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ILLINOIS POWER COMPANY

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

10CFR50.90
June 2, 1988

Docket No. 50-461

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Additional Information Regarding Clinton Power Station Proposed License Amendment to Support Hydrogen Water Chemistry Testing

Dear Sir:

On May 18, 1988, Illinois Power (IP) submitted a request for an Amendment to Facility Operating License NPF-62 to support the Hydrogen Water Chemistry test at the Clinton Power Station (CPS). In a telephone conversation on May 25, 1988, the NRC requested additional information about the Hydrogen Water Chemistry test at CPS. The attachment to this letter provides the NRC's comments, and IP's response to each.

If there are any further questions on this topic, please contact me.

Sincerely yours,

F. A. Spangenberg, III
Manager - Licensing and Safety

GSL/krm

Attachments

cc: NRC Resident Office
NRC Region III, Regional Administrator
NRC Clinton Licensing Project Manager
Illinois Department of Nuclear Safety

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NRC Comment:

Provide a description of the proposed Hydrogen storage arrangement. Indicate the separation distance between the hydrogen and Safety Related Systems and Structures and provide the capacity of a single cylinder within the supply trailer configuration.

IP Response:

Currently, hydrogen is used at CPS for cooling the main generator. The existing hydrogen storage as described in the CPS Final Safety Analysis Report Section 10.2.2.2.1 is located approximately 432 feet away from the nearest building containing safety-related or class 1E components. The closest Seismic Category I structure (below grade portion of the Radwaste Building) is approximately 60 feet away (see attached figure). For the purposes of the Hydrogen Water Chemistry (HWC) test, hydrogen will be stored in a 120,000 SCF capacity tube trailer which will be located northeast of the existing hydrogen storage facility. Therefore, the additional hydrogen will be stored no closer than 432 feet from any building containing safety-related or class 1E components, and at least 60 feet away from the nearest Seismic Category I structure (which is below grade). The tube trailer will contain a minimum of 12 tubes/cylinders, with each tube/cylinder containing 10,000 SCF of hydrogen at 2450 psig.

NRC Comment:

Provide a commitment that the test arrangements facility meets the applicable sections of the EPRI guidelines as contained in EPRI Report NP-5283-SR-A.

IP Response:

The test facility is not a permanent Hydrogen Water Chemistry installation; however, the test facility will meet the applicable sections of EPRI guidelines as contained in EPRI Report NP-5283-SR-A.

NRC Comment:

Provide a statement concluding that the dose rate at the site boundary will not significantly increase. This conclusion should be based on IP's evaluation of similar test data performed at other BWR facilities.

IP Response:

