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NPS Form 10-900 (Rev. 8/86) Utah Word Processor Format (02731) (Approved 10/87)

United States Department of the Interior National Park Service

MAR 0 8 1989

NATIONAL REGISTER

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in <u>Guidelines for Completing</u> <u>National Register Forms</u> (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries. Use letter quality printer in 12 pitch, using an 85 space line and a 10 space left margin. Use only 25% or greater cotton content bond paper.

1. Name of Property Fountain Green Hydroelectric Plant Historic District

historic name other names/site number Big Springs Electric Company, Fountain Green Hydro 2. Location street & number U.S. Highway 89 n/a not for publication city, town Fountain Green x vicinity state Utah code UT county Sanpete code 039 zip code 84632 3. Classification Ownership of Property Category of Property No. of Resources within Property contributing <u>x</u> private building(s) noncontributing ____ public-local x district 3 _____ buildings ____ sites ____ public-State ____ site ____ structure 1____ ____ public-Federal <u>1</u> structures ____ object ____ objects 4____ 1 Total No. of contributing resources Name of related multiple property listing: previously listed in the National Register 0 Electrict Power Plants of Utah

4. State/Federal Agency Certification		
As the designated authority under the National Historic Preservation Act of 1966.		
as amended, I hereby certify that this <u>x</u> nomination <u>request</u> for determination of eligibility meets the documentation standards for registering properties in the		
requirements set forth in 36 CFR Part 60.	In my opinion, the property <u>x</u> meets	
does not meet the National Register cr	riteriaSee continuation sheet.	
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plup y clici		
Signature of certifying official	Date	
UTAH STATE HISTORICAL SOCIETY		
State or Federal agency and bureau		
To me opinion the supersubs much of	and wet the Wettersl Desister	
in my opinion, the propertymeetsdo	des not meet the National Register	
criteriaSee continuation sheet.		
Signature of commenting or other official	Date	
State or Federal agency and bureau		
5. National Park Service Certification		
I, hereby, certify that this property is:		
v entered in the National Register.	Remark Aller D. H. 100	
See continuation sheet	<u></u>	
determined eligible for the Wetienel		
determined eligible for the National		
Register See continuation sheet		
Actomized and alight from the		
determined not eligible for the		
National Register.		
nomewood from the National Desigtor		
removed from the Mational Register.		
othon (overlain)		
Other, (exprain:)		
••••••••••••••••••••••••••••••••••••••	Signature of the Keeper Date	
fr	Signature of the keeper Date	
N.		
6. Functions or Use		
Historic Functions	Current Functions	
(enter categories from instructions)	(enter categories from instructions)	
Industry/Processing/Extraction:	Industry/Processing/Extraction:	
energy facility	energy facility	

7. Description	
Architectural Classification	Materials
(enter categories from instructions)	(enter categories from instructions)
	foundation concrete
Modern Movement (powerhouse)	walls brick, wood
	roof asphalt
	other <u>n/a</u>

Describe present and historic physical appearance.

(see continuation sheet)

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Constructed in 1922-23, the Fountain Green Power Plant is located in an open space at the foothills of the San Pitch Mountains. The plant consists of a powerhouse, earthen dam, steel conduit, switchyard and ancillary structures which include a transformer house and shed. Of the five features within the plant, four are contributing and one is noncontributing to the Fountain Green Hydroelectric Plant Historic District. Because the conduit running between the dam and powerhouse lacks integrity, it was determined that for management purposes the boundaries of the district would exclude as much of the conduit as possible. As well, that portion of the conduit lying within the powerhouse complex grounds will not be counted. Because the conduit is not included, the Fountain Green Hydroelectric Plant Historic District consists of two discontiguous elements: the powerhouse site and the dam at Big Springs. Besides the conduit, the Fountain Green plant since its construction has sustained a few alterations, such as the demolition of the operator's residence, which do not compromise the plant's overall integrity of location, setting, design, materials, workmanship, feeling and association. The Fountain Green Power Plant continues to represent a 1920s hydroelectric power station.

