HISTORIC PROPERTY INVENTORY FORM

State of Washington, Department of Community Development
Office of Archaeology and Historic Preservation
111 21st Avenue Southwest, Post Office Box 48343
Olympia, Washington 98504-8343 (206)753-4011

IDENTIFICATION SECTION

Field Site No. 183-KW **OAHP No.** **Date Recorded** 22-Apr-98
Site Name Historic Filter Plant
Common
Field Recorder Jim Sharpe
Owner's Name U.S. Department of Energy, Richland Operations Office
Address P.O. Box 550
City/State/Zip Code Richland, WA 99352

Status

- [x] Survey/Inventory
- [ ] National Register
- [ ] State Register
- [ ] Determined Eligible
- [ ] Determined Not Eligible
- [ ] Other (HABS, HAER, NHL)
- [ ] Local Designation

Photography
Photography Neg. No. 83G195-46CN
(Roll No. & Frame No.)
View of
Date 9/16/83

Classification [ ] District [ ] Site [x] Building [ ] Structure [ ] Object
District Status [x] NR [ ] SR [ ] LR [ ] INV
Contributing [x] **Non-Contributing** [ ]
District/Thematic Nomination Name Hanford Site Manhattan Project and Cold War Historic District

Description Section
Materials & Features/Structural Types
Building Type Industry
Plan
Structural System
No. of Stories One with basement

Roof Type

- [ ] Gable
- [ ] Hip
- [x] Flat
- [ ] Pyramidal
- [ ] Monitor
- [ ] Other (specify)
- [ ] Gambrel
- [ ] Shed

Cladding (exterior Wall Surfaces

- [ ] Log
- [ ] Horizontal Wood Siding
  - Rustic/Drop [ ]
  - Clapboard [ ]
- [ ] Wood Shingle
- [ ] Board and Batten
- [ ] Vertical Board
- [ ] Asbestos/Asphalt
- [ ] Brick
- [ ] Stone
- [ ] Stucco
- [ ] Terra Cotta
- [ ] Concrete/Concrete Block
- [ ] Vinyl/Aluminum Siding
- [ ] Metal (specify)
- [X] Other (specify) Corrugated transide siding

Roof Material

- [ ] Wood Shingle
- [ ] Wood Shake
- [ ] Composition
- [ ] Slate
- [x] Tar/Built-up
- [ ] Tile
- [ ] Metal (specify)
- [ ] Other (specify)
- [ ] Not visible

Foundation

- [ ] Log
- [ ] Post & Pier
- [ ] Stone
- [ ] Brick
- [ ] Not visible

Concrete

- [ ] Block
- [ ] Poured
- [ ] Other (specify)

Integrity (Include detailed description in **Description of Physical Appearance)**

	Intact	Slight	Moderate	Extensive
Changes to plan	x			
Changes to windows	x			
Changes to original cladding	x			
Changes to interior		X		
Other (specify)				

LOCATION SECTION

Address Building 183-KW, 100-KW Area
City/Town/County/Zip Code Richland/Benton County/99352
Twp 13 **Range** 26 **Section** 5 **1/4 Section** NW **1/4 1/4 Sec** NW, NW
Tax No./Parcel No. **Acreage**
Quadrangle or map name Coyoute Rapids, Wash. 7.5 min series 1986
UTM References Zone 11 **Easting** 301040 **Northing** 5168720
Plat/Block/Lot
Supplemental Map(s)

High Styles/Forms (Check one or more of the following)

- [ ] Greek Revival
- [ ] Gothic Revival
- [ ] Italianate
- [ ] Second Empire
- [ ] Romanesque Revival
- [ ] Stick Style
- [ ] Queen Anne
- [ ] Shingle Style
- [ ] Colonial Revival
- [ ] Beaux Arts/Neoclassical
- [ ] Chicago/Commercial Style
- [ ] American Foursquare
- [ ] Mission Revival
- [ ] Spanish Colonial Revival/Mediterranean
- [ ] Tudor Revival
- [ ] Craftsman/Arts & Crafts
- [ ] Bungalow
- [ ] Prairie Style
- [ ] Art Deco/Art Moderne
- [ ] Rustic Style
- [ ] International Style
- [ ] Northwest Style
- [ ] Commercial Vernacular
- [ ] Residential Vernacular (see below)
- [x] Other (specify) Industrial Vernacular

Vernacular House Types

- [ ] Gable Front
- [ ] Gable Front and Wing
- [ ] Side Gable
- [ ] Cross Gable
- [ ] Pyramidal/Hipped
- [ ] Other (specify)

NARRATIVE SECTION

Study Unit Themes (check one or more of the following)

[ ] Agriculture	[ ] Conservation	[ ] Politics/Government/Law
[ ] Architecture/Landscape Architecture	[ ] Education	[ ] Religion
[ ] Arts	[ ] Entertainment/Recreation	[ ] Science & Engineering
[ ] Commerce	[ ] Ethnic Heritage (specify)	[ ] Social Movements/Organizations
[ ] Communications	[ ] Health/Medicine	[ ] Transportation
[ ] Community Planning/Development	[ ] Manufacturing/Industry	[x] Other (specify) Manhattan Project & Cold War Era
	[ ] Military	[x] **Study Unit Sub-Theme(s)** Reactor Operations, Water Treatment

Statement of Significance

Date of Construction 1952-1955 Ar Architect/Engineer/Builder Kaiser Engineers

[x] In the opinion of the surveyor, this property appears to meet the criteria of the National Register of Historic Places.

