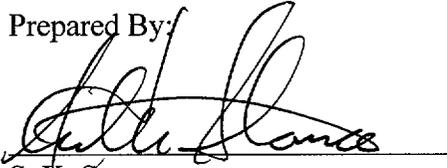


**RIVER BEND STATION
ENVIRONMENTAL OPERATING REPORT FOR 1998/1999**

August 29, 1998 - August 28, 1999

Prepared By:



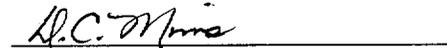
S. K. Stoma
Environmental Specialist - Sr. Lead

Reviewed By:



Troy D. Burnett
Supt. Chemistry / Environmental (Acting)

Approved By:



Dwight C. Mims
General Manager Plant Operations

**RIVER BEND STATION
ENVIRONMENTAL OPERATING REPORT FOR 1998/1999**

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ENVIRONMENTAL OPERATING REPORT FOR 1998/1999**

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RIVER BEND STATION

ENVIRONMENTAL OPERATING REPORT FOR 1998/1999

1.0 INTRODUCTION/OBJECTIVES

The Annual Environmental Operating Report for the period of August 29, 1998 (anniversary of license issuance) through August 28, 1999 is submitted in accordance with Subsection 5.4.1 of Appendix B to River Bend Station Facility Operating License Number NPF-47. River Bend Station (RBS) consists of a 936 MWE General Electric boiling water reactor located on a 3,342 acre site in West Feliciana Parish, Louisiana, 4.1 km (2.5 MI) southeast of St. Francisville. Waste heat from RBS is dissipated via systems using five mechanical draft cooling towers, which draw makeup water from the Mississippi River, 3.3 (air) km (2.0 MI) to the southwest. Blowdown from the normal cooling tower system is discharged to the Mississippi River through a submerged pipe about 200 meters (660 ft) downstream from the makeup water intake. Appendix B to the RBS operating license is the Environmental Protection Plan (Non-radiological), or EPP, which has the following principal objectives:

1. To verify that the facility is operated in an environmentally acceptable manner, as established in the Final Environmental Statement Related to the Operation of River Bend Station (NUREG-1073, commonly referred to as the FES-OL) and other Nuclear Regulatory Commission (NRC) impact assessments.
2. To coordinate NRC requirements and maintain consistency with other Federal, State, and local requirements for environmental protection.
3. To keep the NRC informed of the environmental effects of facility construction and operation and of actions taken to control these effects.

2.0 ENVIRONMENTAL PROTECTION ISSUES

In the FES-OL dated January 1985, the NRC staff considered the environmental impacts associated with the operation of River Bend Station Unit 1. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

2.1 Aquatic Issues

There were no specific aquatic issues identified by the NRC staff in the FES-OL. Environmental concerns, which relate to water quality, are regulated by way of the facility National Pollutant Discharge Elimination System (NPDES) Permit and Louisiana Water Discharge Permit.

RIVER BEND STATION

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2.2 Terrestrial Issues

Salt drift deposition from the normal cooling towers may cause changes in, or damage to, nearby vegetation on RBS property (FES-OL Section 5.5.1). A monitoring program to identify the extent of impacts and the actions necessary to mitigate, if any, is specified in EPP Section 4.2.2.

2.3 Noise Issues

Operation of the normal cooling towers, the service water cooling tower and main station transformers at RBS may increase noise levels at nearby residences (FES-OL Section 5.12). A monitoring program to identify the extent of impacts and the actions necessary to mitigate, if any, is specified in EPP Section 4.2.3.

3.0 CONSISTENCY REQUIREMENTS

3.1 Plant Design and Operation

In accordance with the EPP, RBS personnel prepare and record an environmental evaluation of any proposed change in plant design or operation or performance of any test or experiment that may significantly affect the environment. Such evaluations are not performed on activities that do not affect the environment or are required for compliance with non-NRC environmental regulations. The environmental evaluation process is administered through programs governing design modification and the development/revision of written procedures. Before engaging in additional construction or operational activities which may significantly affect the environment, a determination is made and recorded as to whether any proposed change involves an unreviewed environmental question determination (UEQD). A proposed activity involves a UEQD if it concerns:

- a) A matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL, environmental impact appraisals, or any decisions of the Atomic Safety and Licensing Board;
- b) A significant change in effluent or power levels; or
- c) A matter not previously reviewed and evaluated in the documents specified in (a) above, which may have a significant adverse environmental impact.

If the activity meets any of these criteria it must either not be performed as proposed or a written evaluation must be prepared and submitted for prior NRC approval.

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During the reporting period covered by this report no changes at RBS were determined to involve unreviewed environmental questions. Records of environmental determinations are maintained in the station Permanent Plant File as part of documentation associated with the modification request program and/or the procedure development system.

