



PHASE I ENVIRONMENTAL ASSESSMENT
BF GOODRICH PLANT SITE
MIAMI, OKLAHOMA

Prepared For:

BF GOODRICH COMPANY
UNIROYAL GOODRICH TIRE COMPANY
3925 Embassy Parkway
Akron, Ohio 44333-1799

Prepared by:

The Environmental Sciences and Engineering Department

WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS

1200 St. Charles Avenue
New Orleans, Louisiana 70130

MBFG 004398

WSNCo Project No. 91050



June, 1991

PSD 2008-4

PREFACE

Property transfer due-diligence assessments are intended to develop screening information which will aid in the determination of whether or not the site has been contaminated or has the potential to be contaminated with toxic substances or hazardous waste. If the site shows evidence of such contamination or potential contamination, the inspection is designed to define the need for further analytical examination and/or remedial action.

Waldemar S. Nelson and Company, Inc. (WSNCo) has the responsibility to collect factual and valid data which is time sensitive in nature and defensible and admissible for use in any enforcement action. WSNCo has performed this assessment in a professional manner using that degree of skill and care ordinarily exercised by reputable and competent environmental assessors concerning matters of: chain of custody and document control; receipt and handling of confidential information; employee conduct, responsibilities and ethics; quality assurance and quality control; and applicable regulations regarding compliance with environmental protection standards.

WSNCo will not be responsible for conditions or consequences arising from relevant data and information which was not available, withheld, or not fully disclosed at the time of the site inspection. Additionally, accuracy of site assessments may be affected by limited access and/or physical conditions at the time of the site inspection.

MBFG 004399

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EXECUTIVE SUMMARY

During the week of March 26, 1991 Waldemar S. Nelson and Company, Incorporated (WSNCo) conducted an environmental site assessment (ESA) at the BF Goodrich Tire Manufacturing Plant site in Miami, Oklahoma. Two areas were surveyed which included the plant site proper situated on 160 acres and another 200 acre site adjacent and to the west and southwest of the plant site. This report contains the results of those investigations pertaining to the plant site.

As noted during the site visit and walk through of the facility, the overall appearance of the site was clean and orderly. Potential asbestos containing materials were observed inside the main building. As determined from the regulatory file review, the facility was in compliance and maintained the proper permits while the plant was in operation. The BFG facility is listed on the USEPA CERCLIS printout, but is not listed as a Superfund site. The USEPA investigated the site in September 1984 and found no evidence of a health hazard and determined that no further action by the EPA was required. However, additional investigation of soil and ground water conditions has been requested by the Oklahoma State Department of Health.

WSNCo identified the following items as being of potential environmental concern based on past activities conducted at the site. The comments and recommendations listed below are based on reported occurrences from file reviews, interviews, and observations made by WSNCo personnel.

- During the regulatory agency file review it was discovered that former employees had reported that mine shafts and waste pits were used for waste disposal. It is recommended that BFG undertake an investigation to determine whether these pits and/or mine shafts are present on the property, and if so, conduct a sampling and analysis program on the contents.
- Potential hazardous waste is being stored in unlabeled drums in the waste storage area. It is recommended that the classification of these wastes be determined in order to ascertain the appropriate regulations regarding waste storage, labeling and disposal.
- A number of USTs were located at the BF Goodrich plant site. The tanks, which reportedly stored naphtha, benzene and white gas, were removed just prior to the plant closing in 1985. According to files reviewed, some of these materials leaked from underground lines and were discovered in a basement excavation on site. Based on this information, the potential for contamination from the UST exist.

MBFG 004402

INTRODUCTION

Waldemar S. Nelson and Company, Incorporated (WSNCo) was contracted by BF Goodrich (BFG) and Uniroyal/Goodrich Tire Company (UGTC) to conduct an environmental site assessment (ESA) at the BF Goodrich Tire Manufacturing Plant in Miami, Oklahoma. BFG manufactured tires and rubber related products at the Miami facility from 1945 when the plant was opened until 1986. The plant officially shut down operation in February 1986, and was not operating during the assessment.

