Attachment 10

Population Monitoring and Management Plan
Population Monitoring and Management Plan

14 January 2020

GORA EXEMPT – SECURITY INFORMATION
FOIA EXEMPT – SECURITY INFORMATION
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Revision History:
1/14/20 Original issue of this document. Material previously contained within the LSOL application of 1/25/2019, submissions to FAA/AST and additional material developed in response to FAA/AST inquiries between January and December 2019.
SECTION 1 – INTRODUCTION

Spaceport Camden has prepared this Population Monitoring and Management Plan (PMMP) for use in and around Spaceport Camden during hazardous operations. The resultant data generated by this plan on day-of-launch will inform the Launch Facility Operations Director (also known as the “launch director”) or a designee, if pre-determined population related thresholds are exceeded. These pre-determined population thresholds are identified to maintain safe cumulative risk limits (also known as “expected casualty” or “public risk limits”) during hazardous launch site operations in accordance with Title 14 of the Code of Federal Regulations (CFR) Part 420 for a Launch Site Operator License (LSOL) and Parts 415/417 for a Launch License.

The following paragraphs describe how Camden County will account for and manage the process to determine day-of-launch populations on Little Cumberland Island (LCI), Cumberland Island (CI), and the waters surrounding these islands, to ensure that cumulative risk limits are not exceeded.

1.1 FAA/AST Request for PMMP

This PMMP is required to address the concerns expressed by FAA/AST regarding the active monitoring and management of population that may be present on, and migrate to and from, Little Cumberland Island (LCI) and Cumberland Island (CI), during hazardous launch operations at Spaceport Camden. The original inquiry from FAA/AST stated:

“We need information on how the number of people on LCI and Cumberland Island would be accounted for and managed to ensure that the public risk limits are not exceeded.”

1.2 Regulatory Justification for Request (14 CFR § 413.13)

Although a PMMP is not a required submission under the LSOL regulations of 14 CFR Part 420 (or Parts 415/417), the FAA may request, pursuant to 14 CFR § 413.13 “additional information necessary for a determination that public health and safety, safety of property, and national security and foreign policy interests of the United States are protected during the conduct of a licensed or permitted activity.” This PMMP is one such request.
SECTION 2 – POPULATION MANAGEMENT AND MONITORING

2.1 Generation of Population Threshold Data by Launch

For every launch at Spaceport Camden there is an Incident Command System (ICS) Form 201 compliant document prepared by the launch stakeholders (led by Spaceport Camden) called the Comprehensive Launch Plan (CLP).¹ Within the CLP, one of the analysis products for an orbital launch will be a launch operator generated, and FAA/AST approved, determination of the maximum population that may be accommodated on LCI and CI, given appropriate characteristics for the launch vehicle, payload, trajectory, weather, and other factors included in an FAA/AST approved launch license. These maximum population determinations will serve as the basis for the maximum allowable populations on LCI, CI and the surrounding waters for day-of-launch. Should population estimates exceed these allowable limits, a launch hold would be implemented until populations have been reduced below the agreed upon limits.

2.2 Population Monitoring and Management (M/M)

The following is the description of the process to be used to monitor and manage populations that enter LCI, CI and the surrounding waters. For ease of understanding and considering various regulatory frameworks and necessary working arrangements, the M/M of population is broken down into four (4) zones: 1) Water, 2) Cumberland Island, 3) Little Cumberland Island, and the 4) Rest of the Area (ROA). These zones are shown in Exhibit 1 and are described in the following paragraphs based on their characteristics, lead-agency, supporting organizations, and the methods used to perform M/M operations.

¹ See Spaceport Camden’s Launch Site Operator License (LSOL) application, Attachment 9, for an example of a CLP used in a suborbital launch performed at Spaceport Camden under Part 101.
2.2.1. **ZONE 1 – Water**

On day-of-launch, the waters surrounding LCI and CI shall be subject to United States Coast Guard (USCG) safety zone rules promulgated by the Captain of the Port (COTP) Savannah in accordance with provisions of the Code of Federal Regulations (CFR), specifically, 33 CFR § 165.20, and in accordance with the USCG-Camden County Letter of Agreement (LOA) found as Attachment 3 to the Spaceport Camden LSOL application. Exhibit 1 uses the largest proposed USCG Safety Zone currently under evaluation that includes all of the envisioned trajectories from Spaceport Camden referenced in the Draft Environmental Impact Statement (DEIS)² (Attachment 1 to the Spaceport Camden LSOL application) and the largest launcher to be used from Spaceport Camden. Zone 1 is the water areas defined by the USCG Safety Zone.

