



Smithsonian

National Museum of American History Kenneth E. Behring Center

Guide to the Hales Bar Dam Collection

NMAH.AC.1051

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Collection Overview

Repository:	Archives Center, National Museum of American History
Title:	Hales Bar Dam Collection
Date:	1905-1968
Identifier:	NMAH.AC.1051
Creator:	Chattanooga and Tennessee River Power Company
Extent:	1 Cubic foot (2 boxes)
Language:	English .
Summary:	The Hales Bar Dam was built on the Tennessee River to improve river navigation and produce hydroelectric power. Construction work on the dam, which took place from 1905 to 1913, faced engineering challenges and leaks due to the broken and creviced limestone beneath the dam. The collection spans 1905-1968 and includes papers, reports, drawings and photographs related to the construction of the dam, as well as documents related to its maintenance in the decades following its completion.

Administrative Information

Acquisition Information

This collection was donated by the Tennessee Valley Authority in 1969.

Provenance

Transferred to the Archives Center from the Division of Mechanical and Civil Engineering (now Division of Work and Industry) in 2007.

Processing Information

Processed by Cara Whiting (intern), April, 2011; supervised by Alison Oswald, archivist.

Preferred Citation

Hales Bar Dam Collection, 1905-1968, Archives Center, National Museum of American History

Restrictions

The collection is open for research use.

Conditions Governing Use

Collection items available for reproduction, but the Archives Center makes no guarantees concerning copyright restrictions. Other intellectual property rights may apply. Archives Center cost-recovery and use fees may apply when requesting reproductions.

Biographical / Historical

The Hales Bar Dam was proposed as a permanent solution to improve navigation of the mountainous section of the Tennessee River. Hydroelectric power was an additional benefit of the dam's construction. Congress approved the project in 1904, and the Chattanooga and Tennessee River Power Company began construction in 1905 and finished in 1913. Building plans included a cyclopean concrete masonry dam, lock, spillway, power house, and transformer house.

The dam was built on broken and creviced limestone that made its construction challenging. Engineers used caissons to aid construction. After completion, leakage became a problem and in the 1920s, efforts were made to pump asphalt into the crevices to seal the leaks. This method was mostly successful, but the dam continued to have maintenance problems. The Tennessee Valley Authority acquired the dam in 1939 and ultimately decided to replace the dam rather than continue repairs. The Nickajack Dam was completed a few miles downstream in 1967, using two generators and parts of the switchyard from the Hales Bar Dam. By 1968, the Hales Bar Dam had been dismantled. The Hales Bar Dam powerhouse is one of the few surviving structures of the project. It was added to the National Register of Historic Places in 2008 and is used by the Hales Bar Marina as a boathouse.

Scope and Contents

The collection includes papers, reports, drawings and photographs related to the construction of the Hales Bar Dam, as well as documents related to maintenance on the dam in the decades following its completion.

Series 1, Historical Background, 1905-1968, includes papers, reports and publications related to the construction of the dam and its maintenance. Construction engineers Jacobs and Davies Inc. produced an undated report *Description of Hales Bar Dam*, that discusses the history of the project, its design, construction methods, a contractor's account of work, materials used, transportation, organization, camp, liability insurance, and closure of the dam; copies of the 1905 grant and contract with the Chattanooga and Tennessee River Power Company for construction; reports on leakage problems after construction completed, *Report on the Present Status of the Work of Sealing the Crevices and Stopping the Flow of the Water Under the Hales Bar Dam* (George W. Christians, 1919), *Leakage Under Hales Bar Dam* (Consulting engineer John R. Freeman, 1921); a Tennessee Valley Authority report *Geology of Hales Bar Dam* (Assistant Geologist John W. Frink, 1944) including the geology of the river, choice of the dam site, geology of the site, construction and treatment of leaks; published articles from *The Engineering Record*, *Engineering News*, *Civil Engineering*, and TVA publications discussing construction, hydroelectric power, leakage problems and maintenance work.

Series 2, Drawings, 1912-1966, contains ten blueprint drawings by Jacobs and Davies Inc. detailing cross-sections of the dam, its foundation, caisson, and other proposed construction methods, 1912-1913; microfilm of original construction drawings on twenty-two engineering drawing aperture cards depicting powerhouse details and foundation conditions. Some of the drawings were done by E. W. Clark and Company Management Corporation and were photographed for microfilm purposes from 1962 to 1966.

Series 3, Photographs, 1910-1940, consists of two scrapbooks of exterior and interior views of the dam during and after construction, as well as the lock, the power station, the dam during a flood, geology, caissons, and workers.

Arrangement

The collection is organized into three series.

Series 1, Historical background, 1905-1968

Series 2, Drawings, 1912-1966

Series 3, Photographs, 1910-1940

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Caissons
- Dams
- Power stations
- Rivers

Types of Materials:

- Articles
- Blueprints
- Contracts
- Photograph albums
- Photographs -- 20th century
- Reports
- Specifications

Names:

- Tennessee Valley Authority

Container Listing

Series 1: Historical background, 1905-1968

Box 1, Folder 1	Description of Hales Bar Dam, by Jacobs and Davies, Incorporated, undated
Box 1, Folder 2	Copies of grant, contract and act of Congress, 1905-1944
Box 1, Folder 3	Report titled the Present Status of the Work of Sealing the Crevices and Stopping the Flow of the Water Under the Hales Bar Dam, 1919 October 30
Box 1, Folder 4	Report titled Leakage Under Hales Bar Dam by John R. Freeman, 1921 December 31
Box 1, Folder 5	Report titled Geology of Hales Bar Dam by John W. Frink, 1944 July
Box 1, Folder 6	Publications about Hales Bar Dam, 1905 November 4 - 1968 April

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Series 2: Drawings, 1912-1966

Box 1, Folder 7	Blueprints, 1912 February 29 - 1913 July 7
Box 1, Folder 8	Microfilm of drawings, 1962-1966

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Series 3: Photographs, 1910-1940

Box 1, Folder 9	Loose photographs mounted on linen, 1910-1912
Box 1, Folder 10	Loose photographs, 1911-1928
Box 1, Folder 11	Scrapbook of Hales Bar Dam, 1911-1940
Box 2, Folder 1	Loose panoramic photographs, 1912-1913
Box 2, Folder 2	Scrapbook (part 1), 1911-1912
Box 2, Folder 3	Scrapbook (part 2), 1911-1912

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