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Emergency Plan for Building 221

1. INTRODUCTION

This Emergency Plan for Building 221 has been prepared in compliance with the following Emergency Plan Implementing Procedure (EPIP) documents:

- EPIP 1.4, “Building Emergency Plans”
- EPIP 1.1, “Hazards Survey and Hazards Assessment”
- EPIP 2.2.1, “Area Emergency Supervisors”
- EPIP 3.8.2, “Watches and Warnings”
- EPIP 3.9, “Protective Action Implementation”

These documents are available online at:

<http://www.aim.anl.gov/manuals/emerg/index.html>

The plan has been prepared to:

1. Provide the Fire Department and other emergency responders with information about the building.
2. Provide building occupants with information about the building that they need to know during an emergency.
3. Document that emergency preparedness in the building has been considered and is reviewed annually.

Site-wide emergency management is described in the Comprehensive Emergency Management Plan (CEMP), available from ANL Emergency Management. All emergencies at ANL-East are managed under the incident command system, regardless of the nature of the emergency or where it occurs. The Fire Department Incident Commander is in charge of the emergency response.

This plan contains emergency response information specific to this building. The emergency personnel listed in this plan will assist the incident commander as needed when there is an emergency in the building.

The following acronyms from the EPIP appear in this plan:

IC Incident Commander
The Fire Department officer-in-charge at the scene of the emergency.
(Also, see “Addendum: (IC) Incident Commander ...” at end of plan)

ERCM Emergency Response Center Manager
Manager in charge of the Emergency Response Center when used.

2. EMERGENCY PERSONNEL IN BUILDING 221

<u>Area Emergency Supervisor</u>	<u>ANL Ext.</u>	<u>Home Phone</u>	<u>Pager</u>
Clark Gary Schlesselman	2-5437	(708) 301-2522	4-5437

Alternate Area Emergency Supervisors

Carolyn Peters	2-4909	(815) 730-0131
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Building Manager

Judith K. Stickels	2-3369	(815) 423-5039	4-3369
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Building Monitors: (8:30 - 5:00, Monday - Friday excluding Holidays)

<u>First Floor:</u>	<u>Name</u>	<u>ANL Ext.</u>
A-Wing South	Mark Hereld	2-4170
East B-Wing to exit south	Lupe Franchini	2-3751
A-Wing North & South side D-Wing	Mike Papka	2-1556
D-Wing North side & C-Wing to West B Wing then to exit south	Lynn Valentini	2-4779
Main Computer Room to Lobby exit	Corey Lueninghoener	2-6094

<u>Second Floor:</u>	<u>Name</u>	<u>ANL Ext.</u>
A-Wing South	Jan Griffin	2-7271
South B-Wing to North B-Wing and then, exit south	Judy Stickels	2-3369
C-Wing to Northwest stair and exit	Tina Stanton-Piersanti	2-6536
D-Wing to Northwest Stair & exit	Darius Buntinas	2-7928

<u>Service Floor:</u>	<u>Name</u>	<u>ANL Ext.</u>
Service Floor – East	Operator A	0
Service Floor – West	Operator B	0

Other Emergency Telephone Numbers: (See next page)

Other Emergency Telephone Numbers:

MCS Division Office Ext.:	2-7162
CIS Division Office Ext.:	2-7155
Com-center Ext.:	2-3453
Com-center Business Line:	(630) 257-3355

3. BUILDING DESCRIPTION

Building 221 is a masonry structure with a gross area of approximately 72,300 square feet on two floors, plus a partial service floor (basement). Offices and quasi-office areas make up the upper floor. The first floor contains offices along with a large area for computers and the activities associated with their operations. The service floor contains the Com-center (CC), telephone service main PBX switch, and a mechanical equipment area. The large amount of mechanical and electrical power equipment needed to maintain the computers and PBX telephone switch operated in the building takes up the major portion of the service floor. Storage areas occupy approximately 1,880 square feet of the service floor, and a small area serves as a lunchroom. A sprinkler system protects all of the above areas.

The interior partitions in the building are masonry, demountable metal walls, or stud and drywall. The enclosed ceiling area of the building contains sprayed-on asbestos. Extensive fire detection and protection devices exist in the building. Most offices (and similar areas) have sprinklers. Laboratories, the Com-center, and computing areas contain smoke detectors and sprinklers. Detectors connect to alarms within the building and to the Laboratory Fire Department.

Fire protection facilities also include a Halon suppression system beneath the raised floor in the central computing complex and a Halon suppression system in the PBX switch room and battery room.

Building 221 houses the Labwide network, Administrative production computing servers and the Laboratory's telephone system all operated by the Computing and Information Services Division. It also houses a large complex of Research computing systems operated by the Mathematics and Computer Science Division (MCS). And, the Physical, Biological and Computing Sciences (PBCS) ALD offices are located in this building. The building has approximately 250 occupants.

4. HAZARDS CHECKLIST

<u>Hazard</u>	<u>Present</u>	
	<u>YES</u>	<u>NO</u>
Radioactivity:		X
Chemicals:	X	
Spec. Nuc. Mat:		X
Carcinogens:		X
Other:	Asbestos in Ceilings, Uninterruptible Power System Batteries	

5. HAZARDS DESCRIPTION

The building contains sprayed-on asbestos in the building ceilings and a large number of storage batteries; there is a possibility of diesel fuel spill or fire and, toilet cleaner (containing hydrochloric acid) is stored on Service Floor in cage near elevator. The locations of storage batteries (B132 main computer room, D122 and, D-034) and diesel generator (D-036) is shown in Figures 1 and 3. Other hazards in the building include electrical or normal combustibles (i.e., paper, wood, plastic). Many smaller battery units associated with several uninterruptable power systems are located in several places throughout the first floor computing equipment areas. See also, the Building 221 Hazards Survey in Appendix C.

