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POWER & LIGHT / NEW ORLEANS, LOUISIANA 70174-8708 • (504) 388-2345

MIDDLE SOUTH
 UTILITIES SYSTEM

70-2946
 PDR
 Return to
 396SS

December 13, 1982

W3P82-3949
 3-J22
 Pre-Fuel Load

B. L. Serini
 Uranium Process Licensing Section
 Uranium Fuel Licensing Branch
 Division of Fuel Cycle and Material Safety
 Nuclear Regulatory Commission
 Washington, D. C. 20555



SUBJECT: Additional Information for License to Receive, Possess,
 and Store Special Nuclear Materials.

REFERENCE: Letter 70-2946 from B. L. Serini (NRC) to L. V. Maurin (LP&L)

Dear Mr. Serini,

In the above reference you requested additional information required to complete your review of LP&L's application for receipt and storage of fresh fuel assemblies and neutron sources. This letter transmits the additional information requested so that you may complete your safety evaluation in a timely fashion. The information is provided in the form of an appendix to the application submittal. Also provided is a table of contents for inclusion into the application.

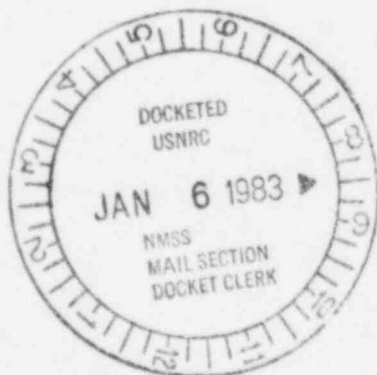
If you have any further questions, please contact R. M. Wilkins.

Yours very truly,

L. V. Maurin

L. V. Maurin

LVM/JBH/bt



FREE EXEMPT

21746

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APPENDIX A

Response to NRC Request for Additional Information.

This Appendix contains the responses to an NRC request for additional information (Reference 1) related to this application for a Special Nuclear Material License.

Reference 1: Letter FCUP: BLS, 70-2946 from B. L. Serini (NRC) to L. V. Maurin (LP&L), 11-22-82.

Appendix A
Additional Information Required for Application
to Receive, Possess, and Store Special Nuclear Materials

1. Please send a clear copy of Pages 22 and 23 from your March 4, 1982 supplement. It should have materials and their dimensions clearly legible.

The requested pages are attached.

2. Please send a diagram and a description of a canned poison element, as referenced on Page 9.1-6 of your FSAR; what is an inner can? The FSAR mentions two sheets of boraflex, but the March 4 supplement shows only one layer. Please reconcile this discrepancy.

The arrangement of the spent fuel storage racks is shown in Figure 2-1. Each fuel assembly compartment is separated from one another by a neutron poison assembly compartment. Contained in each poison assembly compartment are two canned poison elements. A canned poison element consists of a 0.1 inch thick sheet of Boraflex sandwiched between two sheets of 0.031 inch thick stainless steel. This forms the "inner can" referred to on Page 9.1-6 of the FSAR. The outer can of stainless steel, which makes up the boundary of the poison assembly compartment, surrounds both canned poison elements and forms the structural container for the poison material.

The elevation view of the poison assembly compartment is shown in Figure 2-2. Since the poison assembly is open at the bottom and there is a hole at the top, water can flow inside the poison compartment to provide cooling.

The March 4 supplement shows this arrangement in the figures on pages 22 and 23. The close-up sketches are drawn on the basis of an implied symmetry. Thus, although only one boraflex sheet is shown in the close-up figure, it is repeated throughout the rack assembly design due to the symmetrical configuration. The March 4 supplement is therefore consistent with the FSAR description, in that there are two sheets of Boraflex between each assembly.

3. Confirm that the individual who is responsible for radiation safety under this license shall be one who has a B.S. degree in Science and at least two years of working experience in a radiation protection field. He should have the authority to suspend any licensed activity which he believes threatens the health and safety of the employees or the public.

The Health Physics Superintendent is responsible for managing the Waterford-3 Radiation Protection Plan. This individual shall have at least a B.S. degree in Science or Engineering and two years of working experience in a radiation protection field.

The Health Physics Superintendent has the authority and responsibility to stop any job or work within the Radiation Controlled Area in which there is reason to believe that radiation protection controls are not sufficient or are not being followed.

