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 Low Voltage Electrical System

ORION-KSC-FAC-013
Revision – Final
22 July 2019

1. Introduction
   1.1. This Operational Agreement (OA) establishes the roles and responsibilities between Lockheed Martin Space and PAE-SGT Partners, LLC, Base Operations and Spaceport Services (BOSS) regarding the Operations, Maintenance, Engineering, and User (OMEU) of the Industrial Operating Zone (IOZ) Low Voltage (LV) Electrical System 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 LV Electrical System, Program Model Number K61-0553-03.
   1.3. The document establishes the basis for BOSS to successfully provide quality service for Sustaining Engineering, Operations and Maintenance of the IOZ LV Electrical 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 LV electrical technical requirements and operational parameters, scheduled and unscheduled maintenance, and notifications and response.
   2.2. This OA applies to all LV equipment, lighting, and controls required to provide facility and Orion manufacturing electrical service within the IOZ (see Attachment I) . LV electrical equipment includes all switches, breakers, receptacles, panels, surge protectors, light fixtures, and substation up to the medium voltage taps to the end item disconnect switches as defined in the drawing 82K07812.
   2.3. The West Mechanical Room (Southwest corner of the IOZ) contains ancillary equipment (pumps, water heaters, boilers, etc) which are integral to the entire O&C building and are not a part of the scope of this document. Please refer to the applicable drawings for equipment jurisdictional boundaries.

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.

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.

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 emergency or emerging condition requiring immediate access during LM off shift periods only. 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. 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 LV Electrical system.

7.2. NASA owns the facility generator and will provide separate maintenance and operating requirements and funding for all requested activities associated with this generator.to BOSS.

7.3. Scheduled maintenance shall be coordinated with the LM Orion Facilities Manager.

7.4. Scheduled maintenance shall be integrated into the LOCKHEED MARTIN SPACE Production Master Schedule.

7.5. Scheduled maintenance shall not adversely affect ongoing Orion Production operations within the IOZ.

7.6. BOSS shall be responsible for the system operations.

8. Unscheduled maintenance

8.1. BOSS shall be responsible for all Unscheduled maintenance of the IOZ LV Electrical system.

8.2. Unscheduled maintenance due to failures or anomalies that render the system un-operational or at high risk shall have immediate response (30 min). Notification via BOSS trouble call desk to the primary Lockheed Martin Space contacts shall be made as soon as possible.
8.3. Notification of an emergency or emergent condition and requirement for entry / work shall be per Attachment II. The Lockheed Martin Space prime point of contact is the Facility Manager.
8.4. BOSS shall develop a plan in the event of a failure to ensure the IOZ and its contents are protected. The primary consideration for protection shall be the Spacecraft elements, Test Hardware, and Tooling.
8.5. BOSS shall be responsible for the system 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 LV Electrical system. 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 energy efficiency, hardware updates, obsolesce. etc. BOSS shall coordinate with Lockheed Martin Space for all system modifications including software updates / changes. All modifications to the system 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. System Operation
10.1. Normal operation of the LV Electrical system entails operating lighting, certain equipment (bridge cranes, doors, vacuum system, elevators, UPS, etc.) and connect and disconnect of end items from power receptacles; Lockheed Martin Space and/or BOSS may perform these activities.
10.2. From time to time normal operations will open end item circuit breakers; Lockheed Martin Space may close end items circuit breakers however, a notification to and coordination with the BOSS responsible engineer and BOSS site manager shall be made of the activity.
10.3. All primary switching (substation, primary distribution panels, facility generator) is to be performed by BOSS and coordinated with Lockheed Martin Space.

11. Emergency Response
11.1. In the event a system malfunction or failure will or may change the established condition of the IOZ, BOSS shall take immediate action (30 min. response) to either correct or mitigate the failure.
11.2. BOSS shall provide notification to Lockheed Martin Space of system out of normal condition issues and failures as per the BOSS / LOCKHEED MARTIN SPACE Emergency notification list (Attachment II).

