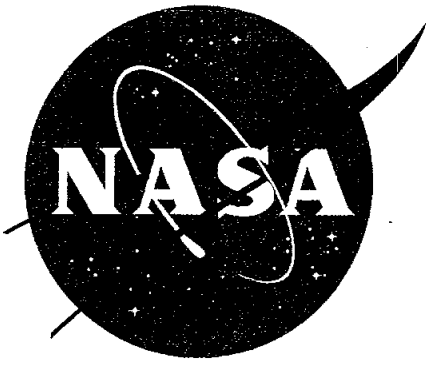
Battery Testing Facility
Environmental Assessment
Johnson Space Center, Houston, TX



October 2003

Prepared for:
Gary Wessels
NASA- Johnson Space Center
2101 NASA Road 1, MC JA131
Houston, Texas 77058

Prepared By:

Team DynCorp-Lynx, Ltd.
NASA- Johnson Space Center
2101 NASA Road 1, MC JA330
Houston, Texas 77058

National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
2101 NASA Road 1
Houston, Texas 77058-3696

November 11, 2003

Reply to Attn of: JA131-03-058

TO: NASA Headquarters
Attn: JE/Director, Environmental Management Division

FROM: AA/Director

SUBJECT: National Environmental Policy Act (NEPA) Finding of No Significant Impact (FONSI) and Environmental Assessment (EA) on Proposed Construction of Battery Test Facility, Building 354

The Johnson Space Center has completed the NEPA requirements for the proposed construction of a facility to be used by NASA and it's contractors to perform testing of batteries used in flight hardware and other technical applications. The new facility would enable the Energy Systems Test Area to support certification and acceptance testing of rechargeable and other type batteries for the Space Shuttle and International Space Station crew equipment. Enclosed are five (5) copies of the signed NEPA FONSI and the completed EA.

Should you have questions regarding these submittals, please contact Mr. David Hickens of the NASA Johnson Space Center Environmental Office at 281-483-3120.

Jefferson D. Howell, Jr.

Enclosure

Lynx, Ltd.

October 24, 2003

Mr. David Hickens
NASA Environmental
Johnson Space Center
NASA Rd #1, MC-JA 131
Houston, TX 77058

Subject: Final Report: Battery Test Facility Environmental Assessment, Johnson Space Center, Houston, Texas

Reference: Contract Number NAS9-01056, Delivery Order #409.

Dear Mr. Hickens:

In partial fulfillment of the referenced contract NAS9-01056, attached please find the subject deliverable, Battery Test Facility Environmental Assessment, Johnson Space Center, Houston, Texas, generated by Lynx Ltd.

Please contact me at X34748 or Mr. Hadley Bedbury X35213 if you have any questions or need additional information regarding this deliverable.

Sincerely,

<original signed>

J. Mark Stapleton, Ph.D., P.E., AEE
Senior Environmental Engineer

Enclosure

2101 NASA Road One • JA 330 / Bldg. 330/ Room 112 • Houston, Texas 77058
281-483-4748 (phone) • 281-244-1732 (fax)

CORRECTION TO CONTACT INFORMATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NOTICE: JA131-03-05-02
National Environmental Policy Act;
Proposed construction of the
Battery Testing Facility
AGENCY: National Aeronautics and Space Administration (NASA)
ACTION: Notice of finding of no significant impact

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for implementing the Procedural Provisions of NEPA (40CFR 1500-1508), and the NASA policy and procedures (14 CFR part 1216 subpart 1216.3), NASA announces the availability of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) that address the environmental impacts expected to result from the construction of a Battery Testing Facility at the Lyndon B. Johnson Space Center (JSC) in Houston, Texas. The facility would accommodate approximately 759 square meters (8,170 square feet) of space, consist of a single story, and be constructed in the north central portion of JSC.

SUPPLEMENTAL INFORMATION: NASA has reviewed the EA prepared for the construction of the Battery Testing Facility and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The EA is hereby incorporated by reference in this final FONSI.

Two alternatives have been considered: the proposed action and the no action alternative. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. Consequences include increase in cost to battery testing due to remote locations. Additionally, safety concerns would result due to substandard facilities and would not provide the necessary facilities to meet the Space Shuttle and International Space Station initiatives.

The potential physical, biological, socioeconomic, and cultural impacts of the construction and operation of the Battery Testing Facility have been assessed and evaluated. It appears that no significant impacts, related to any of these issues, were identified. As a result of this assessment and evaluation, a Finding of No Significant Impact is declared.

Physical and biological resources considered included climate and earth movements, water, air, and noise resources, hazardous materials, transportation, floodplains, wetlands, wildlife, and vegetation. The Battery Testing Facility would have no substantial impact on any of these resources.

Socioeconomic evaluation included effects on land use, demographics, economic activity, and cultural resources. The Battery Testing Facility would have no substantial impact on any of these resources.

Cumulative Impacts: The EA reviewed cumulative impacts that could result from the incremental impact proposed activities when added to other past, present, and reasonably foreseeable future actions. No other actions have been identified within or adjacent to the proposed site for the Battery Testing Facility that would contribute to cumulative impacts.

Mitigation: Standard construction practices would be implemented to reduce erosion potential during ground disturbing activities.

On the basis of the EA, NASA has determined that the physical, biological, socioeconomic, and cultural impacts associated with the construction of the Battery Testing Facility would not individually or cumulatively have a significant impact on the quality of the human environment. Therefore, NASA has determined that an Environmental Impact Statement need not be prepared. NASA took no final action prior to the expiration of the 30-day comment period.

DATE: Comments in response to this notice should be addressed to Mr. David Hickens, and must be received in writing or via facsimile by October 24, 2003.

FOR FURTHER INFORMATION CONTACT: Written requests for copies of the EA and FONSI, or requests for information, should be directed to Mr. David Hickens, Chief, Environmental Office, NASA, Johnson Space Center, Mailcode JA131, 2101 NASA Road 1, Houston, Texas 77058, FAX (281)-483-3048, or by calling (281) 483-3120.

The EA which supports this draft FONSI may be reviewed at:
(a) NASA, Johnson Space Center, Bldg 111, Industry Assistance Office, 2101 Nasa Road #1, Houston, Texas 77058, between the hours of 7:30am and 4:00pm.
(b) NASA Headquarters, Library, Room 1J20, 300 E. Street SW, Washington, D.C. 20546.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NOTICE: JA131-03-05-02
National Environmental Policy Act; Proposed construction of the Battery Testing Facility
AGENCY: National Aeronautics and Space Administration (NASA)
ACTION: Notice of finding of no significant impact

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for implementing the Procedural Provisions of NEPA (40CFR 1500-1508), and the NASA policy and procedures (14 CFR part 1216 subpart 1216.3), NASA announces the availability of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) that address the environmental impacts expected to result from the construction of a Battery Testing Facility at the Lyndon B. Johnson Space Center (JSC) in Houston, Texas. The facility would accommodate approximately 759 square meters (8,170 square feet) of space, consist of a single story, and be constructed in the north central portion of JSC.

SUPPLEMENTAL INFORMATION: NASA has reviewed the EA prepared for the construction of the Battery Testing Facility and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The EA is hereby incorporated by reference in this final FONSI.

Two alternatives have been considered: the proposed action and the no action alternative. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. Consequences include increase in cost to battery testing due to remote locations. Additionally, safety concerns would result due to substandard facilities and would not provide the necessary facilities to meet the Space Shuttle and International Space Station initiatives.

The potential physical, biological, socioeconomic, and cultural impacts of the construction and operation of the Battery Testing Facility have been assessed and evaluated. It appears that no significant impacts, related to any of these issues, were identified. As a result of this assessment and evaluation, a Finding of No Significant Impact is declared.

Physical and biological resources considered included climate and earth movements, water, air, and noise resources, hazardous materials, transportation, floodplains, wetlands, wildlife, and vegetation. The Battery Testing Facility would have no substantial impact on any of these resources.

Socioeconomic evaluation included effects on land use, demographics, economic activity, and cultural resources. The Battery Testing Facility would have no substantial impact on any of these resources.

Cumulative Impacts: The EA reviewed cumulative impacts that could result from the incremental proposed activities when added to other past, present, and reasonably foreseeable future actions. No other actions have been identified within or adjacent to the proposed site for the Battery Testing Facility that would contribute to cumulative impacts.

Mitigation: Standard construction practices would be implemented to reduce erosion potential during ground disturbing activities.

On the basis of the EA, NASA has determined that the physical, biological, socioeconomic, and cultural impacts associated with the construction of the Battery Testing Facility would not individually or cumulatively have a significant impact on the quality of the human environment. Therefore, NASA has determined that an Environmental Impact Statement need not be prepared. NASA took no final action prior to the expiration of the 30-day comment period.

DATE: Comments in response to this notice should be addressed to Mr. David Hickens, and must be received in writing or via facsimile by October 24, 2003.

FOR FURTHER INFORMATION CONTACT: Written requests for copies of the EA and FONSI, or requests for information, should be directed to Mr. David Hickens, Chief, Environmental Office, NASA, Johnson Space Center, Mailcode JA131,2101 NASA Road, Houston, Texas 77058, FAX 281-483-3048, or by calling 281-483-3120.

The EA which supports this draft FONSI may be reviewed at:
(a) NASA, Johnson Space Center, Bldg. 111, Industry Assistant Office, 2101 Nasa Road #1, Houston, Texas 77058, between the hours of 7:30 a.m. 4:00 p.m.
(b) NASA Headquarters, Library, Room 1J20, 300 E. Street SW, Washington, D.C. 20546.

Attn: Mark Stapleton
From: Susanne
281-488-1109

Account: NASA NOTICE
Date: 9/19 Time: 1:53
Account Representative: Susanne
☐ Approved As Is ☐ Need Another Proof ☐ Approved w/Corrections
☑ 1st proof ☐ 2nd proof ☐ 3rd proof per

CORRECTION TO CONTACT INFORMATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NOTICE: JA131-03-05-02
National Environmental Policy Act; Proposed construction of the Battery Testing Facility
AGENCY: National Aeronautics and Space Administration (NASA)
ACTION: Notice of finding of no significant impact

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for implementing the Procedural Provisions of NEPA (40CFR 1500-1508), and the NASA policy and procedures (14 CFR part 1216 subpart 1216.3), NASA announces the availability of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) that address the environmental impacts expected to result from the construction of a Battery Testing Facility at the Lyndon B. Johnson Space Center (JSC) in Houston, Texas. The facility would accommodate approximately 759 square meters (8,170 square feet) of space, consist of a single story, and be constructed in the north central portion of JSC.

SUPPLEMENTAL INFORMATION: NASA has reviewed the EA prepared for the construction of the Battery Testing Facility and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The EA is hereby incorporated by reference in this final FONSI.

Two alternatives have been considered: the proposed action and the no action alternative. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. Consequences include increase in cost to battery testing due to remote locations. Additionally, safety concerns would result due to substandard facilities and would not provide the necessary facilities to meet the Space Shuttle and International Space Station initiatives.

The potential physical, biological, socioeconomic, and cultural impacts of the construction and operation of the Battery Testing Facility have been assessed and evaluated. It appears that no significant impacts, related to any of these issues, were identified. As a result of this assessment and evaluation, a Finding of No Significant Impact is declared.

Physical and biological resources considered included climate and earth movements, water, air, and noise resources, hazardous materials, transportation, floodplains, wetlands, wildlife, and vegetation. The Battery Testing Facility would have no substantial impact on any of these resources.

Socioeconomic evaluation included effects on land use, demographics, economic activity, and cultural resources. The Battery Testing Facility would have no substantial impact on any of these resources.

Cumulative Impacts: The EA reviewed cumulative impacts that could result from the incremental proposed activities when added to other past, present, and reasonably foreseeable future actions. No other actions have been identified within or adjacent to the proposed site for the Battery Testing Facility that would contribute to cumulative impacts.

Mitigation: Standard construction practices would be implemented to educe erosion potential during ground disturbing activities.

On the basis of the EA, NASA has determined that the physical, biological, socioeconomic, and cultural impacts associated with the construction of the Battery Testing Facility would not individually or cumu-

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN THAT A PUB- DATED THIS 19TH DAY OF SEPTEMBER 2003 SEABROOK "ANIMALS CODE, CH Paulins Small, TRMC, CLE III. "C SEABROOK AMENDIN SEABROOK

AGENCY: National Aeronautics and Space Administration (NASA)

ACTION: Notice of finding of no significant impact

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for implementing the Procedural Provisions of NEPA (40CFR 1500-1508), and the NASA policy and procedures (14 CFR part 1216 subpart 1216.3), NASA announces the availability of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) that address the environmental impacts expected to result from the construction of a Battery Testing Facility at the Lyndon B. Johnson Space Center (JSC) in Houston, Texas. The facility would accommodate approximately 759 square meters (8,170 square feet) of space, consist of a single story, and be constructed in the north central portion of JSC.

SUPPLEMENTAL INFORMATION: NASA has reviewed the EA prepared for the construction of the Battery Testing Facility and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The EA is hereby incorporated by reference in this final FONSI.

Two alternatives have been considered: the proposed action and the no action alternative. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. Consequences include increase in cost to battery testing due to remote locations. Additionally, safety concerns would result due to substandard facilities and would not provide the necessary facilities to meet the Space Shuttle and International Space Station initiatives.

The potential physical, biological, socioeconomic, and cultural impacts of the construction and operation of the Battery Testing Facility have been assessed and evaluated. It appears that no significant impacts, related to any of these issues, were identified. As a result of this assessment and evaluation, a Finding of No Significant Impact is declared.

Physical and biological resources considered included climate and earth movements, water, air, and noise resources, hazardous materials, transportation, floodplains, wetlands, wildlife, and vegetation. The Battery Testing Facility would have no substantial impact on any of these resources.

