

PRNC005

PRNC-5S

(Health Physics)

Copy So.ae

FIRE PLAN

MAYAGUEZ

Puerto Rico Nuclear Center

Operated By

University of Puerto Rico

For

U.S. Atomic Energy Commission

Mayaguez, P.R.

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FIRE PLAN

(uavacuEz)

Prepared By

Juan José Soltero

Puerto Rico Nucle

Operated By

university of Puerto Rico

for

U.S. Atomic Energy Comms

Mayaguez, P. Re

center

on

RKC - 5

(Health Physics)

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£. Ist. pire croup

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5. Reactor Supervisor

B. During Non Working Hours

1, First Person to See the Fire

Rules That Mist Bo Observed at AL1 Times tn the PRNC

area

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PUERTO RICO NUCLEAR CENTER

Operated by

UNIVERSITY OF PUERTO RICO

for

U.S. ATOMIC ENERGY COMMISSION

?AUTHOR IZAT OH

This Fire Plan for the Kayaguez Area has been revised
and approved by the Safety Committee. It is hereby approved

and made operative as of January 7, 1963.

Gna

rector

---Page Break---

GENERAL INFORMATION

The following fire plan has been prepared to protect
Personnel and property within the area of the Puerto Rico
Nuclear center, located on State Road #108, KI 1.7 (Mtradero
Ra.)

Fire protection equipment consists of 19 saall C02 ex=

Hngutshers, chat range from 5 lbs. co 8 lbs.; eight 25 1b.

(002 fire extinguishers; eight 20 1b. C02 fire extinguisher:

2 vater fire extinguishers and 2 foun fire extinguishers.

Te also has a fire vater ctreute well distributed through-

Out the building. Within the vater cfreuit there 1s « 100,000

gal. water reservoir, a fire water pump, tvo fire hydrants,

?etght fire hose stations and four 1 1/2 inch fire hose connec

eons:

---Page Break---

1. FIRE pergape

?The fire brigade vill consist of a fire officer, assistant fire

officer, and six groups appointed by the Associate Director. Each

?sroup vill have @ group leader and an assitant group leader

A. Bize officer

Duties:

Develop written fire protection procedures.

2. Assign personnel to specific fire duties
3. Establish locations of fire extinguishers.
4. Inspect and maintain fire fighting equipment.
5. Provide space for, and supervise, storage of flammable material
6. Supervise construction of partitions, tables, shelves, etc., made of flammable materials
7. To make provisions for training personnel.
8. To report directly to the Health Physics Division

Head on fire safety matter.

B. Assistant Fire officer

duties:

- 1, To aid the fire officer.
- 2, WAI1 take full responsibilities of the fire brigade when the fire officer is absent.
3. To check that fire department has been called during an emergency.

©. Group Leader

put

1. WAIL instruct his group members of their duties

in case of « fire

agency.

---Page Break---

?4

2. WAIL have ready, at all times, the necessary equipment to carry out his duty.

3. WAIL make periodic inspection of equipment

4, WAIL inform the fire officer of any equipment

Which is needed

5. After an emergency he will submit a written report to the fire officer of the duties performed by his group.

6. During the absence of anyone from the group, the

Leader, or asst. group leader, will delegate some-

one (who does not belong to the fire brigade) to

take full responsibilities of the duties of the

missing person.

NOTE: Make sure that the person knows, and understands, the responsibilities of the missing person.

?lao, when making the calls to the local fire department, make sure you are understood. speak clearly at all times.

- Assistant Group Leader

responsibilities

1, WAAL assist the group leader in his work.

2. WILL take full responsibilities of the group when the group leader is absent.

B. Brigade Groups Functions and Duties

1, Communication Group (3 persons)

4. In case of fire, or an emergency when the fire alarm

Sounds, they will call the local fire department, and

the college guards.

---Page Break---

a

b, Telephone operator will remain at her place, ready

to receive orders from the communication group

leader.

. ELgst Aid and Health Physics Group (8 persons)

4) To attend and give first aid to all personnel injured directly or indirectly from a fire

b. To inspect the fire area to make sure that no radiation

OF contamination occurs directly or indirectly from the fire.

© To supply the necessary equipment for radioactive protection to the fire groups, in case it is needed.

4: To instruct the fire groups on possible radiation hazards

Which may occur during a fire

&. To Instruct fire groups in the use of the first aid equipment which we have for our protection.

£, To provide transportation to injured personnel from the PRNC to the hospital

(MORE: At least one of the A.2.φ. vehicles, preferably

the station wagon, will be always standby for such an emergency.)