6. ASSEMBLY AND RELOCATION AREAS

Because, it is possible that an area or building in flame can explode or, in the event an explosive device has been reported or is suspected or, for whatever reason evacuation is “directed” (by fire alarm bells/strobe lights or, Public Address announcement), personnel are to proceed to relocate to a protected site and conduct accountability operations.

Our protected site is Building 213 which is the requisite 1500 feet from the evacuated building 221.

7. CONTROL POINT

The control point for an evacuation of Building 221 is the main entry to Building 213. The AES, alternates, and/or building monitors will meet at the control point. Telephone service and building paging are available near the control point.

8. EMERGENCY COMMUNICATIONS AND INSTRUCTIONS

All injuries, illnesses, fires, explosions, chemical accidents, and any unsafe or unstable conditions shall be reported by calling 911. Any Laboratory telephone in the building can be used to call 911. Cellular telephones can be used by calling 252-1911. A pay phone is located on the first floor in the lobby and can be used for 911 calls. **Building occupants are not to use private cars to transport coworkers who are injured or ill.**

The building is connected to the site-wide public address (PA) system. The Com-center operator will announce tornado watches and tornado warnings over this system. The IC or ECRM may order protective/precautionary actions using this PA system and outdoor warning system if necessary. A warning tone precedes all emergency announcements. The AES or alternate may also make announcements within the building using the microphones, which are located in three locations: in the main lobby by the pay phone, MCS Division Office (A228), and the Com-center (D-028A). A hand held radio is also

available in D120 just inside the door on the right in case telephone service is lost
(Access is limited to authorized keycard holders).

9. LOSS OF TELEPHONES

On occasion, telephone communications have been lost site-wide. If normal telephone communications are not available, the AES or alternate should establish a control point in an easily visible location such as the building lobby. The AES or alternate will have a direct connect cell phone or radio available for emergency communications with the Fire Department. Non-emergency direct connect cell phone or radio transmissions are to be avoided. Building occupants are instructed to seek assistance from the AES or alternate at the control point. Alternate AESs and building monitors can assist in notifying building occupants if the building public address is not functional. Any emergency conditions involving the building should be reported to the Fire Department.

When AES calls the Fire Department by direct connect cell phone or radio, the transmission begins with "Argonne Fire Department, this is the AES from Building 221." This will alert the Fire Department to the fact that the transmission is to their attention.

Pay telephones may work when normal telephones are out of service. There are also telephones on separate exchanges in selected locations (non-PBX telephones). Calls to 911 can be made on pay telephones; the caller should state that the call is from Argonne National Laboratory. The dispatcher will direct the call to the Argonne Fire Department. Cellular telephones can be used to report emergencies by calling 252-1911.

10. LOSS OF POWER

If power is lost to a building or group of buildings, the AES determines whether activities should continue in the building. The Laboratory has a portable 500 KW generator which might be used to provide temporary electrical services. If loss of ventilation threatens the safety of the workers, they should be evacuated from the area or from the building. Also, the adequacy of lighting should be considered in deciding whether areas should be occupied or work continued.

Decisions to close the Laboratory because of site conditions are made by the crisis manager only. Instructions to dismiss staff are given over the public address system if available; if not, the site-wide radio network might be used. The AES may ask people to leave the building and/or relocate to another building if loss of power makes the building unsuitable for occupancy. The Fire Department should be notified of such a decision.

11. WARNING SIGNALS/ALARMS

The building is equipped with fire alarms (Loud Bells and flashing strobe lights). Unless, directed otherwise preceding an alarm test, **WHEN THE ALARM BELLS SOUND AND STROBE LIGHTS FLASH, OCCUPANTS ARE TO LEAVE THE BUILDING IMMEDIATELY AND PROCEED TO BUILDING 213 MAIN ENTRY.**

(The loud, ringing alarm bells make use of the building P.A. system impractical.)

Other alarms in the building include Halon horns announcing imminent release of Halon in computer or PBX areas only. These horns are intended to warn specific, technical personnel in the related area that a release has been initiated. Normally, there is a short delay preceding the actual release. This allows for the possibility **WHEN A KNOWN FALSE ALARM** has happened that, these technical personnel can take action to abort the Halon release.

12. EMERGENCY SHUTDOWN PROCEDURES

Emergency Power OFF switches are located at primary entrance/exit to computing areas. For use when a fire is present or when emergency requires electrical shutdown in these areas.

13. PERSONNEL ACCOUNTABILITY

The AES, alternates, and building wing monitors will perform a sweep of their assigned areas to look for and assist any occupants who did not hear an emergency message or, are unable to respond. If necessary, the AES and alternate will assist the Incident Commander in searching the building.

14. SPECIFIC PROCEDURES

In the event of a fire alarm, evacuate the building. When a threat other than fire or tornado is present, announcements over the building Public Address system may be used to provide necessary instructions.

