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

Docket No. 50-320

January 28, 1980

Captain Daniel Clishman
Evergreen International Airlines
3185 Crestview Drive
Newberg, Oregon 97132

Dear Captain Clishman:

In the interest of facilitating your appearance at the February 25, 1980 hearing regarding Three Mile Island Nuclear Station, Unit 2, I believe that advance submission of some of preliminary, background information in the form of written questions and answers would be beneficial. Accordingly, I would appreciate your response to the attached questions. Please be as direct and complete as possible and do not feel constrained by the limited space provided; use additional sheets as necessary. You should bear in mind that you will be asked to swear to (or affirm) the truth of the statements made in your responses, at the hearing. These responses will be considered as part of your direct testimony and will, therefore, become part of the record. You will have an opportunity at the hearing to make necessary corrections or additions to these responses but this should be kept to minor matters. Your responses need not be typewritten; I will have them typed in my office.

In order to expedite the return of your responses, please call me to make appropriate arrangements. My phone number is (301) 492-8658. If I can't be reached, please contact Mr. Stuart Treby at (301) 492-7881.

Sincerely,

Lawrence J. Chandler
Counsel for NRC Staff

Enclosure: As stated

and that by January 1, 1981, the acceptance criteria will be 0.5% free water (by volume) or 1 gallon, whichever is smaller. Governor Ray asked if the NRC could connote approval of the licensee's dewatering program in writing and I indicated that we would provide her with a letter indicating our review and approval. The NRC letter of approval should pave the way for effecting shipments of TMI-2 spent dewatered resin to the Richland, Washington burial site.

R. Weller

R. Weller
Senior Nuclear Engineer
TMI-2 Support

Enclosure: Three Mile Island Unit II Solid Radioactive
Waste Meeting Agenda

cc: R. Vollmer
R. Bangart
TMI Staff

Mtg w/ State of Wash. 1/11/80 From R. Wells

THREE MILE ISLAND UNIT II

SOLID RADIOACTIVE WASTE

MEETING AGENDA

I. INTRODUCTION

A. OVERVIEW OF SHIPPING STATUS

B. SUMMARY OF TMI-II SOLID WASTE

II. DEWATERING PROGRAM

A. OBJECTIVE

B. ELEMENTS OF PROGRAM

C. RESULTS

D. IMPLEMENTATION AND QA VERIFICATION

III. SHIPPING SUMMARY

A. PROPER SHIPPING PACKAGE

B. PROPER TRANSPORTATION VEHICLE

C. SATISFY SHIPPING AND BURIAL GROUND REQUIREMENTS

THREE MILE ISLAND

COMPLETE SOLID WASTE SUMMARY*

SOURCE/TYPE	AMOUNT GENERATED*	AMOUNT SHIPPED*	NO. OF SHIPMENTS	TOTAL ACTIVITY SHIPPED (CURIES)	GENERATION RATE PER MONTH	NO. PER SHIPMENT
1. MISC. TRASH - COMPACTED (55 GAL. DRUM)	1,173	1,113	7	23.4	30	150
- NONCOMPACTED (LSA BOX - 4x4x8)	129	117	11	3.5	24	18
2. SOLIDIFIED DECONTAMINATION FLUID	73	32	1	2.5	9	90
3. SPENT RESIN LINERS	47	0	0	0	9	1
4. SPENT FILTER LINERS	7	0	0	0	1	1

* FROM MARCH 28, 1979 TO JANUARY 3, 1980

PROJECTED SHIPMENTS TO NECO

	PACKAGE TYPE OR FORM	JULY 1979 PREDICTION	JANUARY 1980 PREDICTION
COMPACTED MATERIAL	55 GAL. DRUMS	2/MO.	2/MO.
NONCOMPACTED MATERIAL	4x4x8 BOX		
SOLIDIFIED DECONTAMINATION FLUID			
55 GAL. DRUMS	55 GAL. DRUMS	1/YR.	1/YR.
100 FT^3 LINERS	100 FT^3 LINER	1/WK.	0
130 FT^3 LINERS	180 FT^3 LINER	3/YR.	0
DEWATERED LINERS	4' x 4'	2/WK.	2/WK.
	6' x 6'		