Pursuant to the Spaceport Camden Access Control Plan (Attachment 5 to the Spaceport Camden LSOL application), these areas will be monitored by USCG authorized water craft at designated check points (CPs) that have enforcement authority granted to them under Coast

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² March 2018.
Guard regulations (33 CFR § 165.20) and further addressed within the Spaceport Camden-USCG LOA (Attachment 3 to the Spaceport Camden LSOL application). All craft who wish to proceed through or within the Safety Zone must present appropriate credentials or otherwise be authorized by a launch official or the COTP’s representative on the USCG-authorized water craft.

Craft and their population will be reported to a central launch population M/M desk that will be the point of contact for up-to-date population counts to the launch director. Assisting in the monitoring of the water areas will be other authorized first responder craft, video surveillance from Spaceport Camden property, and launch-day staff pre-positioned on CI, LCI, and Jekyll Island. If needed, fixed wing and/or drone aircraft (appropriately authorized under FAA rules) will also be utilized. These supporting elements will report observed (and if necessary, estimated) populations to the central launch population M/M desk so they are accounted for and managed, as appropriate.

2.2.2. ZONE 2 – Cumberland Island

Cumberland Island is managed and controlled by the National Park Service (NPS), Cumberland Island National Seashore (CUIS) staff. Currently, CUIS utilizes Camden County (CC) first responders (FRs) for enforcement purposes, including the pre-positioning of equipment, vehicles and material on CI. This existing mutual aid arrangement will be utilized for day-of-launch support where NPS/CUIS will be the lead agency supported by CC FRs. The primary method of population M/M will rely on CUIS’s existing monitoring systems and the fact that there is a limit of 300 visitors allowed on Cumberland Island per day and an overwhelming majority uses the paid ferry system to the island. The number of overnight campers (who also use the ferry system) is known through the reservation and check-in system used by the CUIS staff. The number of ferry passengers is known by the ticket sales and boarding counts taken on the ferry. It is noted the 300 per day limit includes visitors who arrive by private boat and are not one of the limited number of residents or guests of the only inn on the island. Private arrivals on the island will be monitored by CC FRs and NPS/CUIS rangers. These observations will be augmented by CC FR and Ranger patrols prior to launch, launch-day staff pre-positioned at CPs between Plum Orchard, Yankee Paradise Campground and the beach in the central-north section of the island, and if necessary, fixed wing and drone aircraft operating under FAA regulations. From these various sources of data, population will be reported to a central launch population M/M desk that will be the point of contact for up to date population counts to the launch director.
2.2.3. **ZONE 3 – Little Cumberland Island**

The only access to LCI is by boat. For boats of a typical monohull draft design, access to LCI is achieved around high tide to the only boat dock on the island. For shallow hulled watercraft access may be achieved at any time to the LCI dock or the northern and eastern beaches of LCI across shallow flats.

The lead government agency for LCI is the Georgia Forestry Commission’s (GFC’s) southeast regional command. The GFC has entered into an agreement with LCI Home Association (LCIHA), for emergency services, safety, rescue, and monitoring of population that is documented in a Letter of Coordination (LOC). The LCIHA employed caretaker(s) will serve as the primary point of contact for regular and emergency contact procedures developed under the LOC. Through established mutual aid agreement(s), Camden County supports GFC in this activity and others.

Through the LOC the regular reports of current population (owners and visitors) on LCI will be made to GFC and the CC Emergency Management Agency. Augmenting this reporting will be data from the planned day-of-launch USCG Safety Zone and shore-based video surveillance (and if employed, drone and/or fixed wing aircraft) operations described above for Zone 1.

In order to travel to LCI through the Safety Zone, a watercraft and its occupants will need to show pre-authorization as a property owner or registered guests of an owner.

A tertiary M/M strategy may include CC FRs presence on LCI who will make additional independent population observations.

From these various sources of data, population will be reported to a central launch population M/M desk that will be the point of contact for up-to-date population counts to the launch director.