On March 26, 1991, Ms. Wendy Robinson and Mr. Keith Priour of WSNCo conducted an on-site investigation of the subject site and observed the activities surrounding the site. The environmental inspection consisted of inspecting approximately 160 acres including the plant portions of the property. The most current BFG facility manager, Mr. N.S. Rose, was interviewed concerning current and prior on-site activities, and allowed WSNCo personnel access to the site. The facility manager who was on site during plant operation was not interviewed during the investigation. The plant still employs a small maintenance crew for disassembling equipment and upkeep of the facility.

In addition to inspecting the subject site, the environmental assessment included interviewing selected environmental regulatory agencies and reviewing selected environmental regulatory files. Interviews were conducted with the Oklahoma State Department of Health, Industrial and Solid Waste Division, and Air Quality Service; Oklahoma Corporation Commission UST Program; Water Resources Board; and Water Quality Control Division.

Documents reviewed as part of this investigation included the U.S. Environmental Protection Agency (USEPA) Region VI CERCLIS printout (list of potential Superfund sites) and the RCRA Information Management Section. Additionally, files were reviewed from the Ottawa County Health Department, and Oklahoma State Department of Health. Documents maintained by BFG are reportedly kept at UGTC in Akron, Ohio and were not reviewed.

MBFG 004403

I. DESCRIPTION OF SITE AND BUILDINGS

A. Current Activities on the Site

1. Current occupant of the site.

BF Goodrich Tire Manufacturing Plant

2. Site address (attach Site Location Map).

**1000 Goodrich Boulevard
Miami, Oklahoma 74354**

3. Parish/County and map reference (U.S.G.S. Quad).

**Ottawa County
Miami, N W, Oklahoma-Kansas Quad (1961)**

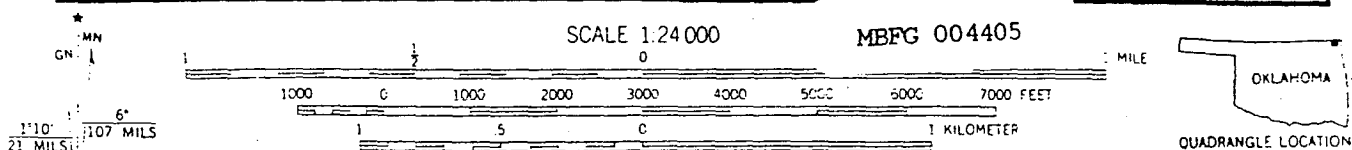
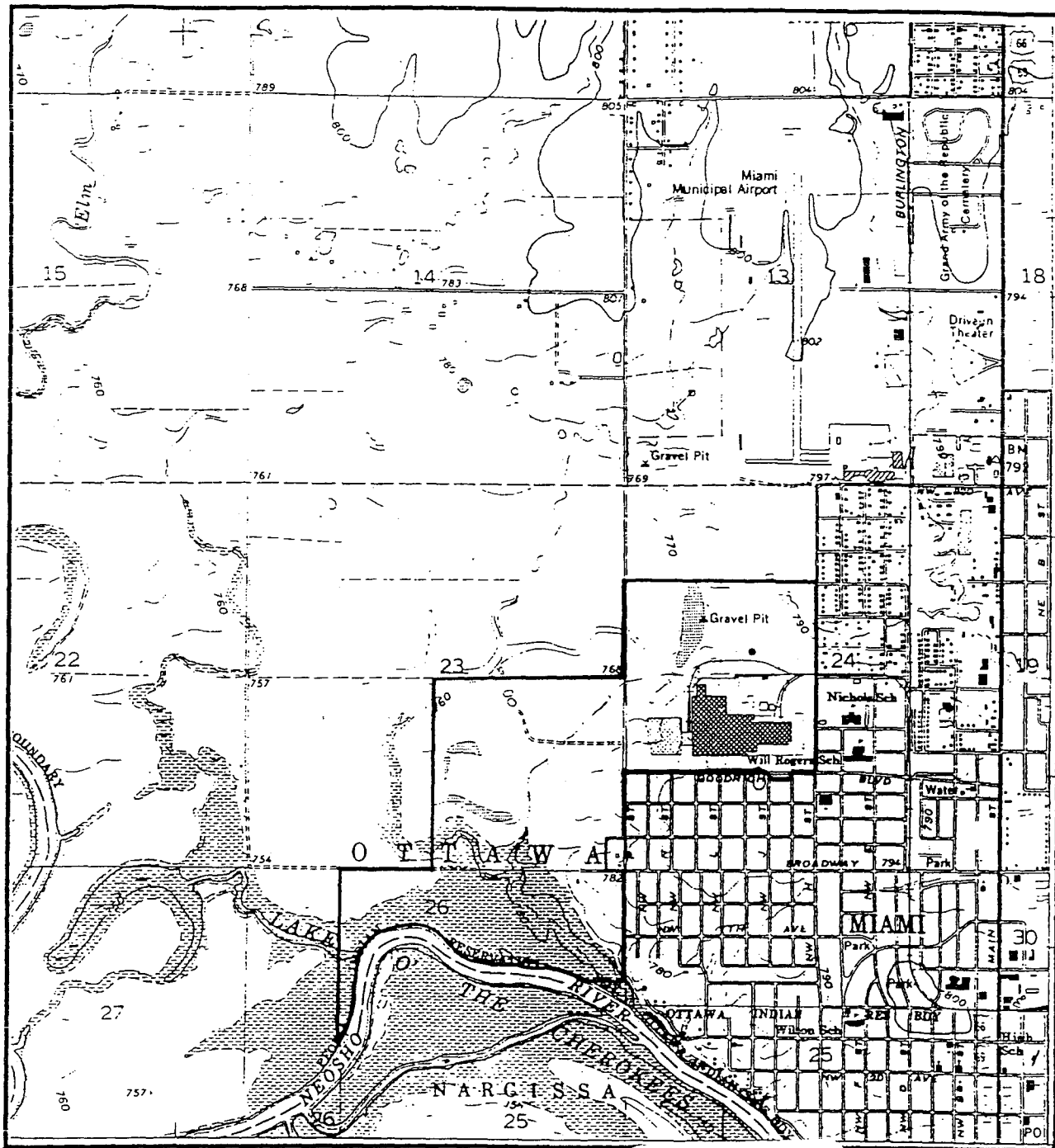
4. Site owner (name, address, telephone).