Maintenance Group (2 persons)

4 To shut off main sir supply fan

b, To shut off basement supply fan.

? To disconnect all receptacle pannels

4, To close main oxygen valve.

@, Te clos

main propane valve.

---Page Break---

+

f. To close main low pressure air valve

& Open Etre pump room door and steel roof.

1b. Unlock chain gate.

4. Make sure that all wrenches for fire hydrants are at their respective places.

J: To make sure that no vehicles are obstructing the road

Going towards the rear of the building.

Ase. Fire Group (4 persons)

To report to the place of the fire immediately after

the fire alarm goes on.

b. To carry out the orders of the person in charge at the site of the fire.

© To unroll nearest fire hose, and to bring nearest fire extinguishers to the place of the fire

(NOTE: DO NOT open water valve at the fire hose unless ordered.)

2nd. Fire Group (2 persons)

4, To direct all personnel, coming out of the rear exit

door, toward the parking lot, in case of a fire emergency.

b. To prevent anyone from entering the building through the rear exit, during a fire emergency.

© When the fire alarm sounds, to close both the wooden double door and the steel double door at the rear of the laboratory building.

---Page Break---

6, Standby Group (4 persons)

4, AE the sound of the fire alarm report to lobby and stay there

B. To substitute anyone in the other groups if called for:

© The group leader will take the place of the reception-

Ye and will stand by for any calle through the tater~

com oF transceiver.

4. One nan of this group vill accompany the firemen co
the place of the fire

©. Check that the fire department has been notified by

calling the fire department.

---Page Break---

11. FIRE ANYWHERE 10 PENG EXCEPT IN REACTOR BUILDING

4A. During Working Hours

1, First Person to See the Fire:

4. Tull nearest fire alarm box

b, Stay near the fire alara box, unt{l the fire

brigade arrives.

© Direct the fire brigade co the place of the fire.

4, Explain to the Le:

ler of the fire group anything you

know with respect to that particular fire

2. Personnel who have been working at the place of the fire

(except the person giving the alarms)

4. Disconnect all electrical apparatus and evacuate the

building through the nearest exit.

b. Inform the fire officer or person in charge of the ope

tion concerning of any flammable material which may endanger

the personnel in the fire brigade.

3. All Personnel not members of the Fire Brig.

QUOTE: When you are moving through the hall, do so in

an orderly way. Do not run, stay always at your right side.

Reueaber, the fire brigade will be going toward the fire area.)

4. Fire Brigade

Fire officer

1. Report to lobby, and from the annunciator, find out the

Location of the fire alarm which is on unless he knows

the location.

---Page Break---

2 Then report to the area of the fire alarm and

direct in extinguishing the fire

b. Assistant Fire officer:

1, Report to the Lobby, and from the annunciator,

find out the location of the fire.

2. Report to Fire Officer and aid him in the operation of putting out the fire.

1. Group leader

4% Will immediately call, by his telephone,
the local Fire Department.

b. Will report to the Lobby and make sure the
telephone operator has also called the local
Fire Department and the college guard.

©. He will stay by the telephone operator, to
make the necessary calls for ambulance, police
dept., etc., if ordered too.

2: Telephone operator

4, Will call the local Fire Department.

b. Will call the college guard

WALL stay standby for any other call

3 Assistant Group Leader

4, He will aid the Group Leader in his duties.

b, WEL] report to the Lobby to receive orders

from Group Leader.

---Page Break---

4

slo

First Aid and Health Physice Group

1. Group te:

4, We will report to the Lobby and from the
?annunciator he will find out the emergency
>, With the help of his group, he will proceed
with the necessary equipment to the emergency

2. Persons in First Aid and Health ?hysics Group

5, WAIL report to the Lobby to find out the

location of emergency ar

>. Will report to the Group Leader at the
cnergency area.

Maintenance Group

1. Group Leader and one member

«Report to the Lobby to find out emergency area.

bi Shut off main air supply fan.

©. Close main oxygen valve.

4, Close main propane valve.

©, Close main low pressure air valve

£, Disconnect all receptacle panels,
pertaining to the emergency area.

2. Assistant Group Leader

8. Open door of the fire pump room and steel
roof.

b. Unlock chain gate.

---Page Break---

ou.

©. Make sure that all wrenches for fire

hydrants are at their respective places

4. Make sure no vehicle is obstructing the road toward the rear of the building, or near fire hydrant

£. 1st. Fire group

1. Group Leader and Risk Group

4. Report to the Lobby and find out from the annunciator the emergency area

b. Report to the nearest fire hose station in

the emergency area

Carry out your duties as directed by the Fire Officer in charge of the operation.