3.2 Reporting related to the NPDES Permit and State Certification

Violations of the National Pollutant Discharge Elimination System (NPDES) and the Louisiana Water Discharge Permit System (LWDPS) permits have been reported to the NRC via copies of non-routine reports sent to the other agencies pursuant to the requirements of the permits (see Table 1). On January 27, 1992 a renewal application for LWDPS Permit No. WP0409 was submitted to the Louisiana Department of Environmental Quality (LDEQ) and on September 14, 1995 a renewal application for NPDES Permit No. LA0042731 was submitted to the Environmental Protection Agency (EPA). On August 27, 1996 the LDEQ received approval from the U.S. Environmental Protection Agency (EPA) to assume authority for the NPDES program. It is expected that LDEQ will issue a Louisiana Pollutant Discharge Elimination System (LPDES) permit in the near future which will replace the existing state and federal permits. Subsequently, the station has submitted to LDEQ seven letters that contain supplemental information and operational change requests. River Bend Station continues to comply with the terms and conditions of the present LWDPS and NPDES permits which were to expire on May 28, 1992 and March 15, 1996, respectively. On November 23, 1998 an NPDES Compliance Sampling Inspection was conducted at River Bend Station by LADEQ. All aspects of the inspection were found to be satisfactory.

3.3 Changes Required for Compliance with Other Environmental Regulations

During the period covered by this report there were no changes in plant design or operation or the performance of tests or experiments required to achieve compliance with non-NRC environmental regulations at River Bend Station.

4.0 ENVIRONMENTAL CONDITIONS

4.1 Unusual or Important Environmental Events

During the period covered by this report there were no unusual or important events, causally related to RBS operation, which resulted in significant environmental impacts.

RIVER BEND STATION

ENVIRONMENTAL OPERATING REPORT FOR 1998/1999

4.2 Environmental Monitoring

4.2.1 Aquatic Monitoring

Water quality monitoring was performed in accordance with the requirements established in the station's NPDES and Louisiana Water Discharge permits. Results were documented in monthly Discharge Monitoring Reports and non-routine reports (Table 1), as required, and submitted to the USEPA and LDEQ.

4.2.2 Terrestrial Monitoring

Subsection 4.2.2 of the EPP requires aerial photography beginning two years prior to cooling tower operation and during the following first and third years of operation. This requirement was completed in 1989 when the "third year" set of stereo color infrared transparencies were monitored. During this reporting period, terrestrial monitoring and monitoring for the existence of new oil and gas wells and pipelines was performed using aerial photographic analysis performed by Aero-Data Corporation on October 9, 1998. No significant changes in vegetative communities or individual trees, attributable to salt drift impacts, were found in the immediate area surrounding the cooling towers. Additionally, no changes in the number or size of wellheads, pipelines or transmission line right-of-ways were identified within two miles of the River Bend site. A new Hydrogen Water Chemistry injection system and chemical storage site, located on the western boundary of the plant site that was completed during the summer of 1999 was identified. Attachment 1 is the photointerpretation report from Aero-Data Corp.

4.2.3 Noise Monitoring

The requirement to conduct an environmental noise monitoring program (EPP Subsection 4.2.3) was completed during 1986/87 and the results were included in the second annual Environmental Operating Report. In general, the acoustic environment in the vicinity of RBS proved to be substantially more complex than anticipated, but neither the magnitude of increases attributable to plant operation nor community reaction exceeded FES-OL predictions.

5.0 ADMINISTRATIVE PROCEDURES

5.1 Review and Audit

Entergy Operations, Inc. has provided for the independent review and audit in compliance with the RBS EPP. The main group responsible for audits of EPP

RIVER BEND STATION ENVIRONMENTAL OPERATING REPORT FOR 1998/1999

related activities, the RBS Quality Assurance Department, reported directly to the Manager-Quality Assurance during the period covered by this report. All findings identified during the reporting period were satisfactorily resolved and did not indicate a significant deterioration of the activities being audited.

5.2 Records Retention

Records and logs relative to environmental aspects of plant operation and audit activities are retained in the RBS Permanent Plant File. These records and logs are available to the NRC on request. Records of modifications to station structures, systems, and components determined to potentially affect the continued protection of the environment will be retained for the life of the plant. Other records, data, and logs relating to the EPP will be retained for five years or, where applicable, in accordance with the requirements of the USEPA and LDEQ.

5.3 Changes in Environmental Protection Plan

There were no requests for changes to the EPP during the period covered by this report.

5.4 Plant Reporting Requirements

5.4.1 Routine Reports

This Annual Environmental Operating Report was prepared to meet the reporting requirements of EPP Subsection 5.4.1 for the period from August 29, 1998, through August 28, 1999. Summaries and analyses of the results of monitoring programs, including comparisons with related pre-operational studies, operational controls, and previous reports are presented in Section 4.2 above. During the period of this report there were no indications of significant harmful effects or evidence of trends toward irreversible damage to the environment causally related to the operation of River Bend Station.

5.4.2 Non-routine Reports

All non-routine events from August 29, 1998, through August 28, 1999, that were reportable were identified to other federal, state, or local agencies in accordance with their reporting requirements in lieu of requirements of EPP Subsection 5.4.2 (see Table 1).

