

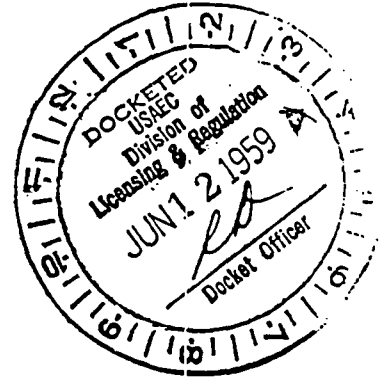
**MALLINCKRODT  
NUCLEAR  
CORPORATION**

70-36  
File of  
SAINT LOUIS 7, MISSOURI • U.S.A. • CENTRAL 1-8980

PLANT  
HEMATITE, MISSOURI

June 5, 1959

Mr. Iyall Johnson,  
Chief, Licensing Branch,  
Division of Licensing & Regulation,  
U. S. Atomic Energy Commission,  
Washington 25, D. C.



Dear Mr. Johnson:

The nuclear alarm system referred to in Dr. Leaders' letters to you dated November 28, 1958, and January 22, 1959, has been installed and tested and is now in operation at the Hematite Plant. The nuclear alarm system is tested once a week by applying a radioactive source to one of the radiation detectors in the plant area. Periodic inspections of the detectors are made throughout the week to determine that they are in proper functioning order.

Enclosed you will find a series of instruction sheets which have been given to the personnel of the Hematite Plant. You will notice that the instructions have been sub-divided with one sheet of instructions detailing the emergency procedure to be followed by all personnel on the sounding of the alarm. Detailed instructions for the Emergency Director have not been distributed to all personnel but have been distributed to all persons who might be called upon to perform as Emergency Director. These procedures are presently stored in the evacuation control center, the tiled barn, which is about 500 feet from the nearest processing area.

It is anticipated that routine drills will be conducted in the near future to familiarize the personnel with the procedures to be followed in the event there is a nuclear incident.

If you have any questions concerning this alarm system, please do not hesitate to contact us.

Very truly yours,

MALLINCKRODT NUCLEAR CORPORATION

EDN/wt  
Enc.

*E. D. North*  
E. D. North, Manager,  
Hematite Plant

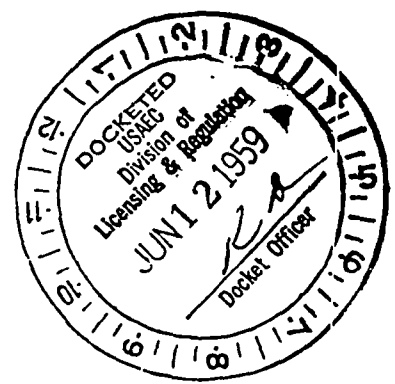
E-180

20-36  
*File by*

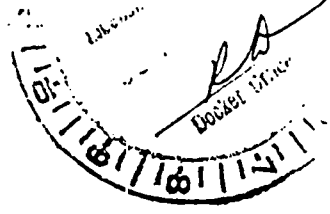
The following instructions are hereby effect.  
Attached are your instructions. If you have  
any questions, and you require clarification, please  
do not get the instructions.

The instructions are hereby effect.  
The Non-... may be... of the system  
in the various...  
Know your instructions and follow them carefully. It will be too  
late to study them after the alarm...  
Routine drills will be conducted in the near future.

E. D. North



76-56  
Page 4.



ALARM--

ACTION--

On sounding of alarm, immediately unlock the two main gates.  
Evacuate to tiller barn--direct personnel to assembly area.  
If visitors are in the area, see that they are evacuated to barn with other personnel.  
It is of greatest importance that all personnel are evacuated from the plant. If necessary, personnel will be carried from the plant. Do not leave anyone behind!

On sounding of alarm, immediately unlock the two main gates.  
Evacuate to tiller barn--direct personnel to assembly area.

If indications of a nuclear incident are observed (blue flash, tank foaming over, other unusual activity)--leave building by a path that avoids approach to the center of activity. Inform Emergency Director of the indication as soon as he or his representative can be contacted in barn.

If visitors are in the area, see that they are evacuated to barn with other personnel.

It is of greatest importance that all personnel are evacuated from the plant. If necessary, personnel will be carried from the plant. Do not leave anyone behind!

Emergency Director will be person present who is highest on the following list:

- Plant Manager
- Acting Plant Manager
- Process Engineer, Green Room
- Process Engineer, Blue Room
- Foreman
- Assistant Foreman

The Emergency Director will take full charge until such time as he is relieved by competent authority. All others will follow his direction to: (1) protect personnel, (2) protect property.

70-56  
File 4

1959

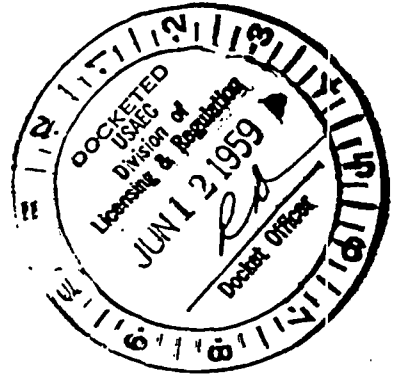
...