4. The content of the application should indicate that all individuals working with licensed materials shall finish a formal training program in radiation protection prior to working with the licensed material.

All individuals working with licensed materials shall complete a training program covering radiation protection prior to working with the licensed materials.

5. Louisiana Power and Light's training program should include the method used for evaluating its effectiveness and a statement of annual frequency for refresher training.

At the end of the training program each individual is required to pass a written examination to demonstrate an adequate knowledge of the material presented. Performance on these exams, as well as student critiques of the instructor, are used to evaluate the effectiveness of the training program. In addition, audits of the training program material have been performed by independent organizations. A refresher training program is conducted annually.

6. Confirm that safety related records, unless specified in the 10 CFR 20, shall be kept at least two years.

All safety related records will be kept two years or more as specified in 10CFR20.

7. Describe the procedure followed for disposing of radwaste which was produced as a result of licensed activity.

Disposal of radwaste is performed according to an approved procedure.

LP&L expects very little radioactive waste, if any, to be generated as a result of new fuel receipt and storage operations. Any radioactive waste generated would be Low Specific Activity (LSA) dry active waste, mostly in the form of compactibles such as protective clothing. This waste will be collected in plastic bags, labelled appropriately and compacted in 4x6x4 ft. metal boxes.

These boxes will be shipped offsite to a licensed burial facility. Onsite storage is provided for boxes awaiting shipment for burial. Non-compactible LSA is also packaged in these metal boxes for offsite burial.

8. Describe the personnel dosimeter system including:

- a. A neutron dosimetry shall be conducted in accordance with guidance in Reg. Guide 8.14.
- b. Frequency for reading the dosimeter and evaluating individual's exposure trend.

Waterford-3 provides for personnel dosimetry monitoring in accordance with approved procedures. The neutron dosimetry shall be performed in accordance with Reg. Guide 8.14.

Neutron TLD's, when issued as required by Reg. Guide 8.14, and self-reading dosimeters will be read at least daily to track exposure trends. Beta-gamma TLD's will be read at least quarterly to verify results from the self-reading dosimeters. Extremity and other special whole body TLD's will be read more frequently than quarterly as required by the specific activity. There will be an approved procedure which provides guidelines for the frequency of reading TLD's more frequently than quarterly.

9. Describe the surface survey and an airborne concentration monitoring program in the facility. If they are not applicable, please state so.