15. TORNADO SHELTERS

The tornado shelter is located on the service floor as shown on the attached drawing Appendix A, Figure 7. All occupants are to move to the nearest tornado shelter when a warning is issued and are to remain there until the all-clear sign is given. There is no smoking in tornado shelters.

16. EMERGENCY EXERCISES

Building 221 holds a tornado drill each spring and a evacuation drill each fall.

17. TRAINING OF NEW OCCUPANTS

Supervisors are responsible for ensuring that new building occupants under their supervision know the location of exits and tornado shelters and are familiar with the 911 emergency reporting procedure.

18. TRAINING FOR AESs AND ALTERNATES

AESs and alternates receive training provided by ANL Emergency Management. Training is required annually.

19. BUILDING DRAWINGS

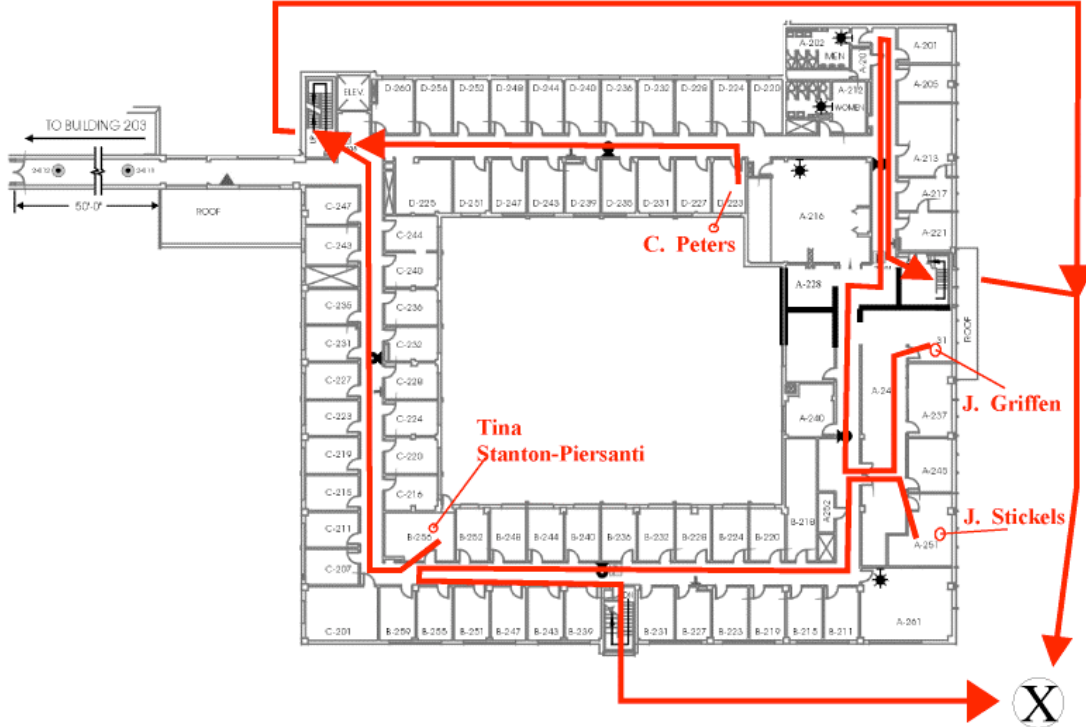
Drawings in this document showing the building evacuation routes and locations of tornado shelters are shown in Appendix A.

Drawings showing the location of building exits are also mounted on walls in each hallway, generally, near fire alarm bells or fire extinguishers

APPENDIX A

Wing Monitor Drawings, Assignments, Evacuation Routes, and Shelter Area

Building 221 Emergency Plan
Wing Monitor Routes Second Floor



CGS 10/07/2005

Check in with AES here.
 Then, continue to the
 assembly area at main
 entry Building 213
 Cafeteria