**RIVER BEND STATION
ENVIRONMENTAL OPERATING REPORT FOR 1998/1999**

TABLE 1
NONROUTINE REPORTS TO FEDERAL AND STATE
ENVIRONMENTAL REGULATORY AGENCIES

DATE	TYPE	RECIPIENT(S)*	DOCUMENT
09-23-98	Letter	EPA	RBG-44645
09-23-98	Letter	LDEQ	RBG-44644
10-16-98	Letter	LDEQ	RBG-44683
11-17-98	Letter	LDEQ	RBG-44730
05-24-99	Letter	LDHH	RBG-45020
06-10-99	Letter	LDEQ	RBG-45031

—
* Agency abbreviations: LDEQ = Louisiana Department of Environmental Quality
EPA = Environmental Protection Agency
LDHH = Louisiana Department of Health and Hospitals

ATTACHMENT 1

PHOTOINTERPRETATION REPORT
(AERO-DATA CORPORATION 98-3527.01)

**A BRIEF AERIAL PHOTOGRAPHY ANALYSIS
OF RIVER BEND STATION AT
ST. FRANCISVILLE, LOUISIANA:
1997-1998**

By:

Aero-Data Corporation
9213 Interline Avenue
Baton Rouge, LA 70809-1908
Phone: (225) 927-5725

Submitted to:

Entergy Services, Inc.
River Bend Station
P.O. Box 220
St. Francisville, LA 70775

November 1998

PRIVILEGED AND CONFIDENTIAL

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- 1.1 METHODS AND MATERIALS
- 1.2 SUMMARY OF PRELIMINARY FINDINGS
- 1.3 OCTOBER 9, 1998 - INTERPRETED IMAGES
- 1.4 SEPTEMBER 29, 1997 - INTERPRETED IMAGES

1.0 Executive Summary

Aero-Data Corporation (ADC) has contracted with Entergy to conduct a photo mission covering a three-mile radius around the facility near St. Francisville, Louisiana. ADC has been providing annual plant site documentation of the facility since 1985.

This year ADC produced a photointerpretation report and a photomosaic of the facility. The current photography was compared to the previous year's photography in order to identify any changes in the number of wellheads and/or pipelines surrounding the site. Changes in vegetation within the facility boundary were also identified.

The deliverables for this project include contact prints of each frame (24), a color plot showing the 1997-1998 changes, a color plot containing the frame centers for each of the photographs from the current flight, and this interpretation report.

1.1 Methods and Materials

The current photo mission was flown on October 9, 1998 at a scale of 1"=1,500' using false color infrared (CIR) film. The frame centers of the 1998 photographic coverage are identical to those flown by ADC in 1997. ADC's flight planning was simplified with the use of a Geographic Information System (GIS) software package which aided in the alignment of the flight lines. Using this system, three flightlines were selected and 24 frames of film were shot for this photo mission. Navigation was conducted using GPS and moving map equipment.