8 2nd. Fire group

1, Group Leader and Risk Group

+ Report to the Lobby and from the annunciator find out the emergency area.

D. Carry out your duties

1, Stand-by Group

1. Group Leader

4. Report to the Lobby and take the place of

the receptionist. stand by for any calle

through the tntorcos or transceiver.

1}. Check with the operator to make sure the

local Fire Department was called.

---Page Break---

a2.

2. Any One from the Stand-by Group

WAL vate for firemen at the main gate

and will guide then to the emergency ar

5. Reactor Supervisor

1, He will be notified of the fire and its location.

2; We will act according to this criteria.

B. During Non-Working How

1. First Person to See the Fire

4. TULL fire alara nearest the fire.

b: TE the fire ts soll, and you are positively sure
that you can put the fire out, return to the fire,
aad aiming with the extinguisher nozzle to the base
of the fire, extinguish the fire.

© TE there As a doubt, that you can control the fire,

Return to the Lobby, and call through the tra

ceiver the folloving words, K 11 - 0340 Unit 11

Wucloar Center calling all stations, chere ts Tee
in the North Tole? (repeat three tines)

Repeat the sane nusbers in spanish,

OS

ro Nucl

Hay Rtelo en el roto Norte."

(Repeat 3 tines)

4. Then you will call the Pire Department using the telephone in the Lobby. The telephone munber of

the Fire Department 18 listed above the dfal on

---Page Break---

a3.

You will speak clearly, saying, "there ts 4

fire in the Nuclear Center, at Miradero Road,

Kiloneter 1.7" (Repeat 4f necessary)

In Spanish,

"Hay un fuego en el Centro Nuclear, por 1a Carretera de Miradero, kilometre 1.7" (Repeat if necessary.)

8. You will then walk as fast as you can to the main gate, open it all the way, and return to the Lobby,

& You will wait for the firemen to arrive, and supply them with dosimeters. Then you will guide the firemen to the emergency area (Note: Be sure that no water is used in places marked "Use No Water",

Person who is on call

& As soon as you hear the sound of the emergency call, you will go directly to the Nuclear Center, and from the annunci-

ator you will find the location of the emer-

gency. Go directly to the

jenent and,

1: shut off Main Air supply fan.

2 Shut off Main oxygen Valve.

3 Shut off Main Propane Valve

4. Shue off Main Low Air Pressure Valve.

---Page Break---

ae

©: Go directly to the emergency area and direct in the operation of extinguishing the fire.

4, After fire te under control, or as soon as posotble, call the following persons by tele-Phone, and notify them of the fire and the action taken:

1, baputy Director

2. Associate Director

3. ead of the Operations Division

Resctor Supervisor

5+ Hicalth Phystes Division Head

6. Fire officer

7. Aaststant Fire officer

8. college Guard

---Page Break---

mr

a5-

FIRE ANYWMERE IN REACTOR BUILDING

There are two fire hose stations in the reactor building, 20
located, that all interior floor areas vill be within reach

of 75 foot hose length. In addition, there are 6 CO, porcuble

fre extingutshers which are located as follows

18 lbe, cop == console Roos

1-8 lbs. co, -- Rear console Roo

1-8 lbs, C0, -- Ist. Floor Reactor area

2 = 20 lbs. Coz =~ Ground Floor Reactor Are

1 +8 tbs. coz -- overhead crane seairsay

A. During Working Hours

1. First person to see the fire

a, Pull nearest fire alarm box in the building, then ph

Fire Department.

Notify reactor operator.

© Take emergency measures to put out fire.

(NOTE: Be sure not to use water in areas where signs warn not to use water in case of fire.)

2. Reactor Operator

@. Shut down reactor.

1b. Announce over P.A. System, "Emergency fire in

(give location)".

- ALL personnel secure equipment and prepare to vacate building if necessary.

4. Phone Fire Department to confirm request for help.

---Page Break---

~16~

© Notify Reactor Supervisor and Reactor Division Head.

£, If instructed by Reactor Supervisor announce, over

P. A. System, "ALL persons vacate building",

Accompany firemen in re-entry of building.

Reactor Supervisor

2 Check that Fire Department has been called.

b Proceed to fire scene and direct emergency fire

extinction until firemen arrives

© Order evacuation of personnel if necessary:

ry.

ø Secure ventilation equipment if necessary.

© Shut off all electrical power to reactor building,

if necessary.

£ Vacate the building.

8. Request Health Physics assistance if radiation

hazard exists and medical officer, if needed.

hh Accompany firemen in re-entry to building.