TMI UNIT II

SOLID WASTE SHIPPING CATEGORY SUMMARY

DEWATERED LINERS

READY FOR SHIPMENT

	CONFIGURATION	NUMBER	AVERAGE CURIES PER LINER	SHIPPING CATEGORY
EPICOR I SPENT RESIN	6' x 6' LINER	4	2.1	LSA TYPE A
		10	7.3	LSA TYPE B
EPICOR I SPENT FILTERS	6' x 6' LINER	7	0.0002	LSA TYPE A
SECONDARY SYSTEM RESIN	6' x 6' LINER	14	0.003	LSA TYPE A
	4' x 4' LINER	1	0.0012	LSA TYPE A

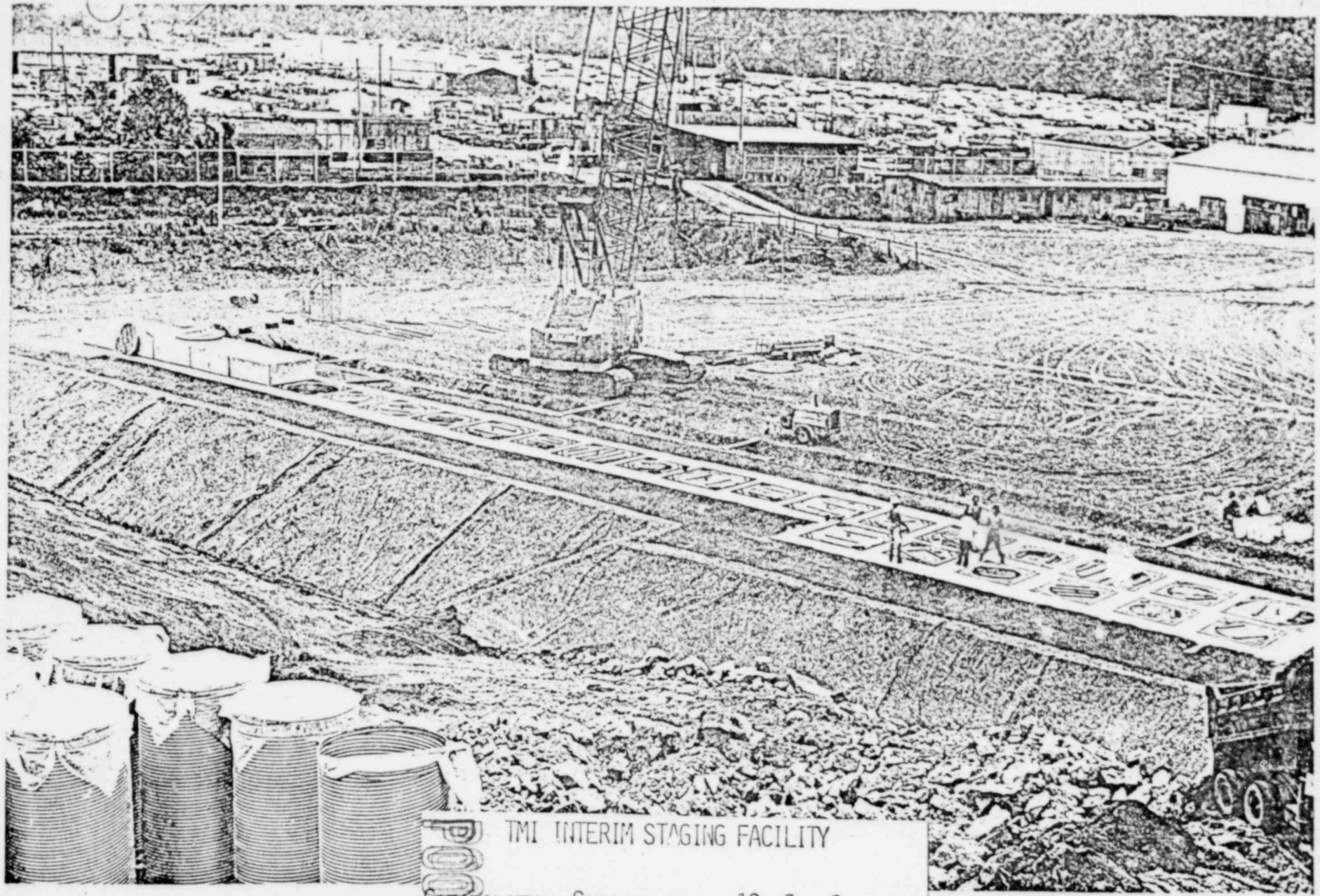