Figure 2: Wing Monitors Second Floor

WING MONITOR

Bldg 221 Service Floor

NORTH

Check-in at
East entrance
control point

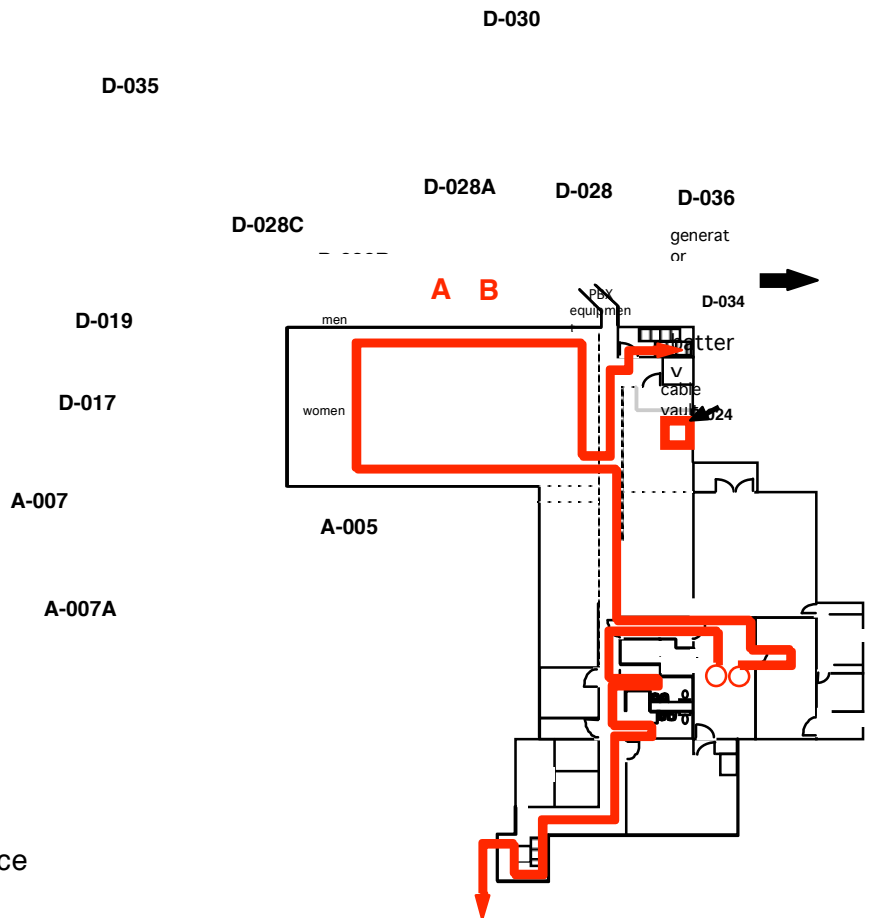
**Batter
y**

OPERATOR

ROUTE

A — EAST ROUTE

B — WEST ROUTE



Check-in at
East entrance
control point

**Figure 3: Wing
Monitor**

Building 221 Emergency Plan
Evacuation Routes from First Floor

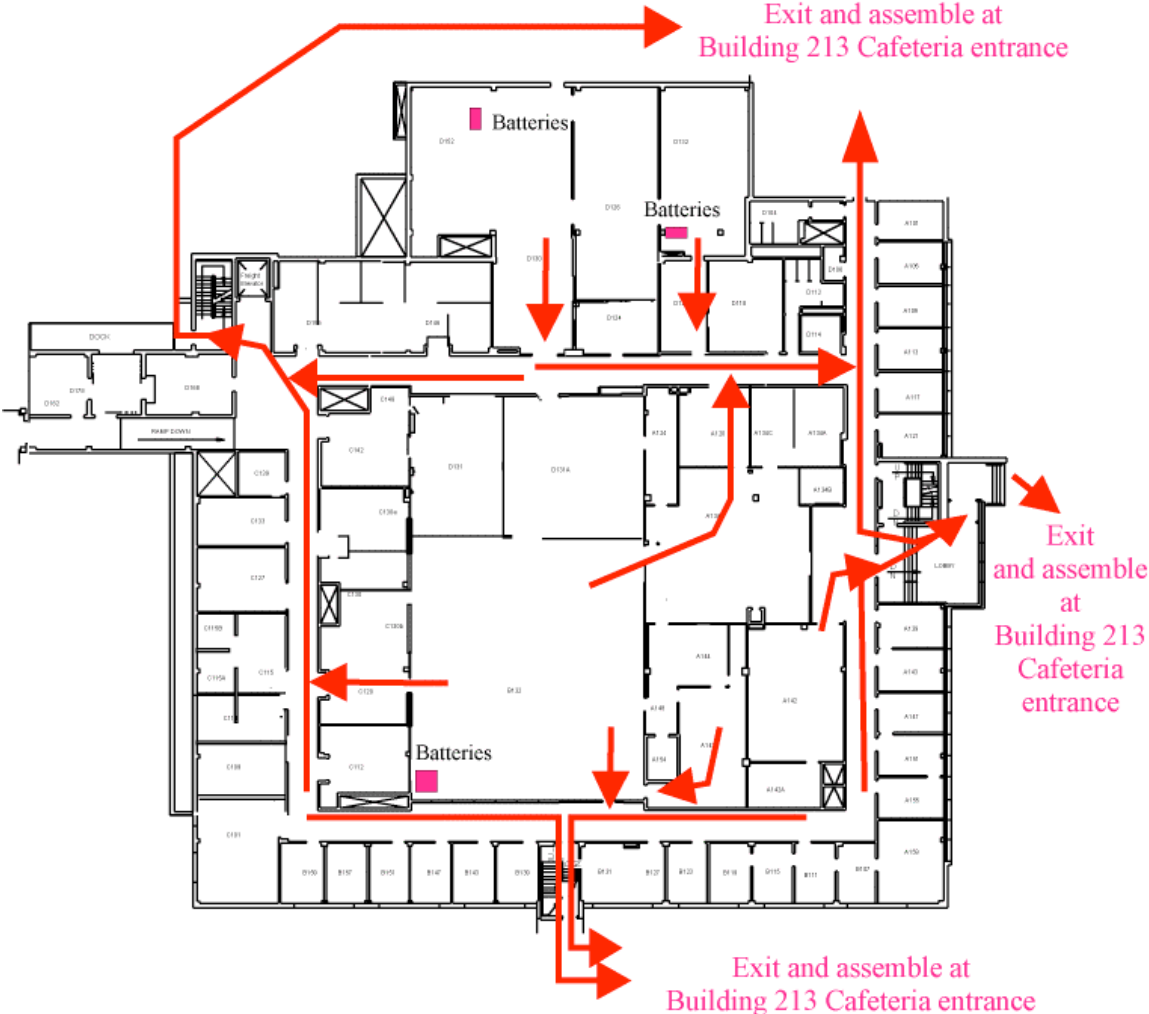


Figure 4: Evacuation Routes First Floor

CGS 10/07/2005

Building 221 Emergency Plan
Evacuation Routes from Second Floor

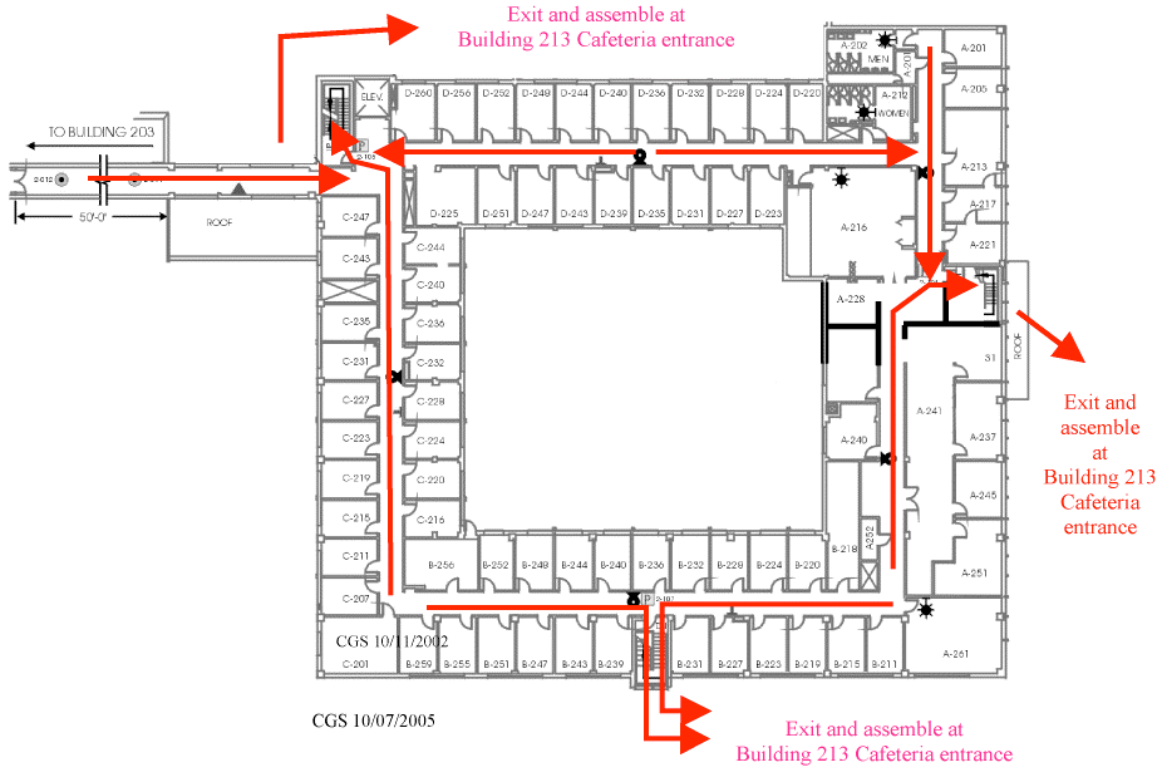


Figure 5: Evacuation Routes Second Floor

Evacuation Route

NORTH

Bldg 221 Service Floor

Assemble
at
Building 213
Cafeteria
entrance

Assemble
At
Building 213
Cafeteria
Entrance

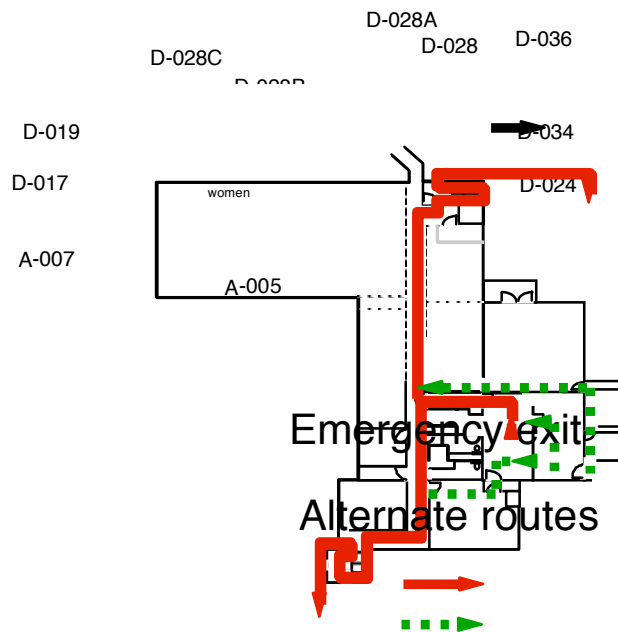


Figure 6: Evacuation Route

SHELTER AREA

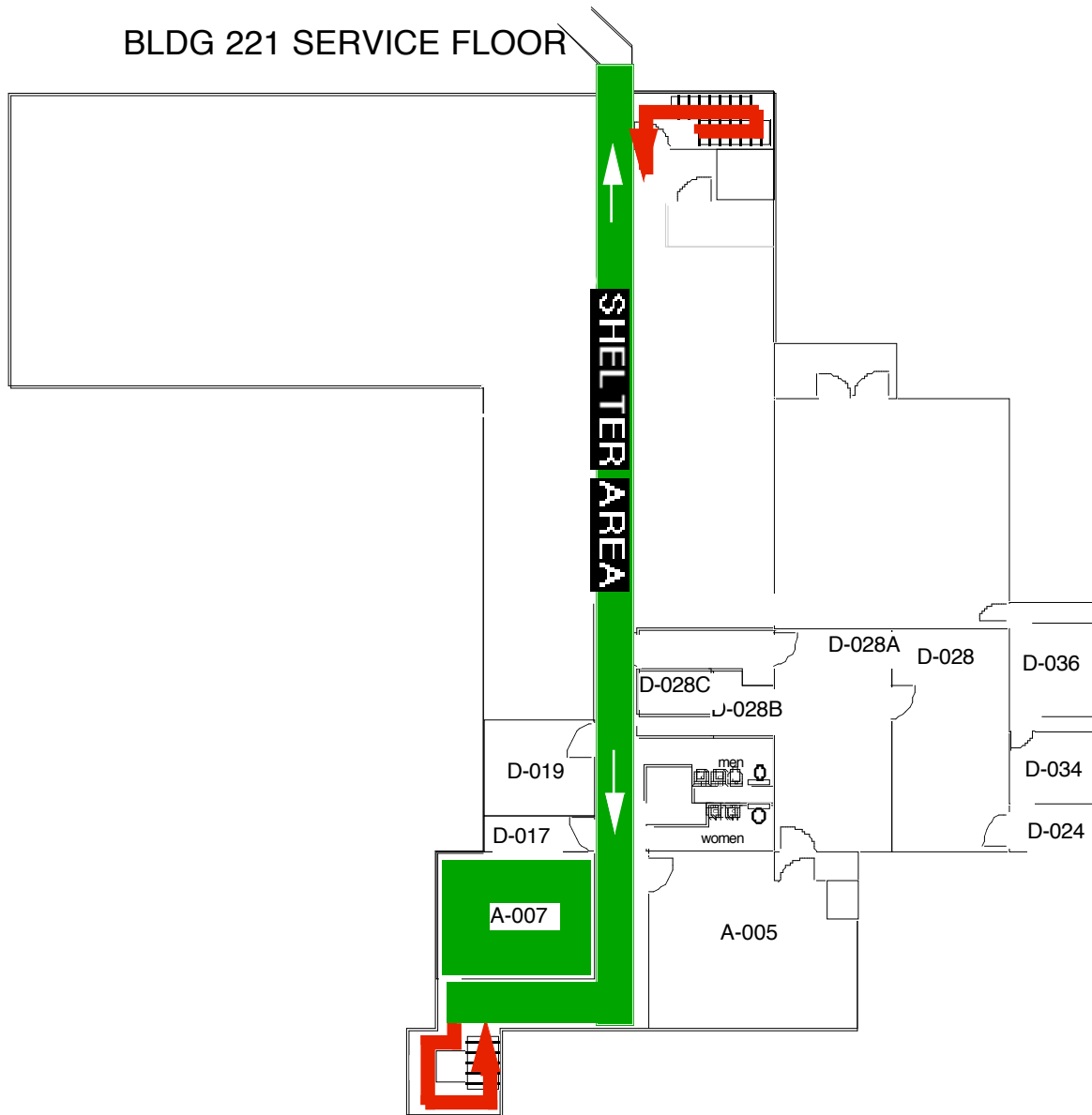


Figure 7: Shelter Area

APPENDIX B

Division MCS and CIS Safety Charters

MATHEMATICS AND COMPUTER SCIENCE DIVISION

SAFETY CHARTER

I. Summary

