



HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 4.0 1/07

Site #8 8322933
Field Date 2012
Form Date 2012
Recorder #

Original
Update

Shaded Fields represent the minimum acceptable level of documentation.
Consult the Guide to Historical Structure Forms for detailed instructions.

Site Name(s) (address if none) Hypergol Module Processing (HMP) South
Survey Project Name KSC Survey: HMP South and Boresight Control Bldg
National Register Category (please check one) [x]building []structure []district []site []object
Ownership: []private-profit []private-nonprofit []private-individual []private-nonspecific []city []county []state [x]federal []Native American []foreign []unknown

LOCATION & MAPPING

Street Number Direction Street Name Street Type Suffix Direction
Address: Avenue G
Cross Streets (nearest / between) 7th Street
USGS 7 5 Map Name ORSINO USGS Date Plat or Other Map
City / Town (within 3 miles) Kennedy Space Center In City Limits? []yes []no []unknown County Brevard
Township 23S Range 37E Section 4 1/4 section: []NW []SW []SE []NE Irregular-name:
Tax Parcel # Landgrant
Subdivision Name Block Lot
UTM Coordinates: Zone []16 [x]17 Easting [5][3][5][1][4][4] Northing [3][1][5][3][9][8][2]
Other Coordinates: X: Y: Coordinate System & Datum
Name of Public Tract (e.g., park) John F. Kennedy Space Center

HISTORY

Construction Year: 1964 []approximately []year listed or earlier []year listed or later
Original Use From (year): To (year):
Current Use From (year): To (year):
Other Use Hypergolic fuels testing/Space Shuttle From (year): 1964 To (year): 2012
Moves: []yes [x]no []unknown Date: Original address
Alterations: [x]yes []no []unknown Date: 1-1-1976 Nature Interior renovation for shuttle program
Additions: []yes [x]no []unknown Date: Nature
Architect (last name first): Tampa Bay Engineering Company Builder (last name first):
Ownership History (especially original owner, dates, profession, etc.) National Aeronautics and Space Administration (NASA)

Is the Resource Affected by a Local Preservation Ordinance? []yes [x]no []unknown Describe

DESCRIPTION

Style Industrial Vernacular Exterior Plan Irregular Number of Stories 2
Exterior Fabric(s) 1. Concrete block 2. Steel 3.
Roof Type(s) 1. Flat 2. 3.
Roof Material(s) 1. Built-up 2. 3.
Roof secondary strucs. (dormers etc.) 1. 2.
Windows (types, materials, etc.) None

Distinguishing Architectural Features (exterior or interior ornaments) Exterior dominated by 22'x40' steel vertical lift doors.

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) Exterior chilled water storage tanks and basins, compressed air tanks, gaseous nitrogen/helium tanks, and washdown systems.

DHR USE ONLY OFFICIAL EVALUATION DHR USE ONLY
NR List Date SHPO - Appears to meet criteria for NR listing: []yes []no []insufficient info Date Init.
KEEPER - Determined eligible: []yes []no Date
[]Owner Objection NR Criteria for Evaluation: []a []b []c []d (see National Register Bulletin 15, p. 2)

DESCRIPTION (continued)

Chimney: No. 0 Chimney Material(s): 1. _____ 2. _____

Structural System(s): 1. Concrete block 2. _____ 3. _____

Foundation Type(s): 1. Slab 2. _____

Foundation Material(s): 1. Concrete, Generic 2. _____

Main Entrance (stylistic details) The main entrance is on the north side of the building and consists of a pair of metal pedestrian doors.

Porch Descriptions (types, locations, roof types, etc.) None

Condition (overall resource condition): excellent good fair deteriorated ruinous

Narrative Description of Resource see continuation sheet.

