT

between
Lockheed Martin Space
Orion Program
and
PAE-SGT Partners, LLC, Base Operations and Spaceport Services (BOSS)

Joint Operations of the O&C Building Industrial Operating Zone Fluid Systems

ORION-KSC-FAC-014
Revision – Final
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1. Introduction
    1.1. This Operational Agreement (OA) establishes the roles and responsibilities between Lockheed Martin Space and BOSS regarding the Operations, Maintenance, Engineering, and User (OMEU) of the Industrial Operating Zone (IOZ) Fluid Systems in building M7-355 (Operations and Checkout).
    1.2. The intent of this document is to provide the business policy in order to operate and maintain the IOZ Compressed Air, Facility Vacuum Cleaning, Program Model Numbers K61-2785-001 (Compressed Air), U70-1393 (Facility Vacuum Cleaning).
    1.3. This document establishes the basis for BOSS to successfully provide quality service for Sustaining Engineering, Operations and Maintenance of the IOZ fluid systems while minimizing impact to Lockheed Martin Space, in order to protect the Lockheed Martin Space assets and ensure a continued production environment is maintained.

2. Scope
    2.1. This OA is to define the IOZ fluid systems technical requirements and operational parameters, scheduled and unscheduled maintenance, and notifications and response.
    2.2. This OA applies to all fluid systems equipment, as delineated in the drawings associated with Program Model Numbers K61-2785-001 (Compressed Air), U70-1393 (Facility Vacuum Cleaning).required to provide facility and Orion manufacturing the fluid services within the IOZ (see Attachment I) .
        2.2.1. Compressed air equipment includes all pipe, tube, valves, gauges, filters, and related components including panel and support structures from the supply penetrations into the IOZ and throughout the IOZ as detailed in drawing 82K07923. Compressed air equipment dedicated to the operation of the IOZ vertical door seals including source isolation valve are part of the applicable door PMN and not subject of this OA. Compressed air equipment dedicated to the operation of the existing altitude chambers including source isolation valves are part of the applicable altitude chamber PMN and not subject of this OA. Compressed air exits the IACP at 115 +/- 5 PSIG with a 38- 40 F dewpoint.
        2.2.2. Facility Vacuum Cleaning system equipment includes vacuum generator, pipe, hoses, sweeps, disconnects, storage cabinets and support structures as detailed in drawing 82K07930. Note: hoses, sweeps, and storage cabinets are not detailed in the drawings but are the maintenance responsibility of LOCKHEED MARTIN SPACE. Included are electrical switch and operating equipment from AC power disconnect (inclusive) to the end item elements.

3. Definitions
    3.1. Scheduled Maintenance includes preventive maintenance (PMI/OMI's), predictive testing and inspection, Scheduled repair projects, programmed maintenance, replacement of obsolete items, and restoration/modernization associated with building systems/components.

3.2. Unscheduled Maintenance includes corrective maintenance, trouble calls and breakdown repairs.
3.3. Emergency Conditions are situations which would render flight hardware or personnel safety at risk.

4. IOZ Cleanliness Standards
    4.1.1. IOZ cleanliness shall be maintained per the Lockheed Martin Space IOZ KSC-FO-042 Clean Zone Operating Procedure
5. Security and Access
    5.1.1. IOZ access shall be per the Lockheed Martin Space IOZ Security / Access Plan (KSC-FO-004).
    5.1.2. IOZ entry requires check-in at operations desk and follow Lockheed Martin Space protocol.
    5.1.3. IOZ access for scheduled maintenance will be coordinated with Lockheed Martin Space through the BOSS maintenance schedule at all times. Lockheed Martin Space will be provided the BOSS maintenance schedule a minimum of two weeks in advance of scheduled maintenance activity to provide for security coordination. Scheduled maintenance that will adversely impact Orion Production operations within the IOZ as determined by Lockheed Martin Space may be performed off shift or on weekends as required; Lockheed Martin Space will support access to the IOZ for the work.
    5.1.4. Lockheed Martin Space will authorize a KSC issued Task Key (KH-122) for access to the IOZ. The Task Key shall be used for unscheduled maintenance and emergency conditions requiring immediate access during LM off shift periods only (except West Mechanical room access). The issued Task Key shall be maintained in a locked and controlled cabinet at all times when not in use in the Industrial Area Chiller Plant (IACP).
    5.1.5. The West Mechanical Room shall be available for access at any time for authorized scheduled and / or unscheduled maintenance. The West Mechanical Room shall be locked at all times when access is not required. The lock shall be the same lock series (KH-122) as authorized by LM. A placard shall be applied adjacent to the access door lock denoting location of the Task Key (in the IACP) as maintained per the previous paragraph.
    5.1.6. A log of IOZ access Task Key usage shall be maintained at the IACP.
    5.1.7. Unscheduled maintenance, emergency and emergent condition access into the IOZ (except for West Mechanical Room) shall be denoted in the IOZ HVAC Log book located at the IOZ Operations Desk. Detail shall include as a minimum:
        5.1.7.1. Reason for entry
        5.1.7.2. Time of entry
        5.1.7.3. Action taken
        5.1.7.4. Time of exit
6. Drop Mitigation and Foreign Object Elimination
    6.1. All personnel accessing the IOZ shall comply with KSC-FO-016 Drop Mitigation Plan and KSC-FO-017 FOE Plan.

