Kennedy Space Center
Commercial Vertical Launch Complex
Environmental Assessment Scoping Report

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National Aeronautics and Space Administration
John F. Kennedy Space Center

Summary of the Commercial Vertical Launch Complex (CVLC) Project

The National Aeronautics and Space Administration (NASA) is proposing to enable the development and operation of a Commercial Vertical Launch Complex (CVLC) on approximately 200 acres of Kennedy Space Center (KSC). A land-use agreement would be entered into with a non-NASA entity (or entities) which would build and operate the proposed facility.

An important component of the notional CVLC is its shared use by NASA, non-NASA agencies, and private commercial interests, involving several types of launch vehicles and associated infrastructure. The concept includes two separate launch pads, each with its own vehicle integration approach (horizontal and vertical), a common rocket and ground support test facility, and propellant storage for multiple users. The potential launch vehicles supported would have up to 2 million pounds thrust, and use standard or modified liquid propellants. Some vehicles could utilize small, strap-on solid rocket boosters.

In 2007, NASA commissioned the "KSC Vertical Launch Site Evaluation Study" to assess potential CVLC locations on KSC property. The siting evaluation criteria included over-flight restrictions, available launch azimuths, distance from residential areas, minimum contiguous acreage, proximity to existing roads and utilities, hurricane storm surge inundation risk, proximity to public use areas, and preliminary environmental factors. Perhaps the most telling of these criteria was the over-flight restriction which prohibited trajectories of rockets launched from the site to pass over existing buildings, structures, or inhabited areas. Based on this study, NASA selected two potential sites for further evaluation. Alternative 1 is located along the Atlantic coast south of Shuttle launch complex 39A and north of the Atlas launch complex 41. The Alternative 2 site is located more inland, east of State Route 3, north of State Route 406, and south of the Scrub Ridge Trail Road (Figure 1).

The Environmental Assessment Process

NASA is preparing an Environmental Assessment (EA) pursuant to National Environmental Policy Act (NEPA) to evaluate the impacts that the implementation of this proposal might have on the environment, as well as the No Action alternative. Under NEPA, "environment" includes the physical (air, water, land) and biological (plants, animals) environments, and human relationships to the environment (i.e., archeological, cultural, health, safety, jobs, housing, schools, and aesthetics). While NEPA does not require that preparing an EA includes soliciting public comments (scoping) to define issues that should be analyzed, NASA concluded that gathering such data would be in the best interests of the public and the mission. Therefore, NASA provided written information (hard copy and via website) and conducted a series of public meetings to inform and involve stakeholders. This report summarizes that effort and the comments that were received. Following scoping, a Draft EA is being prepared which will be available for public review and written comment. All of the input collected will be considered in the preparation of the Final EA.

The Scoping Process

Private citizens, non-governmental organizations, and governmental agencies at all levels were invited to express their views, comments, and concerns regarding the proposed CVLC project. Comments to NASA could be submitted via postal mail, email, telephone, and/or by participating in scoping meetings that were held two locations in the vicinity of the study area (Titusville and New Smyrna Beach, Florida).

The objectives of the scoping process were:

- to provide a description of the proposed action to all interested parties;
- to identify potentially significant issues or impacts related to the proposed action that should be analyzed in the EA;
- to provide an early and open process to relay those potentially significant issues from stakeholders to NASA;
- to identify and eliminate from detailed analyses those issues that were deemed inconsequential; and
- to identify the means through which involvement by interested parties could be continued.

The formal scoping period for the proposed CVLC project was announced in two regional newspapers, the Daytona Beach News Journal and Florida Today, on February 18, 2008, and scoping continued through April 7, 2008. All comments collected were documented and are being considered during the development of the Draft EA which will be publicly available for review.

Scoping Meetings

Four public scoping meetings were held at two locations in the vicinity of the proposed CVLC study area. Prior to the meetings, a CVLC project information sheet was sent to 160 private individuals, non-governmental organizations, and public officials and agencies. It included a summary of the proposed action and possible alternatives; public meeting dates and locations; website, email, and postal addresses; and a NASA representative's telephone number. The CVLC mailing list was generated by the NASA KSC Environmental Program Branch from their standard list of local and state stakeholders related to NEPA, as well as contact information provided by Merritt Island National Wildlife Refuge (MINWR) and Canaveral National Seashore (CNS).