TO BE PREPARED FOR SHIPMENT

MISC. FILTERS	6' x 6' LINER	5	8	LSA TYPE B

SHIPPING CATEGORY REQUIREMENTS

PER 10 CFR 71 AND 49 CFR 173

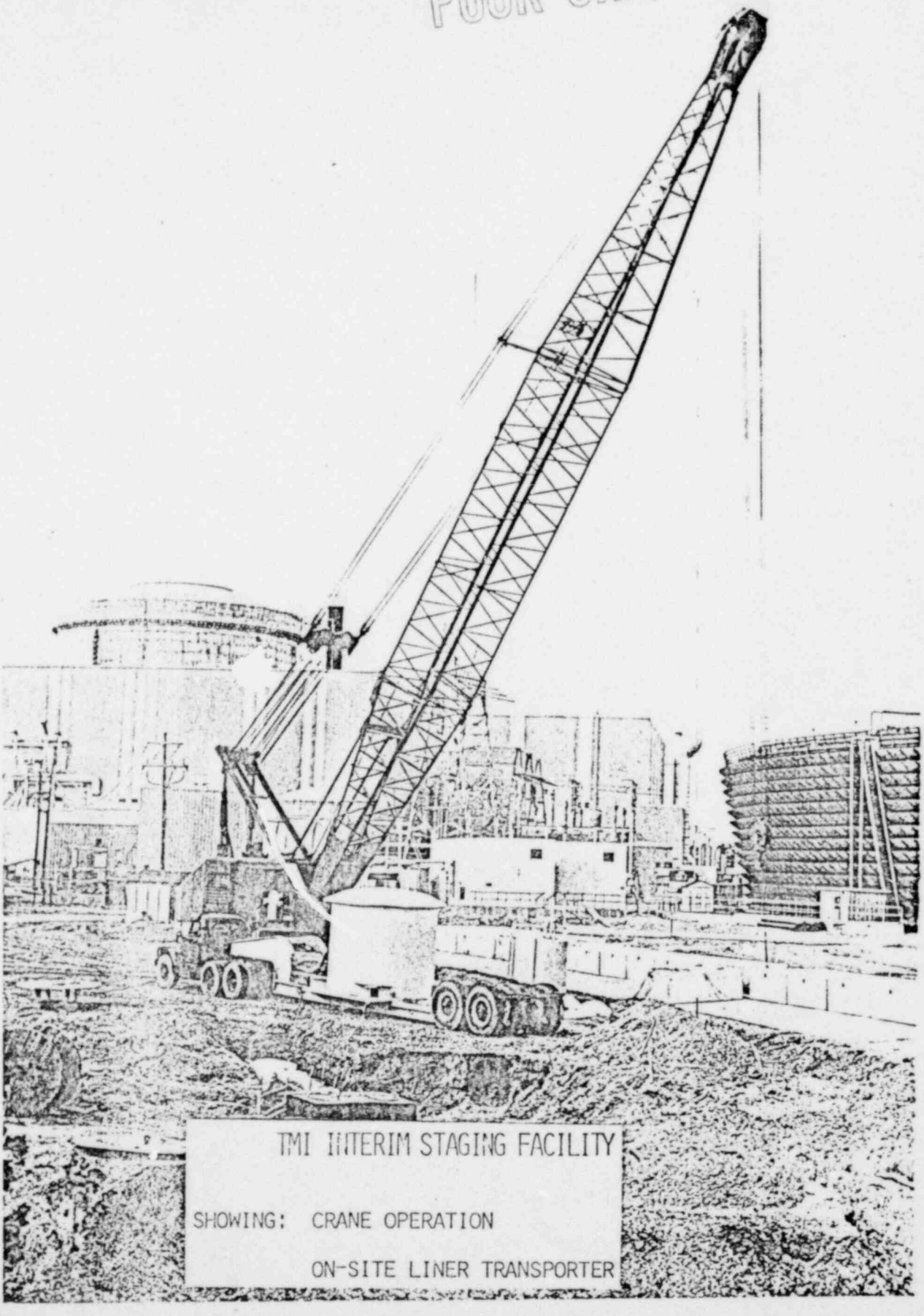
TRANSPORT GROUP	CONCENTRATION FOR LSA	TYPE A QUANTITY LIMIT	TYPE B QUANTITY LIMIT
I	< 0.0001 MCI/GM	0.001 CI	20 CI
II	< 0.005 MCI/GM	0.05 CI	20 CI
III	< 0.3 MCI/GM	3 CI	200 CI
IV	< 0.3 MCI/GM	20 CI	200 CI