2.2.4. **ZONE 4 – Rest of Areas (ROA)**

There is little anticipated impact from the ROA on the public risk limits as these areas are well outside of the widest anticipated impact limit lines of a launch from Spaceport Camden. There is no anticipated plan to estimate or report Zone 4 populations on day-of-launch. However, M/M of spectator populations in non-hazardous operation areas is an important public service function included as part of a larger overall population M/M plan that helps to prevent inconvenient traffic patterns that may be created on the day of launch.

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3 LCI boat dock access is via the Cumberland River (Intracoastal Waterway) from the western side of the island through a shallow channel that winds its way through the marsh.
The Director of the CC Emergency Management Agency (CCEMA) is responsible for developing and implementing CC local emergency operations plans. Through implementation of a unified command structure, the Director of CCEMA centrally coordinates all events and incidents that may impact public safety, including those where multiple jurisdictions are involved.

Zone 4 encompasses all land and water outside of the area directly affected by Zones 1 – 3. The CCEMA director delegates the M/M of road flow and potential congestion during launch operations in Zone 4 during day of launch operations to the county sheriff’s office pursuant to National Incident Management System (NIMS) doctrine. NIMS provides a common, nationwide framework that enables the whole community to work together to manage all threats and hazards. NIMS applies to all incidents, regardless of cause, size, location, or complexity. The NIMS utilizes the Incident Command System (ICS) approach that defines all aspects of incident / event management through use of standardized ICS approved forms. The ICS is scalable and modular, allowing Camden County to collapse or expand, as necessary, to manage complex events.

Spaceport Camden launches are organized and planned utilizing the ICS-compliant CLP process. Methods of M/M are anticipated to include common tactics employed today for events and incidents including: road flow changes, CPs, and FR monitoring and interdiction, as necessary. The CLP process incorporates and utilizes common practices already in place across all local and regional first responders and government agencies to manage issues such as road flow and potential congestion. Anticipated participating agencies and their agreed upon roles and responsibilities for Zone 4 are provided in the following exhibit.
### Agency

<table>
<thead>
<tr>
<th>Agency</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camden County Sheriff’s Office</td>
<td>Road Closure on Union Carbide Road near Spaceport Camden’s main gate and any identified flow control issues elsewhere in the county</td>
</tr>
<tr>
<td>Camden County Fire &amp; Rescue</td>
<td>Staged for response</td>
</tr>
<tr>
<td>Georgia Forestry Commission</td>
<td>Staged for response</td>
</tr>
<tr>
<td>NPS/CUIS</td>
<td>Notification / Awareness</td>
</tr>
<tr>
<td>Naval Submarine Base Kings Base</td>
<td>Notification / Awareness</td>
</tr>
<tr>
<td>Strategic Weapons Facility Atlantic</td>
<td>Notification / Awareness</td>
</tr>
<tr>
<td>Georgia Department of Natural Resources (includes Crooked River State Park)</td>
<td>Notification / Awareness</td>
</tr>
<tr>
<td>Glynn County Emergency Management Agency</td>
<td>Notification / Awareness</td>
</tr>
<tr>
<td>Georgia Emergency Management Agency – State Operations Center Duty Officer</td>
<td>Notification / Awareness</td>
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<tr>
<td>Georgia State Patrol</td>
<td>Notification / Awareness</td>
</tr>
<tr>
<td>Georgia Department of Transportation</td>
<td>Notification / Awareness</td>
</tr>
</tbody>
</table>

**Exhibit 2. Zone 4 Anticipated Participating Agencies & Agreed Upon Roles / Responsibilities**

### SECTION 3 – CONCLUSIONS

The processes described above for M/M of populations on day-of-launch will be pre-coordinated through the ICS-201 compliant CLP process employed by Spaceport Camden. The provisions of this population M/M plan will be integrated into the overall CLP and executed. Through the utilization of the USCG Safety Zone and the concomitant enforcement provisions there under, unauthorized vessels will be kept from LCI and CI and Zone 1 waterborne craft (and persons) will be accounted for on day-of-launch. For Zone 2, and augmenting the USCG CPs, on CI there will be NPS/CUIS’s robust daily data on campers, ferry passengers, and private boats who visit the CUIS docks, which will be further augmented by ranger / FR patrols and land CPs. For Zone 3, on LCI, those vessels authorized to carry pre-registered visitors and property owners will go through the appropriate water CP and be counted. Augmenting this data will be information received under the GFC’s LOC agreement with LCIHA. If needed, CC FRs on LCI may also monitor population, as needed. All of these data will be reported to launch control for use in determining if cumulative (public) risk limits have been exceeded.