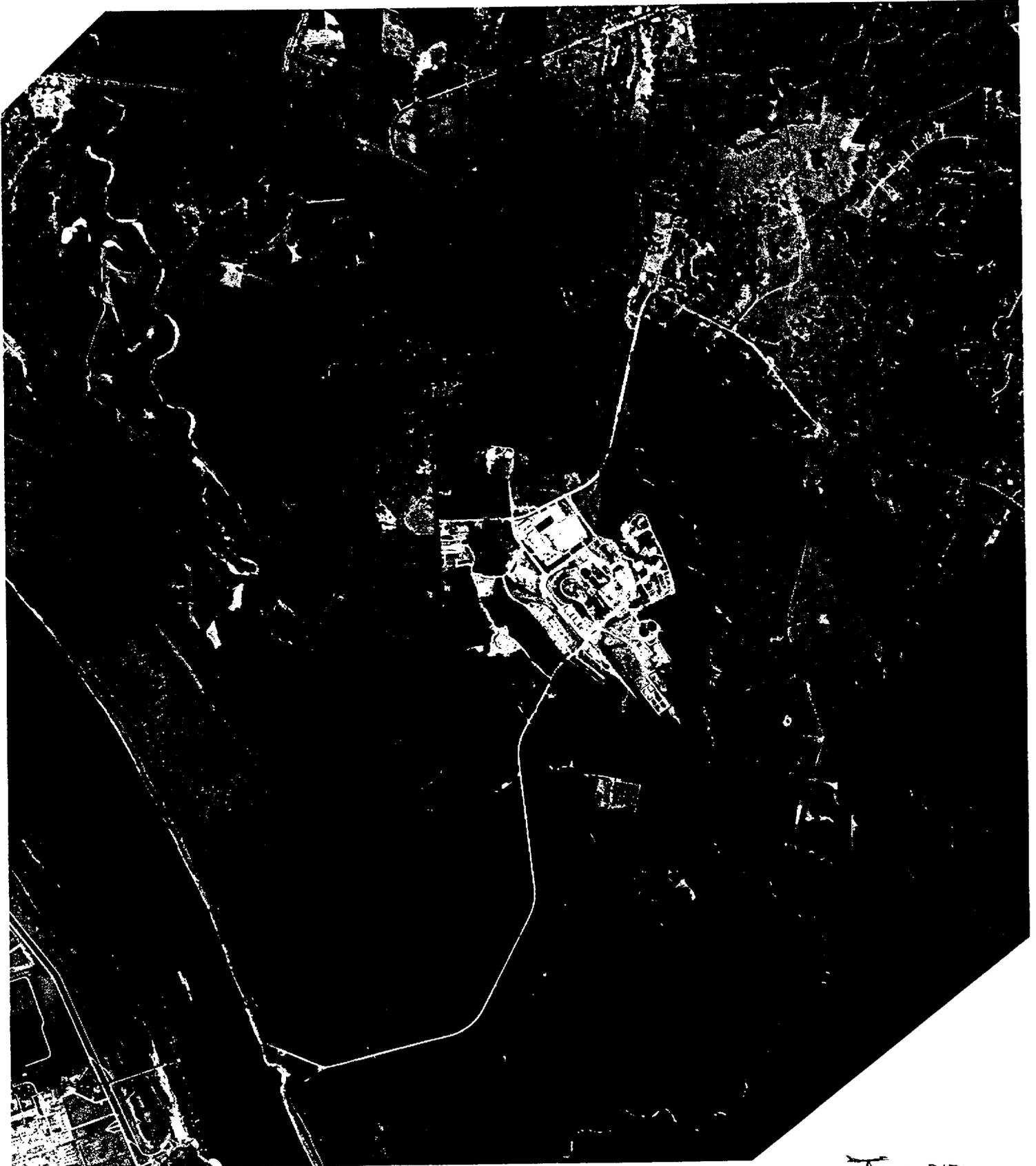
The change map of the River Bend facility was produced using Digital Photogrammetric Workstations in combination with a Geographic Information System. Each frame of film was scanned at a high resolution and referenced three-dimensionally to the Louisiana State Plane Coordinate System. The GIS incorporated digital orthophotomosaics of the 1997 and 1998 photo missions as well as digitized vector data. Comparison of the current photography with the 1997 photography by rigorous three-dimensional photointerpretation revealed no new changes regarding pipelines or wellheads. No significant ground vegetation removal was detected.

1.2 Summary of Preliminary Findings