4 Take any other measure that circumstances warrant.

4, Reactor Division Hi

2 Report to fire scene and check that Fire Department
has been called,

be Lend assistance

required.

5. Health Physics Department

2 report to Reactor Supervisor if requested.

Lend assistance

required.

---Page Break---

-

6. Medical officer

? Report to Reactor Supervisor if requested,

D. Lend assistance as required

7. Fire Brigade

Stay standby at the lobby. .

TWOAREANE: In case of emergency fire in the Reactor Building,

the Reactor Supervisor will act as fire officer.

= Persons not having specific duties will evacuate Reactor building through the nearest exit.

B. During Non-Working Hours

First Person to See the Fire

a, Pull fire alarm near the fire. In the Reactor

Building {s closed, pull the fire alarm located

in the Lobby.

Call the local Fire Department, using the telephone in

the Lobby,

Speak clearly, and say the following,

Fire 420 fire in the Nuclear Center at Miradero Road,

lloneter 1.7", (Repeat 4f necessary.)

In Gpanis, "oy fuego en el Centro Nuclear ettuado en
el kilozetro 1.7 en la Carretera de Mtradero".

(Repeat if necessary.)

?Thon call thong the Transceiver the following:

KL - 246 Unit 11 muelear center calling all
stations, there ts Tee in the North role?

(Repest 3 eines)

---Page Break---

-18-

intsh, K 11 - 0340 Unit 11 Lianando @ todas Las

estaciones del Centro Nuclear. Hay Btelo en el role
Norte". (Repeat 3 tines.)

4. Then go to the main gate, open it all the way, and return

0 the Lobby to prepare dosimeters for the firemen and to wait for them. If during that time you have a chance to repeat the call by the Transceiver, or by phone, do so.

Only persons having RED Label 110 badges can go into the Reactor Building. If you are one of them, you may direct the firemen into the Reactor Building. If not,

wait for someone to arrive.

Reactor Supervisor, Assistant Reactor

Supervisor, Health Physicist, or a person having a RED Label on his film badge, will direct firemen into the Reactor Buil-

Reactor Division Head,

ing to extinguish the fire.

After the fire is under control, the following will be notified:

Reactor Divi

jon Head

D. Reactor Supervisor

©, Aemistant Recetor Supervisor

a. Heals

Phystes Division Head

© Assoctate Director

£. Deputy Director

---Page Break---

=.

TV. FIRE IN THE AuNex BUILDING

As During Working Hours.

L

a

Etzst Person to See the Fire

4 Pull fire alarm in the Annex Building.

b) Go directly to the fire alarm located in the
Ground floor Laboratory Building, next to stairway
0. 2, sound the fire alarm, and stay there, until
the fire brigade arrives, then direct them to the
emergency area.

Personnel who are Working at the Place of Fire

Evacuate building immediately by the nearest door
marked "Exit". Get away from the building as soon
as you can. Report to parking place in front of
the Laboratory Building. Do not enter Laboratory
Building unless you are a member of the Fire Brigade.

ALL Other Personnel Who do not Belong to the Fire Brigade

4 At the sound of the fire alarm, turn off any equip-
ment which you are using.

b) Evacuate the building by the nearest door, marked
"EXIT", and report to the parking place. You will
be notified there, when you can enter the Reactor
of Laboratory Buildings to continue your work.

?2 When you enter the building to continue your work,
you will NOT USE THE TELEPHONE NOR INTERCOM for
any purpose whatsoever, unless it is another fire
emergency or a serious accident.

---Page Break---

ea

4

2

= 20-

1) Same as Part 11, A, 4.,a)-

Assistant Fire officer

1) Same as Part I, A, 4.,b).

1) Same as Part IT, A.

sa.

First Aid and Health Physics Group

1) Same as Part 11, Avy 4, ae

Maintenance Group

1: Group Leader and one member

4) Report to Lobby to find out the emergency

¥) Open door of Fire Pump Hoos, and steel roof.

?) Unlock chain gate.

Make sure that all wrenches for fire hydrants

are at their respective places.

Make sure that no vehicle is obstructing the road toward the rear of the building, or near the fire hydrants.

Check each other to make sure everything is

one.

8) If a vehicle is in the way,

1) If vehicle is open and can be moved, do so, then report License and model to Group

Leader of the Stand-by Group.

---Page Break---

=21-

2) If vehicle is closed and cannot be moved report License and model to Group Leader of the

Stand-by Group.

£, Tet. Fire Group

1, Group Leader and His Group

Report to Lobby and from there find out the emergency

Area report to the fire hose station nearest the emergency

area, In this case two or three hoses must be

connected together in order to reach close to the

emergency area. Hoses may be taken from other fire

hose stations.

