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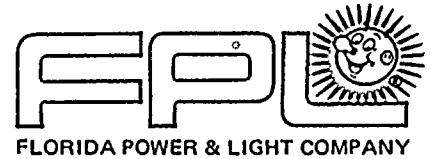
ACCESSION NBR: 8302180299 DOC. DATE: 83/02/11 NOTARIZED: NO DOCKET #
 FACIL: 50-251 Turkey Point Plant, Unit 4, Florida Power and Light Co. 05000251
 AUTH. NAME: AUTHOR AFFILIATION
 URRIG, R. E.: Florida Power & Light Co.
 RECIPIENT NAME: RECIPIENT AFFILIATION
 EISENHUT, D. G.: Division of Licensing

SUBJECT: Forwards summary of work & insp conducted to date to preclude foreign matl from entering steam generators (both primary & secondary sides) during const activities.

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February 11, 1983
L-83-72

Office of Nuclear Reactor Regulation
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: Turkey Point Unit 4
Docket No. 50-251
Steam Generator Repair Program -
Cleanliness Report

Special Steam Generator Repair Program License Condition 3.H.(g)(vi) of DPR-41 requires that prior to resumption of power operation we submit a report which describes our work to preclude the presence of foreign material in the primary coolant system. Please find attached a summary of the work and inspection done to date to preclude foreign material from entering the steam generators (both primary and secondary sides) during construction activities.

The primary system is now sealed, and final loop inspection and cleanup will be accomplished just prior to startup. We will submit the final report describing the results of that activity at that time.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced System & Technology

REU/JEM/js

Attachment

cc: Mr. James P. O'Reilly, Region II
Mr. Harold F. Reis, Esquire
PNS-LI-83-097-1

Pool

8302180299 830211
PDR ADQCK 05000251
PDR

SUBJECT:

Primary & Secondary Side Cleanliness

In order to eliminate the probability of foreign material entering the steam generators during construction activities, the following has been accomplished:

Primary Side - Channel Head

1. Prior to decontamination activities in the channel heads, a double inflatable loop seal was installed in each nozzle and the C/H drain holes plugged. Their purpose was to prevent the entry of large objects, such as screws, wrenches, watches, and dosimeters, into the loop piping, and to minimize the amount of alumina grit entering the RCS to a level which can easily be controlled during start-up operations. Installation of the loop seals was performed under access control by JPC:QC, and no unusual occurrences are recorded.
2. Removal of the double inflatable seals and initial cleanup following decontamination activities was done by Westinghouse in accordance with their procedure MRS 2.2.2 FLA-1, and witnessed by FPL-QA. Channel head cleanliness was verified by Westinghouse and QA before seal removal. Although the seals did not eliminate all passage of alumina grit into the loop piping, loop cleanliness after vacuuming was determined to be acceptable for continuation of construction activities. Access control was established for the insertion of loop plugs prior to lead shielding, and no unusual occurrences are recorded.

This seal removal, cleanup and verification is documented in the Westinghouse report.