**The BF Goodrich Company
3925 Embassy Parkway
Akron, Ohio 44333-1799
(216) 374-4045**

5. Total acreage of site.

160 acres (approximately)

MBFG 004404



SITE LOCATION MAP

WALDEMAR S. NELSON AND COMPANY
 INCORPORATED
 ENGINEERS AND ARCHITECTS
 1200 ST. CHARLES AVE. NEW ORLEANS, LA

BFGOODRICH FACILITY

DATE	SCALE	JOB NO.	DWG. NO.	REV.
	NONE		FIGURE 1	0

6. Current site usage description (attach Site Plot Plan and site photographs).

The plant site is a light industrial property located in a residential and commercial/light industrial area of Miami, Oklahoma. The site is located in the 100 year flood plain of the nearby Neosho River. The site is currently a non-operating tire manufacturing plant. The plant still employs a small crew to handle maintenance and dismantling of equipment. The plant was officially closed in February 1986.

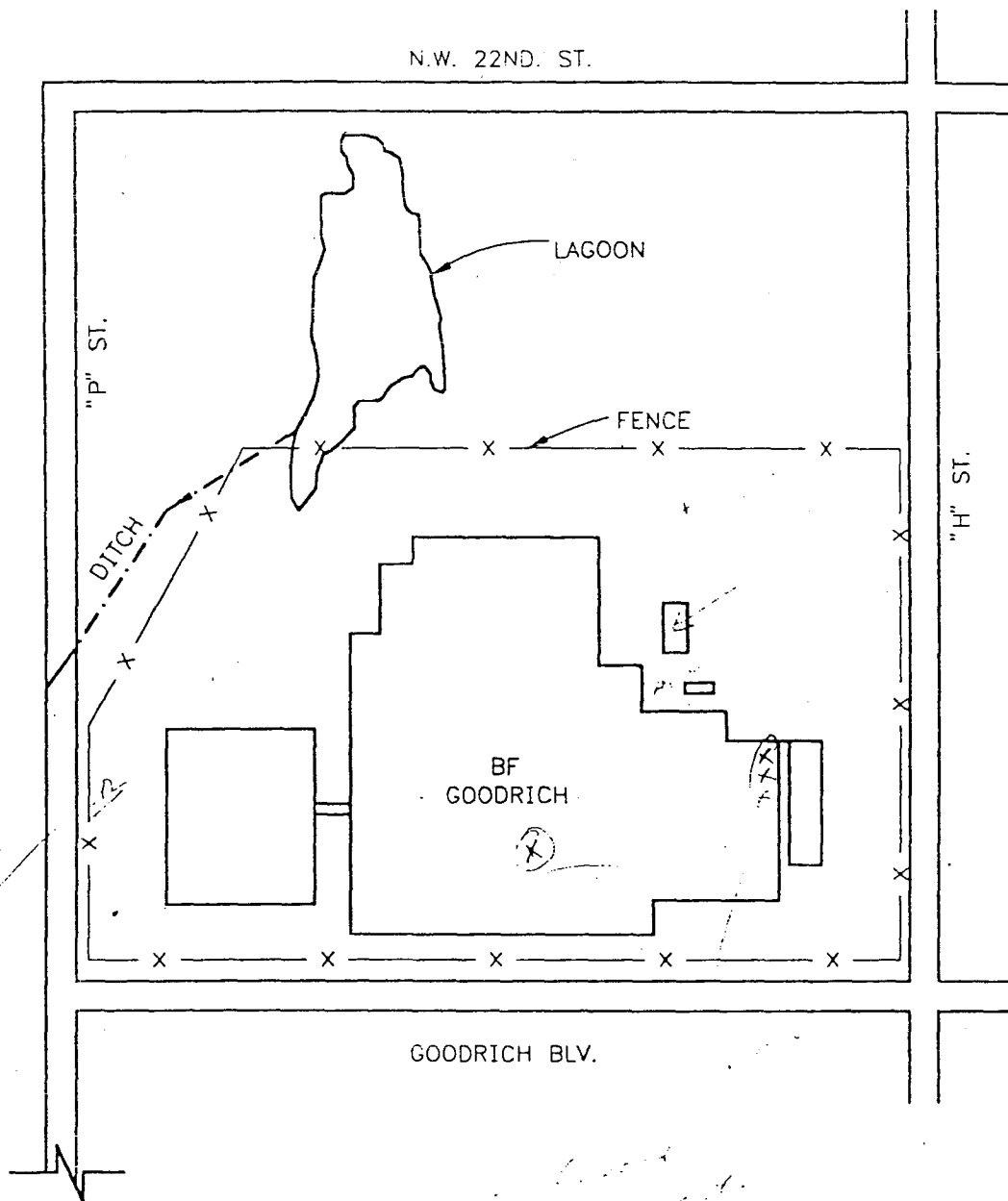
7. Number, size, and current use of site buildings.

Two main buildings make up the plant. The large factory building (1.4 million ft²), which includes the office space and waste storage area, was used for the manufacturing and assemblage of tire, inner tubes, and other rubber related products. The smaller warehouse building (217,000 ft²) was used to store the finished product and supplies.

8. Utilities (sources).

Natural Gas:	Kansas Pipeline Authority (KPA)