No changes in the number or size of wellheads, pipelines or transmission line right-of-ways were identified during the interpretive phase of this project. There are no significant changes in vegetation in the area immediately surrounding the cooling towers. An area of construction is visible on the western boundary of the plant site. Aside from this construction, the area surrounding the Entergy River Bend facility has not changed significantly since the 1997 photomission.

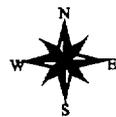
1.3 October 9, 1998 - Interpreted Images

Entergy River Bend
Aerial Photographic Analysis
October 9, 1998



All mapping compiled using digital photogrammetric workstations. The image above is a digital orthophotomosaic georeferenced to the Louisiana State Plane Coordinate System - South Zone (NAD 27).

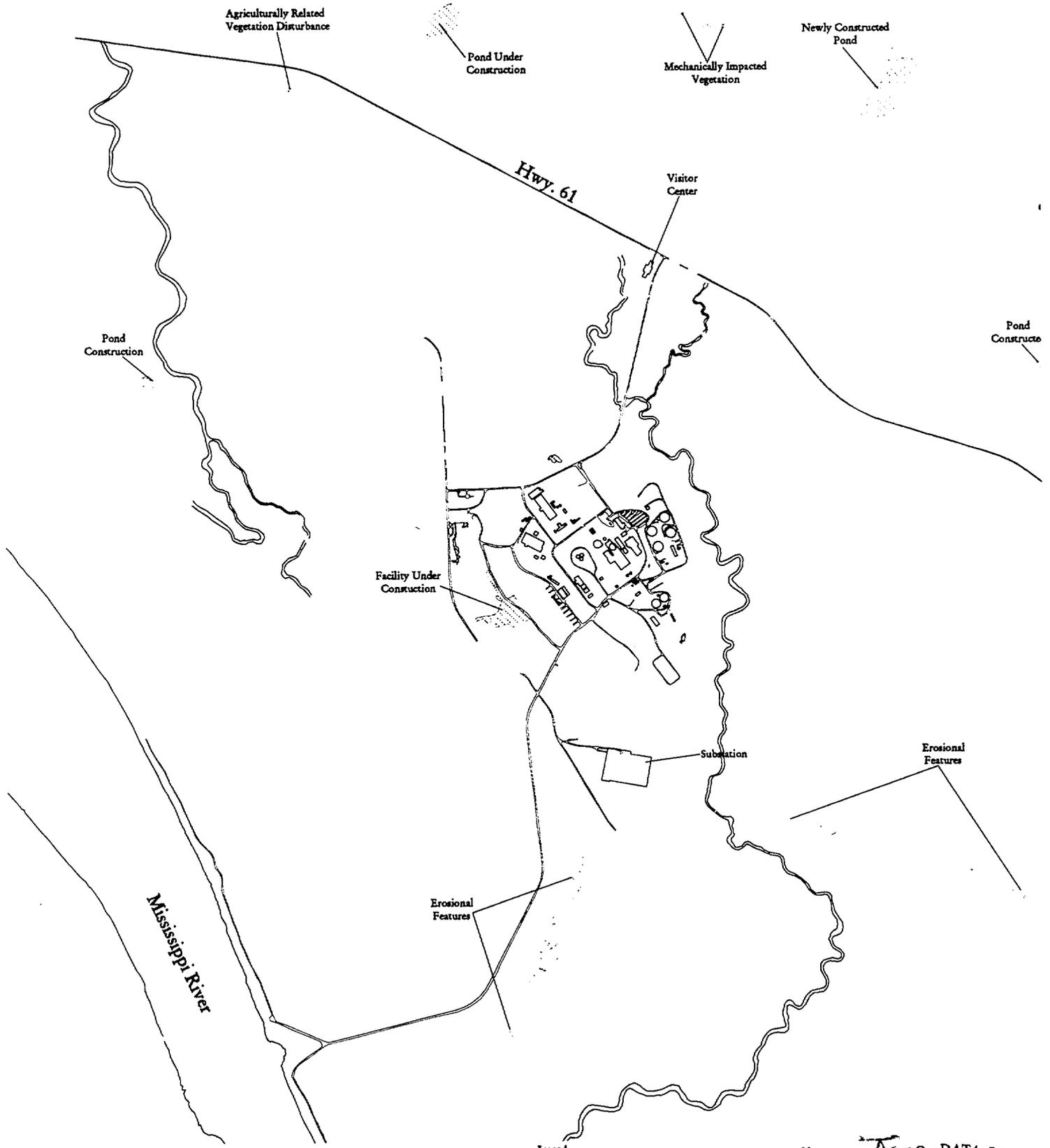
No adverse activity involving pipelines or wellheads was observed during this period.