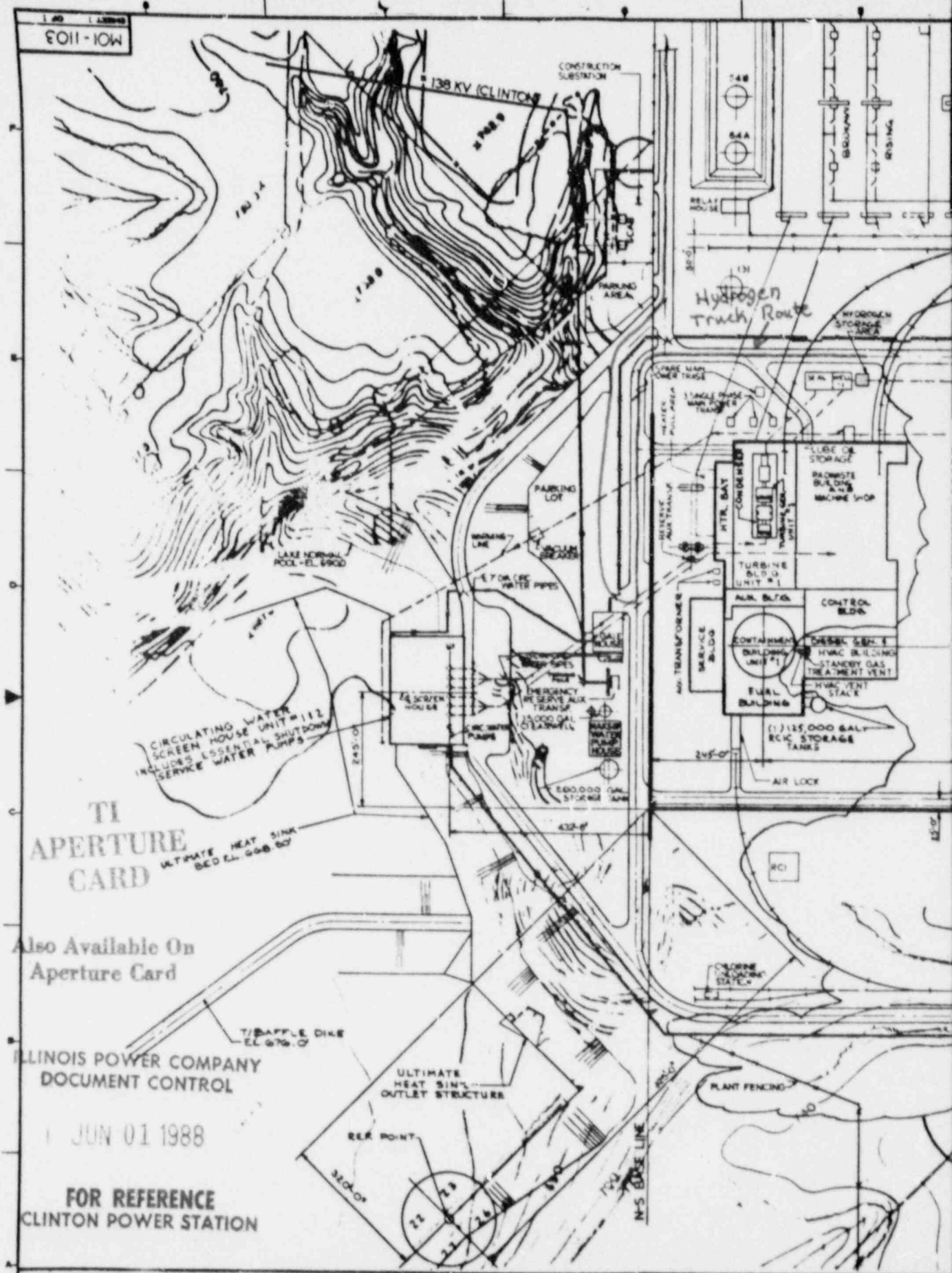
Based on the review of test results of the hydrogen addition tests performed at other BWR facilities (e.g. Fitzpatrick, Duane Arnold, Hope Creek), IP concludes that the dose rate at the site boundary will not increase significantly. It should also be noted that during the test, the site boundary radiation levels will be monitored to comply with 40CFR190 limits for CPS.

NRC Comment:

Provide a description of the on-site storage of chlorine, used for water treatment, indicating the separation distance between the hydrogen and chlorine and the pathway for truck related delivery at the site.