TMI INTERIM STAGING FACILITY

CAPABILITY: STAGING FOR: 12 6 x 6 LINERS
18 4 x 4 LINERS

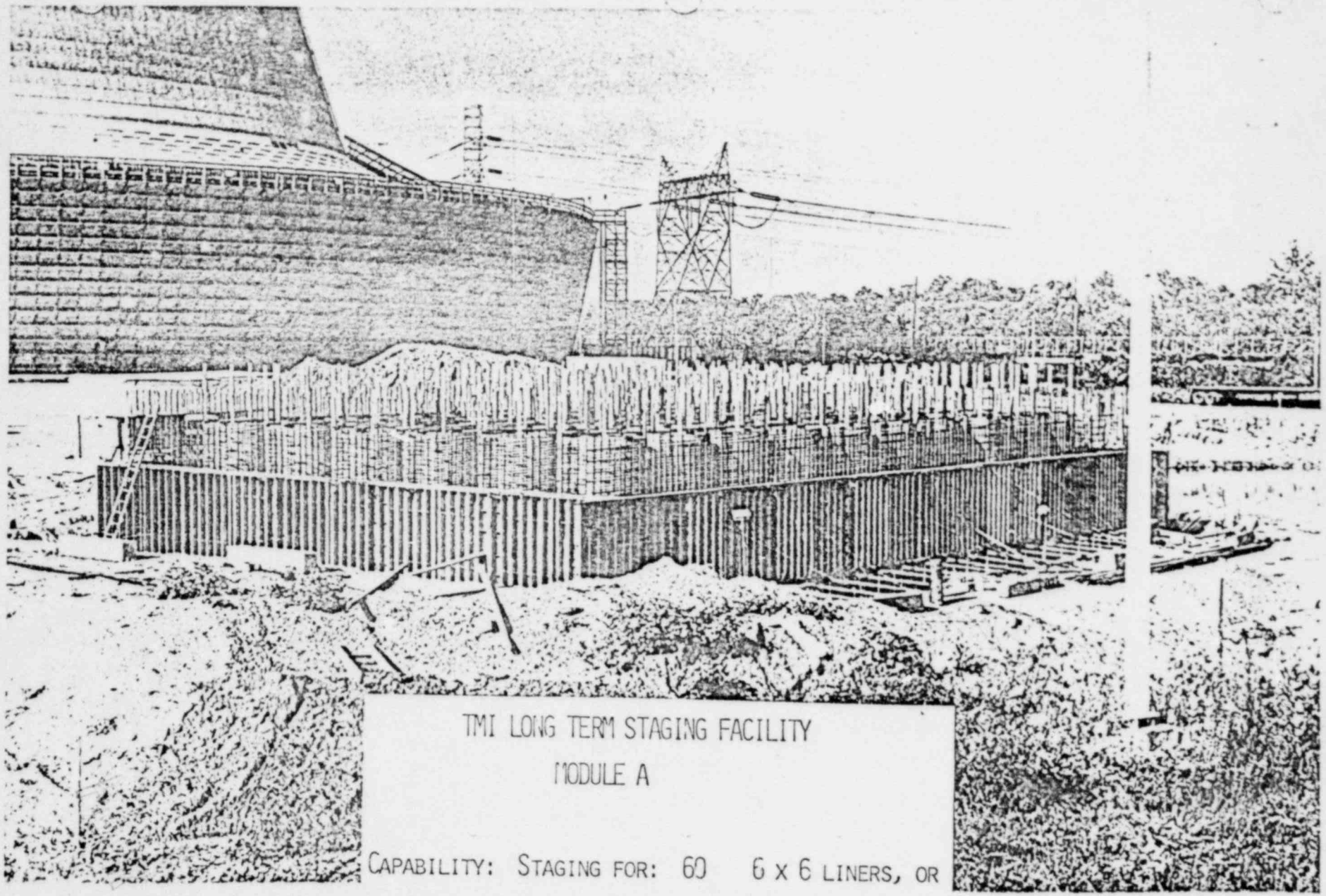
STATUS: 6 x 6 LINER LOCATIONS: ALL FILLED
4 x 4 LINER LOCATIONS: 17 FILLED



TMI INTERIM STAGING FACILITY

SHOWING: CRANE OPERATION

ON-SITE LINER TRANSPORTER



TMI LONG TERM STAGING FACILITY

MODULE A

CAPABILITY: STAGING FOR: 60 6 x 6 LINERS, OR

120 4 x 4 LINERS

STATUS: 6 x 6 LINER LOCATIONS: 1 FILLED

4 x 4 LINER LOCATIONS: 0 FILLED

(SOME CONSTRUCTION IN PROGRESS)

TMI UNIT II

DEWATERING PROGRAM OBJECTIVES

1. TO UNDERSTAND THE MECHANISM OF WATER RETENTION IN A LINER.

2. TO DETERMINE THE PRECISE AMOUNT OF WATER IN A LINER BEFORE AND AFTER DEWATERING.

3. TO PERFORM VARIOUS TESTS TO DETERMINE THE SUPERIOR LINER DESIGN AND PROCEDURE FOR MAXIMUM DEWATERING EFFICIENCY WITHOUT ALTERING RADIONUCLUDE RETENTION.