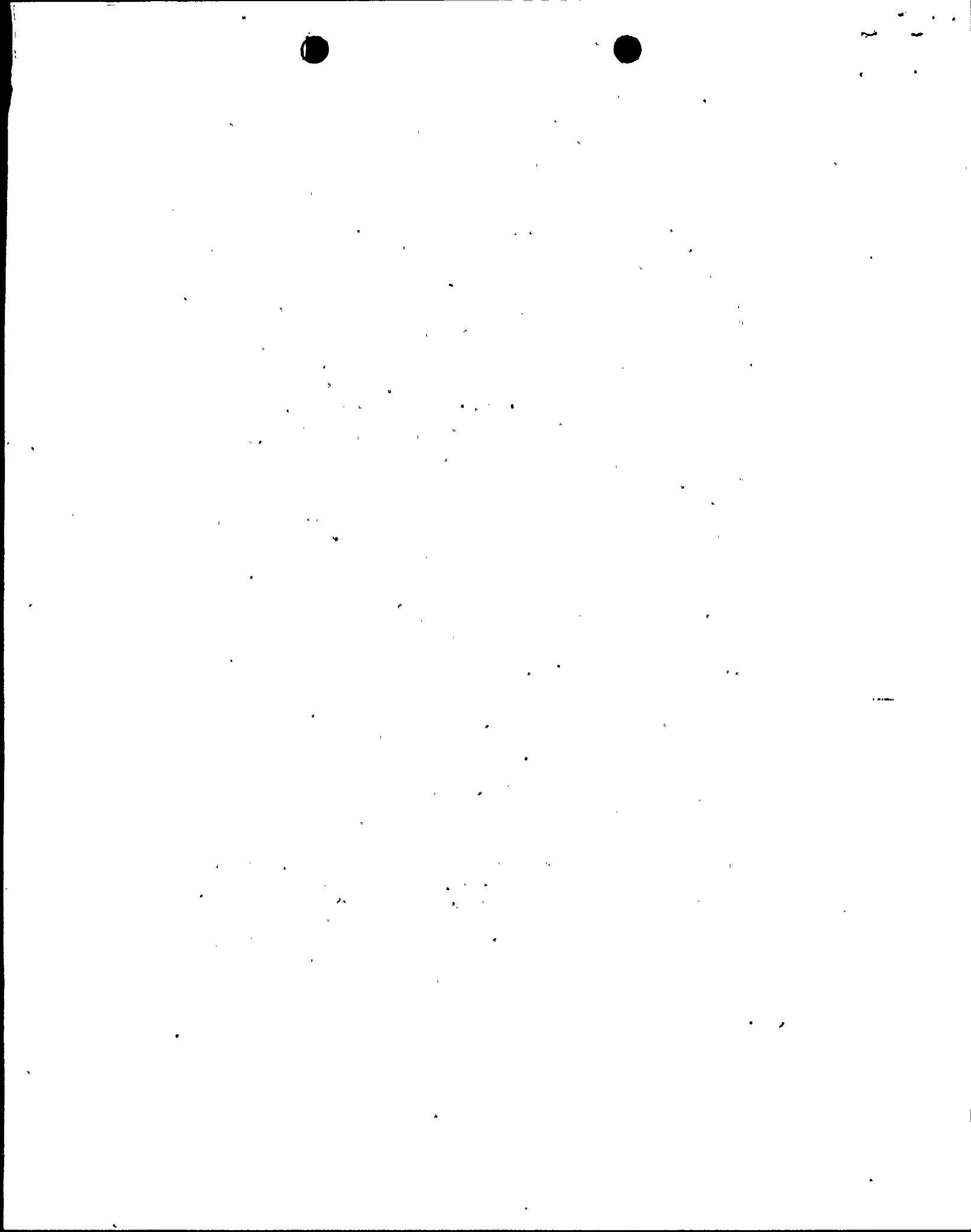
Secondary Side

1. Upon removal of the Omega Seal and shipping cover, access control was established for Westinghouse work on the anti-vibration bars.
2. Access control was continued through installation of the "Beehive" tube bundle protection and the wrapper annulus "doughnut". The "Beehive" is a sheet metal dome which completely seals the tube bundle inside the wrapper. It is fabricated in sections large enough to preclude their entry into the tube bundle upon removal, and crimped together to eliminate the possibility of the loss of any fasteners. The annulus "doughnut" consists of a series of tubes made of Refrasil (sewn) wedged into the small opening between the outer shell and the wrapper.

These activities are documented on Process Sheets and Access Control Logs which indicate no unusual occurrences.

Tube Sheet

1. Prior to separation of the new channel heads from the new lower assemblies, each tube, under access control, was capped and a Herculite protection barrier installed to reduce the possibility of cutting fluid and metal shavings from entering the tubes.
2. After machining of the new lower assembly weld preps, snipe cuts and divider plates, the tube sheets were wiped clean and the tubes sampled for cleanliness per Westinghouse Spec. 83318 PA. This activity was accomplished under Access Control and witnessed by JPC:QC and FPL-QA, and is documented by inspection reports and Process Sheet 82-090.
3. Following evaluation of the results of the tube cleaning exercise, "permanent" tube sheet protection was installed. This protection is made up of a series of overlapping sheet metal plates, covered by Refrasil, held in place by low profile cam-lok plugs. This design will eliminate welding smoke and spatter from entering the tubes, prevent arc strikes and other mechanical damage, and uses no tape thus eliminating adhesive residue.



Installation of the Tube Sheet Protection was witnessed by JPC:QC and FPL-QA with no unusual occurrences recorded. It is documented on Process Sheet 82-090.