7. Scheduled maintenance
   7.1. BOSS shall be responsible for all scheduled maintenance of the IOZ Fluid systems as shown on the system drawings.
   7.2. Scheduled maintenance shall be coordinated with the Lockheed Martin Space Orion Facilities Manager.
   7.3. Scheduled maintenance shall be integrated into the Lockheed Martin Space Production Master Schedule.
   7.4. Scheduled maintenance shall not adversely affect ongoing Orion Production operations within the IOZ.

8. Unscheduled maintenance
   8.1. BOSS shall be responsible for all unscheduled maintenance of the IOZ Fluid Systems as shown on the drawings.
   8.2. Unscheduled maintenance due to failures or anomalies that render the systems un-operational or at high risk shall have immediate response (30 min). Notification via BOSS Duty Office to the LM Orion Facilities Manager and the BOSS Facility Manager or alternant (see Attachment II) shall be made as soon as possible.
   8.3. BOSS shall be responsible for the Fluid Systems operations during unscheduled maintenance activities to ensure safe and effective maintenance processes.

9. System Modifications and Configuration Control
   9.1. From time to time modifications / additions may be required on the fluids systems. Lockheed Martin Space may desire to implement such changes to the system however in all cases configuration changes will be vetted through the existing BOSS Support Request and BOSS Configuration Control Board.
   9.2. BOSS may desire to perform system modifications for reasons such as hardware updates, obsolescence etc. BOSS shall coordinate with Lockheed Martin Space for all system modifications. All modifications to the systems shall be managed and approved through BOSS change management system.
   9.3. System Modifications and Configuration Control changes shall be coordinated with the Lockheed Martin Space Orion Facilities Manager.

10. Systems Operation
   10.1. Compressed Air
      10.1.1. Lockheed Martin Space as the designated User provides interface connection and valve configuration of the IOZ compressed air system.
      10.1.2. Should a configuration other than established by Lockheed Martin Space be required for maintenance / modification BOSS shall coordinate the changes with Lockheed Martin Space before implementing.
   10.2. Gaseous Nitrogen
      10.2.1. Lockheed Martin Space as the designated User provides interface connection and valve configuration of the IOZ Gaseous Nitrogen system except BOSS shall be responsible for the KSC O&C laboratory nitrogen supply valve configuration; this valve is located along the IOZ North wall adjacent to the existing altitude chambers.

10.2.2. BOSS will provide the gaseous nitrogen.

10.2.3. The gaseous nitrogen system shall be maintained at 3000 +/- 300 PSIG by BOSS at all times unless coordinated with Lockheed Martin Space otherwise.

10.2.4. Lockheed Martin Space will coordinate high nitrogen demand with BOSS to ensure the nitrogen supply can be maintained.

10.3. Gaseous Helium

10.3.1. Lockheed Martin Space as the designated User provides interface connection and valve configuration of the IOZ Gaseous Helium system.

10.3.2. BOSS will provide the gaseous helium

10.3.3. The gaseous helium system shall be maintained at 3000 +/- 300 PSIG at all times unless coordinated with Lockheed Martin Space otherwise.

10.3.4. Lockheed Martin Space will coordinate high helium demand with BOSS to ensure the helium supply can be sustained.

10.4. Gas Vent System

10.4.1. Lockheed Martin Space as the designated User provides interface connection and valve configuration of the IOZ Gaseous Vent system.

10.4.2. There shall be no other use for the gas vent system other than for venting of Oxygen compatible gasses or as otherwise determined by Lockheed Martin Space. The IOZ gaseous vent system is dedicated for Orion IOZ operations and will not be used for other purposes unless specifically approved by Lockheed Martin Space.

10.5. Vacuum Cleaning System

10.5.1. Lockheed Martin Space as the designated User will operate the vacuum cleaning system using the hoses, sweeps and other fittings. Lockheed Martin Space will turn on and off the vacuum cleaning system using existing pushbutton operating stations within the IOZ.

10.5.2. The vacuum cleaning system is for collection of non-hazardous debris only. The system shall not be used for the collection of liquids. Should the system inadvertently ingest liquid or a hazardous material Lockheed Martin Space shall immediately notify BOSS at the duty office (861-5050) to coordinate the appropriate response and action.