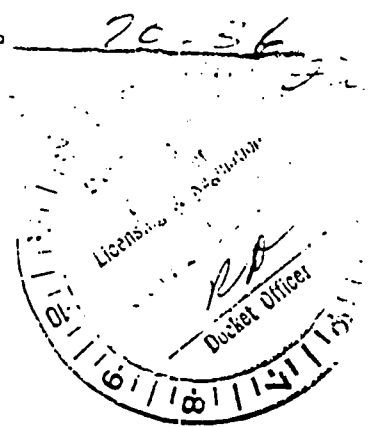
1959

...

...

Take station at the intersection of the highway and main drive.  
Do not permit anyone to enter plant area unless directed to do  
so by the Emergency Response.





ALARM--

ACTION--

... If you see ... check alarm ... on way out to ... monitors ... been tripped.

See that guard opens ... gates for personnel leaving area.  
Send all personnel to barn.

Post guard at main driveway at highway to prevent anyone entering plant area until "All Clear" has sounded.

silence alarm, (silencing switch in barn).

insist on quiet and order.

Determine that all personnel have been evacuated--ask if anybody is missing. All personnel must be removed from plant. If necessary, personnel will be carried out, using proper first aid procedures.

Obtain low level monitoring device (marked LOM) and determine amount of radioactivity in barn area. If reading is above 50  $\mu\text{r/hr}$ , remove personnel to safe location upwind from plant. Do not approach plant. Take monitoring devices along.

Collect all film badges, have the films removed from the metal badge and held for Mr. Miller. Keep separate from badge holder.

It should by now be possible to determine that the alarm was:

A. A true nuclear incident

Indications are high level radioactivity - radioactivity on materials in film badges, knowledge of unusual incident by personnel such as (1) bright, blue flash (2) unusual activity in vessel or tank, etc.

B. A false alarm caused by malfunction in the system.

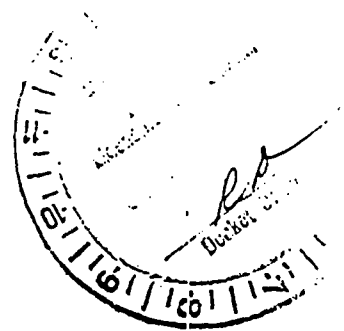
Signs of a false alarm will be the absence of indications in "A"--no radioactivity in plant or badges and no observed incident in plant.

If it appears that there was a nuclear incident, obtain plan "A" (Nuclear Incident) from assembly point office and put it into effect.

If it appears that there was no nuclear incident, obtain plan "B" (Suspected Malfunction in Nuclear Alarm System) from assembly point office and put it into effect.

70-36  
File

EMERGENCY DIRECTOR



If it appears that a nuclear incident has occurred, call the following persons in order listed:

	<u>Home</u>	<u>Office</u>
T. D. North	Americus, Ill., 673	Hematite
L. W. Sauer	St. Louis, Mo., JA-2-6102	463
G. W. Tompkins	St. Louis, Mo., TR-2-7686	242
J. W. Miller	St. Louis, Mo., HA-9-3644	491
F. W. Moore	St. Louis, Mo., WO-2-4397	471

Relate the occurrence to the first person contacted--what happened, radiation detector readings, visual evidence, etc. If the person contacted agrees that an incident has occurred, or if none of the above can be reached, take the following steps:

- (1) Dispatch all personnel to Barnes Hospital, Emergency Entrance on Kingshighway Blvd. Collect all film badges before they leave plant.

(Note:-- This procedure will be modified at a later date when Indium foil has been placed in film badges. Then affected personnel only will be sent to Barnes.)

- (2) Notify the following doctors that a nuclear incident has occurred and that \_\_\_\_\_ persons are on the way to Barnes Hospital, Emergency Entrance:

Dr. H. Haffner	JE-3-9782 (Office), St. Louis, Mo. WY-1-0113 (Home), St. Louis, Mo.
Dr. N. P. Knowlton, Jr.	OL-2-4935 (Office), St. Louis, Mo. WY-3-1352 (Home), St. Louis, Mo.
Dr. J. B. Shapleigh II	FR-1-3737 (Office), St. Louis, Mo. WO-1-4533 (Home), St. Louis, Mo.

- (3) Call for additional manpower by notifying:

George W. Rapp	YE-7-2230
Bennie Dunn	833J, DeSoto, Mo.
Louis Schuckebrock	Atlas-7-2124, Arnold, Mo.
Obie Young	YE-7-5822

7000  
Plan  
Nuclear

... notified to Barnes Hospital, St. Louis, Mo., a guard to be placed (report to Barnes Hospital).

- (4) Notify E. D. North, Waterloo, Ill., 673  
R. W. Shearer, St. Louis, Mo., JA-1-6102
- Office  
Hematite  
463

The first person contacted will call the USAEC, Oak Ridge, Tennessee, 5-6611, extension 7988 or 5-7436 and inform them of the occurrence. This is that all persons on the following list have been notified:

	<u>Home</u>	<u>Office</u>
E. D. North	Waterloo, Ill., 673	Hematite
R. W. Shearer	St. Louis, Mo., JA-1-6102	463
J. W. Miller	St. Louis, Mo., HA-9-3644	491
F. M. Balmore	St. Louis, Mo., WO-2-4397	471

- (5) When the off duty guard arrives, dispatch guard who was on duty at the time of the occurrence to Barnes Hospital.

When Emergency Director is properly relieved, he will report to Barnes Hospital.

#### Miscellaneous Instructions

Do not give information concerning the occurrence to anyone. If asked for information, state that none is available at the present time, but that a statement will be made later.