MCS Division safety coordinator provides leadership for an effective safety program within MCS. This is accomplished through inspection tours of the space used by MCS in Building 221 and Building 203, publicizing good safety practices, and reporting safety hazards and unsafe practices to Division management to ensure safe and healthy working conditions for MCS personnel. MCS Division management will act on the advice of the safety coordinator to correct unsafe conditions and to encourage safety in MCS operations.

II. Responsibilities of the Division's Safety Coordinator

- A. Initiates and documents inspections.
- B. Recommends the correction of unsafe practices.
- C. Acts as liaison between MCS and appropriate Laboratory Safety Personnel, and officially represents MCS for DOE review.
- D. Formulates safety policies and recommends their adoption by MCS management.

III. Inspection Documentation

At least one inspection will be conducted each year. Each safety inspection will be documented. When unsafe conditions are found, the following will be noted:

- A. Room or area where the condition was found.
- B. Brief description of unsatisfactory condition.
- C. Recommendation for action to eliminate condition. The individual responsible for the area will be notified of the unsatisfactory condition and

will be requested to comply with recommended action or other appropriate action to eliminate the unsafe condition.

The safety coordinator will retain a file copy of each unsafe condition report and will ensure that the unsafe condition has been satisfactorily corrected.

IV. Responsibilities of the MCS Division Director

- A. Appoints the safety coordinator.
- B. Makes safety a topic at staff meetings sufficiently frequently to reinforce the certainty of the division's commitment to safety and to encourage suggestions and discussions of safety among MCS personnel.
- C. Requires that new employees attend the Laboratory safety indoctrination seminar given by SME and that they be properly trained in their assigned jobs.
- D. Requires that all new or major modifications to facilities be assessed to ensure an appropriate level of safety and that the assessment be documented.
- E. Includes safety attitude, performance, and involvement as an element in performance evaluations and salary determinations.

