

OPERATIONAL AGREEMENT

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

**Joint Operations of the Launch Abort System Facility
Industrial Operating Zone AC Electrical System**

ORION-KSC-FAC-017
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 Launch Abort System Facility (LASF) Industrial Operating Zone (IOZ) AC Electrical System in buildings M7-0777, M7-0776A, and M7-0776B.
 - 1.2. The intent of this document is to provide the business policy in order to operate and maintain the LASF IOZ AC Electrical System, Program Model Number K60-0570.
 - 1.3. This document establishes the basis for BOSS to successfully provide quality service for Sustaining Engineering, Operations and Maintenance of the LASF AC Electrical while minimizing impact to Lockheed Martin Space, in order to protect the Lockheed Martin Space assets and ensure a continued production and processing environment is maintained.
2. Scope
 - 2.1. This OA is to define the LASF AC electrical technical requirements and operational parameters, scheduled and unscheduled maintenance, and notifications and response.
 - 2.2. This OA applies to all AC electrical equipment, lighting, and controls as delineated in the drawings associated with PMN K60-0570 required to provide facility and Orion manufacturing electrical service within the IOZ (see Attachment I). LV electrical equipment includes all switches, breakers, receptacles, panels, distribution light fixtures, and substation up to the medium voltage taps to the end item disconnect switches.
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
5. LASF IOZ cleanliness shall be maintained per the Lockheed Martin Space IOZ KSC-FO-042 Clean Zone Operating Procedure Security and Access
 - 5.1.1. LASF IOZ access shall be per the Lockheed Martin Space IOZ Security / Access Plan (KSC-FO-004).
 - 5.1.2. LASF IOZ entry requires check-in at the Orion Operations Desk in the O&C building following Lockheed Martin Space protocol. Shop personnel can pre-coordinate entry by calling the O&C Operations Desk at 321-867-7525 in advance of travel to the LASF.

- 5.1.3. LASF 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 LASF 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 LASF IOZ for off shift work.
 - 5.1.4. Unscheduled maintenance when Lockheed Martin Space is unavailable during non-work hours shall be authorized through the BOSS Duty Office and execution of the BOSS / Lockheed Martin Space call tree maintained by the Duty Office.
 - 5.1.5. Lockheed Martin Space will authorize a KSC issued Task Key (KH-122) for access to the LASF IOZ mechanical equipment rooms. The Task Key shall be used for nominal maintenance 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).
 - 5.1.6. The Electrical Rooms shall be locked at all times when access is not required. The lock shall be the same lock series (KH-122) as authorized by Lockheed Martin Space. A placard shall be applied adjacent to the access door lock denoting location of the Task Key (in the IACP) and maintained per the previous paragraph.
 - 5.1.7. A log of the LASF IOZ access Task Key usage shall be maintained at the IACP.
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 LASF IOZ AC Electrical system
 - 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 LASF IOZ.
 - 7.5. BOSS shall be responsible for the system operations.
8. Unscheduled maintenance
 - 8.1. BOSS shall be responsible for all unscheduled maintenance of the LASF IOZ AC Electrical system as shown on the drawings.
 - 8.2. Unscheduled maintenance due to failures or anomalies that render the system un-operational or at high risk shall have immediate response within 30 min. Notification via BOSS Duty Office to the Lockheed Martin Space Facilities