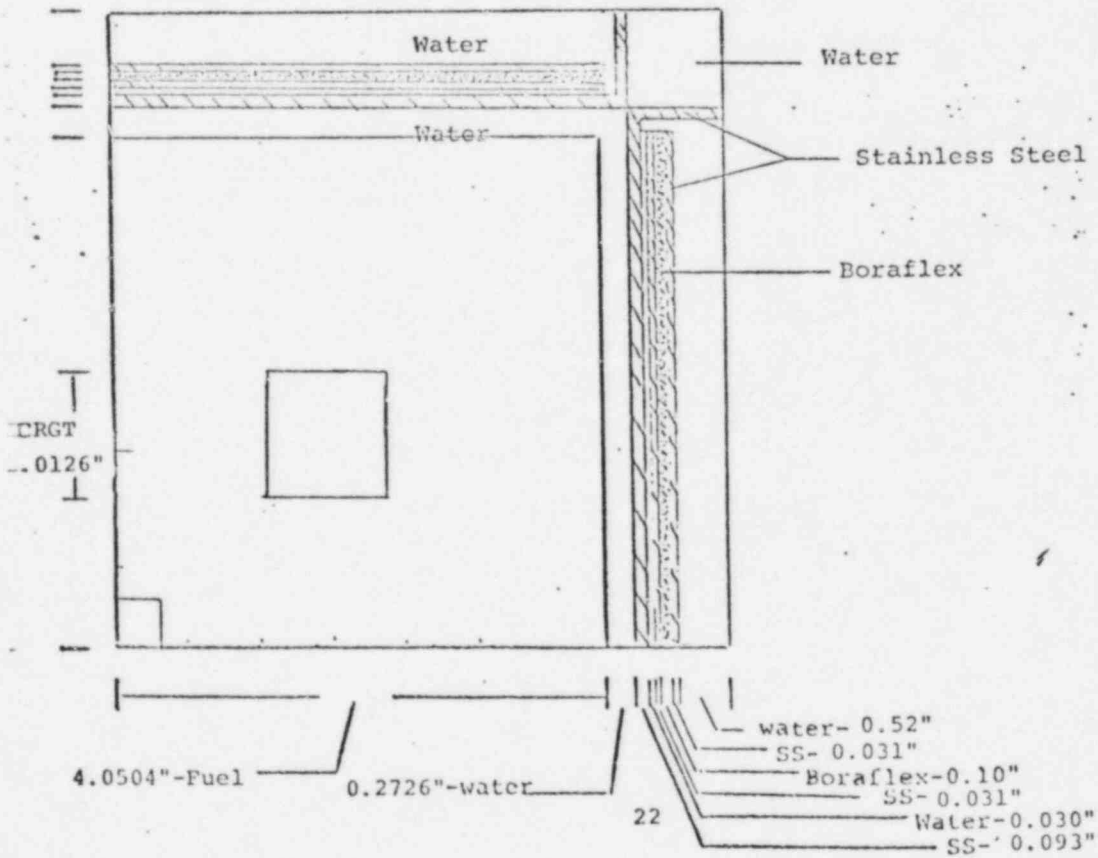
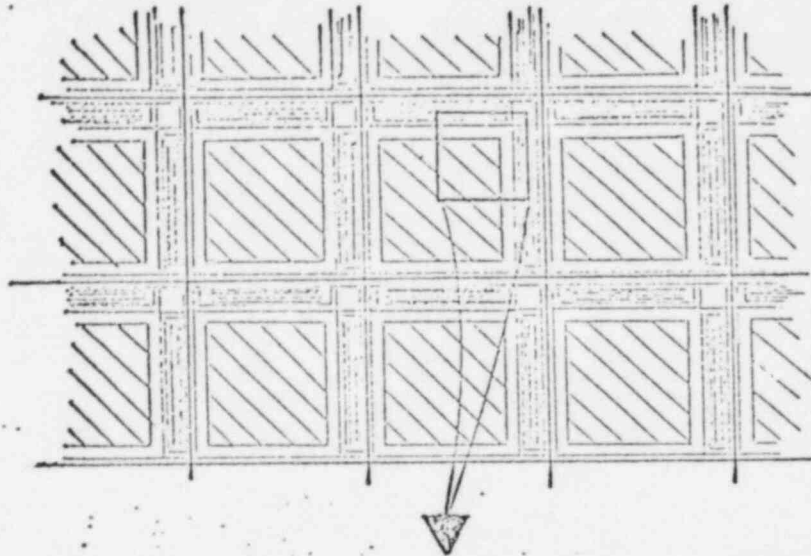
All new fuel is surveyed upon receipt. Swipe surveys for removable surface contamination are taken on the shipping container and each fuel assembly. These swipes are counted for alpha and beta-gamma contamination. A beta-gamma radiation survey is also performed for each assembly and container. Local air samples using portable equipment are only taken as necessary based on swipe survey results. Areas are posted and barricaded as necessary based on survey results.

The installed radiation monitoring system provides seven area radiation monitors in the fuel handling building. These monitors alarm locally and in the control room. Two fuel handling building exhaust monitors provide continuous monitoring of airborne radioactivity. The exhaust monitors detect particulates, iodines, and noble gases and alarm in the control room.

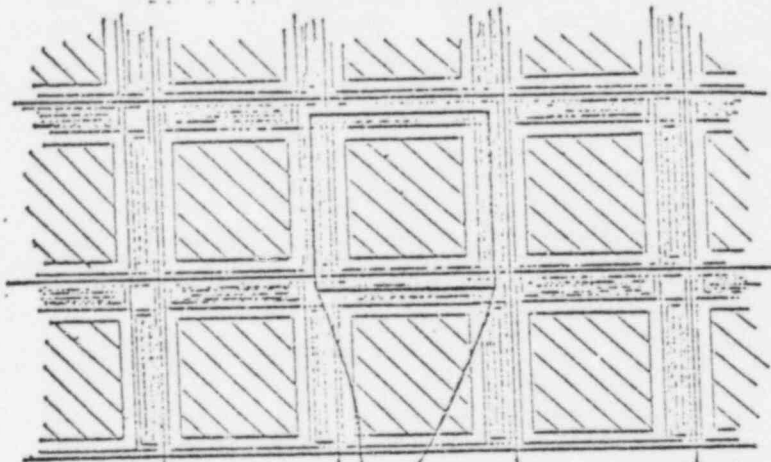
10. Confirm that all the licensed activity shall be conducted in accordance with an approved operating procedure.