Approved:

Date:.....

Ewing L. Lusk(Acting)
Director, Mathematics and Computer Science

COMPUTING AND INFORMATION SYSTEMS DIVISION

SAFETY CHARTER

I. Scope

This charter provides for the establishment of an Computing and Information Systems Division Safety Coordinator and Safety Committee composed of the Division Safety Coordinator and other CIS personnel. The Safety Coordinator and members of the safety committee will be appointed by the Director of CIS. It will be the Safety Coordinator's charge to provide emphasis and leadership for an effective safety program within CIS. This will be accomplished through publicizing good safety practices, reporting safety hazards and unsafe practices to management, and taking any other reasonable actions to ensure safe and healthy working conditions for CIS personnel. CIS management will act on the advice of the safety coordinator to correct unsafe conditions and to encourage safety in our operation.

II. Responsibilities of the Division's Safety Coordinator

The Safety Coordinator will:

- A. Initiate and document inspections with the Building Manager and other assigned personnel. At least two inspections will be conducted each year.
- B. Authoritatively recommend the correction of unsafe practices.
- C. Act as liaison between CIS and appropriate Laboratory Safety Personnel, and officially represent CIS for DOE review.
- D. Formulates safety policies and recommends their adoption by CIS management.

III. Inspection Documentation

Each safety inspection will be documented. When unsafe conditions are found, the following will be noted:

- A. Room or area where condition(s) were found.
- B. Brief description of unsatisfactory condition.
- C. Action to eliminate condition. The individual responsible for the area will be notified of the unsatisfactory condition(s) and will be asked to comply

with recommended action or other appropriate action to eliminate the unsafe condition.

The Building Manager will retain a file copy of each unsafe condition report and will ensure that the unsafe condition has been satisfactorily corrected.

The day-to-day job duties of the Safety Coordinator will include appraisals of the general safety conditions of Building 221. Unsafe conditions that require immediate actions will be noted, and remedial action will be taken to remove the hazardous condition(s).

Approved: Date:.....

Michael Skwarek (Acting)
Chief Information Officer Argonne National Laboratory
Director, Computing and Information Systems

APPENDIX C

Hazard Survey For Building 221

Hazard Survey for Building :

221
Gary Schlesselman
Carolyn Peters
Ewing L. Lusk

1. Area Emergency Supervisor
Alternate(s)

2. Hazards Survey Approved by:

Division Director, Mathematics and
Computer Science

Date:

3. General Building Use.
Mark all that apply. Describe the building uses, marking as many as apply. If necessary, provide a brief discussion here to adequately describe building use. Examples include: Satellite Waste Accumulation Areas, Pilot Scale Projects, hazardous material storage, above and under ground storage tanks, Special Nuclear Materials, student area, computer facility, etc.

<input checked="" type="checkbox"/>	Office
<input type="checkbox"/>	Process
<input type="checkbox"/>	Laboratory
<input type="checkbox"/>	Construction/Demolition
<input type="checkbox"/>	Warehouse/Storage
Offices and computing facilities for Mathematics and Computing Science and Computing and Instrumentation Solutions divisions	

Y/

N

4. N Classified materials are present in the building.

5. Special Use Buildings. (buildings that have as a primary operation one of the activities/conditions listed and not normally found in a typical office building.) Does your building include any of the following? Mark all that apply.

<input type="checkbox"/> N	Nuclear facility as listed in the Nuclear Safety Procedures Manual (NSPM)
<input type="checkbox"/> N	Radiological facility(e.g., having defined radiological controlled areas)
<input type="checkbox"/> N	Utility (water, steam, electric)thermal/cryogenic
<input type="checkbox"/> N	Transportation, Storage, and Disposal (TSD) facility
<input type="checkbox"/> N	Hazardous waste (e.g., a certified hazardous waste generator with Satellite Waster Accumulation Area)
<input type="checkbox"/> N	Thermal/ cryogenic (operations involving large heat/cold sinks or fire producing operations such as welding, Bunsen burners
<input type="checkbox"/> N	Pressure differential (Operations involving large pressure systems)

Does your building have areas that are controlled by cyber-locks, keypad access, or bar code readers? Identify locations and type of control. Are the locations marked to identify by name that can provide access in an emergency?

Many of the rooms do have keycard (Weigand type) readers. They are not marked because, the Fire Department has its own, authorized keycards for entry in emergency. Also, the Lockshop has its own, authorized keycards. They, in turn, have information on who should be called in an emergency.

6. Occupant Status

Describe the occupancy of the building. First consider typical population - number of people that spend at least half their time in the building. How many of this population are on the first floor?

Total First Floor Only

Y/
N

Y Indicate if the building has personnel with identified special needs - sight, hearing, mobility impairments; special medical needs; permanent or temporary; etc.

Sight

7. Describe aspects or situations which bring increased numbers of people to the building. Meetings in auditorium facilities, sporting or cultural events, open house, social occasions, etc.

Meetings in conference rooms
Occasional special tours

8. How large is the building? Describe structural characteristics of building. How many floors above grade? How many basements? Are there tunnels connecting this building to others? Identify the buildings connected by any tunnels. Are there vaults in the building that require special security considerations? Attach a "foot print" drawing to the hazard survey.