Group Leader will send one man to the emergency area
with the fire extinguisher, which is located in the

lobby.

2nd. Fire Group

1, Group Leader and His Group

Report to Lobby and find out the location of the
fire area.

Report to the fire area, taking with him the fire
extinguisher at the fire hose station near the

fire a

Report to the officer directing the operation, and

help him extinguish the fire,

---Page Break---

»

-22-

Stand-by Group,

Group Leader

1

Report to Lobby and take the place of the Receptionist. Stand-by for any calls through the Intercom or the Transceiver.

Check with the operator, to make sure that the Fire Department has been notified.

Send one of the members of the stand-by group to await the Etremer at the main gate so that he can direct them to the scene of the fire.

5. Reactor Supervisor

1.

2

+ During Non-Work

He will be notified of the fire and its location.

He will act according to his criteria

Hours

1. First Person to See the Fire

?The procedures are the same as Part II, B.

The only difference is that the person to see the

fire will also pull it

Jara in the Lobby of the

Laboratory Building, in addition to pulling the

alarm of the Annex Building,

---Page Break---

-2-

V, RULES THAT MUST BE OBSERVED AT ALL TIMES IN THE

No smoking will be allowed in the following area.

a, All Laboratories: All rooms or areas where equipment is

being used to perform experimental research, analysis,

or any other experimentation.

b Service house: Due to the materials kept in this area,
and also due to the lack of ventilation, and excess of heat.

© Near or inside inflammable storage areas:

4. Near, or at the Gasoline depot, and fuel oil tank.

© Carpenter

£ Inside storage area: of materials which are

Flammable.

8 ALL areas marked as "NO SMOKING" in drawings.

No smoking will be allowed while handling explosives:

gasoline,

paint (even if the paint has

low ignition point and no fumes),

or any other flammable material.

3. All flammable, toxic, and explosive materials, will be kept

in the flammable storage room or shack. Only small quantities which are for immediate use will be kept in the laboratories.

4. When flammables are kept in the laboratories, they will be in

special storage compartments which are provided with a special

bestos cover.

5. Chemicals which have a low ignition point under normal atmospheric

pressure will be kept in explosion proof refrigerators.

6, Eapey boxes, rags, paper tovels, or any other material rep~

resenting a fire hazard, will be stored in steel cabinets,

---Page Break---

4

otherwise they will be stored outside of the laboratory
building.

The construction of any table,

writton, oF apparatus made

of flammable material, will have to be approved by the Pire
officer.

8. very Priday @ routine inspection will be held on the P.R.N.C.

9. Every aonth a formal fire inspection will be held.

4A report of this inspection will be sent to all Diviston

and a copy to the Disector,

Any area which the Fire Officer considers as fire hazard

will be marked as such, and "NO SMOKING" will be permitted

in that area.

10. No parking will be allowed near or in front of the fire hydrant.

11. No parking will be allowed near or in front of the main building!

storage areas.

12. No parking will be allowed on the road going to the rear of the building, or the road going to the annex building.

---Page Break---

25.

THE FOLLOWING SKETCHES WILL IN DETAIL THE LOCATION OF FIRE

ALARMS, FIRE EXTINGUISHERS, EXIT DOORS, AND NO SMOKING AREAS.

Lecenp:

00, PIRE EXTINGUISHERS ??????.

PERE ALARM

FIRE Hose STATION

FIRE ALAR ANWUNCIATOR HAS NINE STATIONS.

OK Bel ~ BASEMENT STAIRWAY NO. 1

BOK B-2 - GROUND FLOOR LOBBY

Box B43

BASEMENT REACTOR BLOG., STALRIAY NO. 3

BOK B-4 ~ SECOND FLOOR STAIRWAY NO. 1

BOK 8-5 - OUTSIDE REACTOR CONTROL ROOM, SECOND FLOOR

BOK B-6 ~ GROUND FLOOR STATRIAY NO. 2

ox 7

SECOND FLOOR STAIRWAY NO. 2

?BOK B-8 - UNDERGROUND REACTOR PUMP ROOM, REAR OF BUILDING.

BO B.9 ~ ATTIC FLOOR, STAIRWAY NO. 2

THE BOK NUMBERS OF THE ANNUNCIATOR CORRESPOND TO THE ALARM

NUMBER, SUCH AS, BOX B-1 CORRESPONDS TO THE FIRE ALARM (At).

---Page Break---

LEGEND

= FIRE PUMP ROOM aa

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x woe L |

> spveous | ruven [ena] aL

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