Socioeconomic evaluation included effects on land use, demographics, economic activity, and cultural resources. The Battery Testing Facility would have no substantial impact on any of these resources.

Cumulative Impacts: The EA reviewed cumulative impacts that could result from the incremental proposed activities when added to other past, present, and reasonably foreseeable future actions. No other actions have been identified within or adjacent to the proposed site for the Battery Testing Facility that would contribute to cumulative impacts.

Mitigation: Standard construction practices would be implemented to reduce erosion potential during ground disturbing activities.

On the basis of the EA, NASA has determined that the physical, biological, socioeconomic, and cultural impacts associated with the construction of the Battery Testing Facility would not individually or cumulatively have a significant impact on the quality of the human environment. Therefore, NASA has determined that an Environmental Impact Statement need not be prepared. NASA took no final action prior to the expiration of the 30-day comment period.

DATE: Comments in response to this notice should be addressed to Mr. David Hickens, and must be received in writing or via facsimile by October 24, 2003.

FOR FURTHER INFORMATION CONTACT: Written requests for copies of the EA and FONSI, or requests for information, should be directed to Mr. David Hickens, Chief, Environmental Office, NASA, Johnson Space Center, Mailcode JA131,2101 NASA Road, Houston, Texas 77058, FAX 281-483-3048, or by calling 281-483-3120.

The EA which supports this draft FONSI may be reviewed at:
(a) NASA, Johnson Space Center, Bldg. 111, Industry Assistant Office, 2101 Nasa Road #1, Houston, Texas 77058, between the hours of 7:30 a.m. 4:00 p.m.

NASA Headquarters, Library, Room 1J20, 300 E. Street SW, Washington, D.C. 20546.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NOTICE: JA131-03-05-02

National Environmental Policy Act; Proposed construction of the Battery Testing Facility

AGENCY: National Aeronautics and Space Administration (NASA)

ACTION: Notice of finding of no significant impact

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for implementing the Procedural Provisions of NEPA (40CFR 1500-1508), and the NASA policy and procedures (14 CFR part 1216 subpart 1216.3), NASA announces the availability of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) that addresses the environmental impacts expected to result from the construction of a Battery Testing Facility at the Lyndon B. Johnson Space Center (JSC) in Houston, Texas. The facility would accommodate approximately 759 square meters (8,170 square feet) of space, consist of a single story, and be constructed in the north central portion of JSC.

FOR FURTHER INFORMATION CONTACT: Written requests for copies of the EA and FONSI, or requests for information, should be directed to Mr. David Hickens, Chief, Environmental Office, NASA, Johnson Space Center, Mail code JA131, 2101 NASA Road 1, Houston, Texas 77058, FAX (281)-483-3048, or by calling (281) 483-3120.

SUPPLEMENTAL INFORMATION: NASA has reviewed the EA prepared for the construction of the Battery Testing Facility and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The EA is hereby incorporated by reference in this final FONSI.

Two alternatives have been considered: the proposed action and the no-action alternative. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. The pyrotechnic test facility (B352) has the only capability in the agency to certify and perform acceptance testing on NASA Standard Initiators and pyrotechnic cartridges. Consequences include increase in cost to battery testing due to remote locations. Additionally, safety concerns would result due to substandard facilities and would not provide the necessary facilities to meet the Space Shuttle and International Space Station initiatives.

The potential physical, biological, socioeconomic, and cultural impacts of the construction and operation of the Battery Testing Facility have been assessed and evaluated. It appears that no significant impacts, related to any of these issues, were identified. As a result of this assessment and evaluation, a Finding of No Significant Impact is declared.

Physical and biological resources considered included climate and earth movements, water, air, and noise resources, hazardous materials, transportation, floodplains, wetlands, wildlife, and vegetation. The Battery Testing Facility would have no substantial impact on any of these resources.

Socioeconomic evaluation included effects on land use, demographics, economic activity, and cultural resources. The Battery Testing Facility would have no substantial impact on any of these resources.

Cumulative Impacts: The EA reviewed cumulative impacts that could result from the incremental impact proposed activities when added to other past, present, and reasonably foreseeable future actions. No other actions have been identified within, or adjacent to, the proposed site for the Battery Testing Facility that would contribute to cumulative impacts.

Mitigation: Standard construction practices would be implemented to reduce erosion potential during ground disturbing activities.

On the basis of the EA, NASA has determined that the physical, biological, socioeconomic, and cultural impacts associated with the construction of the Battery Testing Facility would not individually or cumulatively have a significant impact on the quality of the human environment. Therefore, NASA has determined that an Environmental Impact Statement need not be prepared. NASA took no final action prior to the expiration of the 30-day comment period.

Jefferson D. Howell
Director
Johnson Space Center

EXECUTIVE SUMMARY

Type of report

This report is an Environmental Assessment (EA) Report.

Name of proposed action

The name of the proposed action is construction of a Battery Testing Facility (BTF), Lyndon B. Johnson Space Center (JSC), Houston, Texas.

Description of proposed action

The proposed action discussed in this document is the construction of the BTF to be used by NASA and contractors. The proposed site is located in the north central portion of JSC and would host an approximately 759 square meter (8,170 square foot), single story building. This document provides an environmental assessment of the proposed action.

Description of no action alternative

Alternatives that were considered include the proposed action and the no-action alternative. The no-action alternative would have several negative consequences for JSC. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. The pyrotechnic test facility (B352) has the only capability within the agency to certify and perform acceptance testing on NASA Standard Initiators and pyrotechnic cartridges. Consequences include increase in cost to battery testing due to remote locations. Additionally, safety concerns would result due to substandard facilities. This alternative would not meet the purpose and need for the proposed project.

Physical resources

Construction of the Battery Testing Facility (BTF) on the proposed site at NASA's Lyndon B. Johnson Space Center (JSC) would impact approximately 0.21 hectares (0.517 acres) of undeveloped, field. Due to the location, the proposed facility would be constructed to effectively drain excess water from the site. Construction activities may cause short-term air emissions and dust. This can be mitigated with proper dust control methods. Construction noise may exceed normal ambient noise levels, but normal levels are expected after construction activity ceases.

Traffic flow is not anticipated to be affected during the construction phase due to the restricted site location. No hazardous materials would be generated as a result of the construction or operation of the proposed facility and preventive measures would be incorporated to reduce potential spills from construction equipment.

The generation of hazardous materials is not anticipated as a result of construction. No effects from hazardous materials, when managed in compliance with environmental regulations, are anticipated. Operation of the facility may result in some air emissions, but are not anticipated to be substantial.

The topography of the proposed site would not be altered substantially. Some fill material may be placed under the proposed building and parking lot for leveling and stability. Impacts to topography relating to occupancy and maintenance of the proposed facility are not expected. Some short-term erosion of soil and turbidity in drainage ditches may occur during construction of the proposed facility; however, with appropriate storm water pollution prevention controls and practices, the impact would be minimal, and implemented in accordance with Best Management Practices as required by the Texas Pollutant Discharge Elimination System (TPDES) General Permit No. TXR040000.

Biological resources

The proposed site is an undeveloped field, dominated by grasses. Planted native and non-native trees along the perimeter of the property should not have to be cleared due to the size of the proposed site. The established vegetation on site and in the drainage ditch provides protective cover and food resources for some wildlife species; however, no substantial displacement of wildlife is expected as a result of the proposed action. No impacts to threatened and endangered species or designated critical habitat would result from the proposed action.

No wetlands were shown on or immediately adjacent to the proposed site on the National Wetland Inventory maps. No wetlands indicators were observed within the boundaries of the site during a site reconnaissance. Standing water was observed in the drainage ditch during the site reconnaissance, however, drainage ditches constructed in uplands are not considered waters of the United States.

Socioeconomic and cultural resources

Construction and operation of the proposed facility would not adversely impact minority or low-income populations. Some jobs and potential learning opportunities would be created. National Historic Landmarks (NHL) identified at JSC would not be impacted.

Conclusions

Short- and long-term effects on the quality of the human environment would be minimal if the proposed action were implemented. Other potential impacts to the physical and biological resources would be temporary and no impacts to socioeconomic and cultural resources would occur. No reasonable foreseeable cumulative effects associated with the construction of the Battery Testing Facility were identified. The no-action alternative would not provide the resources for meeting the project objectives.

ENVIRONMENTAL ASSESSMENT
For
THE CONSOLIDATE BATTERY TEST FACILITY
LYNDON B. JOHNSON SPACE CENTER
Houston, Texas

Lead Agency:	**NASA – Lyndon B. Johnson Space Center**
Proposed Action:	Construction of a Battery Testing Facility
For Further Information:	Mr. David Hickens Chief, Environmental Services Office, JA131 2101 NASA Road 1 Houston, TX 77058 (281) 483-3120
Date:	October 2003

Abstract:

The proposed action discussed in this document is the construction of a Battery Testing Facility (BTF), which will enable the Lyndon B. Johnson Space Center (JSC) to perform testing of batteries used in flight hardware and other technical applications. The new building would enable the Energy Systems Test Area to support certification and acceptance testing of proposed and rechargeable batteries for the Space Shuttle and International Space Station crew equipment, including Lithium based batteries.

The BTF is a key element in meeting NASA's long range manned space flight goals. This document provides an environmental assessment of the proposed BTF site.

TABLE OF CONTENTS

Table of Contents

Glossary: Abbreviations, Acronyms, and Terms

Alternative	**Plan, option, choice (this EA analyzes two alternatives)**
Baseline conditions	**Existing condition of a resource issue**
BTF	**Battery Testing Facility**
CEQ	**Council on Environmental Quality**
BMP	**Best management practices**
CEQ Regulations	**Regulations that tell how to implement NEPA**
CFR	**Code of Federal Regulation**
COH	**City of Houston**
Cumulative effects	**Past, present, and reasonably foreseeable effects added together (regardless of who or what has caused, is causing, and might cause these effects)**
Decision maker	**JSC Management, with review from NASA Headquarters Environmental Management Code JE**
DOC	**Discipline Operations Center**
EA	**Environmental Assessment**
EHS	**Space Station Environmental Health Subsystem**
EIS	**Environmental Impact Statement**
FONSI	**Finding of No Significant Impact (on the human environment, as defined in CEQ Regulations 1508.14)**
FPPA	**Farmland Protection Policy Act**
HCFCD	**Harris County Flood Control District**
Issue	**An environmental resource about which someone has a concern; identified in NEPA, § 102 (2) (E) as an unresolved conflict**
JSC	**Lyndon B. Johnson Space Center, Houston, Texas**
NASA	**National Aeronautics and Space Administration**
NEPA	**National Environmental Policy Act of 1969**
NHL	**National Historic Landmark**
No action	**Continue present management, but do not do the proposed project**
Objective	**A subset of the project's goal**
Preferred Alternative	**The alternative (option/plan) that the Decision maker plans to select near the end of the analysis process**
PPE	**Personal protection equipment**
ROD	**Record of Decision**
Selected Alternative	**The alternative (option/plan) that the Decision maker selects to implement**
TARL	**Texas Archeological Research Laboratory**
THC	**Texas Historical Commission**
USACE	**United States Army Corp of Engineers**

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

NASA proposes to construct a Battery Testing Facility (BTF) at the Lyndon B. Johnson Space Center (JSC) in Houston, Texas beginning in 2003.

The functional requirements of the BTF will be allow for safer and more efficient testing of batteries in ESTA.

1.2 Need for the Consolidate Battery Test Facility

The new facility will enhance and upgrade the safety of test operations and mission supportability. The battery test stands currently used for the Space Shuttle and International Space Station crew equipment are spread out within three separate facilities at the ESTA, including the pyrotechnic test facility. Safety concerns and delays in battery tests would result if this facility were not constructed.

1.3 Applicable Regulatory Requirements and Required Coordination

Compliance with the following environmental laws, regulations, and coordination activities are required for the proposed Battery Testing Facility project to proceed.

- Clean Air Act
  This act establishes standards for particulate matter in the air. This project meets these standards as described in 4.3.1.

- Migratory Bird Treaty Act
  This act provides for the protection of migratory birds. Under this act it is unlawful "by any means or manner, to pursue, hunt, take, capture, [or} kill" any migratory birds except permitted by regulation. Unintentional take constitutes a violation. While modifications of habitat possibly used my migratory species may occur at the site, habitat modification is not considered a "take".

- National Historic Preservation Act
  This act establishes a requirement for consideration of potential impacts to historic properties. The Texas Historical Commission (THC) determined that there would be no adverse effects to historic properties if the proposed action were implemented.

- Endangered Species Act
  This act was established to protect Federally listed threatened and endangered species. The U. S. Fish and Wildlife Service determined that no federally listed threatened or endangered species are known to occur at the proposed site. In addition, there was no officially designated critical habitat at this site. The proposed action would be constructed in accordance with the law.

- Farmland Protection Policy Act
  This act was implement to assist in protection of prime farmland throughout the United States. The proposed site is designated as "farmland already in urban development" and is exempt from further review under the policy.

Additional guidelines to be followed:

- Federal Emergency Management Agency guidelines concerning floodplains.

- National Pollution Discharge Elimination System general permit conditions as outlined in the NASA Storm Water Pollution Prevention Plan.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Construction of the Consolidate Battery Test Facility

The BTF would be located at JSC in Harris County, Texas. JSC is located 35.40 kilometers (22 miles) southeast of downtown Houston, near Clear Lake (*Section 8.0, Figure 1*). The proposed construction site is located in the northeast portion of JSC, adjacent to Building 354 and west of intersection of T-4 and T-3. The site is approximately 0.21 hectares (0.517 acres) of an undeveloped field, dominated by grasses.