11. Emergency Response

11.1. In the event a system malfunction or failure will or may change the established condition of the IOZ or operations within BOSS shall respond within 30 minutes as defined in the unscheduled maintenance section of this document

11.2. System out of condition issues and failures detected by Lockheed Martin Space shall be communicated to BOSS Duty Office immediately at 861-5050.

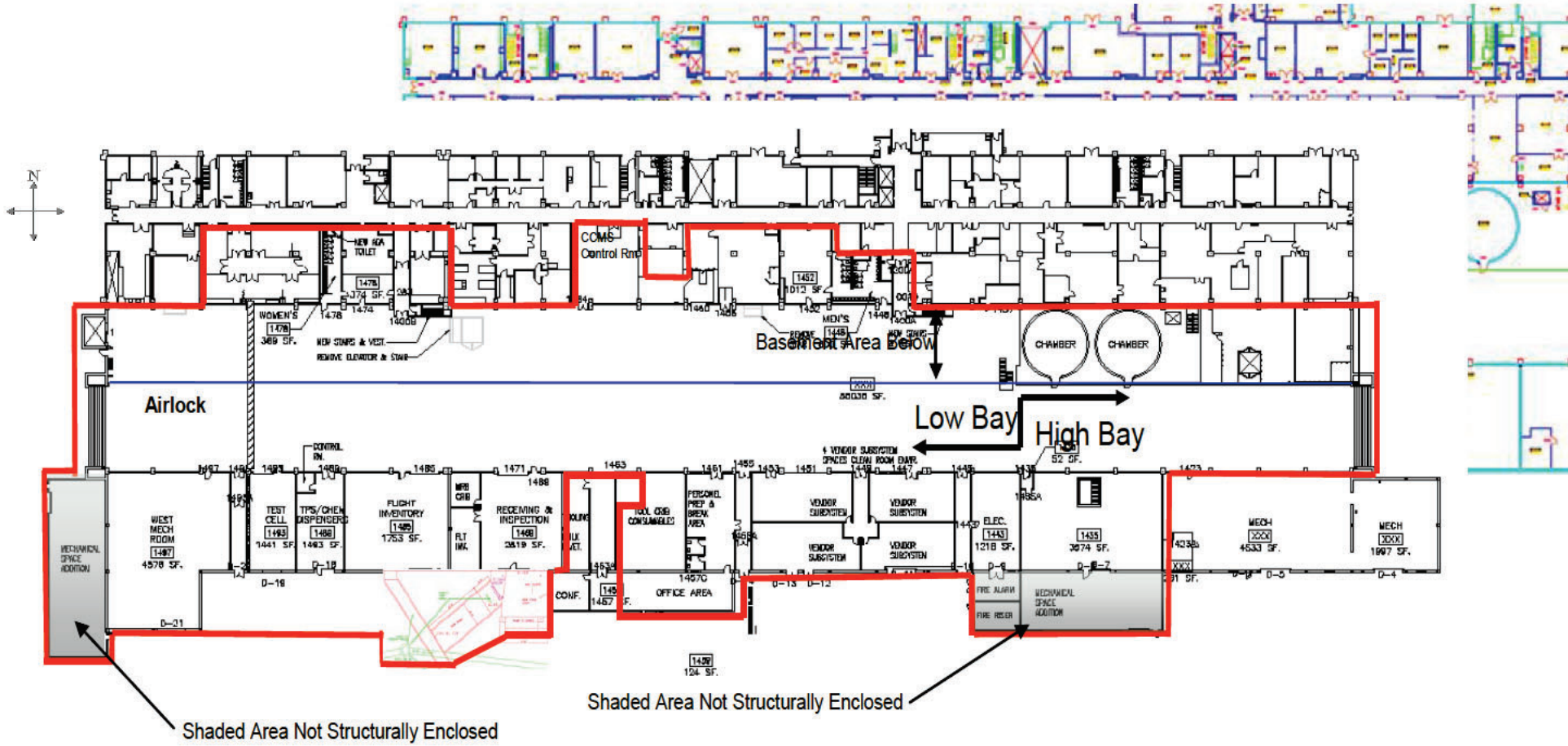
11.3. BOSS shall provide notification to the Lockheed Martin Space Orion Facilities Manager and BOSS Facility Manager of system out of condition issues and failures.

12. Natural Disaster Fluid Systems Preparation and Operation

12.1. Lockheed Martin Space and BOSS shall prepare and respond as determined by their individual approved plans.

12.2. Compressed Air – The compressed air system shall remain pressurized and active unless specifically coordinated otherwise with Lockheed Martin Space.

ATTACHMENT I
IOZ Boundaries



♦Red envelope is IOZ boundary