Electricity:	Grand River Dam Authority (GRDA)
Drinking Water:	City of Miami
Process Water:	Four (4) water wells located on site

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MBFG 004407

SITE PLOT PLAN

WALDEMAR S. NELSON AND COMPANY
INCORPORATED
ENGINEERS AND ARCHITECTS
1200 ST. CHARLES AVE. NEW ORLEANS, LA.

BF GOODRICH FACILITY
MIAMI, OKLAHOMA

DATE	SCALE	JOB NO.	DWG. NO.	REV.
6/25/91	NTS	91050		

9. Security (fencing, gates, exterior barriers, etc.).

The plant site and the unimproved property is surrounded by a wire fence.

B. Adjacent Land Use

1. Describe surrounding land use.

West

P Street
Approximately 200 acres of unimproved
BFG property containing a borrow pit
and closed landfill

North

City of Miami Incinerator
NW 22nd Street
Miami Municipal Airport

East

H Street
Residential (across H Street)
Will Rogers Jr. High School
Nichols Grammar School

South

Goodrich Boulevard
Residential (across Goodrich Blvd)

C. Environmental Characterization

1. Topography and slope.

Gentle slopes with little or no topographic relief.

2. Groundwater flow direction.*

Ground water in the site area appears to flow southwest.

*NOTE: Unless otherwise noted, the groundwater flow direction has been interpolated from a review of topographic conditions. Site specific conditions may vary due to a variety of factors. No claim is made as to the accuracy of this judgement.