A precast tilt-up and composite steel frame building, approximately 759 square meters (8,170 square feet) in size, comprised of a single story is proposed for construction *(Section 8.0, Figure 2)*. The building would house the battery testing and storage facility. The proposed site will be impacted by the proposed facilities.

2.2 No-Action Alternative: Maintenance of site in the undeveloped condition

The no-action alternative would have several negative consequences for JSC. The no-action alternative would negatively impact battery testing and the ability of ESTA to support NASA future missions. The battery test stands currently used for the Space Shuttle and International Space Station crew equipment are spread out within three separate facilities at the ESTA, including the pyrotechnic test facility. Safety concerns due to substandard facilities and delays in battery tests would result if this facility were not constructed.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The affected environment succinctly describes the relevant resources of the areas that would affect or that would be affected by the alternatives if they were implemented. In conjunction with the description of the no action alternative in Chapter 2 and with the predicted effects of the no action alternative in Chapter 4, this chapter establishes the scientific baselines against which the decision maker and the public can compare the effects of the action alternative.

3.2 Climate and Earth Movements

3.2.1 Hurricanes and Tidal Surge

From June to November, the Gulf Coast may be struck by hurricanes and tropical storms with sustained heavy rain and strong winds. Flooding may occur in coastal areas due to storm surge (extremely high tides caused by wind) and receding waters. A review of the U.S. Geological Survey (USGS) Topographic Map (League City Quadrangle) contained within MapTech Terrain Navigator indicates the proposed site is located within JSC has an elevation of approximately 4.57 meters (15 feet) above mean sea level (USGS, 1995) *(Section 8.0, Figure 3)*. An orthogonal view illustrates the generally flat conditions at JSC with several notable drainage ditches crossing the installation from the southwest to the northeast (*Section 8.0, Figure 3a*). The land surrounding the site proposed is generally flat, with a gentle slope to the northeast.

3.2.2 Rainfall

Rainfall is evenly distributed throughout the year, with an annual average of about 116.84 centimeters (46 inches) (Weather Post 2000). Thunderstorms are common in summer months when the sun warms the air near the surface, causing it to rise and cool, resulting in clouds and rain. Showers and thunderstorms also occur when weather fronts pass through the area.

3.3 Construction Impacts

3.3.1 Air Resources

The U. S. Environmental Protection Agency established National Ambient Air Quality Standards (NAAQS) for ozone, lead, carbon monoxide, sulfur dioxide, nitrogen dioxide, and respirable particulate matter. The Texas Natural Resource Conservation Commission (TNRCC) has adopted the NAAQS standards presented in Table 3.3.1 for each of the six pollutants.

The TNRCC classifies the air quality status of each county with respect to NAAQS as attainment, nonattainment, or unclassified. Attainment indicates that the air quality is

within the NAAQS. Nonattainment indicates that the air quality exceeds NAAQS for a specified pollutant or pollutants. Unclassified indicates insufficient data to categorize a particular county. Harris County is classified as a "severe nonattainment" area for ozone.

It is in attainment for all other NAAQS. Ozone is not emitted directly into the air. It is formed through chemical reactions between natural and man-made emissions of volatile organic compounds (VOCs) and nitrogen oxides (NOx) in the presence of sunlight. Ozone pollution is the periodic increase in the concentration of ozone in the ambient air. When temperatures are high, sunshine is strong, and winds are weak, ozone can accumulate at ground level to unhealthful levels (TNRCC 1995).

Table 3.3.1 - National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Period	Proposed NAAQS	Secondary NAAQS
Ozone	1 hour[a]	125 ppb	125 ppb
	8 hour[b]	85 ppb	85 ppb
Carbon Monoxide	1 hour[c]	35.5 ppm	35.5 ppm
	8 hour[c]	9.5 ppm	9.5 ppm
Sulfur Dioxide	3 hour[c]	-	550 ppb
	24 hour[c]	145 ppb	-
Nitrogen Dioxide	Annual[d]	35 ppb	-
	Annual[d]	54 ppb	54 ppb
Respirable Particulate Matter (10 microns or less) (PM10)	24 hour[e]	155 µg/m3	155 µg/m3
	Annual[f]	51 µg/m3	51 µg/m3
Respirable Particulate Matter (2.5 microns or less) (PM2.5)	24 hour[g]	66 µg/m3	66 µg/m3
	Annual[h]	15.1 µg/m3	15.1 µg/m3
Lead	Quarter[d]	1.55 µg/m3	1.55 µg/m3

Source: TNRCC June 2000; www.tnrcc.state.tx.us/air.monops/naaqs.html
Proposed NAAQS: The levels of air quality that the EPA judges necessary, with an adequate margin of safety, to protect the public health.
Secondary NAAQS: The levels of air quality that the EPA judges necessary to protect the public welfare from any known or anticipated adverse effects.
ppb = parts per billion, ppm = parts per million, µg/m3 = micrograms per cubic meter
a – Not to be at or above this level on more than three days over three years.
b – Not to be at or above the average of the annual fourth highest daily 8-hour maximum over a three year period.
c – Not to be at or above this level more than once per calendar year.
d – Not to be at or above this level.
e – Not to be at or above the three year average of the annual 99th percentile for each monitor within an area.
f – Not to be at or above the three year average of annual arithmetic mean concentrations at each monitor within an area.
g – Not to be at or above the three year average of the annual 98th percentile for each population-oriented monitor within an area.
h– Not to be at or above the three year average of annual arithmetic mean concentrations from single or multiple community-oriented monitors.

3.3.2 Noise Environment

Most of the land immediately surrounding the proposed site hosts buildings and parking lots. Adjacent to the west of the proposed site, there is Building 354, Cryogenic Test Facility. Adjacent to the northwest, there are the Building 354 Storage Facilities and parking lots. Adjacent to the northeast, this is the Building 353, Propulsion Test Facility and parking lots. Adjacent to the southeast, there is the Building 361 Engineering Test Facility. Adjacent to the south, there is the Building 351 Thermal Test Facility and parking lots.

The land surrounding the proposed site hosts buildings and parking lots. Adjacent to the south and west, there is a single linear depression (drainage ditch) bordering the proposed site to the south and discharges into a storm drain north of the site.

A fence marks the perimeter of JSC area, and there are public roadways to the north, east and southwest of JSC. There is also a residential development located to the northwest of JSC. Noise levels do not appear to exceeded normal background levels typically associated with such areas.

3.3.3 Spills and Hazardous Materials

The proposed site is undeveloped and has not been associated with any known activities or past uses, which involved the generation, storage, or disposal of hazardous materials. The application of herbicides and insecticides is presumed to have occurred as part of normal pest control procedures. Residual concentrations of these chemicals are not expected to be present on the proposed site. There are no records of spills having occurred at the proposed site.

3.3.4 Transportation

The proposed site is located adjacent to Bldg 354 near the intersection of T-3 and T-4 Avenue. Vehicles currently travel on both roads when going to and from surrounding buildings. Access to the proposed site will be along the T-4 Avenue through Gate 4 on Space Center Boulevard to the West of the installation.

In general, there is little traffic at the proposed site on JSC.

3.4 Water Resources

3.4.1 Surface Water and Drainage

There is a linear depression (drain ditch) located on the southern and western boundaries the site. The gentle slope of the land toward the northeast indicates runoff would flow into the drainage ditch and eventually into a storm water inlet. Water was observed in the drainage ditch during the time of the study, however, this water is believed to be from a

recent precipitation prior to the site reconnaissance but it can be assumed these areas do shunt surface water off the site at certain times.

3.4.2 Floodplains

Floodplains are low areas adjoining inland and coastal waters. Those that have a one percent chance or greater for flooding in any given year are considered to be in a 100-year floodplain. Activities in floodplains should be compatible with the natural propensity for flooding. Structures in the floodplain may further exacerbate flooding upstream or downstream.

The Federal Emergency Management Agency (FEMA) publishes flood maps for insurance ratings. An aerial photograph was obtained and the FEMA floodplain map of JSC was superimposed on the photograph and is included in Section 8.0, Figure 4 (Map number 48201C1090 K, revised April 20, 2000). No portion of the proposed site is located within the 500-year floodplain.

3.4.3 Groundwater

The Beaumont Formation, along with the underlying Montgomery, Bentley, and Wouldis Sand Formations, comprise the Chicot Aquifer, which extends approximately 700 feet below surface in the area of the proposed BTF site. The Evangeline Aquifer is approximately 670.56 meters (2,200 feet) thick and extends from the base of the Chicot Aquifer to approximately 883.92 meters (2,900 feet) below surface (*Digital Models for Simulation of Groundwater Hydrology of the Chicot and Evangeline Aquifers Along the Gulf Coast of Texas,* 1985, Texas Department of Water Resources). Shallow groundwater can typically be encountered at a depth of 3.05 to 6.10 meters (10 to 20 feet) below the surface at JSC. The Chicot and Evangeline Aquifers are the principal sources of groundwater in the Houston area.

Harris County has restricted the pumping of groundwater due to the subsidence in the area. The main source of water supply for JSC and the surrounding vicinity is treated surface water. According to the Joint Groundwater Monitoring and Contamination Report prepared by the Texas Groundwater Protection Committee in 1998, JSC is not located in a groundwater protection or recharge zone.

3.5 Biological Resources

3.5.1 Vegetation

The proposed site is in the Gulf Prairies and Marshes area of Texas, with nearly level coastal prairie, slowly drained by many slow-moving rivers, streams, and sloughs surrounded by low woodlands (Hatch et al. 1990). Fresh water marshes are located in low-lying remnant prairies, while salt marshes are located in areas adjacent to coastal waters.

Tall prairie grasses are the dominant vegetation in coastal prairies. Natural fires and grazing have prevented trees and shrubs from dominating the landscape. Development has affected plant communities at and surrounding the proposed site. The proposed site was used for agriculture prior to 1969. Many species of natural vegetation were removed during agricultural practices. Dominant vegetation now includes Bermuda grass (*Cynodon dactylon*), Dallisgrass (*Paspalum dilatatum*), and Johnson grass (*Sorghum halapense*). Three different species of native and non-native trees are planted along the perimeter of the property.

3.5.2 Wildlife

The Upper Texas Gulf Coast is home to many species of birds, mammals, reptiles, and amphibians. However, agriculture and urban development have fragmented and altered wildlife habitat. Open fields, administrative, test facility buildings and storage buidlings surround the proposed site.

The open land near the proposed site provides habitat for deer, small mammals, birds, reptiles, and amphibians that are adapted to suburban and rural environments. Several drainage ditches across JSC provide habitat for a variety of species. During the field reconnaissance, species observed included green heron, (*Butorides striatus*), great egret (*Casmerodius albus*), grackle (*Quiscalus sp.*), barn swallow (*Hirundo rustica*), red-winged blackbird (*Agelaius phoeniceus*), Eastern meadowlark (*Sturnella magna*), loggerhead shrike (*Lanius ludovicianus*), purple martin (*Progne subis*), snowy egret (*Egretta thula*), doublecrested cormorant (*Phalacrocorax auritus*), and American crow (*Corvus brachyrhynchos*).

Birds such as mourning doves *(Zenaida macroura),* European starling *(Sturnus vulgaris),*house sparrows *(Passer domesticus)*, Northern mockingbird *(Mimus polyglottos),* Northern cardinal *(Cardinalis cardinalis),* and blue jay *(Cyanocitta cristata)* may also be found at and surrounding the proposed site. Small mammals such as raccoon *(Procyon lotor),* opossum *(Didelphis virginiana),* and rodents are found in undeveloped areas on and adjacent to the proposed site. Whitetail deer (*Odocoileus virginianus*) are frequently observed on JSC property. The fence surrounding JSC typically would prevent large animals from entering the property, however, deer on the property may be able to penetrate the boundary.

3.5.3 Wetlands

The U.S. Army Corps of Engineers (USACE) is responsible for administering and enforcing Section 404 of the Clean Water Act. Wetlands are defined in Title 33, Code of Federal Regulations (CFR) Part 328, Section 3(b), as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. A jurisdictional wetland, as defined by the *1987 Corps of Engineers Wetland Delineation Manual*, must meet three mandatory criteria: hydric soils, wetland hydrology, and hydrophytic vegetation.

Soils at the proposed site are mapped as Lake Charles-Urban land complexes (Figure 5). Lake Charles soils are very firm, mildly alkaline at depths below 55.8 centimeters (22 inches), and consist of clay ranging in color from black (top 55.8 cm (22 inches)) to gray with mottles (187.96 cm (74 inches)). Soils are nearly level, sloping between 0 - 3% (usually 0 – 1%). These soils are somewhat poorly drained, and very slowly permeable. (Soil Conservation Service, Harris County Soil Survey, 1976).

The U.S. Department of the Interior, Fish and Wildlife Service has published National Wetland Inventory maps that identify wetland areas. No wetlands were shown on or immediately adjacent to the proposed site, although wetlands are mapped on other portions of the JSC property *(Section 8.0, Figure 6).* During site reconnaissance of the proposed site, no wetlands indicators were observed within the boundaries of the site. The drainage ditch adjacent to the south and west of the proposed site does not support hydrophytic vegetation, but it is a manmade structure created from uplands and is not considered a water of the United States. USACE has the discretion to determine on a case-by-case basis whether or not a particular waterbody is a water of the United States (51 FR 41217). Federal Register 51 FR 41217, dated states that drainage ditches constructed entirely in upland areas generally are not considered to be waters of the United States. The term "waters of the United States" is defined at 33 CFR 328.3 and refers to the USACE Section 404 jurisdiction.

3.6 Socioeconomic and Cultural Resources

3.6.1 Demographics and Economic Activity

The proposed site is located in the Clear Lake area. The Clear Lake area includes the cities of Friendswood, Kemah, League City, Nassau Bay, Seabrook, Webster, Clear Lake Shores, El Lago, Taylor Lake Village, and parts of Houston and Pasadena. The 2000 population estimate for the Clear Lake area is about 200,000 persons.