During each public scoping meeting, attendees were encouraged to register at tables set up at the entrance to the meeting room. Posters showing the proposed site locations were in the entrance area. Comment forms and CVLC project information sheets were handed out by attendants. When the meeting began, a NASA KSC Public Affairs representative welcomed the attendees and introduced the CVLC project representatives. This was followed by a PowerPoint presentation given by four presenters: a NASA KSC Environmental Program Branch manager (NEPA process); NASA KSC Spaceport Development manager (CVLC project summary), Federal Aviation Administration environmental professional (FAA launch operator licensing requirements) and a

contractor environmental specialist (project alternatives and potential environmental issues). Following the presentation, the comment session was mediated by the NASA Public Affairs representative and the four presenters answered questions. Verbal comments were recorded by note takers, but the submission of written comments was encouraged to ensure completeness and accuracy. A summary of the public meeting details is shown in Table 1.

Other Scoping Sources

Table 2 summarizes the characteristics of the other comment methods (postal mail, telephone, and email). Postal mail and telephone produced 34 and 32 comments each, respectively. Email was by far the most productive source of comments with a total of 1655 emails received. There were two types of emails: 631 were composed and sent by individuals, and 1024 were sent in response to bulk emails generated by two stakeholder groups. These emails had automated reply features that returned identical messages to the CVLC email address. One message (subject line "Opposition to Site Selection") requested that neither Alternative Site 1 nor 2 be used. The concern expressed was loss of portions of MINWR and CNS for public use and recreation. The email urged NASA to consider a wider array of alternative sites. The second bulk email message (subject line "Reconsider the Locations of Site 1 and Site 2 and Their Environmental Impact") cited the same public access concerns, but also discussed loss of wildlife habitat and detrimental impacts to the ecotourism industry. As in the "Opposition to Site Selection" bulk email, a desire for NASA to consider alternate locations was expressed.

Summary of Scoping Comments

A total of 1,936 scoping comments (verbal and written) were received from the general public, non-governmental organizations, and public officials and agencies at the Federal, state and local levels (Table 3). Each written (postal and email) and telephone comment received was read and a response sent when appropriate (e.g., requests for information). Details on all comments from all sources (public meetings, email, postal mail, and telephone) were entered into a spreadsheet for tabulation and analysis.

Table 4 summarizes the site location preferences and associated comments. The greatest number of comments involved loss or reduction of access to public use areas (MINWR, CNS, and Mosquito Lagoon). Stakeholders cited a variety of reasons, specifically recreation, education, wildlife viewing, impact to local businesses and economy, and reduced quality of life. Many responses also mentioned potential impacts to natural habitats and wildlife.

Additional comments and concerns identified as a result of the scoping process included:

- proximity of Alternative Site 2 to hunting areas
- perceived safety and security risks associated with allowing commercial entities to operate on KSC
- potential closing of roads and waterways
- barge and rail access to sites

- terrorism concerns
- fear of dominance by foreign interests
- impact of fewer educational opportunities for local children
- the need for an Environmental Impact Statement to be prepared vs. an EA
- potential impacts to the environment and nearby public in the event of an accident or fuel spill
- lack of accountability and trust of commercial enterprises
- project cost.

There were also many comments that expressed long-term support for NASA and KSC, particularly for originally preserving the land, and the agency's continued high level of environmental diligence. Observations regarding the CVLC project specifically were:

- help replace some jobs lost when the Space Shuttle retires
- lessen our dependence on foreign interests for deliveries into space
- the economy of Brevard County relies heavily on space-related businesses
- reduced access to public areas would be beneficial to wildlife and overused habitats
- high technology space activities and the natural resources of this area can and should continue to coexist as they have in the past

The data collected in this effort will be considered as NASA continues the environmental analysis of the proposed CVLC project. Discussions are underway with CCAFS to determine the availability and feasibility of using existing sites not currently located on KSC property. Should any such sites be identified, they will be included as Alternatives in this environmental analysis. As these analyses proceed, the public will be afforded additional opportunities to provide input.