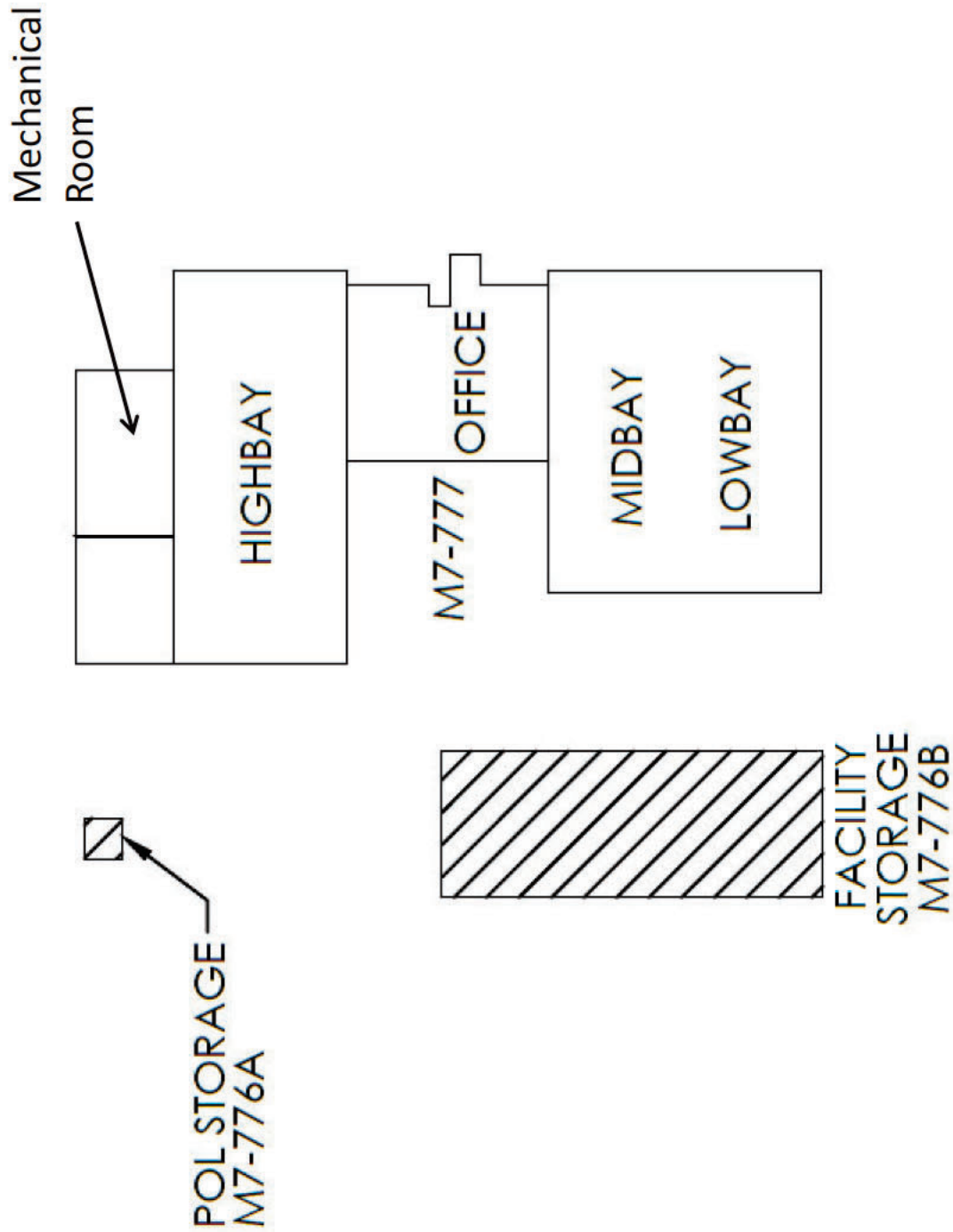
- Manager and the BOSS Facility Manager or alternant (see Attachment II) shall be made as soon as possible.
- 8.3. BOSS shall develop a plan in the event of loss of a primary feeder to ensure the LASF -IOZ and its contents are protected. The primary consideration for protection shall be the Spacecraft elements, Test Hardware, and Tooling.
 - 8.4. BOSS shall be responsible for the AC electrical 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 AC 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, obsolescence etc. BOSS shall coordinate with Lockheed Martin Space in advance for all system modifications including software updates / changes. All modifications to the system shall be managed and approved through BOSS change management system prior to implementation.
 - 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 AC Electrical system entails operating lighting, certain equipment (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, 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 that will or may change the established condition of the LASF IOZ, BOSS shall take immediate action (30 min. response) to correct or mitigate the failure.
 - 11.2. BOSS shall provide notification to Lockheed Martin Space of system out of 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 AC 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 LASF IOZ AC Electrical system shall be set to operate in the normal configuration or as jointly agreed between Lockheed Martin Space and BOSS with both substations active or as determined /agreed by Lockheed Martin Space and BOSS depending upon the emerging conditions.

ATTACHMENT I
IOZ Boundaries



ATTACHMENT II
Emergency Contact List

Lockheed Martin Space Points of Contact



NASA Orion Production Operations