The proposed site is located within one census tract composed of five block groups, mapped and designated by the U.S. Department of Commerce, Bureau of the Census. The proposed site is located in the 1990 census tract, 373.03, surrounding NASA Johnson Space Center, in Houston, Harris County, Texas. Table 3.6.1 lists the race, ethnicity, the number of persons of voting age, the number of persons in the workforce, the average household income, and the number of housing units and their occupancy status for all block groups in tract 373.03.

The aerospace industry, specialty chemical industry, tourism, and boating and recreation dominate the Clear Lake area economy. Additional area businesses include the service, wholesale, and retail sectors.

Table 3.6.1 Demographics of Census Tract 373.03 (including all blocks)

Census Tract 373.03		
Persons:	White	6,916
	Black	592
	Native American	53
	Asian	691
	Hispanic	2,095
Total Persons:		10,347
Persons of Voting Age:	White	6,224
	Black	562
	Native American	52
	Asian	606
	Hispanic	1,988
Total Persons of Voting Age:		9,432
Persons in Work Force:		7,243
Average Household Income:		50,752
Housing Units:	Owned	1,250
	Rented	2,695
	Vacant	553
Total Housing Units:		4,498

Source: Clear Lake Area Economic Development Foundation

3.6.2 Cultural Resources

Archeological site records on file with the Texas Archeological Research Laboratory (TARL) at the University of Texas at Austin were reviewed to determine the presence of recorded site within or immediately adjacent to the project area. Based on a review of these records, no archeological sites have been recorded within the project limits. However, numerous sites in the immediate vicinity of Clear Lake are on record with the state files at TARL suggesting a favored location for habitation during the prehistoric period.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

Environmental consequence is the scientific and analytic basis for the summary comparison of effects. This chapter presents in detail and by resource the following effects:

- Direct, indirect, and cumulative effects of all alternatives
- Relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity
- Irreversible and irretrievable commitment of resources that would be involved if any of the alternatives were implemented
- Adverse effects that cannot be avoided

4.2 Climate and Earth Movements

4.2.1 Hurricanes and Tidal Surge

4.2.1.1 Effect of the Proposed Action

The proposed BTF would be constructed to comply with all required hurricane construction codes. JSC has an emergency plan outlining hurricane procedures that would be adopted and applied to the BTF. If tidal surge or receding floodwaters were to reach the BTF, possible structural damage could occur.

4.2.1.2 Effect of the No Action Alternative

Hurricane and tidal surge damage would be minimal on the proposed site as there would be no new structures to damage. Some damage to the land surface including deposition of foreign materials may result if these climatic events were to occur.

4.2.2 Rainfall

4.2.2.1 Effect of the Proposed Action

Heavy rain events could result in flooding around the BTF if topography would be altered as such. The BTF would be constructed to effectively drain any excess water in a manner not to cause additional flooding upstream or downstream of the proposed site or to other JSC property.

4.2.2.2 Effect of the No Action Alternative

Heavy rains should not cause flooding problems upstream or downstream of the undeveloped site outside of existing conditions. Flow levels would not be changed from the current conditions unless modifications occurred elsewhere on JSC property.

4.3 Construction Impacts

4.3.1 Air Resources

4.3.1.1 Effect of the Proposed Action

The construction of the BTF would produce some air emissions. An increase of 22,679.62 Kg (25 tons) per year for VOCs or NOx, resulting from the proposed project, could trigger general conformity analysis. Emissions from the BTF are not expected to reach this significance level; consequently, a general conformity analysis should not be required.

Heavy machinery and trucks emit carbon monoxide, particulate matter, nitrogen oxides, hydrocarbons, and sulfur oxides. Steps should be taken to minimize emissions and control any dust created during construction. Air quality effects from construction equipment and associated vehicular traffic would be localized and temporary. These actions should pose no substantial impact upon air quality standards.

The BTF would primarily utilize equipment already in operation at JSC. Additional equipment may be necessary and vehicle use would occur, but normal operation and use of the proposed facility indicate there would be no effect on ambient air quality.

4.3.1.2 Effect of the No Action Alternative

There would be no changes in air quality if the no action alternative were implemented. Construction equipment would not be necessary and general maintenance activities would continue.

4.3.2 Noise Environment

4.3.2.1 Effect of the Proposed Action

Operation of heavy machinery and increased vehicular traffic would temporarily increase noise levels during the construction of the proposed facility on-site and to surrounding buildings. The temporary noise increase would not be likely to pose a threat to occupants, but the potential for hearing loss in construction workers at the site would exist during most construction phases.

Best management practices (BMP) shall be incorporated to minimize the impact of construction related noise to surrounding areas. JSC would require all safety standards be followed including wearing personal protection equipment (PPE) at all times during the construction of the BTF.

4.3.2.2 Effect of the No Action Alternative

The noise environment would remain unaltered if the no action alternative were implemented.

4.3.3 Spills and Hazardous Materials

4.3.3.1 Effect of the Proposed Action

Heavy construction equipment brought from outside JSC has resulted in some spills of hydraulic fluid and other petrochemicals at other construction site. JSC would take precautions at the BTF site to prevent potential spills by requiring construction equipment be adequately maintained and serviced.

Based on the preliminary data provided, the generation of hazardous materials is not anticipated as a result of construction. No effects from hazardous materials, when managed in compliance with environmental regulations, are anticipated.

4.3.3.2 Effect of the No Action Alternative

Existing conditions should remain unchanged if the no action alternative were implemented.

4.3.4 Transportation

4.3.4.1 Effect of the Proposed Action

The BTF would be designed to allow vehicle circulation by reducing the mixing of truck and automobile traffic by the user. At the proposed site, a truck entrance would be created off of T-4 Avenue. Some vehicle parking space would be lost in parking lot south of Building 354 during the construction phase.

No transportation impacts are expected at JSC. Some traffic congestion may occur during construction, but steps should be taken to ensure safe roadway conditions and access to all facilities. Traffic volume through the ESTA area and JSC Space Center Boulevard entrance may increase, but the entrance already uses a traffic signal and alterations in traffic flow outside JSC are not anticipated. Long term affects on transportation are not anticipated.

4.3.4.2 Effect of the No Action Alternative

Alterations in the traffic flow patterns are not anticipated with the no action alternative. Any changes in traffic flow or volume would be a result of changes occurring elsewhere at JSC. Parking around building 354 would remain a viable option for employees working in surrounding buildings, but new parking lots would not be constructed.

4.4 Water Resources

4.4.1 Surface Water and Drainage

4.4.1.1 Effect of the Proposed Action

The filling and reconstruction of the drainage structures may alter the storm water drainage and flow at the proposed site. Alternate surface water drainage routes should be considered prior to construction.

Runoff from the additional parking lots may increase the non-point source discharge into the system. Adequate drainage, flow attenuation structures, and a detention area may be items of consideration for reducing non-point source discharges and additional flow associated construction of the BTF. The proposed site is less than 1 acre and would not require the development of a Storm Water Pollution Prevention Plan and a the completion of signed Site Notice in accordance with the new storm water regulations promulgated March 10, 2003.

Construction impacts may result in the alteration of the drainage ditches along the southern and western boundaries. There may be temporary erosion causing sedimentation and turbid waters within the drainage swale. Contractors shall create and implement a sedimentation and erosion control plan in accordance with JSC and regulatory guidelines before construction begins. These sedimentation and erosion control procedures shall be carried out for the duration of construction.

The topography of the proposed site would not be altered substantially. Some fill material may be placed under the proposed building and parking lot for leveling and stability. Impacts to topography relating to occupancy and maintenance of the proposed facility are not expected.

4.4.1.2 Effect of the No Action Alternative

Increases in surface drainage and non-point source discharges are not anticipated with the no action alternative. The site would remain undeveloped with general maintenance continuing in its current manner. The no action alternative should have no effect.

4.4.2 Floodplains

4.4.2.1 Effect of the Proposed Action

The proposed project would not affect any Harris County Flood Control District (HCFCD) infrastructure; consequently, there would be no detention requirement. The design engineer would be responsible for incorporating a design mechanism that would adequately address the local hydraulic conditions due to increased runoff. NASA should provide information to the City of Houston (COH) from hydraulic studies and impact analysis to allow for determination of impacts; however, the COH does not evaluate the effects of development on the floodplain. Federal facilities not falling under the

jurisdiction of the County or City must comply with requirements of Executive Order 11988, which cover development in Special Flood Hazard Areas.

4.4.2.2 Effect of the No Action Alternative

The no action alternative should not alter the surface elevation of the designated floodplain.

4.4.3 Groundwater

4.4.3.1 Effect of the Proposed Action

No known groundwater contamination exists in the immediate area of the proposed construction site. A known groundwater plume does exist in the ESTA area on JSC, north of Avenue B however, the plume that is emanating from a spill around Building 356 is moving with groundwater flow in a northeasterly direction and away from the proposed construction site. Sampling the groundwater at the proposed site would determine whether construction and normal operations of the proposed facility would impact groundwater. Contaminated groundwater is not anticipated to be encountered during construction phase at the proposed site.

Potable water at the proposed site would be supplied by the Clear Lake City Water Authority, which draws its supply from surface water.

4.4.3.2 Effect of the No Action Alternative

No anticipated effects on the groundwater would occur if current maintenance activities continue. The existing groundwater wells should still be monitored in order to determine background levels.

4.5 Biological Resources

4.5.1 Vegetation

4.5.1.1 Effect of the Proposed Action

The proposed site is undeveloped field, dominated by grasses. Planted native and non-native trees along the perimeter of the property should not have to be cleared due to the size of the proposed site.

4.5.1.2 Effect of the No Action Alternative

The present vegetative community would persist in its early successional stages because maintenance mowing would continue with the no action alternative.

4.5.2 Wildlife

4.5.2.1 Effect of the Proposed Action

Proposed improvements at the proposed site would not support habitat areas suitable for most wildlife; however, landscaped areas may provide small pockets of habitat for adaptive species. Construction activities are not anticipated to adversely impact these habits areas adjacent to the proposed site. Therefore, the localized habit areas are not anticipated to be adversely affected and should be suitable for the current species. Substantial displacement of wildlife is not anticipated. Remaining fields near the proposed site will be to accommodate any displaced wildlife.

4.5.2.2 Effect of the No Action Alternative

Despite the absence of natural vegetation on the proposed site, the existing vegetation does offer some protective cover and food resources for wildlife. Maintenance mowing would periodically remove this vegetation, which may have a negative impact for some species, but a positive impact for others. The drainage ditch should continue to provide suitable habitat for some species, if vegetation removal is limited.

4.5.3 Wetlands

4.5.3.1 Effect of the Proposed Action

No known wetlands are present at the proposed site. Drainage ditches constructed in uplands are not considered waters of the United States and, thus, no permit from the USACE is required for re-alignment of the ditches. USACE has the discretion to determine on a case-by-case basis whether or not a particular waterbody is a water of the United States (51 FR 41217). Federal Register 51 FR 41217, states that drainage ditches constructed entirely in upland areas generally are not considered to be waters of the United States. The term "waters of the United States" is defined at 33 CFR 328.3 and refers to the USACE Section 404 jurisdiction.

Soils on the proposed site are not subject to Farmland Protection Policy Act.

4.5.3.2 Effect of the No Action Alternative

There would be no changes in wetlands inventory if the no action alternative were implemented.

4.6 Socioeconomic and Cultural Resources

4.6.1 Demographics and Economic Activity

4.6.1.1 Effect of the Proposed Action

The BTF would employ civil service and contract personnel. Current employees hold most positions that would be associated with the BTF.

Executive Order 12898, dated February 11, 1994, requires the preparation of an environmental justice strategy that follows the framework of the National Environmental Policy Act (NEPA) and Title VI of the Civil Rights Act. The Executive Order prohibits disproportionately adverse human health or environmental impacts within minority and low-income populations.

Studies conducted for this project indicate that there will not be any disproportionate impacts to low-income or minority populations. No displacements will be required, and no impact to community cohesion is anticipated now or in the future, since the project area is largely undeveloped land and confined to JSC property. Because no residential households will be displaced, and no minority populations or low income populations will be divided or isolated by the proposed project, no environmental justice issues have been identified for the proposed project.

4.6.1.2 Effect of the No Action Alternative

The implementation of the no action alternative would have a slight negative effect on employment opportunities.

4.6.2 Cultural Resources

4.6.2.1 Effect of the Proposed Action

Impact to cultural or archaeological resources is not anticipated at the proposed site. In the event that archeological deposits or features are encountered during construction, the construction operations shall cease within the immediate area and the Archeological Division of the THC and NASA shall be immediately contacted for further consultation.

Work would cease in the vicinity until the requirements of Section 106 of the National Historic Preservation Act were met.

4.6.2.1 Effect of the No Action Alternative

The no action alternative would not result in land alterations; consequently, any unknown archeological deposits or features would not be disturbed. There are no records of cultural resources for this site.

4.7 Cumulative Effects

The proposed action at the proposed site is not anticipated to have any measurable affect on local resources and facilities. Little, if any, new demand is expected for land resources or other resources in any other areas surrounding the proposed facility. Implementation of this action would provide the necessary facilities for supporting the Space Shuttle and

International Space Station initiatives and help in meeting NASA's long range manned space flight goals.