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Remote Sensing Consulting Services
225.927.5725

1500 0 1500 Feet

Entergy River Bend Aerial Photographic Analysis October 9, 1998



All mapping compiled using digital photogrammetric workstations. The image above is a digital orthophotomosaic georeferenced to the Louisiana State Plane Coordinate System - South Zone (NAD 27).

No adverse activity involving pipelines or wellheads was observed during this period.

Legend

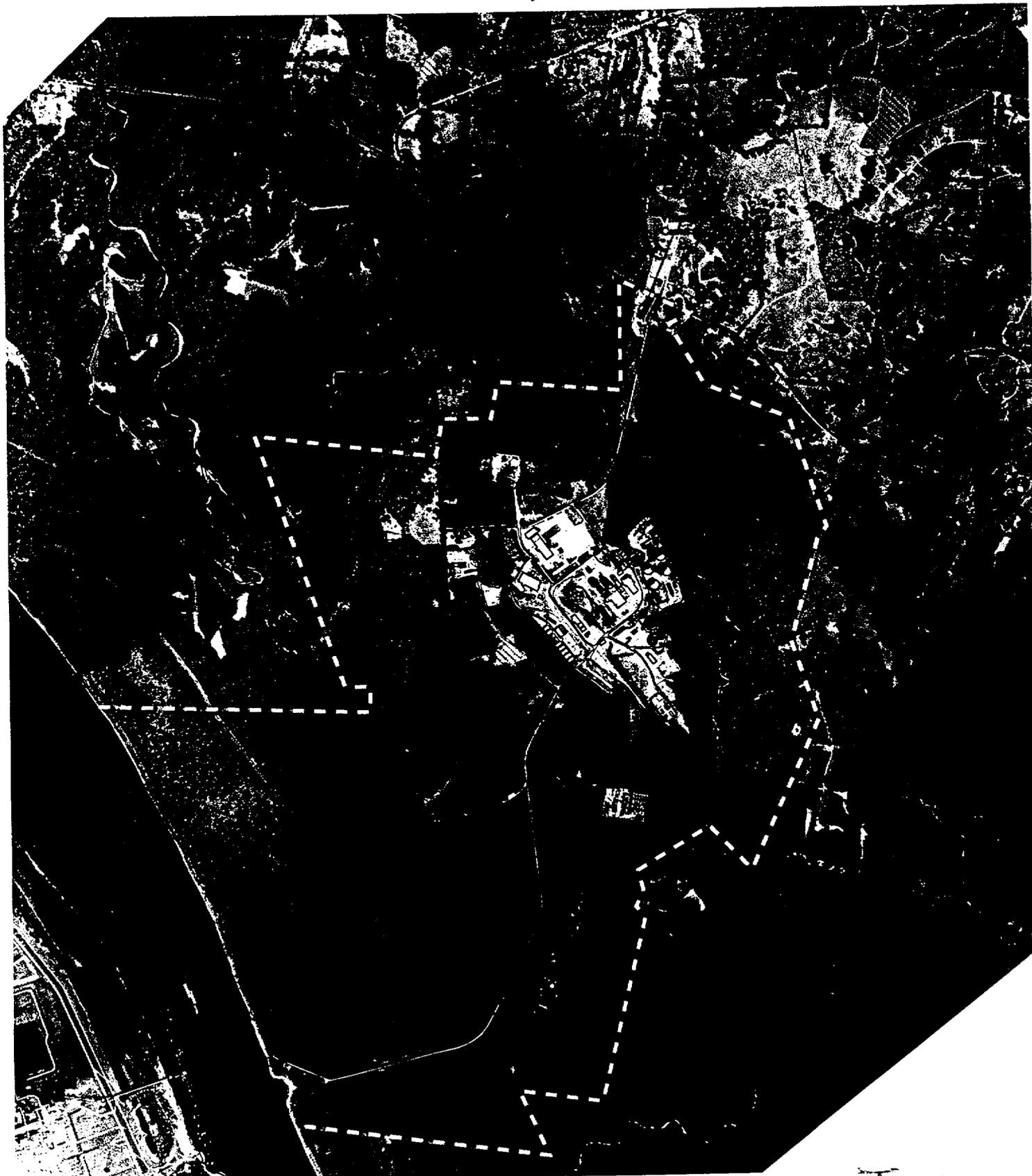
<ul style="list-style-type: none"> Existing Structures Road Water Pipeline Change Well Head Change 	<ul style="list-style-type: none"> Vegetation Removed Revegetated Areas Property Boundary (Approximate)
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1500 0 1500 Feet