All licensed activity shall be conducted in accordance with an approved operating procedure.

PDO CALCULATIONAL MODEL
 FOR THE
 WATERFORD NUCLEAR PLANT
 SPENT FUEL STORAGE RACKS



PDQ EXPANDED FUEL CENTERED
CALCULATIONAL MODEL
WATERFORD NUCLEAR PLANT
SPENT FUEL STORAGE RACKS



Dimensions same as for Figure 1.1-1
extra stainless steel box wall
represented on two sides as designed

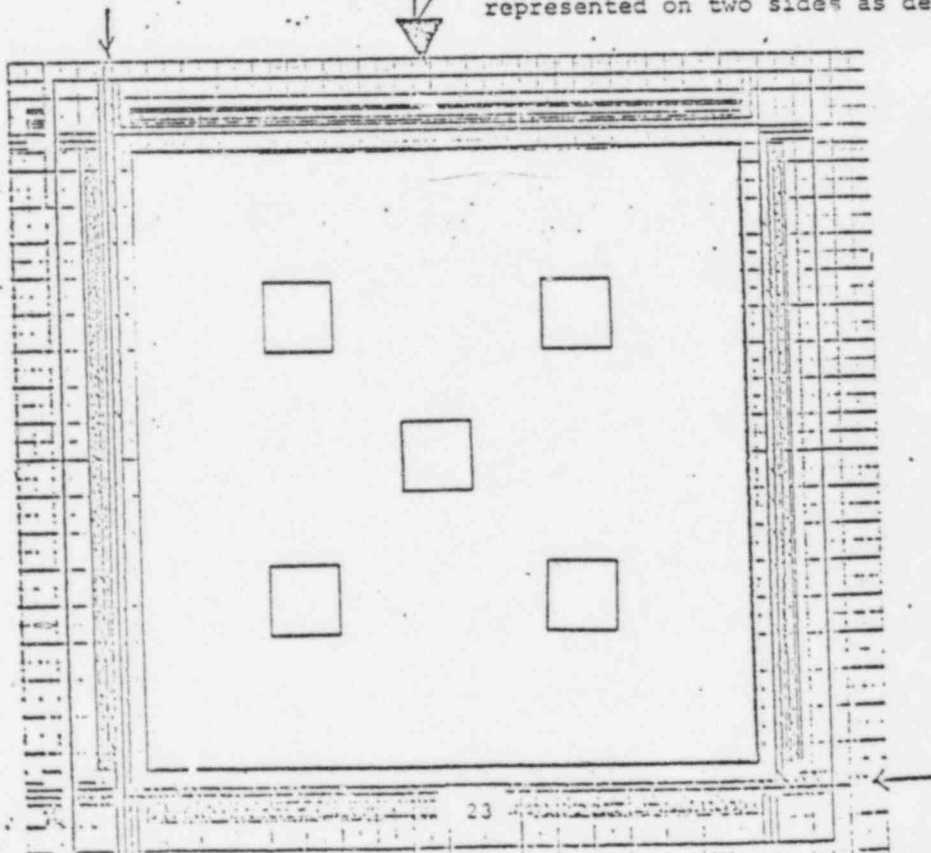
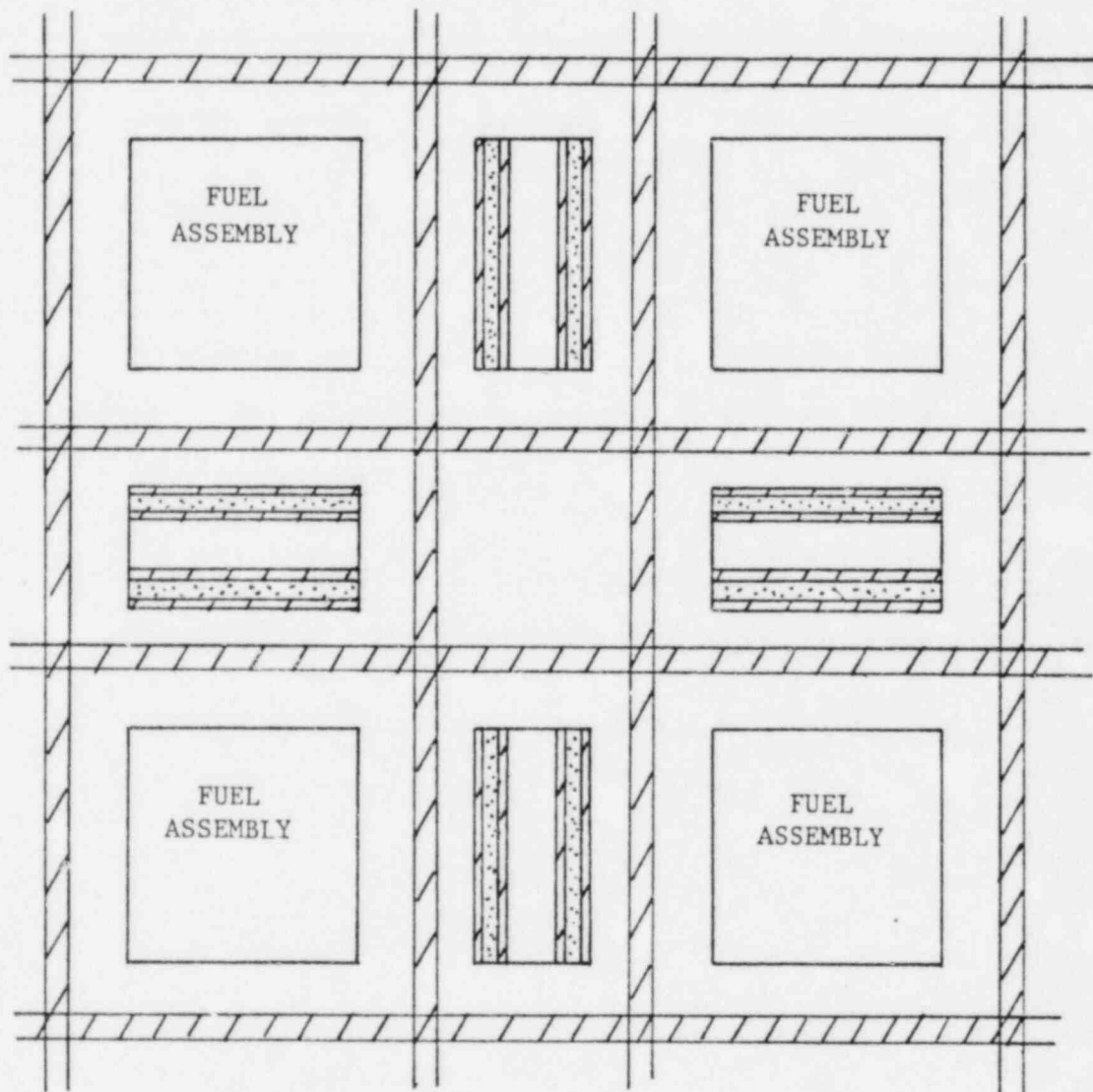