5.0 PREPARERS

Dr. Mark Stapleton
Senior Environmental Engineer
Lynx, Ltd.
2101 NASA Road One
JA 330 / Bldg. 330 / Rm. 112
Houston, Texas 77058
281-483-4748 (phone)
281-244-1732 (fax)

Terri Bradshaw
Environmental Specialist
Lynx, Ltd.
2101 NASA Road One
JA 330 / Bldg. 330 / Rm. 112
Houston, Texas 77058
281-483-7936 (phone)
281-244-1732 (fax)

6.0 AGENCIES AND INDIVIDUALS CONTACTED

6.1 Federal Agencies

Mr. Mike Long
Federal Emergency Management Agency, Region VI
800 North Loop 288
Denton, Texas 76209
940-898-5225 (phone)
940-898-5195 (fax)

Mr. Michael Jansky
Regional Environmental Review Coordinator
United States Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733
214-665-7451 (phone)
214-665-7446 (fax)

Mr. Carl Wang, PE, CHMM
National Park Service
Room 7251
1849 C Street, NW
Washington, D.C. 20240
202-565-1261 (phone)
202-565-1266 (fax)

Mr. James Greenwade
United States Department of Agriculture
Natural Resource Conservation Service
101 South Main
Temple, Texas 76501-7602
254-742-9960 (phone)
254-742-9859 (fax)

Mr. Ron Jones
United States Fish and Wildlife Service
Division of Ecological Services
17629 El Camino Real, Suite 211
Houston, Texas 77058
281-386-8282 (phone)
281-488-5882 (fax)

Mr. Ken Kumor
National Aeronautics and Space Administration
NEPA Officer
Environmental Management Division/Mailcode JE
Washington, D.C. 20546-0001
202-358-1112 (phone)
202-358-2861 (fax)

6.2 State Agencies

Mr. Dan Burke
Texas Commission on Environmental Quality
P.O. Box 13087 – MC205
Austin, Texas 78711-3087
512-239-1543 (phone)
512-239-6195 (fax)

Ms. Kathy Boydson
Texas Parks and Wildlife
Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, Texas 78744
512-389-4638 (phone)
512-389-4599 (fax)

Dr. James E. Bruseth, Director Archaeological Division
Deputy State Historic Preservation Officer
Texas Historic Commission
P.O. Box 12276
Austin, Texas 78711-2276
512-463-5942 (phone)
512-463-8927 (fax)

Ms. Barbara Deane
Texas General Land Office
1700 North Congress Avenue
Austin, Texas 78711-2873
512-936-1964 (phone)
512-463-6311 (fax)

Mr. Jarrett Woodrow
Director of Coastal Wetlands Programs
Texas Parks and Wildlife
1502 Pine Drive (FM 517)
Dickinson, Texas 77539
281-534-0131 (phone)
281-534-0122 (fax)

Ms. Celeste Brown
Director of Endangered Species Programs
Texas Parks and Wildlife
4200 Smith School Road
Austin, Texas 78744
512-912-7021 (phone)
512-912-7058 (fax)

6.3 Local Agencies

Mr. Michael D. Talbott, P.E.
Harris County Flood Control District
9900 Northwest Freeway
Houston, Texas 77092
713-684-4000 (phone)
713-684-4102 (fax)

Mr. Bob Shelby
Region 5 Director
Texas Archeological Society
542 Chelsea Street
Bellaire, Texas 77401
713-667-2109 (phone)

Mr. Carl Masterson
Community Resources Program Manager
Community and Environmental Planning
P.O. Box 22777
Houston-Galveston Area Council
Houston, Texas 77227-2777
713-993-4561 (phone)
713-993-4503 (fax)

Mr. Al Davis
Harris County Historical Commission
929 Waxmyrtle
Houston, Texas 77079
713-468-6771

7.0 REFERENCES

Federal Emergency Management Agency, National Flood Insurance Program; Flood Insurance Rate Map, Harris County and Incorporated Areas, Map Number 48201C1090K, Panel 1090 of 1135, 2000.

Hatch, S.L., K.N. Gandhi and L.E. Brown. 1990. *Checklist of the Vascular Plants of Texas* Publication MP-1655. Texas Agricultural Experiment Station. College Station, Texas.

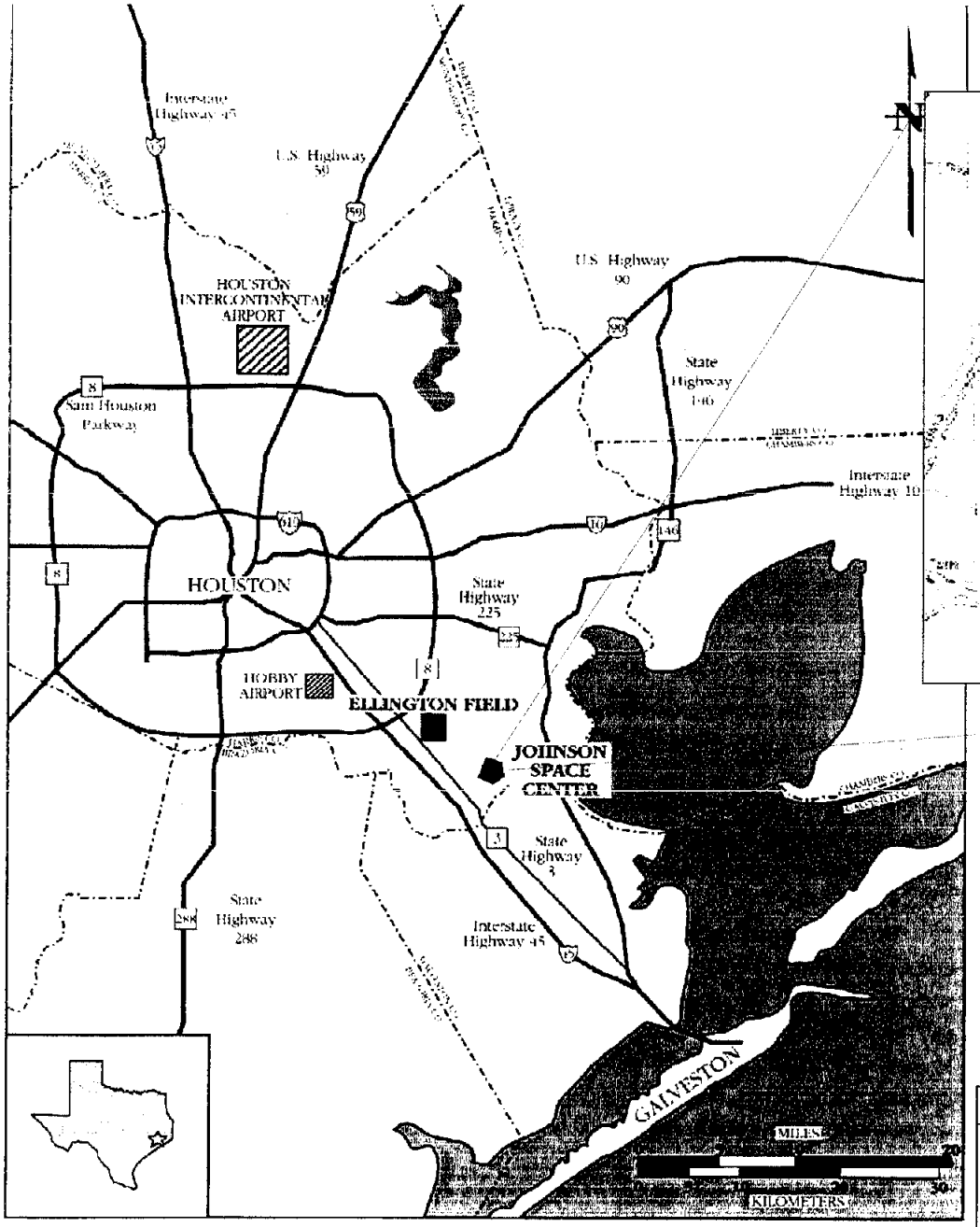
Soil Conservation Service, United States Department of Agriculture; *Soil Survey of Harris County, Texas, 1976.*

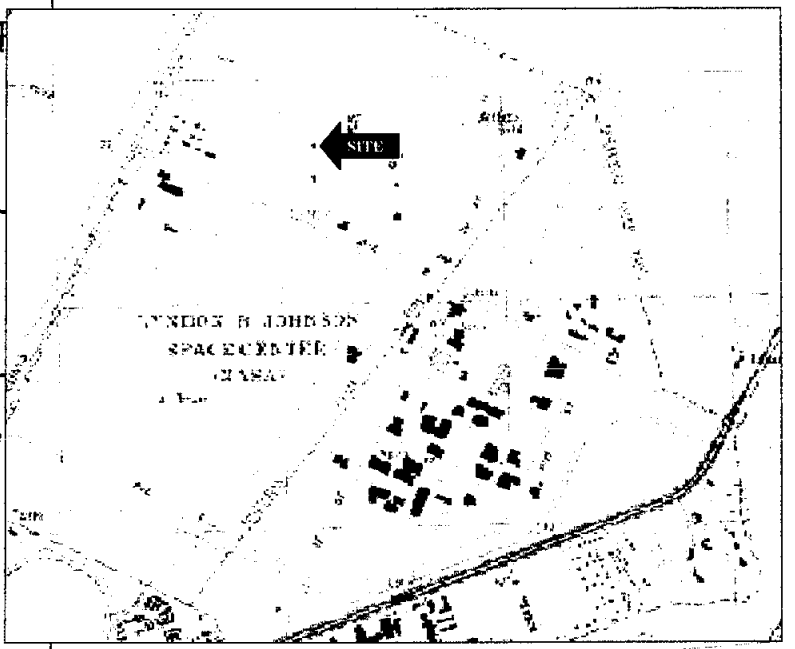
Texas Department of Water Resources; *Digital models for simulation of ground-water hydrology of the Chicot and Evangeline aquifers along the Gulf coast of Texas*, 1985.
United States Department of Commerce, Bureau of the Census; Census of Population and Housing. Harris County, Texas, Census Tract Number 373.03, 1990.

United States Geological Survey, United States Department of the Interior; *League City, Texas, 7.5 Minute Topographic Quadrangle,* 1995.

WeatherPost – Houston Texas Historical Weather; National Weather Service, San Francisco, California,
(http://www.weatherpost.com/longterm/historical/data/houston_texas.htm),2000.

8.0 Figures





Source: Key Maps, Inc.
Houston, Texas

Figure 1: Vicinity Map

Lynx, Ltd.

Drawn By: JMS

Date: 1/21/03

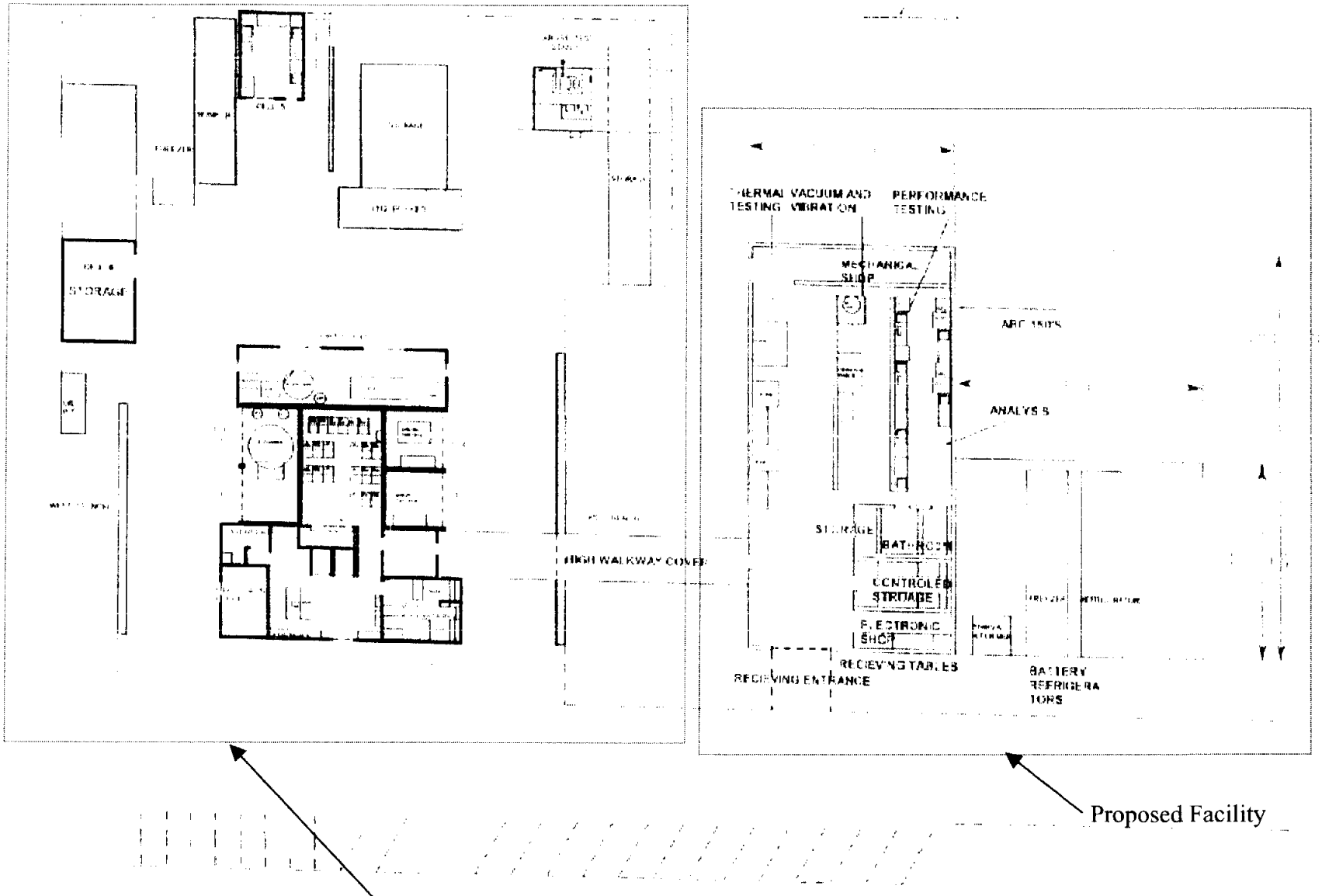


Figure 2: Proposed Facility

Lynx, Ltd.