11.3. System out of normal condition issues and failures detected by Lockheed Martin Space shall be communicated to BOSS immediately per the BOSS / Lockheed Martin Space Emergency notification list and/or the KSC Response Desk at (321) 861-5050

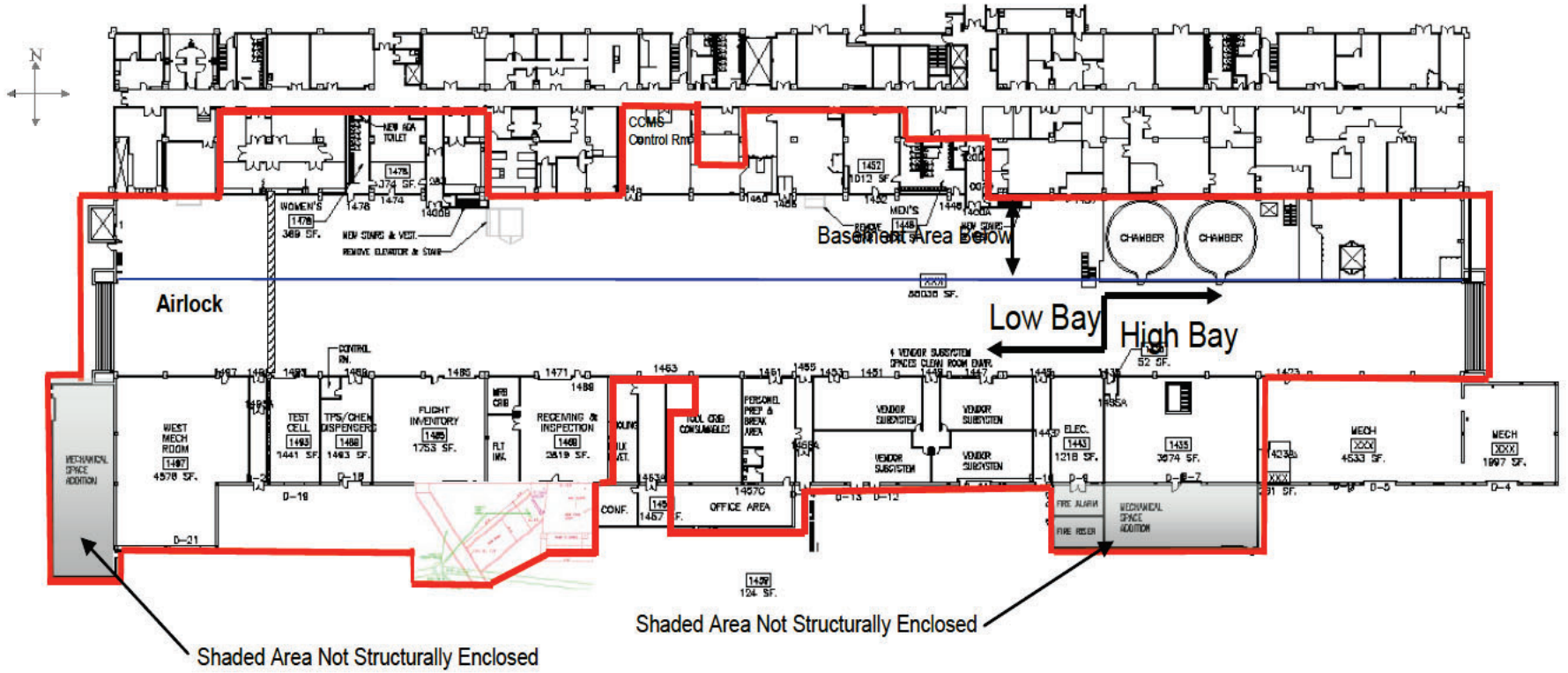
12. Natural Disaster LV Electrical System Preparations and Operation

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

12.2. The IOZ LV Electrical system shall be set to operate in the nominal configuration with both substation ends active and tie-breaker set to close upon loss of one of the ends or as determined by Lockheed Martin Space depending upon the emerging conditions.

12.3. The IOZ LV facility generator is manually controlled. Lockheed Martin Space shall provide specific request to BOSS on how to connect and operate this generator during natural disasters.

ATTACHMENT I
IOZ Boundaries



♦Red envelope is IOZ boundary