General Setting

The Fountain Green Power Plant site consists of three buildings located just northwest of the small town of Fountain Green, in Sanpete County, Utah. Fountain Green is one of several small towns--such as Mt. Pleasant and Moroni--which lie along U.S. highway 89 between the San Pitch Mountains on the west and the Wasatch Range on the east. Directly adjacent to the power plant site is the Utah Division of Wildlife Resources Fountain Green Fish Hatchery. Water leaving the powerhouse is diverted into the fish ponds. A county road from Fountain Green provides access to the both the power plant site and fish hatchery. Unlike hydroelectric plants powered by water from mountain streams, the Fountain Green unit operates on water from Big Springs, a major water source about one and a half miles west of Fountain Green. There, water pours from a canyon wall, is captured by a small, earthen dam and diverted into a steel conduit which carries the water to the powerhouse. The plant site is not located at the mouth of a canyon, but lies in an open pasture some miles distant

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from the mountains. Although the plant site has a small front yard, there are few shade trees and landscaping details. About one quarter mile northwest of the plant is the foundation of the original Big Springs Electric Company hydroelectric plant. Built in 1902, this facility also used water from Big Springs. The dam at Big Springs may have also served this original hydroelectric plant, although the dam was probably rebuilt in 1922 at the time the Fountain Green facility was constructed.

1. Powerhouse

Containing only two turbine units, the Fountain Green powerhouse (no. 1) is a relatively small structure with a simple architectural style containing elements of Art Moderne. Rectangular-shaped with a concrete capped parapet wall above a flat roof, the structure was constructed in 1922-23 of brick with a red face. On the north side of the roof is an interior brick chimney with a concrete cap. The concrete foundation is slightly flared and a prominent concrete coursing wraps around the building. This coursing provides the lintel for the building's 8/1 double hung windows and their concrete sills. Heavy metal screening covers all the windows. A centrally-located, brick pavilion demarcates the entrance on the the west facade. The concrete flat roof of the pavilion intersects the concrete coursing of the main structure. The pavilion's concrete is deteriorating, especially in the southeast corner. Within in the pavilion are 8-light double doors. A sign at the entrance reads, "Telluride Power Co./Ft. Green Hydro Plant." On the west side of the building, the conduit from the springs divides and enters the two units within the plant. The tailrace for one unit exits on the east side, under the front sidewalk, then either enters a canal which carries the water to the fish hatchery or into an irrigation ditch. The tailrace for the other unit also exits on the east side of the powerhouse, except it is closer to the northeast corner of the building. Water from this tailrace passes through an underground conduit before entering the fish hatchery canal at about the same place as the other tailrace.

Power generation equipment at Fountain Green consists of two turbine-generator units. One of these units, no longer in operation, is composed of a Pelton Wheel (manufactured by Doble)

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direct-connected to a Western Electric 160 kilowatt alternating current generator. This unit also features a small Western Electric 125 volt direct current exciter driven by a belt from the generator shaft. The second unit at Fountain Green features a Pelton wheel attached to a General Electric 160 kilowatt alternating current generator. A Western Electric, 125 volt d.c. exciter is belt-driven from the generator shaft. The Pelton wheels at this station operate on a relatively high head of about 400 ft. Adjacent to the generating units are modern control panels, but Fountain Green today is a remote-controlled facility. The ceiling of the Fountain Green powerhouse is covered with ornamental pressed metal, probably a fire-control measure.

The powerhouse at Fountain Green, although it has undergone some deterioration, still retains its original integrity of location, design, setting, workmanship, feeling, and assocation and is a contributing building to the Fountain Green Hydroelectric Power Plant Historic District.

2. Switchyard

The switchyard at Fountain Green (no. 2) includes a steel switchrack with transformers that may be original to the plant, as well as a much larger structure made of creosoted wood poles that appears to be of more recent construction. In addition, the switchyard is surrounded by a modern chain-link fence. The alterations to the Fountain Green switchyard, especially the addition of a larger, modern switchrack, detract from the overall integrity of the switchyard, especially integrity of setting, feeling, and design. The older switchrack itself retains integrity of design, materials, and workmanship, but as a component of the switchyard it is not physically and visually dominant enough to overcome alterations. The switchyard does not contribute to the Fountain Green Hydroelectric Power Plant Historic District.