Entergy River Bend
 Aerial Photographic Analysis
 October 9, 1998



All mapping compiled using digital photogrammetric workstations. The image above is a digital orthophotomosaic georeferenced to the Louisiana State Plane Coordinate System - South Zone (NAD 27).

No adverse activity involving pipelines or wellheads was observed during this period.

Legend

	Existing Structures		Vegetation Removed
	Roads		Revegetated Areas
	Water		Property Boundary (Approximate)
	Pipeline Change		
	Well Head Change		

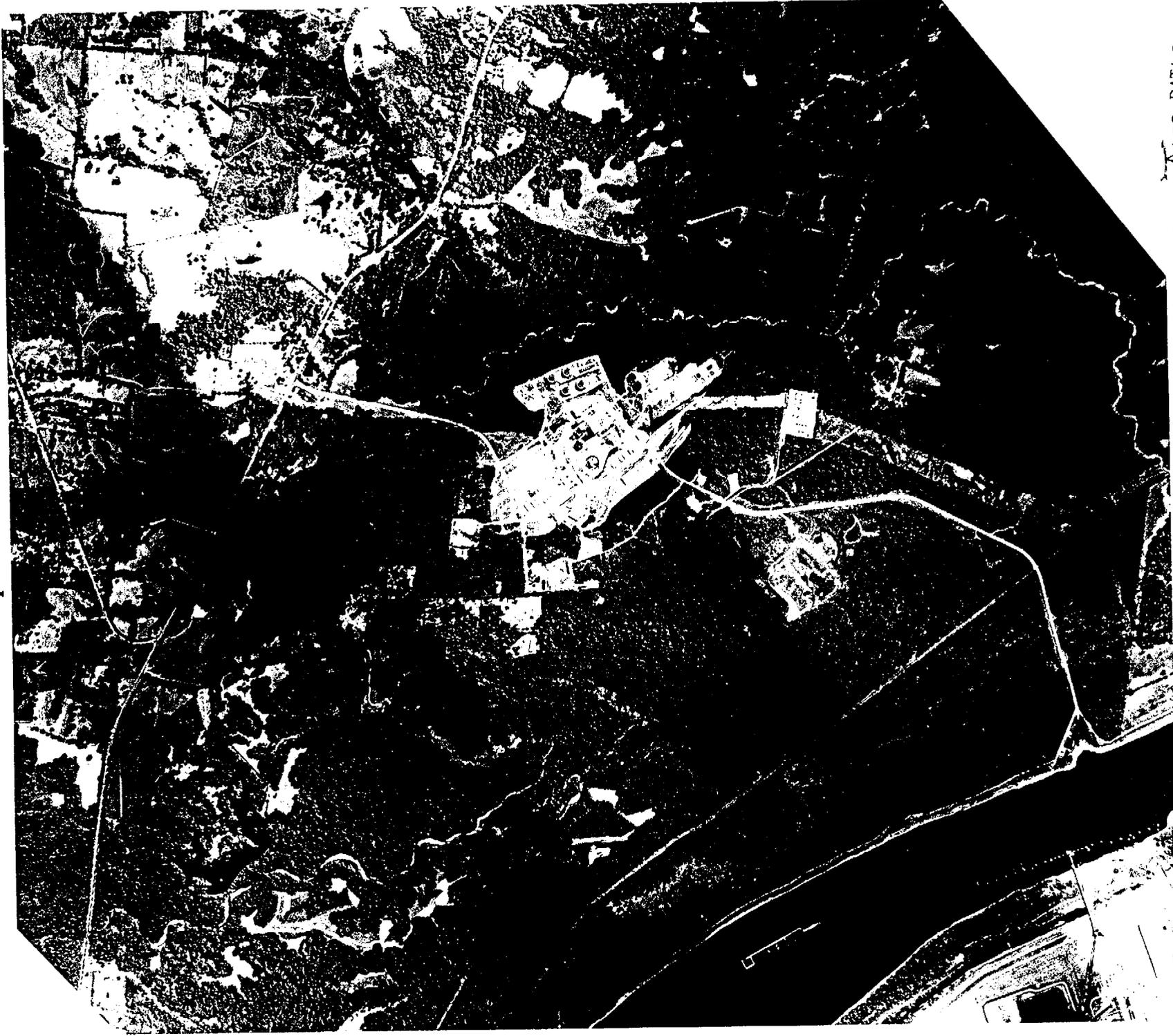


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1500 0 1500 Feet

1.4 September 29, 1997 - Interpreted Images

Entergy River Bend
Aerial Photographic Analysis
September 29, 1997



All mapping compiled using digital photogrammetric workstations. The image above is a digital orthophotomosaic georeferenced to the Louisiana State Plane Coordinate System - South Zone (NAD 27).

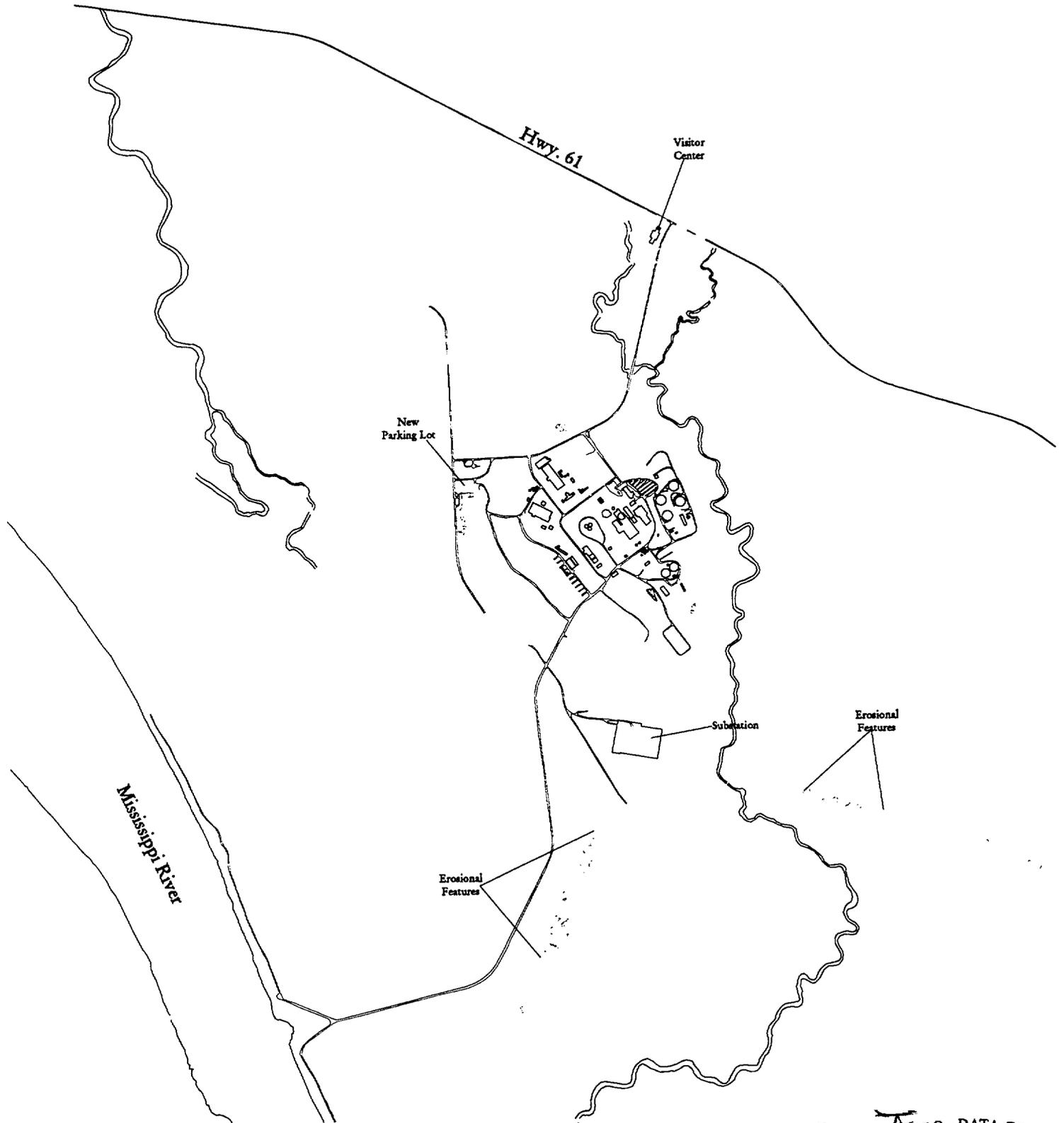
No adverse activity involving pipelines or wellheads was observed during this period.