Drawn By: JMS

Date: 1/21/03

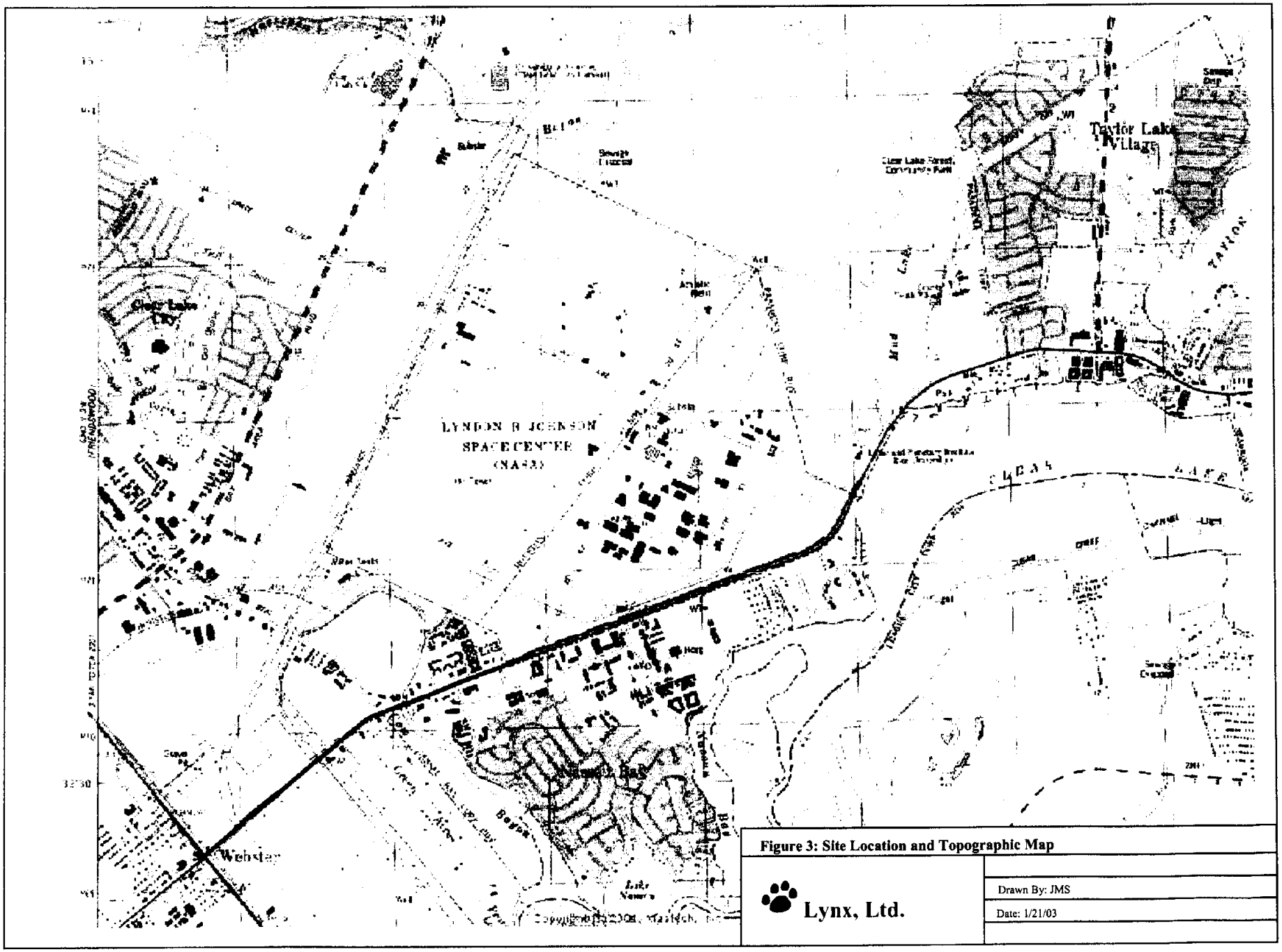
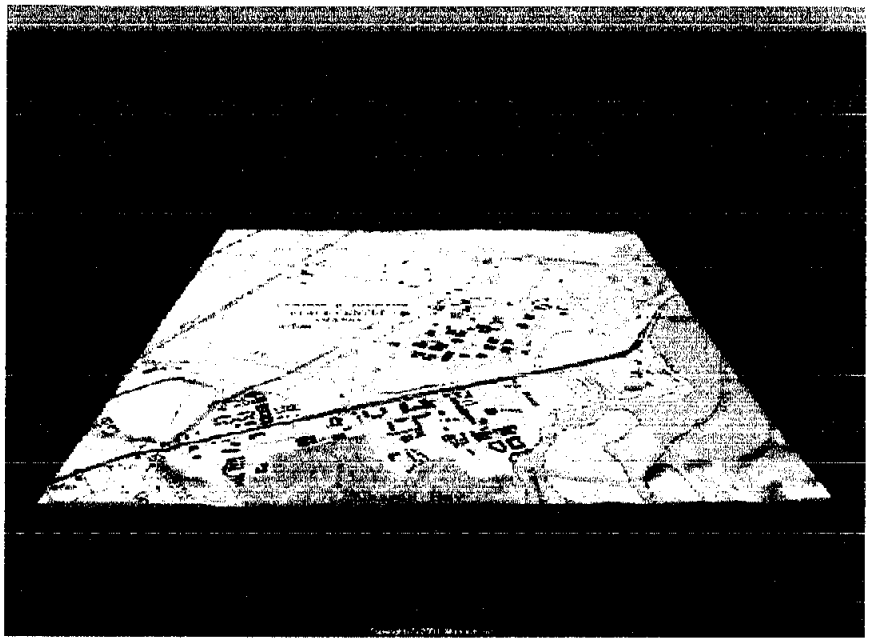


Figure 3: Site Location and Topographic Map

Lynx, Ltd.

Drawn By: JMS

Date: 1/21/03



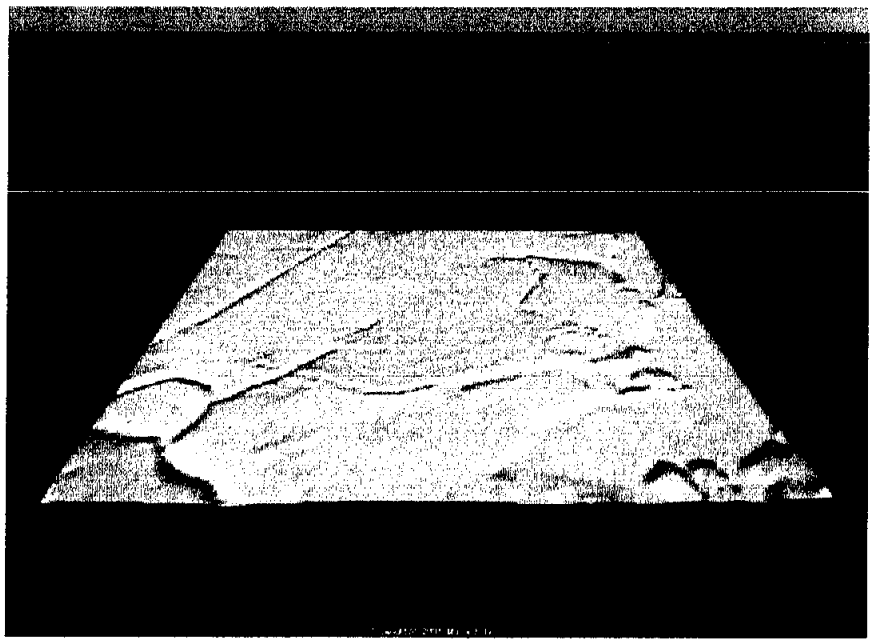


Figure 3a: Orthogonal View of Johnson Space Center

Lynx, Ltd.

Drawn By: JMS

Date: 1/21/03

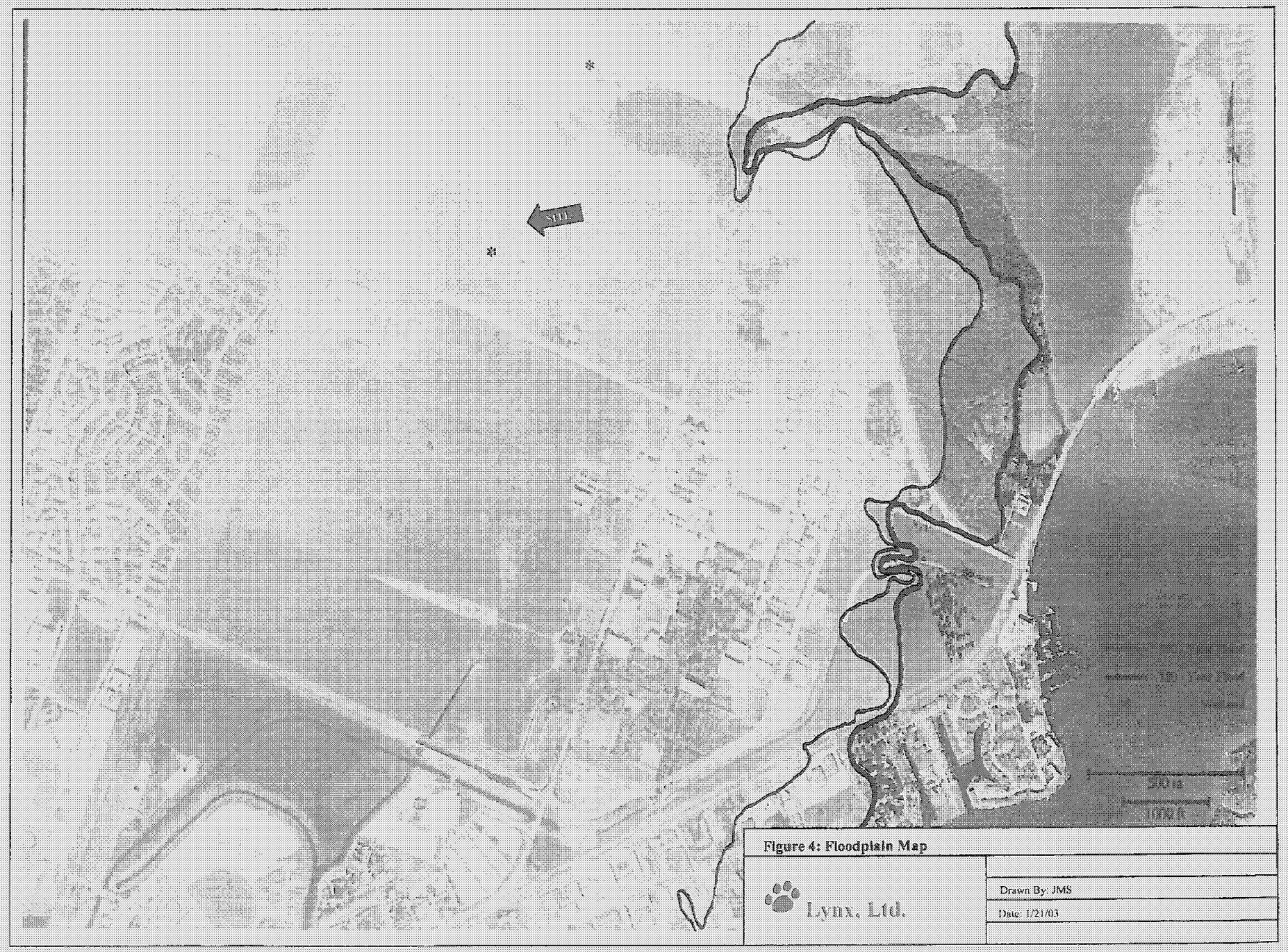
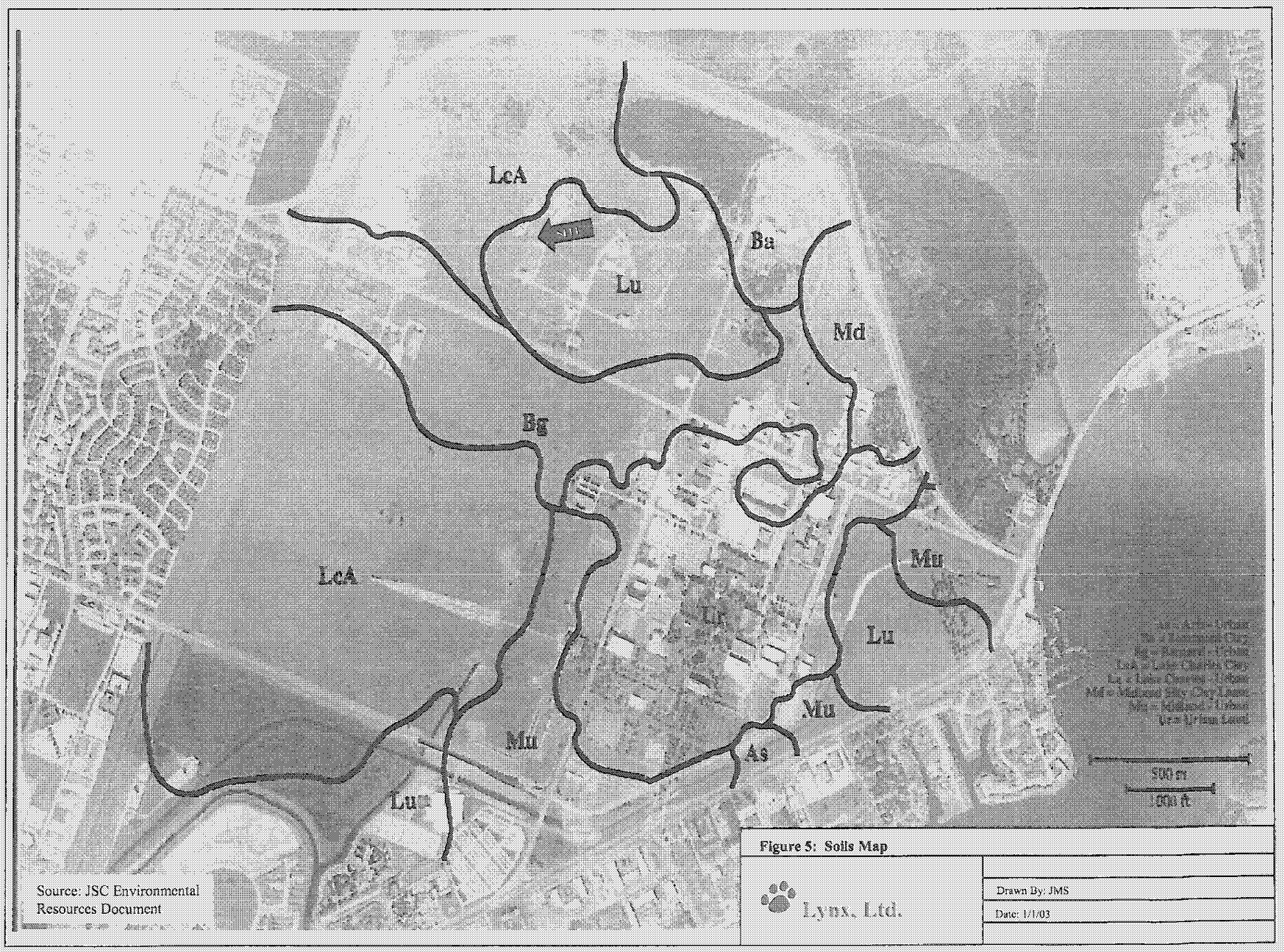