[x] In the opinion of the surveyor, this property is located in a potential historic district (National and/or local).

The 183.1-KW Headhouse was located in eastern Washington on the Hanford Site in the K-West Reactor Area near the south shore of the Columbia River. Construction of the KW-Reactor and its associated facilities t 1955 as part of "Project X". All facilities constructed during this project were designed for minimum damage and quick recovery from enemy attack. The 183.1 Headhouse was the water quality center for the entire was designed to be multi-operational in that it was capable of operating as a single plant, two plants, or six plants. The facility contained equipment for metering raw water, chemical injection into raw, filtered, and pr effluent and influent control throughout the filter plant. Basic operations in the headhouse included: chlorination of raw water, addition of coagulants to raw water, PH correction of filtered water, addition of corrosio water, and influent and effluent control. The 183.KW Headhouse was a portion of a multi-component facility that contained a chlorine building, flocculaction and sedimentation basins, a reinforced concrete basin, two enclosed reservoirs. The Headhouse was located adjacent to the sedimentation basins. The facility was designed to filter and chemically treat water withdrawn from the Columbira River to prevent filming and reduce tubes. River water was delivered to the 183.1-KW facility from the 181-KW River Pump Station through two 60-inch steel pipes. From the header, six, 36-inch steel pipe lines transported water to the sedimentatior acid, and chlorine were proportioned in the headhouse and added to the raw water. As part of the deactivation process, the facility was shutdown in 1971.

It is therefore the conclusion of the U.S. Department of Energy that Building 183.1-KW Headhouse is eligible for inclusion in the National Register of Historic Places under Criterion A as a contributing property within tl Project and Cold War Era Historic District.

Description of Physical Appearance

The 183.1-KW Headhouse was a "T" shaped building with ground and lower level floors. It was constructed with a reinforced concrete foundation and floor, structural steel frame walls with corrugated transite siding asphalt and gravel surfacing.contained the controls for the filter plant water flow, filter backwashing, water level, and rate of chemical addition. Its dimensions were 136 feet long by 31 feet wide x 20 feet high; 70 f feet high.

The ground floor contained a laboratory and sample room, chlorinator room, electrical switchgear and operation rooms, area housing chemical feed equipment, storage tanks, equipment area, lunchroom, locker and re water softners, heat exchangers, and pumps. The 183.1-KW Building differed from the 183.1-KE Building in that it contained two banks of sanitary water pressure filters with booster and slurry pumps and the contr backwashing. The laboratory occupied 800 square feet, office space 180 square feet, work area 37,930 square feet, storage 4,760 square feet, miscellaneous space 640 square feet.

The lower floor of the headhouse contained three banks of heat exchangers, raw water piping, alum and hot water recirculating pumps, transfer and injection pumps, control valves, two air compressors and an air rece the building from the 181-KW River Pump House through two 60-inch steel lines. Construction of the headhouse included the following materials materials: excavation 11,390cy, backfill 12,000cy, classified, backfill miscellaneous iron 88,789lb, structural steel 98,405lb, and reinforcing steel 311,776lb.

Major Bibliographic References

Photograph # 83G195-46CN
Drawing # H-1-23824
AEC-GE. 1964. *Catalog of Hanford Buildings and Facilities 100 Areas.* GEH-26434. Richland, Washington.
General Electric Company. 1952. *Design Scope 100-K Area Water Plant Design.* HW-26414. Richland, Washington.
General Electric Company. 1957. *Completion Report Project CA-512 Volume II 100-K Water Plants.* Richland, Washington.
Hanford Atomic Products Operation. 1963. *Volume-3-Deacription of the 100-KE and 100-KW Production Reactor Plants.* HW-74095. Richland, Washington.

UNC Nuclear Industries. 1984. *100 Deactivated Area Pictorial Review.* UNI-2780. Richland, Washington.
Westinghouse Hanford Company. 1988. *Hanford Surplus Facilities Programs Facilities Listings and Descriptions.* WHC-SP-0331. Richland, Washington.

es took place from 1952 until
ntire water treatment plant. It
d process water and for
osion inhibitor to process
two feeder buildings, and two
uce corrosion of the process
ation basins. Alum, sulfuric

in the Hanford Site Manhattan

ding, transite roof with built-up
70 feet long by 60 feet wide x 20

d rest room and a janitor closet,
ontrol panel for automatic

receiver. Raw river water entered
kfill 400cy, concrete 2,721cy,