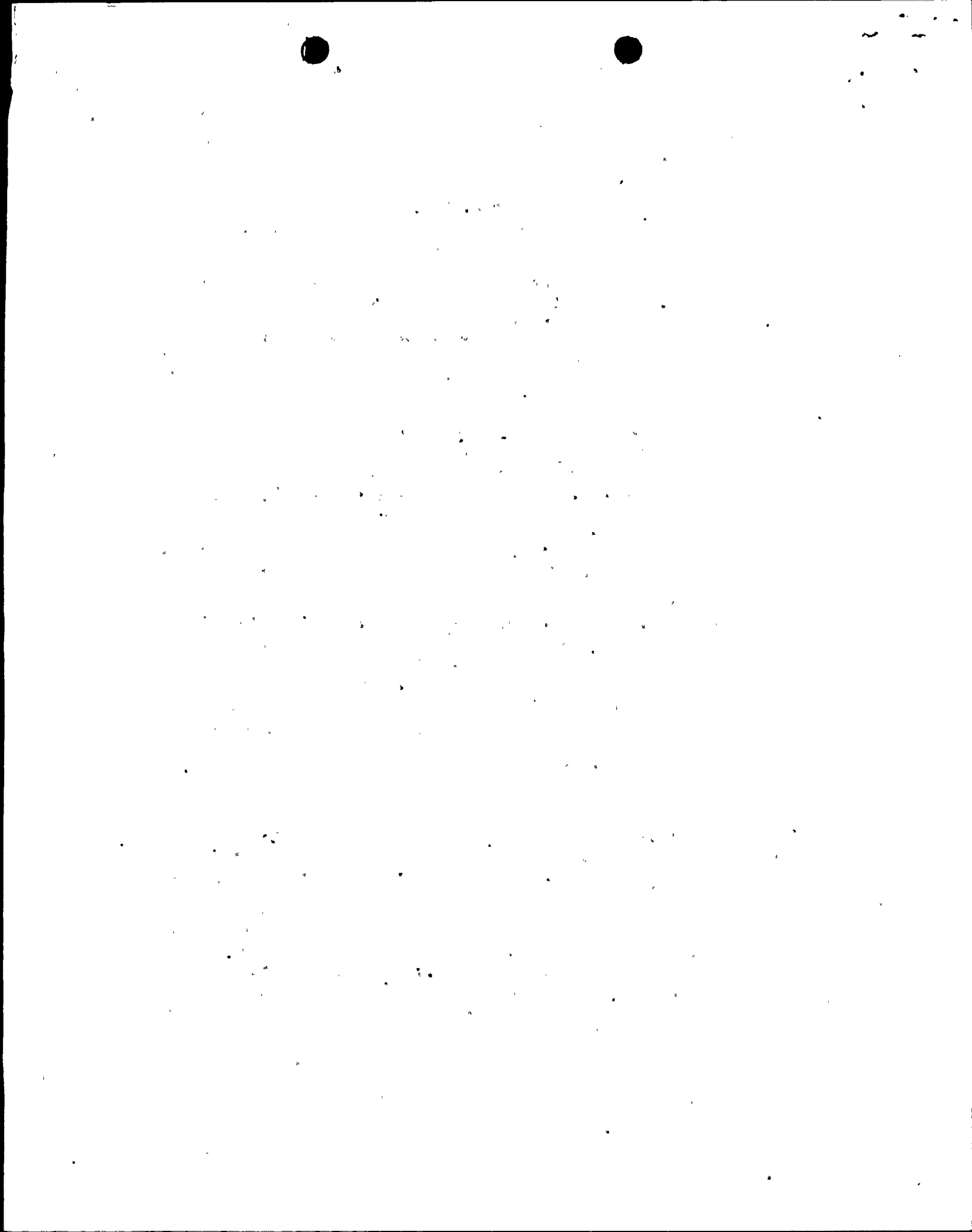
The Construction Program includes additional planned activities, which have not yet been accomplished, to ensure the cleanliness of both the primary and secondary systems. These activities will be witnessed and verified by JPC:QC and FPL-QA, and done under access control as noted. These activities include:

Primary Side

1. Removal of the tube sheet protection and loop plugs for PWHT will be done after cleanliness of the bowls has been verified by QA. Access Control will be established for PWHT and will be in effect at all times the tubes are exposed and/or the loops are uncovered.
2. Loop plugs and tube sheet protection are to be reinstalled for welding of the snipe cutouts and divider plate.
3. Final removal of the tube sheet protection, loop plugs and drain plugs will be done after cleanliness of the bowls has been verified by QA.
4. Westinghouse will perform a final loop inspection and cleanup per MRS 2.2.2 FLA-1 and MP 2.2.1 GEN. which will be witnessed and verified by FPL-QA. This will be done under Access Control which will remain in force until the manways are sealed.

Secondary Side

1. The tube bundle protection has been designed to stay in place during upper girth PWHT. However, a gross cleanup will be done to protect against a possible failure of the protection system.
2. The annulus protection must be removed before welding the wrapper. The doughnut will be thoroughly cleaned by vacuuming prior to removal. This activity is to be witnessed and verified by JPC:QC and FPL-QA. Access Control of the Upper Assembly will be established for this task and remain in force for the remainder of the job, until the manways are sealed.



3. Following the welding of the wrapper, the tube bundle protection will be thoroughly cleaned. FPL-QA will verify this activity prior to removal of the "Beehive".
4. Removal of the "Beehive" will be witnessed by FPL-QA.
5. Westinghouse has been contracted to perform a search and retrieval inspection to confirm secondary side cleanliness. The procedure for this has not been submitted, but will be similar to Westinghouse Procedure SP 2.4.2 GEN-4, used to inspect the Unit 3 generators. This activity will be accomplished under access control, to be witnessed and verified by FPL-QA. Results will be documented in the Westinghouse Report.
6. Final cleanliness inspection and verification will be done by JPC:QC and FPL-QA, under access control, immediately prior to closing of the upper assemblies and will be documented on inspection reports and process sheets.

Included with this report are samples of the documentation to be generated. All necessary paperwork is included in the PC/M Packages and will be turned over to Records with the packages. In the meantime, any records currently existing are available for your inspection as you desire.

We trust this information will meet your needs in generating the pre-startup report to the NRC. Should you require further assistance, please do not hesitate to call on us.