3. Dam

The dam (no. 3) is located at the lower edge of the San Pitch Mountains, adjacent to Big Springs, a natural spring flowing from the ground. The dam collects water from Big Springs and impounds

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it in a small reservoir. The dam is an earth fill, gravity structure about 160 ft. long and 25 ft. high. Water is diverted into a small, rectangular concrete intake that includes a trash rack. The Big Springs reservoir is surrounded by a wire fence. Water from the springs is also used for irrigation, fish-rearing, and culinary purposes. Although the dam may have received improvements during the construction of the 1922 Fountain Green hydroelectric plant, it appears as though only minor alterations may been made to the structure since that time. Because the dam retains the majority of its integrity of location, setting, design, materials, workmanship, feeling and association, it is a contributing element in the Fountain Green Hydroelectic Power Plant Historic District.

4. Conduit

The conduit (no. 4) for Fountain Green consists of a pipeline that essentially acts as a penstock. This pipeline, about 1.25 miles in length (6,066 feet) has both welded steel and riveted steel sections. The pipeline decreases in diameter, from 22 in. to 20 in. to 12 in., as it approaches the plant. The pipeline rests on saddles made of rubble stone or concrete, spaced evenly over the length of the line. About 35 ft. from the rear of the powerhouse, a Y creates two branches in the penstock. Each branch supplies water to a turbine inside the powerhouse. After emerging from the base of the dam the pipeline lies in a semi-wooded area. Most of the pipe, however, runs across open prairie. Because most of the conduit appears to be welded steel pipe which has probably replaced most of the original riveted steel pipeline, the conduit no longer retains its historic integrity. Therefore it has been excluded from the Fountain Green Hydroelectric Power Plant Historic District.

5-6.Ancillary Structures

Adjacent and to the south of the powerhouse are two structures. The building closest to the powerhouse (no. 5) is constructed of the same red brick, indicating a similar construction date as the powerhouse. Presently, it is used as a garage and battery house. To the south is another structure (no. 6) which has an identical style and configuration as the battery house but consists of a NPS Form 10-900a (Rev. 8-86) Utah Word Processor Format (02741) Approved 10/87

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sandy-colored brick. It is now used for storage. Because of their identical style and shape, these two buildings were probably erected at or near the same time as the powerhouse. Rectangularshaped with a concrete foundation, both buildings have a flat roof with a concrete-capped parapet wall. On the east facade of each building, beneath the concrete-capped parapet wall, is is a course of corbelled brick. On the north and south walls of the two buildings, the parapet is stepped. The metal-covered roofs with exposed rafter ends are visible on the west side of each structure. Windows are 8/1 double hung with concrete sills and no lintels. Entrances into each building are somewhat different. A wooden door on the east side of the battery house has a 1-light transom and a modern metal garage door accessed the garage bay. The southern building has double wooden doors with a concrete step and a concrete-capped, interior brick chimney. Between these two structures is the old switch rack and behind it the new substation enclosed in a chain link fence. Virtually unaltered, both of these structures retain their integrity of location, setting, design, materials, workmanship, feeling and association and are contributing buildings to the Fountain Green Hydroelectric Power Plant Historic District.

Originally, this site had an operator's residence just east of the powerhouse. At some point, the home was removed and now a gravel driveway and enclosed substation occupies the location.

8. Statement of Significance		
Certifying official has considered the s other properties:nationally	ignificance of this proper _xstatewide	ty in relation to locally
Applicable National Register Criteria <u>x</u>	ABx_CD	
Criteria Considerations (Exceptions)	_ABCD _	EFG
Areas of Significance (enter categories from instructions) Industry	Period of Significance 1922 - 1923	Significant Dates n/a
Engineering		
	Cultural Affiliation	
Significant Person n/a	Architect/Builder unknown/unknown	

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

(see continuation sheet)

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The Fountain Green Hydroelectric Plant District is eligible for the National Register of Historic Places under Criterion A and Criterion C, in a local context. Under Criterion C, the Fountain Green Power Plant is significant within a local context because it embodies the characteristics of a small, 1920s high-head hydroelectric power plant. The Fountain Green Power Plant's engineering features were ideally suited to its mountainous setting. Power companies built numerous high-head plants in Utah during the late nineteenth and early twentieth centuries. They were the most efficient type of hydroelectric technology for generating power on Utah's relatively small mountain streams. Fountain Green is also significant under Criterion A, in a local context. Utilizing the area's major water source. Big Springs. local residents formed a power company to construct a larger plant after their earlier 1902 station proved inadequate. The company's Fountain Green powerhouse, built in 1922-1923, served Fountain Green and other small towns in Sanpete County, allowing rural residents to make modern improvements. The Fountain Green hydroelectric plant is the only facility left to represent the early development of the small but important local electric power industry in Fountain Green and surrounding areas.