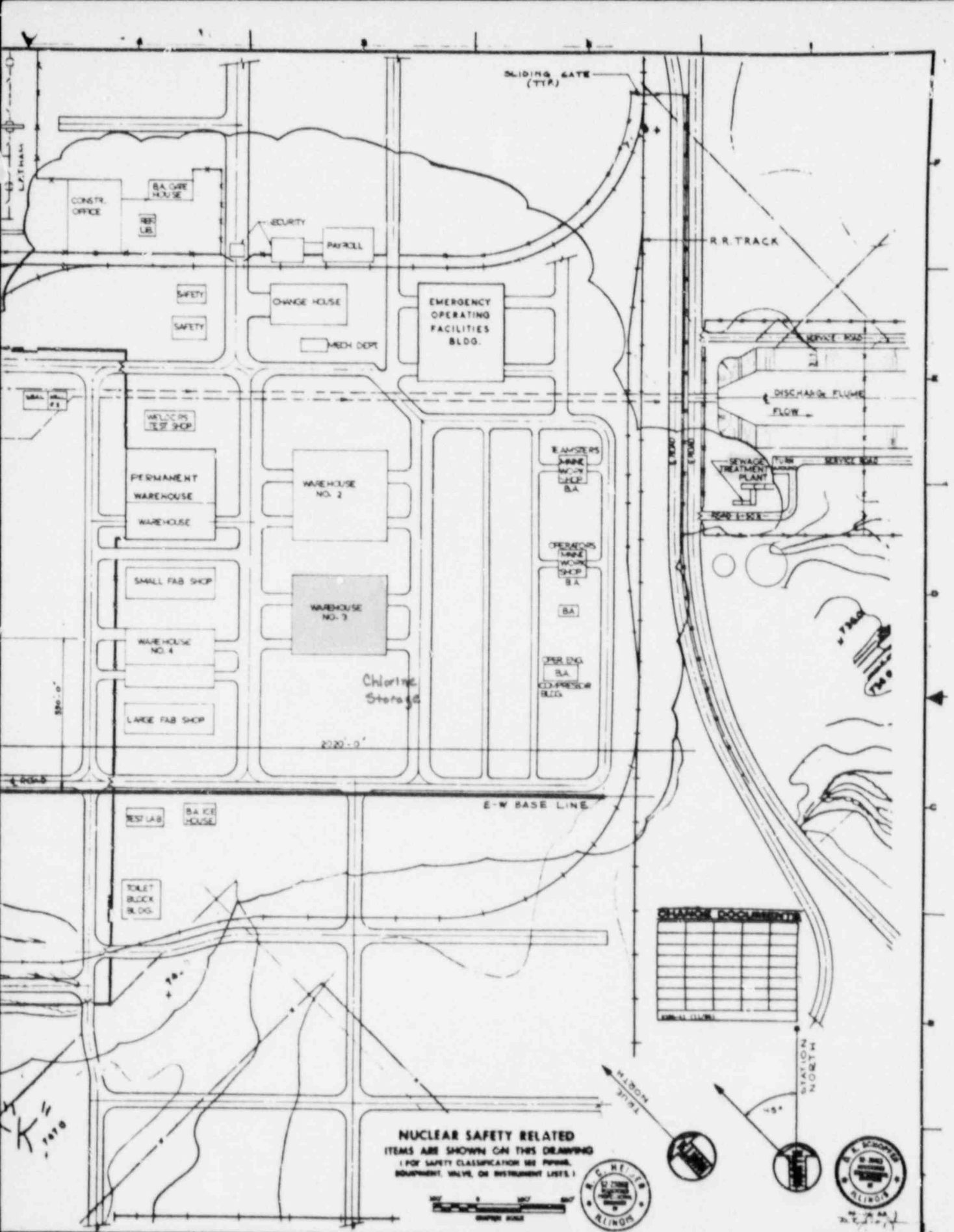
IP Response:

Currently, chlorine is used in the makeup water pump house and sewage treatment plant. The chlorine at these facilities is stored in 150-pound containers. Additional 150-pound chlorine containers are stored near warehouse No. 3 (see attached drawing). The existing hydrogen storage is approximately 475 feet away from the makeup water pump house, 600 feet away from the warehouse No. 3 and 1000 feet away from the sewage treatment plant. The attached drawing shows the location of these structures and the path the hydrogen tube trailer will take when being delivered. It should be noted that delivery of hydrogen for the HWC test will be consistent with the current methods of hydrogen delivery.



REV	DATE	PREPARED	REVIEWED	APPROVED	PURPOSE
J	5-20-81				REVISED TRANSMISSION LINE ROADS & FENCING - ADDED SCALE - FOR CONSTRUCTION
K	4-14-82				UNIT 2 DELETED REVISED ROADS & RAILROAD TRACKS AND ADDED PERMANENT STRUCTURES - FOR CONSTRUCTION REFERENCE

REV	DATE	PREPARED	REVIEWED	APPR
E	6-1-77			
F	6-9-78			
G	6-23-78			
H	2-15-79			



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