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In early 1970 chemicals leaking from underground feedlines were discovered during a basement excavation at the plant. These chemicals (white gas, naphtha, and benzene) were pumped out of the basement into drums and trucked to the adjacent BFG landfill for disposal.

According to files reviewed, the Hazardous Waste Division recommended a soil and groundwater sampling program be developed to indicate any potential contamination from the site. In response to this recommendation, BFG/UGTC has retained WSNCo to conduct a Phase I Environmental Site Assessment of the property and is awaiting results of this investigation.

4. Soil quality.

- i) Was soil sampling implemented as part of this investigation?

Soil sampling was not conducted as part of this investigation.

If yes, describe analytical results.

n/a

5. Surface water within one mile (including rivers, lakes, streams, etc.).

The plant utilizes a lagoon system to handle stormwater flows and spill control. Discharges from the lagoon are released to the Neosho River, which is located approximately 1.5 miles to the south of the site.

MBFG 004409

6. Wetlands.

- i) Marshlands/swamplands/surface water bodies located within one mile, by reviewing U.S.G.S. topographical map.

The Neosho River is approximately 1.5 miles to the south.

- ii) Was a preliminary wetlands determination based on soil types, hydrologic conditions and/or vegetation performed on the property?

No

Was the U. S. Army Corps of Engineers contacted for confirmation?

No

D. Site History

- 1. Was a history of land ownership, title search, and/or prior land usage provided to, or conducted by WSNCo?

No

*NOTE: Official determination for wetlands classification is made by the U. S. Army Corps of Engineers.

MBFG 004410

If yes, describe former uses of the site and include names of former owners/occupants and dates of occupancy. Also include if known: on-site activities, underground storage tank usage, and waste disposal practices.

BF Goodrich built the plant as part of the war effort in 1944. According to plant employees, the subject site was undeveloped prior to construction.

2. Site history was reviewed back to what year?

BF Goodrich has occupied the subject site since 1944.

3. Were historical aerial photographs reviewed as part of this investigation?

Yes

If yes, state dates of photographs reviewed and discuss findings of review.

One aerial photograph was reviewed of the plant site and surrounding area. This photograph showed the residential areas to the east and south, the City of Miami Incinerator and municipal airport to the northeast, the closed BFG landfill to the west, and the Neosho River to the south.

E. Surrounding Land Use

1. Potentially significant adjacent uses, including the occurrence of spills and the presence of hazardous-waste generators and underground storage tanks.

According to the Miami Fire Department, no problems or investigations from spills or leaks were reported in the area of the subject site.

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2. Potable water sources (surface and/or groundwater).

Potable water is supplied by the City of Miami. The source of the water is the Neosho River.

If groundwater sources, do registered water wells exist within 1/2 mile?

According to files reviewed the only registered wells within 0.5 mile are the four wells located on the BFG site. These wells were used for process water when the plant was in operation. The depth of the wells is approximately 1100 feet.

3. Residences within 1000 feet of site.

Residences are adjacent to the site to the east and south.

4. Sensitive, off-site receptors within 1000 feet (i.e., hospitals, schools, nursing homes).

Two schools are located within 1000 feet to the east.

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II. PRODUCTS, PROCESSES, AND CHEMICAL USE

The plant was not operating at the time of this assessment and has been closed since February 1986. Responses in this section are based on interviews with the current facility manager and observations made during the on-site inspection.

A. Give a Complete Description of all Products Manufactured, Wastes Generated, and How Wastes are Stored and Disposed

BF Goodrich manufactured rubber tires, inner-tubes, and related rubber products from 1944 to 1986. The plant was closed in February 1986.

From 1945 to 1971, the BFG plant operated an open dump site for disposal of all waste generated from the plant, i.e. rubber waste from the manufacturing, wood waste etc. Some of the waste was burned. The former landfill is located on BFG property adjacent to the plant on the west side. The waste was transported from the plant to the landfill in company-owned trucks. It was also reported (from former employees) that three mine shafts and several waste pits located on the property (location unknown) were also used for waste disposal.

According to the USEPA Region VI RCRA Information Management Section, the BF Goodrich facility is listed as a Class 3 (100kg or less) small quantity generator (EPA ID No. OKD007126345). Manifested hazardous waste was hauled off site by US Pollution Control Company and brought to the Lone Mountain Disposal site in Waynoka, OK for disposal. No records review or on-site inspection of this facility was conducted as part of this investigation.