Created in 1849, Sanpete County received its first Mormon colonizers in 1850. The early years of settlement in the broad San Pitch Valley proved difficult for the settlers, as Indian uprisings disrupted their attempts at community building until the 1870s. Once established, however, Sanpete become a leading Utah county in irrigated farming and stock raising by the 1910s. Numerous small towns grew as agricultural centers, especially along the three branches of the Denver and Rio Grande Railroad

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which transversed the county. By 1910, Sanpete's population stood at 16,704.

Their permanence established, Sanpete communities began to provide amenities for their residents. Electrical power arrived in the late 1890s and by the early 1900s, at least nine towns and villages acquired power for domestic and street lighting. One of the utilities organized at this time which serviced several small towns was the Big Springs Electric Company.

Recognizing the potential for hydroelectric power from Big Springs in the San Pitch mountains 1 1/2 miles northwest of Fountain Green, local residents incorporated the Big Springs Electric Company in 1902. Officers of the new firm were George Carter, president, Henry Jackson, vice-president, and A. J. Aagard, Jr., secretry/treasurer. Warren Holman and C.L. Johnson became directors. Several of these men were also active in other community ventures. George Carter and Henry Jackson served on the Fountain Green Irrigation Company's board of directors which formed in 1903 to claim water rights near Fountain Green. Aagard apparently operated a store in the community.

Construction of the powerhouse began in 1902 and by 1903, the oneunit plant was producing electricity for Fountain Green. Within a few years, the town of Moroni also began buying power from Big Springs Electric Company. By the early 1920s, increased demand convinced the company's directors that the existing plant was inadequate and that more generating ability was necessary. Rather than enlarge the facility, the firm decided to erect a new power station with two generators about 1500 feet southeast of the original building--the site of the existing Fountain Green station. Sometime subsequently, the 1903 powerhouse was demolished.

In 1922, the company acquired the land for the new Fountain Green plant and construction of the station began. At Big Springs, workers built an earthen dam, forming a small reservoir to direct the water into the intake. A new steel pipeline carried the water over 6,000 feet with a 500 foot drop to the generating station. Completed in 1923, the plant not only supplied power for Fountain Green and Moroni, but also began service to the communities of

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Wales, Nephi and Levan.

Ownership of the Fountain Green hydroelectric plant remained with the Big Springs Electric Company until 1927 when all assets were transferred to the Big Springs Power Company. This local firm operated the facility until 1942 when control passed to the Telluride Power Company of Delaware--a transaction which caused community controversy apparently due to loss of local control of the utility. Telluride assumed legal title in 1952. In 1962, Utah Power and Light, which currently owns and operates the Fountain Green plant, acquired the property.

Although sometimes erratic because of interruptions to water supplies, electricity generated in Sanpete County's hydroelectric plants was important to area residents. Desiring the benefits of electricity, such as lighting, small towns and local power companies proved willing to acquire large debts in order to continue and improve their electrical service. Villages which did not have access to locally produced power, such as the Fountain Green plant provided, waited until the 1930s for transmission lines to enter their communities. 9. Major Bibliographical References