4. TO IMPLEMENT THE DEWATERING PROCEDURE.

5. TO PROVIDE A QUALITY ASSURANCE PROGRAM FOR DEWATERING VERIFICATION.

ELEMENTS OF DEWATERING PROGRAM

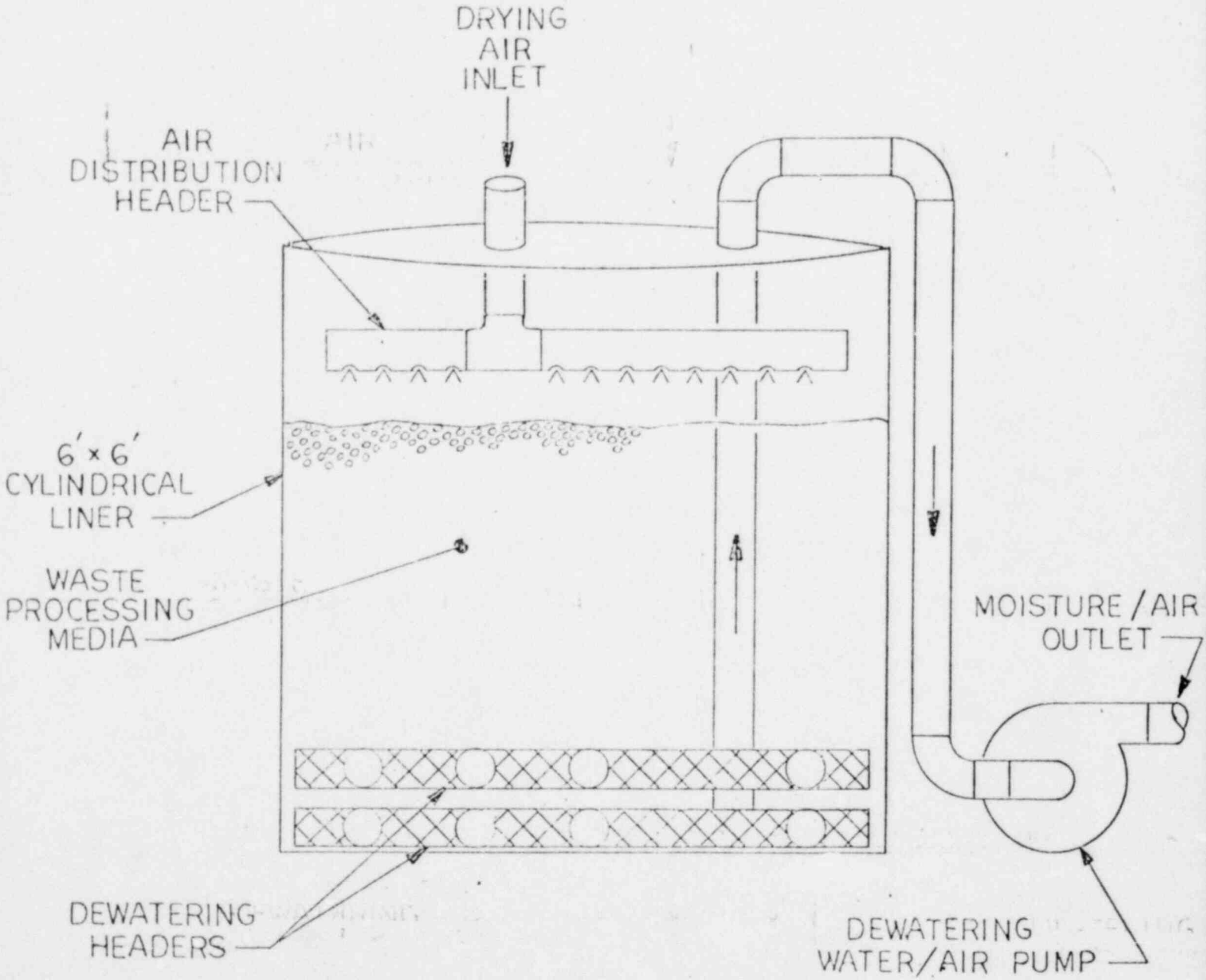
1. MECHANISM OF WATER RETENTION
   A. ANALYTICAL RESEARCH
   B. LABORATORY TESTING