Potential hazardous waste is being stored in unlabeled drums in the waste storage area. In the event that these waste materials are classified as hazardous, it is recommended that BFG comply with hazardous waste regulations for hazardous waste management.

MBFG 004413

- B. List all Raw Materials Used in all Production Processes and Describe How They are Stored

The primary raw materials used by BFG during tire manufacturing were blocks of raw rubber (natural and synthetic), sulphur, zinc oxide, carbon black and organic acids. A complete list of all chemicals used is extensive and can be supplied upon request. These materials were blended and mixed in the manufacturing process to meet specific recipes for rubber compounds. The materials were used as liquids and dry goods. Raw materials were stored in dry sacks, drums, above and below ground storage tanks and large dispensing hoppers.

MBFG 004414

III. SELECTED REGULATORY ISSUES

A. Air Emission Permits

1. Does the site maintain air permits?

Yes

If yes, attach copies to this report, and describe compliance status concerning air operations.

According to the Oklahoma State Department of Health-Air Quality Service, while the plant was in operation, the facility was operating in compliance with applicable air pollution control regulations set forth by the Oklahoma Clean Air Act.

2. If no, are there any emissions (including fugitive, VOCs, etc.) which should be examined for permitting?

Describe below.

None observed. The plant is no longer in operation.

3. Does the facility handle any substances which are subject to NESHAP regulations?

n/a

Describe handling, use, and disposal in detail.

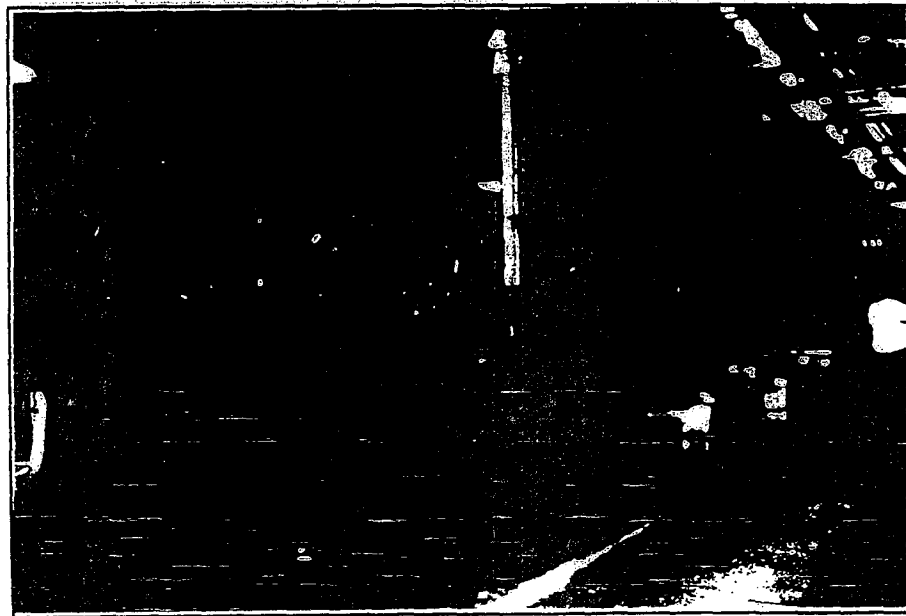
n/a

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SITE PHOTOGRAPHS
BF GOODRICH SITE
Miami, Oklahoma