Archaeological Remains _____ Check if Archaeological Form Completed

RESEARCH METHODS (check all that apply)

- FMSF record search (sites/surveys)
- FL State Archives/photo collection
- property appraiser / tax records
- cultural resource survey (CRAS)
- other methods (describe) _____
- library research
- city directory
- newspaper files
- historic photos
- building permits
- occupant/owner interview
- neighbor interview
- interior inspection
- Sanborn maps
- plat maps
- Public Lands Survey (DEP)
- HABS/HAER record search

Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed) Survey and Evaluation of NASA-owned Historic Facilities and Properties, John F. Kennedy Space Center, Brevard County, Florida.

OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually? yes no insufficient information

Appears to meet the criteria for National Register listing as part of a district? yes no insufficient information

Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) HMP South is recommended eligible for inclusion in the NRHP-eligible Hypergolic Maintenance and Checkout Area Historic District in the context of the U.S. Space Shuttle Program (1969-2010) under NRHP Criterion A in the area of Space Exploration.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

- 1. Other 3. _____ 5. _____
- 2. _____ 4. _____ 6. _____

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents

- 1) Document type _____ Maintaining organization _____
Document description _____ File or accession #'s _____
- 2) Document type _____ Maintaining organization _____
Document description _____ File or accession #'s _____

RECORDER INFORMATION

Recorder Name David L. Price Affiliation New South Associates

Recorder Contact Information 6150 E. Ponce de Leon Ave., Stone Mountain, GA 30083
(address / phone / fax / e-mail)

Required Attachments

- 1 USGS 7.5' MAP WITH STRUCTURE LOCATION PINPOINTED IN RED
- 2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
- 3 PHOTO OF MAIN FACADE, ARCHIVAL B&W PRINT OR DIGITAL IMAGE FILE
If submitting an image file, it must be included on disk or CD AND in hard copy format (plain paper is acceptable).
Digital image must be at least 1600 x 1200 pixels. 24-bit color, jpeg or tiff.

HISTORICAL STRUCTURE FORM
Continuation Sheet

Hypergol Maintenance Processing (HMP) South

Narrative Description of Resource

HMP South is a concrete block building with a reinforced concrete foundation. The air-conditioned building has an irregular footprint that contains 7,100 square feet of floor area. It has two high-bay test cells, located on the east and west sides, which measure approximately 40 feet by 40 feet by 60 feet high. Each cell features three vertical-lift exterior doors, one on each exterior elevation, that measure 22 feet wide by 40 feet high and are equipped with inflatable seals for excluding contaminants. Each test cell has a 10-ton overhead bridge crane with a hook height of 45 feet. The cells have large capacity exhaust systems and a floor system which collects and dilutes hypergolic spills. Between the test cells is a two-story central area that contains control rooms, equipment rooms, and storage areas (National Aeronautics and Space Administration [NASA] 1967:10-55).

On the south side of HMP South's exterior are chilled water storage tanks and basins, compressed air tanks, gaseous nitrogen/helium tanks, washdown systems, and a contaminated effluent tank to control and contain inadvertent spilling of toxic and combustible propellants.

The interiors of HMP South's test cells contain hypergolic fuel and oxidizer servicing areas that are capable of testing and servicing the space shuttle's forward Orbital Maneuvering System (OMS) module. The east test cell contains three levels of work platforms arranged in a U shape around the outer walls. This cell was used primarily as a staging area or auxiliary test space, with the west test cell reserved as the primary area for forward OMS module processing. The west test cell contains a two-level work area. The ground level has an OMS module staging area and all of the hypergolic fuel and oxidizer pumps, lines, and gauges. Above this ground level is a steel-frame upper level work platform. The overhead bridge crane lifted the OMS module up onto this platform where it was maneuvered into different positions depending on the work performed.

The two-story central portion of HMP South contains a variety of rooms that support the test cell work areas, including a Thermal Control System (TCS) room, control room, Hardware Interface Module (HIM) room, equipment testing rooms, and central corridor. Interior spaces are typically finished with suspended acoustic tile ceilings, drywall walls, and tile floors.



Source: USGS Orisino, Florida Quadrangle, 1976