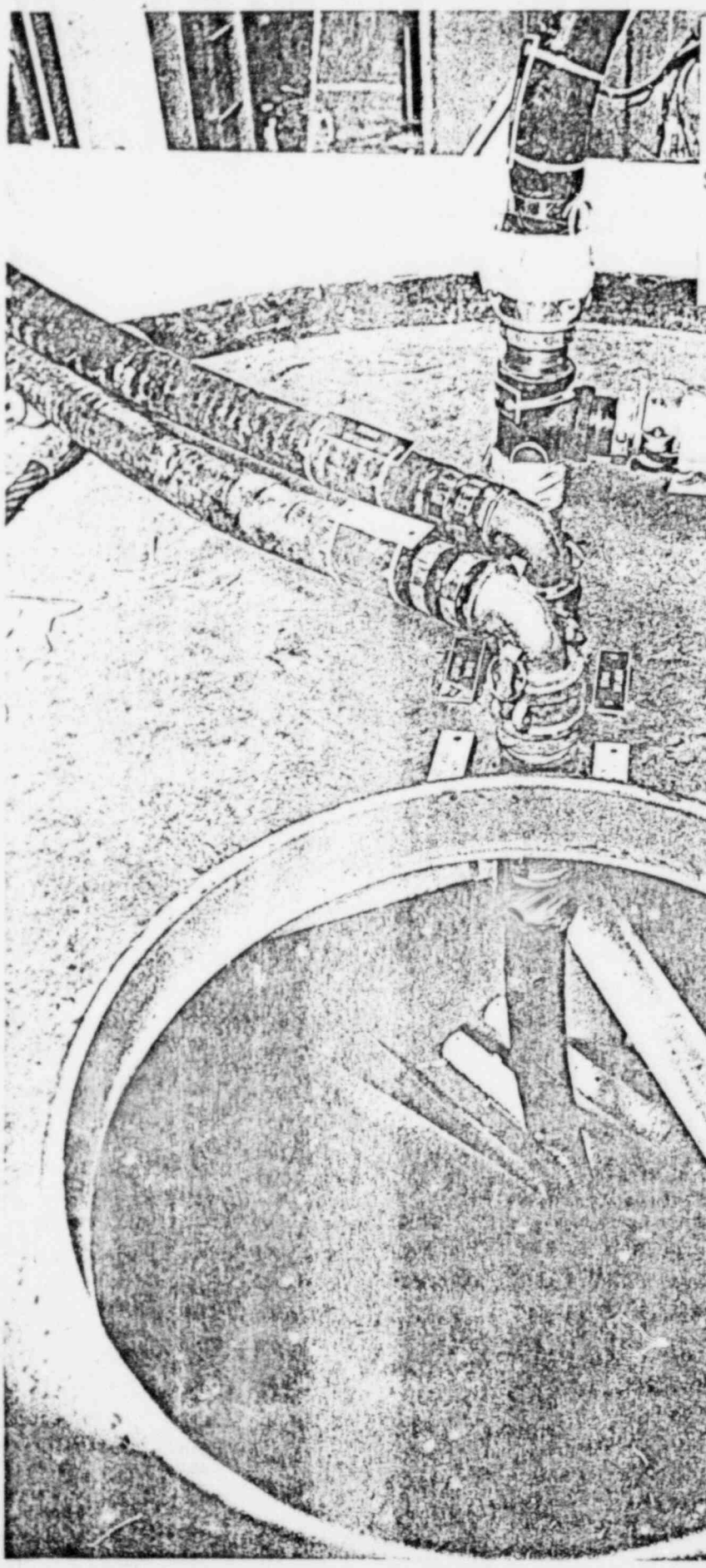
2. METHOD OF WATER REMOVAL
   A. LABORATORY TESTING
   B. LINER DESIGN
   C. EXPERIMENTAL TESTING
      (1) ENERGY VARIATION: HYDRAULIC
      PNEUMATIC
      THERMAL
      MECHANICAL
      (2) TIME VARIATION
   D. SUPERIOR PROCEDURE DEVELOPED

3. PROCEDURE IMPLEMENTATION
   A. PROCEDURE PREPARATION AND REVIEW
   B. MANAGEMENT AND NRC APPROVAL
   C. PROCEDURE USE

4. QUALITY ASSURANCE VERIFICATION

TMI UNIT II
TYPICAL WASTE PROCESSING LINER





TYPICAL LINER

(WITHOUT WASTE PROCESSING MEDIA)

SHOWING: PROCESS LINES

INPUT DISTRIBUTION HEADER

DEWATERING HEADER

(1) gross count, background count and net count per minute (after subtraction of background);

(2) statistical data relating to quality control, graphs of gross counts per minute as a function of gamma ray energy and a profile of count-rate across the body of the person being counted;

(3) a graph of count-rate compared with background and gamma spectra of nuclides identified in the person being counted, and a graph of statistical quality control data.

Within the next few months, NRC will publish a document (NUREG-0636) which will describe the whole body counting system used in Middletown, the analytical procedures employed, the quality assurance program, the results of each whole body count (excluding individual identifying information), an interpretation of the results (similar to the general information in this letter) and samples of how the detailed data on file are interpreted. A copy of that NUREG will be supplied to each participant in the program.

We hope this letter helps you understand the technical meaning of the analyses that were performed and the logic behind the statements made in your Certificate.

Sincerely,

/s/

Barbara G. Brooks
Health Physicist
Licensee Operations Evaluation Branch
OMPA

Enclosures: as stated

cc: Ms. Jane Fisher
Bureau of Radiation Protection
Department of Environmental Resources
Commonwealth of Pennsylvania
P. O. Box 2063
Harrisburg, Pennsylvania 17120

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