<input type="text" value="2"/>	Number of floors above grade	Describe	<u>Offices and computing equipment rooms</u>
<input type="text" value="1"/>	Number of basements (Include all excavated below grade areas that are in beneficial use)	Describe	<u>Typical bldg. utility service equipment & storage plus, Lab telephone switch equipment and phone operators.</u>

Y/
N

<input type="text" value="N"/>	tunnels	Describe	<u>Hallways connect bldg. 221 to bldg. 203 @ each level.</u>
<input type="text" value="Y"/>	vaults	Describe	<u>One walk in "safe" used for storage & normally not closed.</u>

N high bays	Describe	
What is the total square footage?	72,300	Sq-ft (See PFS web-site <i>Building & Utility Data Summary</i>)

9. The primary indicator of the current inventory of radiological materials for most buildings or material balance areas (MBAs) is contained in the LANMAS system. Some decisions might replace (e.g., WMO, AGHC) or supplement LANMAS with in-house inventory programs. The LANMAS listing (if applicable) should be reviewed for accuracy, keeping in mind that this represents a snapshot in time. Listings from any other radiological materials inventory system should be attached. In all cases, the information noted in the following table must be provided for the entire building/facility with the amounts five in curies. Attachment 1 to DOE-STD-1027-92Chf 1 contains a list of isotopes that must be included. In some cases there will be an overlap of this listing with that Section 10 (Sealed Sources). Include each inventory holding only once in either of the two tables.

<i>Room</i>	<i>Isotope or Material</i>	<i>Material Form</i>	<i>Quantity</i>	<i>Container Type</i>
None				

- 10.* The primary inventory of sealed isotopic source on site is the ANL Sealed Source Database. The database listing for each building/facility should be reviewed for accuracy and corrected as necessary. If any supplemental sealed source inventory is maintained, attached a report from that system. In all cases, the information noted in the following table must be provided for the entire building/facility with the amounts given in curies.

<i>Room</i>	<i>Isotope or Material</i>	<i>Material Form</i>	<i>Quantity</i>	<i>Container Type</i>
None				

* Use 0.1% of the DOE STD-1027-32 CAT 3 values. If there is a radionuclide in your inventory that is not listed in the DOE STD-1027-32 Attachment 1, the report

the total inventory and not that the radionuclide is not the inventory.

11. The Chemical Management System serves as the primary indicator of chemical within the building. This information is only a “snapshot” and may vary. One should review the chemical inventory printout (Hazardous & Regulated Chemicals Report, SARA class w/o thresholds and w/o exclusions) for the building, determine its accuracy, ascertain if there are any other hazardous materials not contained in the inventory list, and assure the chemical management system is updated. Attach that portion of the CMS report and a listing and amount of any other hazardous materials not in the CMS report to this document. AES or building personnel need to do a sampling check of the inventory listed on the report to ascertain probably validity of information. Review one percent of the CAS# in the building report or 10 CAS# whichever is greater. This review should include physically going to the chemical and confirming the data.

Product	CAS #	Size / Amount	Unit of Measure	Building	Wing	Room	Division
Currently, there are only common hazardous materials (i.e., materials commonly used by the public, including any substance used for personal, family, or household purposes or is in the same form and concentration as a product packaged for distribution and use by the general public (motor oil, cleaning products, gasoline, diesel fuel).							

12. Workplace conditions

The following matrix lists equipment or conditions that may be in your building and would indicate the possibility of a potential workplace hazard. Check (highlight) all that apply. Also consider if any biohazards are associated with your building.

Electrical	Kinetic Energy	Potential Energy	Radiation	Thermal	Other
Electrical lines (sealtite conduits under raised floor in computing rooms)	Vehicles/ forklifts/ dollies Pallet jack	Pneumatics	X-ray	Boilers	Routine outdoors weather
High voltage (bldg. electrical)	Fans (for HVAC)	Hydraulics	Laser	Furnaces	Power tools
Transformers (Bldg. Electrical)	Belts/ gears (for HVAC)	Pressure tanks, Halon cylinders	UV	Welding/ cutting	Animals insects
Diesel generator (In room D036)	Motors (for HVAC)	Vacuum system	RF	Chemistry labs – Bunsen burners, etc.	Asbestos (in ceilings)
Capacitors (in UPS systems)			Steam (for bldg.. heat)	Herbicides / pesticides	
Battery banks Associated with UPS systems					

13. Do you have any of the following?

- | | |
|----------|--|
| N | Glove boxes or hot cells |
| Y | Eye wash by PBX diesel generator in D036 |
| N | Chemical storage cabinets |
| N | HEPA filters |
| N | Air monitoring systems |
| Y | An emergency generator, if yes for what purpose? |
| N | Retention tanks, if yes for what purpose? |

Backup Telephone & network systems

14. List types of personnel protective equipment used in the building

Safety helmet & glasses, rubber gloves & matting for work on uninterruptible power system batteries.
--

“ANL East Sara 302 Building Report”

Currently, there are only common hazardous materials reported i.e., materials commonly used by the public, including any substance used for personal, family, or household purposes or is in the same form and concentration as a product packaged for distribution and use by the general public (motor oil, cleaning products, gasoline, diesel fuel).

Other hazards not listed on Sara 302 report.

Asbestos in ceilings

Electrical storage batteries for Uninterruptible Power Supplies (UPS)