Figure 4: Floodplain Map

Lynx, Ltd.

Drawn By: JMS

Date: 1/21/03



Source: JSC Environmental Resources Document

Figure 5: Soils Map

Lynx, Ltd.

Drawn By: JMS

Date: 1/1/03

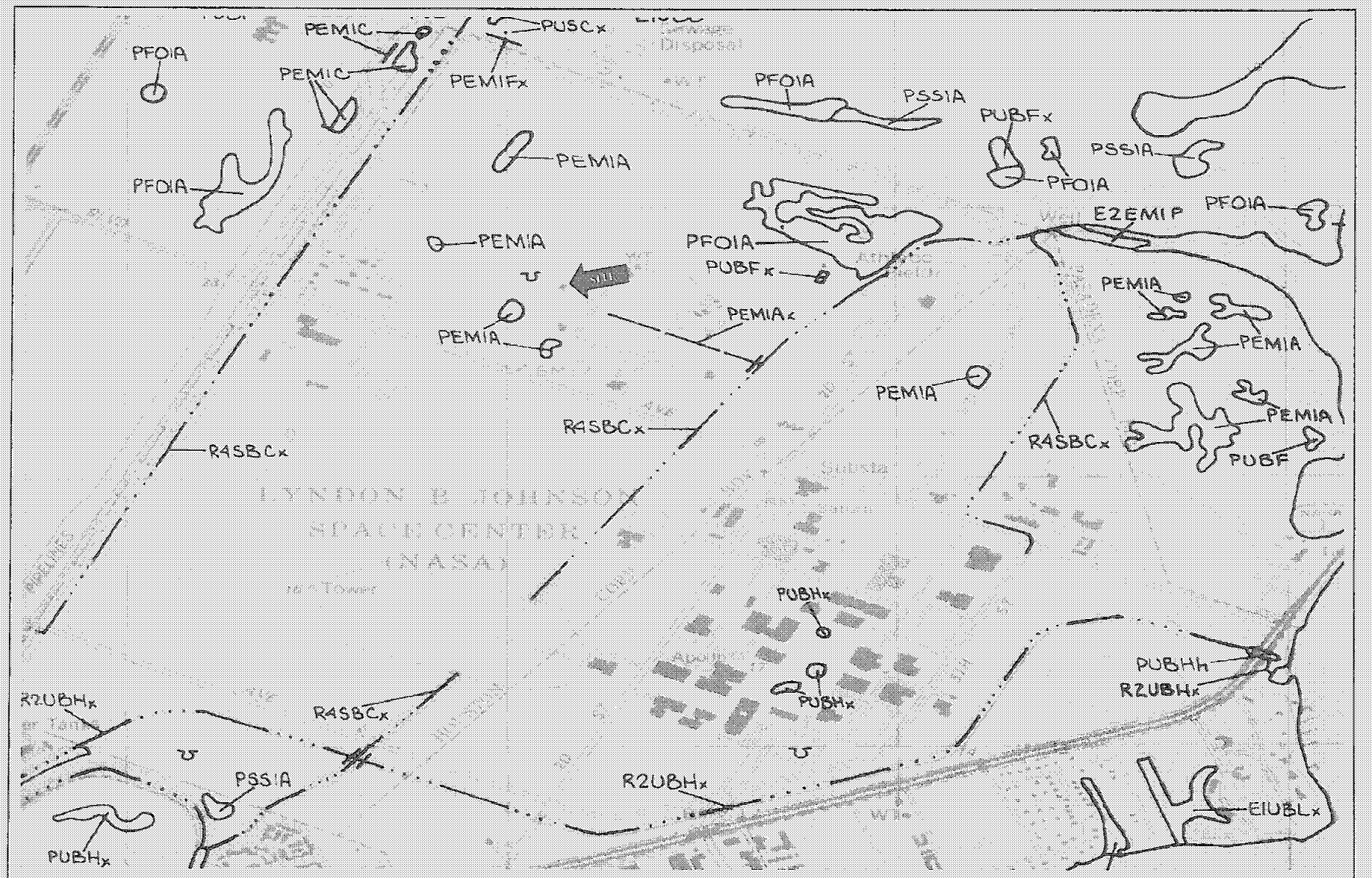


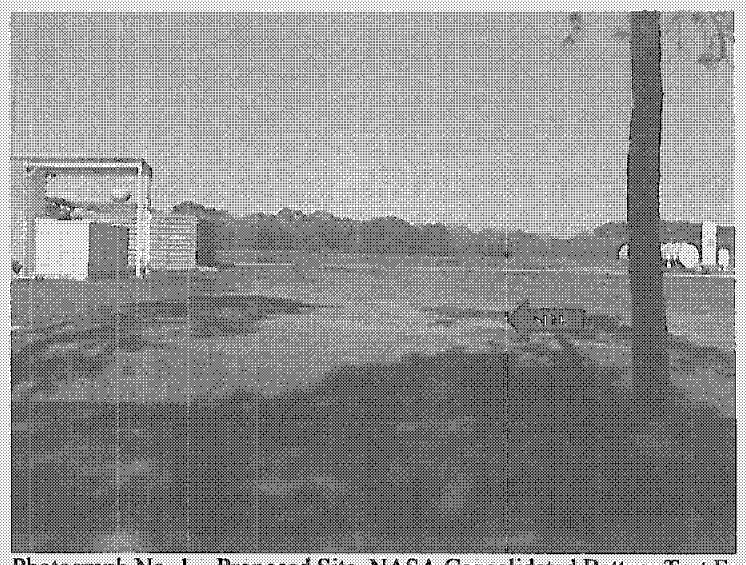
Figure 6: Wetlands Map

Lynx, Ltd.

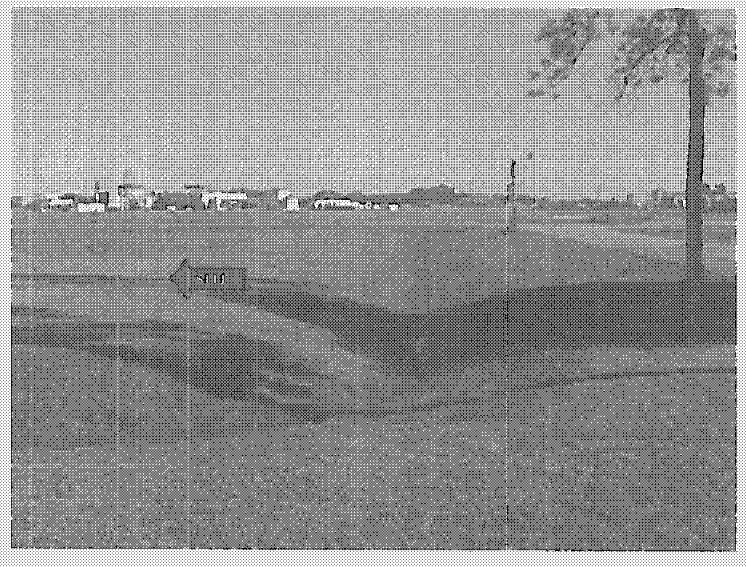
Drawn By: JMS

Date: 1/21/03

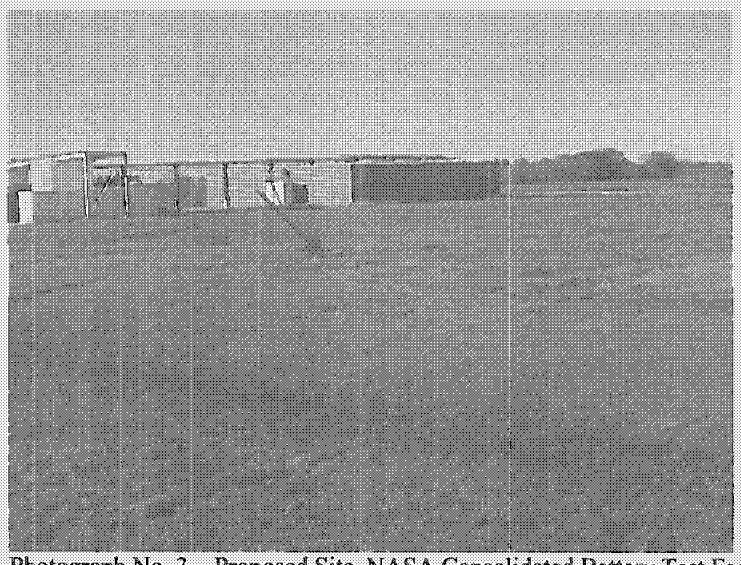
9.0 Photographs



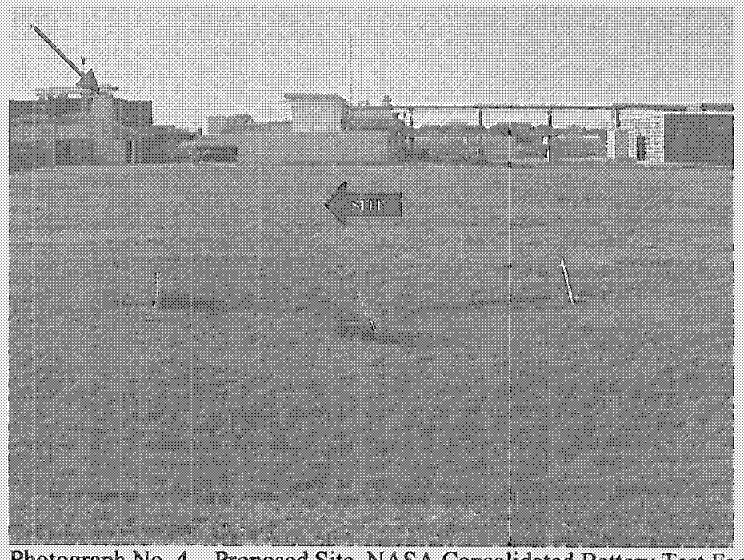
Photograph No. 1 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston, Texas. Proposed site location of the NASA Consolidated Battery Test Facility viewed from T-4 Avenue along the Southern Boundary of the site, facing north.



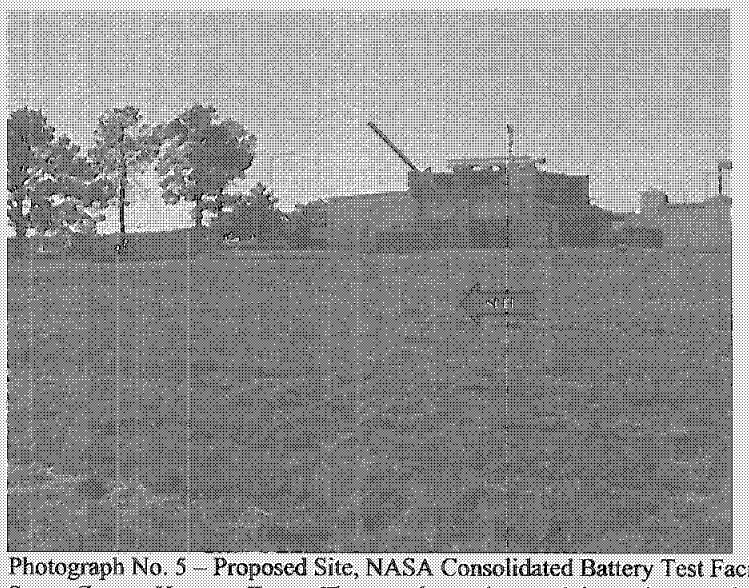
Photograph No. 2 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston, Texas. Viewed from the Western Boundary of the site, facing east. Tree located along the perimeter of the proposed site.