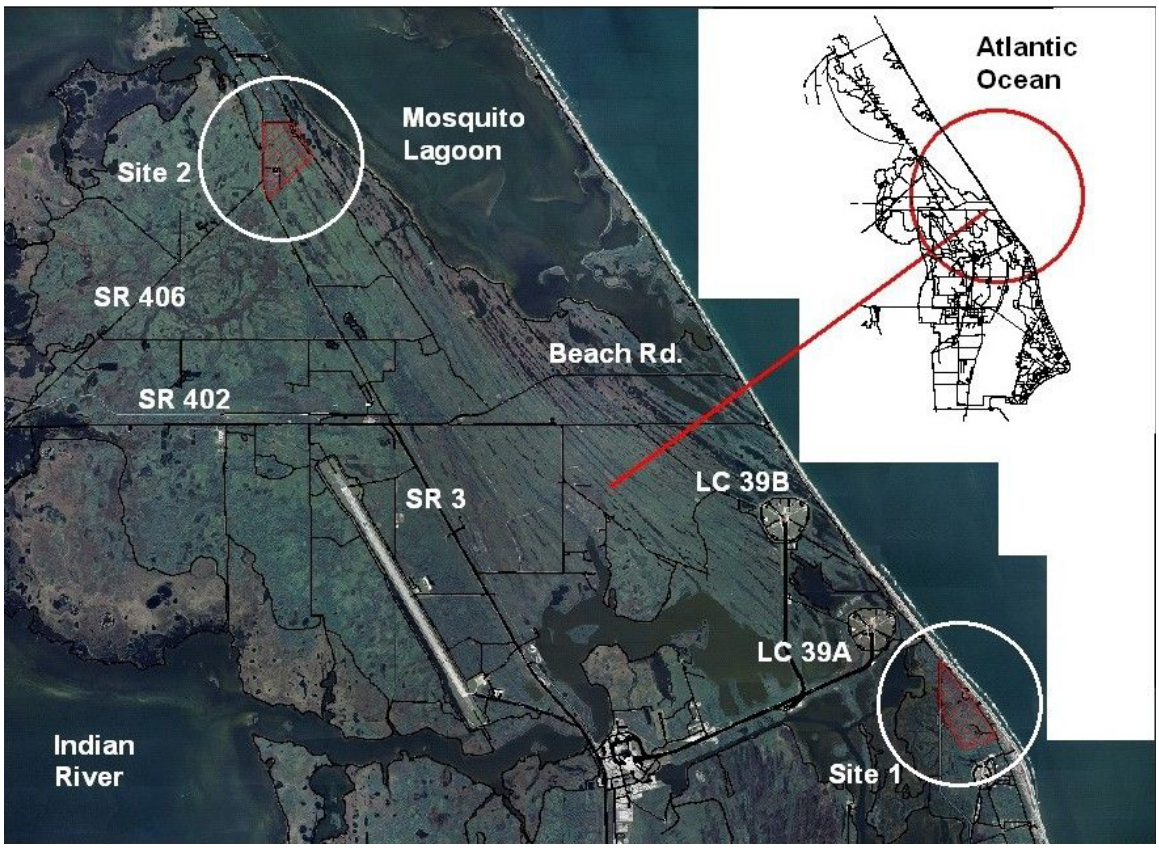

Figure 1. Locations of proposed CVLC site Alternatives 1 and 2 on Kennedy Space Center.

Table 1. Public meetings summary.

Location	Date & Time	Attendees (signed in)	Verbal Comments	Written Comments
Titusville City Hall	25 Feb. 2008 1 p.m.	120	34	60
Titusville City Hall	25 Feb. 2008 6 p.m.	167	36	
New Smyrna Beach Public Library	28 Feb. 2008 10 a.m.	109	24	28
New Smyrna Beach Public Library	28 Feb. 2008 5 p.m.	159	33	
	TOTAL	555	127	88

Table 2. Other scoping methods summary.

Comment Method	Number Received
Email (automated bulk)*	1024
Email (individuals)	631
Postal mail (individuals)	20
Postal mail (non-governmental organizations)	9
Postal mail (government agencies and officials)	5
Telephone (individuals)	28
Telephone (non-governmental organizations)	3
Telephone (government agencies and officials)	1
TOTAL	1721

* see Other Scoping Methods section for explanation

Table 3. Comment sources summary (includes public meetings, emails, postal mail, and telephone).

Comment Source	Number received
General public	1,918 (includes 1,024 bulk email responses*)
Non-governmental organizations	12
Governmental agencies and officials	6
TOTAL	1,936

* see Other Scoping Methods section for explanation

Table 4. Site selection preferences and associated comment categories (*CCAFS = Cape Canaveral Air Force Station).

Comment Category	% of Total Individual Responses	% of Total Individual + Bulk Email Responses
Support Project and/or NASA	25	6
Oppose Site 1	< 1	< 1
Oppose Site 2	65	15
Oppose Both Sites	35	84
Use Alternative Site (various suggestions)	87	97
Use CCAFS*	45	9
Oppose Using CCAFS	1	< 1