1. A view inside the main warehouse showing rows of dismantled equipment.

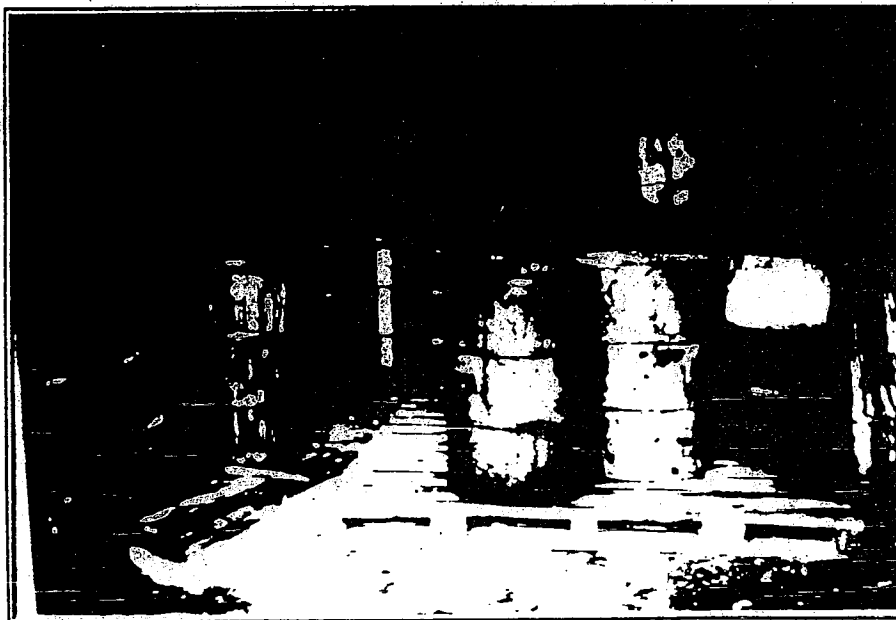


2. A view of some of the machinery used to manufacture rubber related products.

**SITE PHOTOGRAPHS
BF GOODRICH SITE
Miami, Oklahoma**



3. Surface staining was observed around grease and oil traps inside the plant.



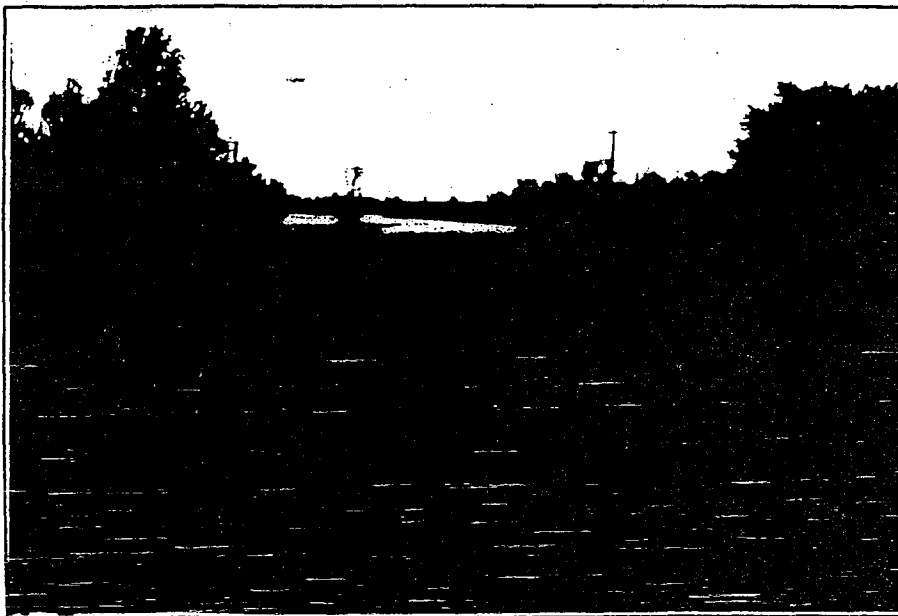
4. A view looking inside the former electrical building which is now used to store drums.

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**SITE PHOTOGRAPHS
BF GOODRICH SITE
Miami, Oklahoma**



7. A view of discharge pipes for storm water runoff as it enters the lagoon.



8. A view of the lagoon on the north side of the plant. It was used for process water discharge and is currently used for storm water runoff.

In early 1970 chemicals leaking from underground feedlines were discovered during a basement excavation at the plant. These chemicals (white gas, naphtha, and benzene) were pumped out of the basement into drums and trucked to the adjacent BFG landfill for disposal.

According to files reviewed, the Hazardous Waste Division recommended a soil and groundwater sampling program be developed to indicate any potential contamination from the site. In response to this recommendation, BFG/UGTC has retained WSNCo to conduct a Phase I Environmental Site Assessment of the property and is awaiting results of this investigation.

4. Soil quality.

- i) Was soil sampling implemented as part of this investigation?

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If yes, describe analytical results.

n/a

5. Surface water within one mile (including rivers, lakes, streams, etc.).

The plant utilizes a lagoon system to handle stormwater flows and spill control. Discharges from the lagoon are released to the Neosho River, which is located approximately 1.5 miles to the south of the site.

MBFG 004437