FIGURE 2 - 1

SPENT FUEL STORAGE RACK ASSEMBLY DESIGN



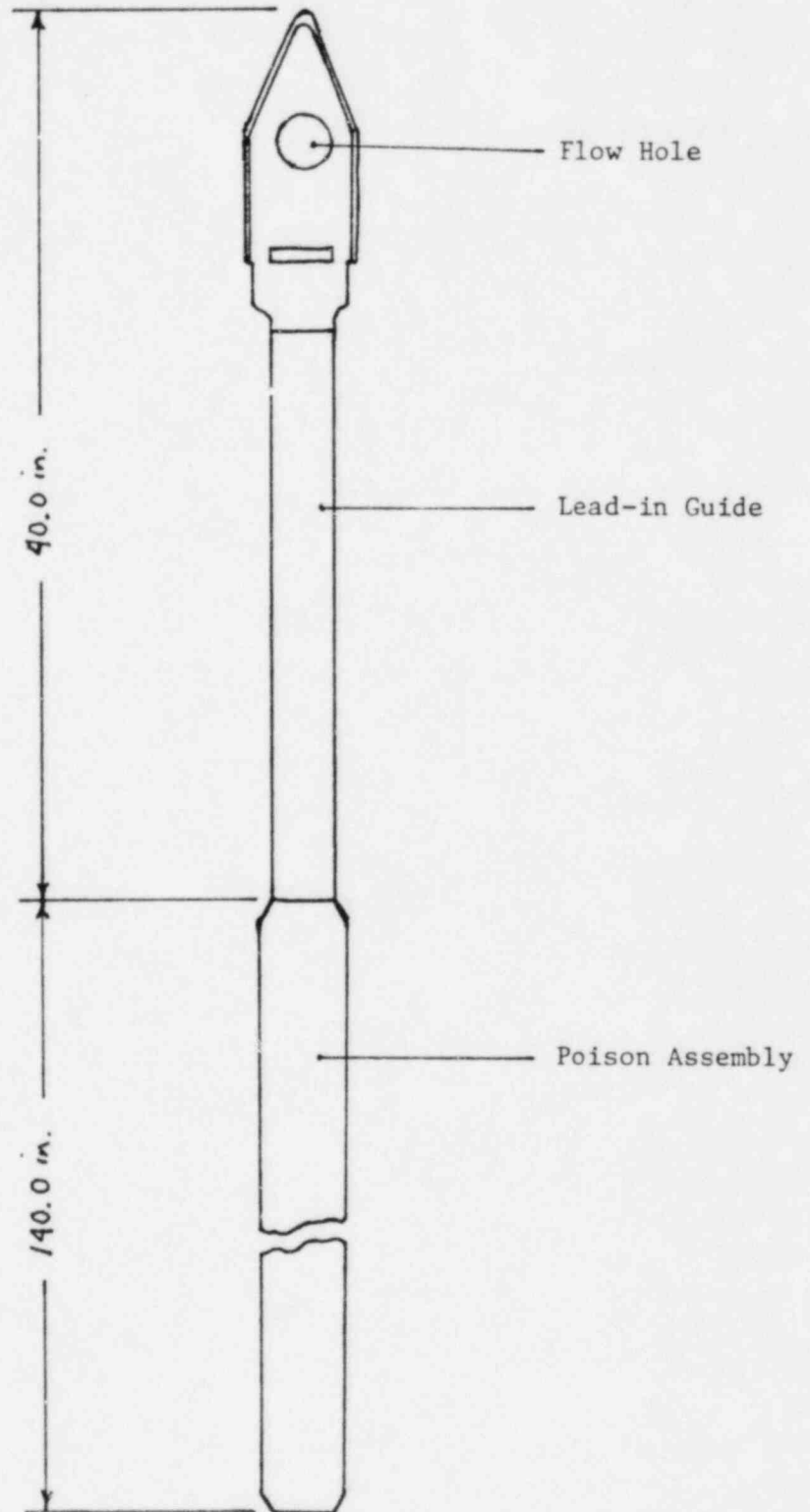
STAINLESS STEEL	
BORAFLEX	
WATER	

NOT TO SCALE

FIGURE 2-2

Poison Assembly Compartment

Elevation View





A. PLEASE NOTE FACSIMILE LOCATIONS ON THE BACK

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

"PLEASE"

FACSIMILE SERVICE REQUEST

USE DARK PEN WHEN FILLING OUT
AND REMOVE ALL STAPLES.

DATE: 11/22/82

MESSAGE TO: Bob Wilkins

TELECOPY NUMBER: 504-363-8945
AUTOMATIC MANUAL

VERIFICATION NUMBER: 504-363-8962

NO. OF PAGES 7 EXCLUDING REQUEST SHEET DO YOU WANT ORIGINAL COPIES BACK?

CITY & STATE: New Orleans, Louisiana YES
NO

MESSAGE FROM: Barry L. Serini

BUILDING HILLSTE OFFICE PHONE 74510 MAIL STOP 35655

SPECIAL INSTRUCTION:

+ NOTE TO RECIPIENT:
+ IF THERE ARE ANY PROBLEMS
+ CALL (301) 427-4287.

+ FOR OFFICE USE ONLY:

+ SENDER'S INITIALS: BS

SERVICE: IMMEDIATE OTHER

+ CERTIFIER'S NAME: _____

11/22
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