Antrei, Albert C.T., ed. The Other F County, Utah, 1849-1983. Salt La	orty-Niners: A Topical Hitory of Sanpete ke City: Western Epics, 1982.
Cole, Bradford R. and Johnson, Mike. Structure/Site Information Form.	Utah State Historic Preservation Office, "Fountain Green Power Plant." 30 June 1987.
Previous documentation on file (NPS): preliminary determination of individual listing (36 CFR 67) has been requested	<u>x</u> See continuation sheet
<pre>previously listed in the National Register previously determined eligible by the National Register designated a National Historic Landmark recorded by Historic American Buildings Survey # recorded by Historic American Engineering Record #</pre>	Primary location of additional data: <u>x</u> State Historic preservation office Other State agency Federal agency Local government University <u>x</u> Other Specify repository: Utah Power and Light Company
10. Geographical Data	
Acreage of property <u>c. 1.6 acres</u>	
UTM References A <u>1/2 4/4/2/3/3/0 4/3/8/7/4/0/</u> Zone Easting Northing	0 B <u>1/2</u> <u>4/4/4/2/0/0</u> <u>4/3/8/7/4/8/0</u> Zone Easting Northing
c <u>////////////////////////////////////</u>	D_/_//////////////////////////////////
	See continuation sheet
Verbal Boundary Description	
	<u>x</u> See continuation sheet
Boundary Justification	
	<u>x</u> See continuation sheet
11. Form Prepared By	
name/title <u>Mark Fiege/Janet Ore, Con</u>	sulting Historians

organizationfor Utah Power and Light Co.dateNovember 1988street & number144 South 900 East #10telephone (801) 532-5456city or townSalt Lake CitystateUtah

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- Daughters of the Utah Pioneers of Sanpete County, Utah, 1947. These...Our Fathers: A Centennial History of Sanpete County, 1849-1947. Springville, UT: Art City Publishing Co., 1947.
- Utah Power and Light Company. "Before the Federal Energy Regulatory Commission Application for Exemption of Small Hydroelectric Power Project from Licensing--Existing Dam." Unpublished report, October 1987.

Warrum, Noble. Utah Since Statehood: Historical and Biographical. Chicago-Salt Lake: S.J. Clarke Publishers, 1919.

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Verbal Boundary Description:

The Fountain Green Hydroelectric Plant Historic District is located in the southern half of section 36, T13S, R2E, Fountain Green North, Utah USGS Quadrangle. The historic district boundaries for both the powerhouse component and dam component follow the FERC project boundaries (see map).

Powerhouse Component: The historic district boundaries follow the FERC project boundary lines. The Point of Beginning lies . 30 ft. SW of the SW corner of the shed. The boundary then proceeds N 166.4 ft., E 100.4 ft., then S 0 35' 13" for 146.41 ft., then W for 98.9 ft. to Point of Beginning. Acreage for this component is .33 acre.

Dam Component: The historic district boundaries follow the FERC project boundary lines. The Point of Beginning lies on the centerline of the penstock 40 ft. E of the top of the dam. Boundary then proceeds S 11 07' 12" for 104.3, then N 69 04' 15" W 170.73 ft., N2 15' 30" W 60.21 ft., N70 32' 27" E 47 ft., N 60 36' 49" E 199.92 ft., then S 11 07' 12" W 137.69 ft. to Point of Beginning. Acreage for dam component is .62 acre.

Boundary Justification:

The boundaries for the Fountain Green Hydroelectric Plant Historic District were chosen because they encompass those buildings and structures associated with the operation of the Fountain Green plant. The pipeline was excluded from the district because it lacks historic integrity. Thus, with the pipeline excluded, the historic district includes two discontiguous components, the dam at Big Springs and the powerhouse site. A discontiguous district is justified because the dam and the powerhouse are geographically separate, visual continuity is not a factor of historic significance, and the space between the dam and the powerhouse is not significant. The boundary for the dam follows the FERC boundary line and encompasses the dam and its general setting in a ravine, in which the waters of Big Springs are impounded. The powerhouse site encompasses the ground on which the powerhouse and associated structures sit and which is distinguishable from the surrounding fields and adjacent fish hatchery.



Fountain Green Photograph Log:

Fountain Green Hydroelectric Plant Historic District Photographs Fountain Green. Utah Mark T. Fiege, photographer July 1988 original negative at Utah SHPD

Photo #:

1. Powerhouse (no. 1), view to west.

2. Garage/battery house (no. 5), view to northwest.

3. Powerhouse (no. 1) interior, view to northwest, showing one turbine-generator unit.

4. Storage building (no. 6), view to southwest.

5. Powerhouse complex, view to east, photo taken from conduit (no. 4).

6. Big Springs, with dam (no. 3) on left, view to south.