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1500 0 1500 Feet

**Entergy River Bend
Aerial Photographic Analysis
September 29, 1997**



All mapping compiled using digital photogrammetric workstations. The image above is a digital orthophotomosaic georeferenced to the Louisiana State Plane Coordinate System - South Zone (NAD 27).

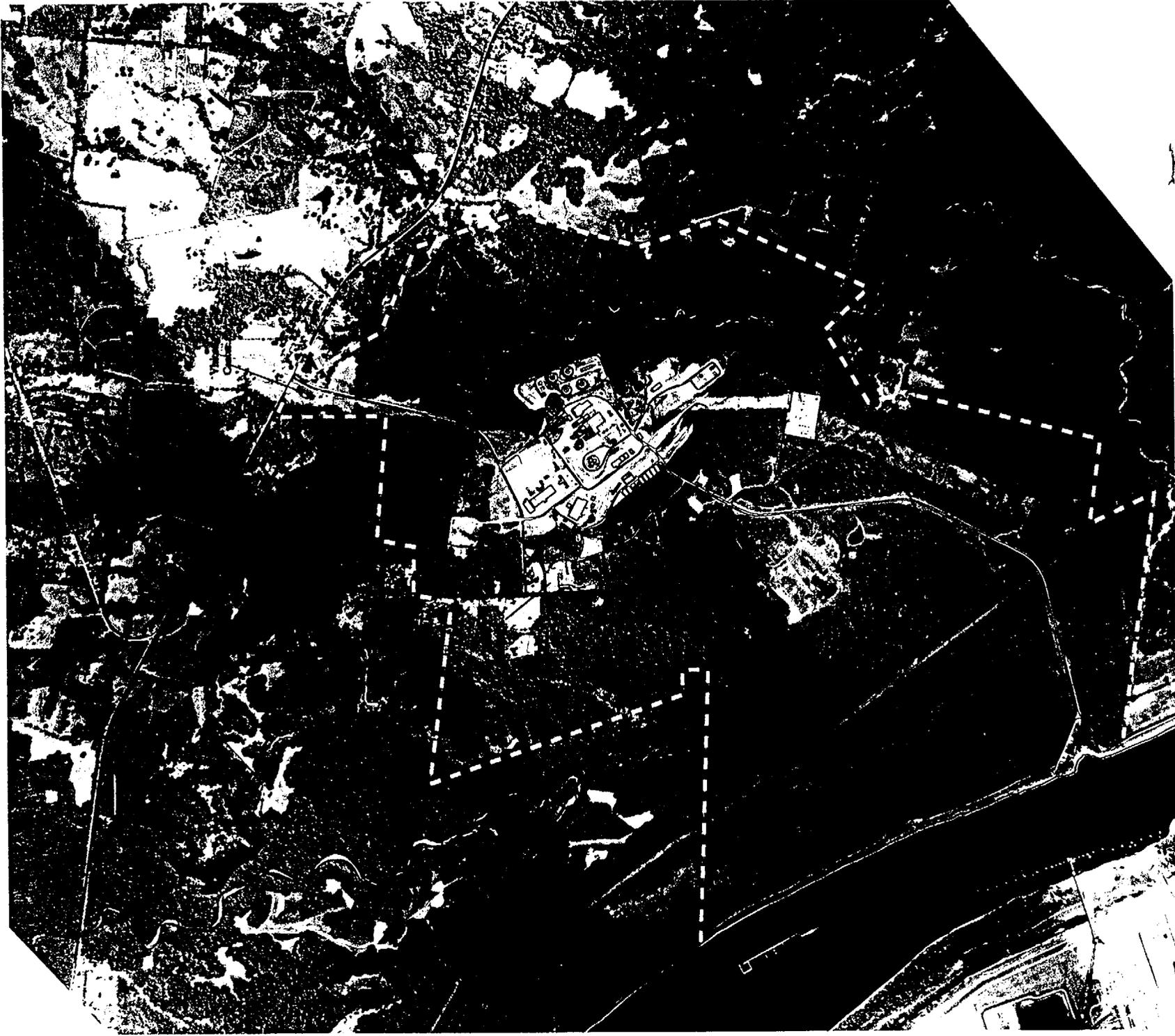
No adverse activity involving pipelines or wellheads was observed during this period.



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1500 0 1500 Feet

Entergy River Bend
 Aerial Photographic Analysis
 September 29, 1997



All mapping compiled using digital photogrammetric workstations. The image above is a digital orthophotomosaic georeferenced to the Louisiana State Plane Coordinate System - South Zone (NAD 27).

No adverse activity involving pipelines or wellheads was observed during this period.

Legend

	Existing Structures		Vegetation Reserved
	Pool		Recreational Area
	Well		Property Boundary (Approximate)
	Pipeline Change		
	Well Head Change		



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