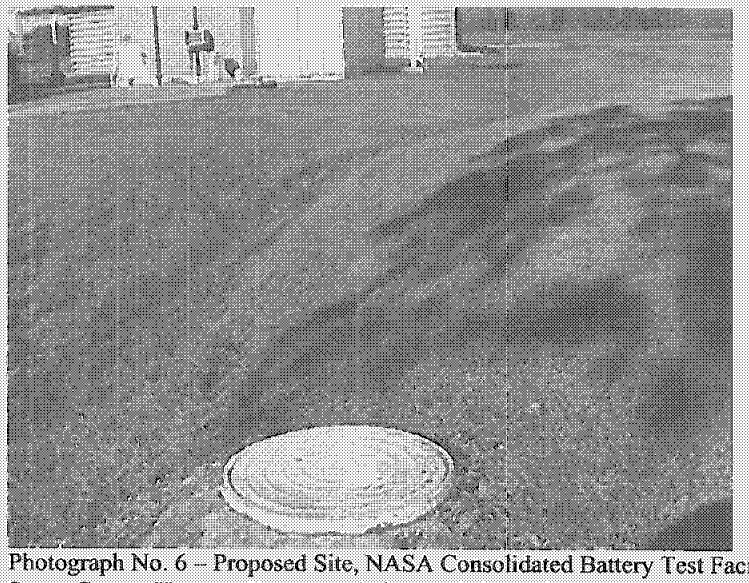
Photograph No. 3 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston Texas. Viewed from the Southern Boundary of the site, facing northwest.



Photograph No. 4 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston, Texas. Viewed from the Eastern Boundary of the site, facing West. Building 354 borders the site to the west. Subsurface utilities are clearly marked in the foreground.



Photograph No. 5 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston Texas. The trees located around the perimeter of the proposed site, facing southwest. Building 354 borders the site to the west.



Photograph No. 6 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston Texas. A drainage ditch parallels the proposed site along the Western Boundary. Standing water in the drainage ditch due precipitation event prior to site reconnaissance. Facing North.

Photograph No. 7 – Proposed Site, NASA Consolidated Battery Test Facility, Johnson Space Center, Houston Texas. Standing water in the drainage ditch due precipitation event prior to site reconnaissance. Facing North.

10.0 Agency Correspondence Received at the Time of this Report

May 16 03 09:53a

orig - GWL
cc: GMG

Lynx, Ltd.

May 16, 2003

Mr. Michael D. Talbott, P.E.
Harris County Flood Control District
9900 Northwest Freeway
Houston, Texas 77092

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Test Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Talbott:

As required under the National Environmental Policy Act (NEPA), Lynx Ltd. submitted an Environmental Assessment to your office on April 18, 2003 and comments were requested to be provided by May 9, 2003. To date, no response has been received from your office. Please confirm receipt of the above reference project.

To prevent serious delays in the project, please provide any comments on the above referenced project by COB on May 16, 2003. If there are no comments, please sign below and fax to (281) 244-1732.

If there are any questions, please contact me at 281-483-4748 or via email at james.m.stapleton1@jsc.nasa.gov.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS:
Signed By: GLENN W. LAIRD
Printed Name: GLENN W. LAIRD
Date: 6/9/03
Title: ~~ENVIRONMENTAL SERVICES~~ DEPARTMENT MANAGER

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-244-1732 (fax)

May 20, 2003

Dr. Mark Stapleton
Lynx, Ltd.
2101 NASA Road • JA 330, Room 112
Houston, TX 77058

RE: Proposed Battery Testing Facility, Johnson Space Center, Houston, Harris County.

Dear Dr. Stapleton:

This letter is in response to your request for information concerning the impacts upon fish, wildlife, and plant resources associated with the project referenced above. Texas Parks and Wildlife Department (TPWD) staff reviewed the Environmental Assessment (EA) and does not have concerns about significant impacts to wildlife habitats.

Staff suggests that NASA develop plans to detain and treat storm water detention before allowing it to discharge into area streams. The Department recommends a combination of hay bales and silt screens to prevent siltation into wetlands. Any hay that is used in erosion control should be certified weed free hay to reduce the potential for introduction of exotic weedy species. Runoff control measures should be maintained until native vegetation has been reestablished on disturbed sites. The reseeding of exposed areas with a mixture of native grasses and limiting mowing practices can assist enhancement of existing native grasses or prairie remnants. Native plants are adapted to the local environment and will persist through periods of environmental stress. Most exotic plants cannot similarly persist and are also overrated as wildlife food and cover. However, a few exotic species can establish themselves by out-competing native plants. They then become serious persistent pests, difficult if not impossible to control or eradicate. Exotic species should, therefore, be omitted from permanent landscape plans and prevented from becoming established on disturbed soils.

In order to protect migratory birds construction activities should occur outside the March – August migratory bird nesting season of each year the project is authorized and lasting for the life of the project. Construction activities include (but are not limited to) removal of nests or nest structures, tree felling as well as vegetation clearing, trampling or maintenance. Additional information regarding the Migratory Bird Treaty Act may be obtained from the U.S. Fish and Wildlife Service Southwest Regional Office (Region 2) at (505) 248-6879.

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512-389-4800
www.tpwd.state.tx.us

We appreciate the opportunity to review and comment on your project. If you have any questions contact me in San Marcos at (512) 396-9211.

Sincerely,

Renée Fields
Wildlife Habitat Assessment Program
Wildlife Division

/jrf

USDA United States Department of Agriculture
Natural Resources Conservation Service
101 South Main
Temple, Texas
76501-7602

May 14, 2003

Lynx, Ltd.
2101 NASA Road One
JA 330/Bldg.330/Room 112
Houston, Texas 77058

Attention: Dr. Mark Stapleton, Sr. Environmental Engineer

Subject: LNU-Farmland Protection-
NASA –Battery Testing Facility
Harris County, Texas

We have reviewed the information provided concerning the proposed NASA – Battery Testing Facility at the Johnson Space Center in Harris County, Texas, as outlined in your letter of April 18, 2003. This is part of a NEPA Environmental Evaluation for this project as required by NASA. We have reviewed the project as required by the Farmland Protection Policy Act (FPPA) and completed the AD-1006 form.

Your plans indicate that you are planning to construct a new facility on the Johnson Space Center. We consider this area as a prior conversion to urban land. The FPPA states that "Farmland does not include land already in or committed to urban development or water storage", 7CFR part 658.2 (a). In addition the FPPA act states "Actions that include assistance provided to purchase, maintain, renovate, or replace a structure that already exists in not subject to the act." 7CFR part 658.3(c). Therefore no further consideration will be needed for this project.

I have attached a completed AD-1006 (Farmland Conversion Impact Rating) form for this project indicating the site is not Important Farmland and exempt from the FPPA. Thanks for the quality resource materials you submitted to evaluate this project. If you have any questions please call James Greenwade at (254)-742-9960, Fax (254)-742-9859.

Thanks,

James M. Greenwade
Soil Scientist
Soil Survey Section
USDA-NRCS, Temple, Texas

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 4-18-2003
Name of Project NASA-Battery Testing Facility	Federal Agency Involved NASA
Proposed Land Use Battery Testing	County and State Harris County, Texas
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 4-24-2003 / Person Completing Form: James Greenwade

Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)	YES ☐	NO ☐	Acres Irrigated / Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction: Acres / %		Amount of Farmland As Defined in FPPA: Acres / %
Name of Land Evaluation System Used:	Name of State or Local Site Assessment System:		Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site				
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS) Land Evaluation Criterion* Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160				
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100				
Total Site Assessment *(From Part VI above or local site assessment)*	160				
TOTAL POINTS *(Total of above 2 lines)*	260				

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

Name of Federal agency representative completing this form: | Date:

(See Instructions on reverse side)

Form AD-1006 (03-02)

Lynx, Ltd.

May 16, 2003

Mr. James Greenwade
United States Department of Agriculture
Natural Resource Conservation Service
101 South Main
Temple, Texas 76501-7602

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Testing Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Greenwade:

As required under the National Environmental Policy Act (NEPA), Lynx Ltd. submitted an Environmental Assessment to your office on April 18, 2003 and comments were requested to be provided by May 9, 2003. To date, no response has been received from your office. Please confirm receipt of the above reference project.

To prevent serious delays in the project, please provide any comments on the above referenced project by COB on May 16, 2003. If there are no comments, please sign below and fax to (281) 244-1732.

If there are any questions, please contact me at 281-483-4748 or via email at james.m.stapleton1@jsc.nasa.gov.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS
Signed By: James M Greenwade
Printed Name: James M Greenwade
Date: 5-16-03
Title: Soil Scientist
letter was Mailed 5-14-03

Jim

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-244-1732 (fax)

Lynx, Ltd.

COMMUNITY AND ENVIRONMENTAL DEPT
2003 APR 21 AM 9:40

April 18, 2003

Mr. Carl Masterson
Community Resources Program Manager
Community and Environmental Planning
P.O. Box 22777
Houston-Galveston Area Council
Houston, Texas 77227-2777

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Testing Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Masterson:

Lynx, Ltd. is in the process of preparing an Environmental Assessment (EA) for the above referenced project. This EA is being prepared on behalf of NASA - Johnson Space Center. As required under the National Environmental Policy Act (NEPA), we are submitting the Environmental Assessment of the proposed project for your review and comment.

Please provide any comments on the proposed project by May 9, 2003. If there are no comments, please sign below and fax to (281) 244-1732. If there are any questions, please contact Dr. Mark Stapleton, Senior Environmental Engineer, at 281-483-4748 or Ms. Terri Bradshaw, Environmental Specialist, at 281-483-7936.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS:
Signed By: Carl E. Masterson
Printed Name:
Date: 5-12-03
Title: Community Resources Prog. Mgr.

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-483-7285 (fax)

Lynx, Ltd.

April 18, 2003

Mr. Ken Kumor
National Aeronautics and Space Administration
NEPA Officer
Environmental Management Division / Mailcode JE
Washington, D.C. 20546-0001

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Testing Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Kumor:

Lynx, Ltd. is in the process of preparing an Environmental Assessment (EA) for the above referenced project. This EA is being prepared on behalf of NASA - Johnson Space Center. As required under the National Environmental Policy Act (NEPA), we are submitting the Environmental Assessment of the proposed project for your review and comment.

Please provide any comments on the proposed project by May 9, 2003. If there are no comments, please sign below and fax to (281) 244-1732. If there are any questions, please contact Dr. Mark Stapleton, Senior Environmental Engineer, at 281-483-4748 or Ms. Terri Bradshaw, Environmental Specialist, at 281-483-7936.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS:
Signed By: K. Kumor Date: MAY 6, 2003
Printed Name: KENNETH M KUMOR Title:

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-483-7285 (fax)

Lynx, Ltd.

April 18, 2003

Mr. Mike Long
Federal Emergency Management Agency, Region VI
800 North Loop 288
Denton, Texas 76209

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Testing Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Long:

Lynx, Ltd. is in the process of preparing an Environmental Assessment (EA) for the above referenced project. This EA is being prepared on behalf of NASA - Johnson Space Center. As required under the National Environmental Policy Act (NEPA), we are submitting the Environmental Assessment of the proposed project for your review and comment.

Please provide any comments on the proposed project by May 9, 2003. If there are no comments, please sign below and fax to (281) 244-1732. If there are any questions, please contact Dr. Mark Stapleton, Senior Environmental Engineer, at 281-483-4748 or Ms. Terri Bradshaw, Environmental Specialist, at 281-483-7936.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS:
Signed By:
Printed Name: CAROLYN R. JAFFE
Date: 4/27/03
Title: NSC MGT. PROG. SPEC.

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-483-7285 (fax)

Lynx, Ltd.

April 18, 2003

Mr. Bob Shelby
Region 5 Director
Texas Archeological Society
542 Chelsea Street
Bellaire, Texas 77401

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Testing Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Shelby:

Lynx, Ltd. is in the process of preparing an Environmental Assessment (EA) for the above referenced project. This EA is being prepared on behalf of NASA - Johnson Space Center. As required under the National Environmental Policy Act (NEPA), we are submitting the Environmental Assessment of the proposed project for your review and comment.

Please provide any comments on the proposed project by May 9, 2003. If there are no comments, please sign below and fax to (281) 244-1732. If there are any questions, please contact Dr. Mark Stapleton, Senior Environmental Engineer, at 281-483-4748 or Ms. Terri Bradshaw, Environmental Specialist, at 281-483-7936.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS:
Signed By: Robert T. Shelby
Printed Name: Robert T. Shelby
Date: April 28, 2003
Title: Director-Region 5, Texas Archeology Society

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-483-7285 (fax)

Lynx, Ltd.

May 16, 2003

Mr. Michael Jansky
Regional Environmental Review Coordinator
United States Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Ref: Coordination Request for Environmental Assessment
Project Name: Battery Testing Facility
Project Location: NASA - Johnson Space Center, Houston, Texas

Dear Mr. Jansky:

As required under the National Environmental Policy Act (NEPA), Lynx Ltd. submitted an Environmental Assessment to your office on April 18, 2003 and comments were requested to be provided by May 9, 2003. To date, no response has been received from your office. Please confirm receipt of the above reference project.

To prevent serious delays in the project, please provide any comments on the above referenced project by COB on May 16, 2003. If there are no comments, please sign below and fax to (281) 244-1732.

If there are any questions, please contact me at 281-483-4748 or via email at james.m.stapleton1@jsc.nasa.gov.

Sincerely,

Dr. Mark Stapleton
Sr. Environmental Engineer

JMS/tlb

NO COMMENTS
Signed By: Michael B. Jansky P.E. Date: 05/23/2003
Printed Name: _____ Title: _____

2101 NASA Road One • JA 330 / Bldg. 330 / Room 112 • Houston, Texas 77058
281-483-6207 (phone) • 281-244-1732 (fax)