

DESCRIPTION OF HAZARDOUS CONDITIONS

SOUTH BUILDING ATTIC

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25X1A9a Monday, 20 July 1953, [REDACTED] of TSS and [REDACTED] CIA Assistant Safety Officer, made a fire and safety survey of the East and Central Areas of the South Building Attic. The following statements concerning the existing hazards due to the nature and location of the operation were given by [REDACTED]

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- a. Room 4201 is a laboratory containing inflammable materials such as acetone, alcohol, chloreform, benzene, ether and about sixty gallons of acids (nitric, sulfuric and hydrochloric). He stated that in case of fire, or as a bi-product of a semi-automatic experiment, phosgene gas could be produced from chloroform. This is a very deadly ex-war gas. There will also be a 208 cu. ft. acetylene tank and a 208 cu. ft. oxygen tank used in this room.
- b. A mixture of potassium di-chromate and sulfuric acid is used in Rooms 4201, 4007, 4019 and 4013. This material is used as a glass cleaner and is capable of severely burning personnel if the container should upset or crack. These rooms contain between two and five gallons of this material in porcelain or pyrex containers.
- c. The danger of cyanide gas is present in Rooms 4201, 4202, 4007 and 4013 at all times. This gas is very deadly and could be produced by fire or laboratory accidents. Only a small concentration (1 to 2000) of this gas is needed to be considered deadly.
- d. Rooms 4201-A, 4009-A, 4013-B and 4011 are small photographic rooms which would probably only produce nauseous organic nitrogen compound fumes.
- e. Room 4202 is a storage room for the various laboratories throughout the central and east sections of the attic. There are 400 different compounds stored in this room which will give approximately 16,000 possible combinations. [REDACTED] said 25X1A9a that there was no question as to the deadly possibility of the fumes that would be produced in case of fire or accident. Cyanide, bromine and hydrogen fluoride gases, all of which are very deadly, would probably be formed. There are 50 gallons of the following inflammables stored in this room: ether, petroleum ether, hexane, benzene, toluene, carbon di-sulfide, alcohol collodion and 2 lbs. of magnesium. There are also

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25X1A9a 20 gallons of acids and 9 lbs. of cyanide crystals. Mr. [REDACTED] further stated that one pound of cyanide and one gallon of acid would form a lethal dose for the entire area.

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- f. The entire east area, which has a maximum of 25 persons, is affected by each of the eight individual rooms that make up the east area. This is caused by the fact that the air-conditioning unit will pick up poisonous fumes and recirculate them throughout the entire area in approximately 18 seconds. [REDACTED] claimed at the time of installation that this unit was a 90% return supply system.
  - g. The east area is secured by means of a vault door located near the east stairwell. The lock on this door is of a type that can be locked from the outside trapping personnel within since this is their only escape route.
  - h. Immediately outside this vault door, and on the opposite side of the hall at the stairway, is a large air-conditioning unit and the motor for the elevator. A fire in either location would probably eliminate all possibility of egress for personnel in the east section.
  - i. The central section of the building consists of 12 rooms and has a maximum of 16 persons in the entire area. The same situation exists in this area as in the east section. Every room in this area affects the other rooms in the section because of the air-conditioning unit.
  - j. The east vault door of the central section is similar to the vault door securing the east section. However, there are normally two routes of egress for personnel in the central area.
  - k. Rooms 4007 and 4013 are the same type as Room 4201 and have approximately the same quantity and type of hazardous materials.
  - l. Rooms 4017 and 4019 make up a small laboratory where small quantities of inflammables and acid are stored.
  - 25X1A9a m. [REDACTED] stated that all chemical laboratories should have safety showers to aid in the removal of acids that might be spilled on personnel during an experiment or as a result of an accident.
  - n. Refrigerators used for storage of ether should have interior lights removed, be entirely spark-proof inside and have external switches to lessen the danger of explosion.
  - o. Room 4021 is used as a carpentry shop. 4 gallons of paint and 1 gallon of turpentine are stored in metal cabinets.

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- p. If there were a power failure, the entire attic area would be without light or air conditioning. Since there are no outside windows in this attic, light and ventilation could be a major hazard.

/s/

[Redacted]  
 CIA Assistant Safety Officer

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CONCURRENCE:

/s/

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\_\_\_\_\_  
 [Redacted]  
 Chief, TSS/SAD

/s/

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\_\_\_\_\_  
 [Redacted]  
 Deputy Chief, TSS/Research Analysis Branch

SO: JBM/jg (27 July '53)

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FIRE AND SAFETY SURVEY REPORT

AREA INSPECTED: Central and East Sections, South Building Attic  
DATE INSPECTED: 20 July 1953

25X1A9a INSPECTED BY: [REDACTED] Assistant Safety Officer, SO  
[REDACTED], Intelligence Officer, TSS

PURPOSE:

1. To determine the existence of any fire and safety hazards and to make appropriate corrective recommendations.

FINDINGS:

2. See attached Description of Hazardous Conditions.

RECOMMENDATIONS:

3-a. Signs should be placed on the doors at both east and west stairways reading "DANGER-POISONOUS GASES AND ACIDS". This would warn both guards and firemen of the hazards involved in fighting a fire in these areas.

b. Oxygen masks should be hung on the walls adjacent to the East Section entrance door and the east and west entrance doors to the Central Section. A sufficient number (at least one to a room) of oxygen masks should be hung in each room of these two attic areas to afford protection against poisonous fumes.

c. Emergency lights that would automatically turn on with a power failure should be installed in each room and corridor of the attic.

d. Emergency out-off switches for the air-conditioning unit should be strategically installed throughout the attic area so that the spread of poisonous fumes could be slowed in case of a fire or accident.

e. Safety showers should be installed in all laboratory rooms in sufficient number to insure adequate protection to personnel. The rooms requiring safety showers are as follows: 4201, 4007, 4019, 4013 and 4202.

f. The locks on the east door of the Central Section and the door to the East Section should be modified so as to allow personnel to unlock them from the inside. This will eliminate the possibility of trapping personnel in these areas.

g. The wood shelving in Room 4202 should be replaced by metal shelving and all inflammable liquids stored in closed metal cabinets. The acids in this area should also be kept segregated from both the inflammables and

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the other materials in this area.

h. All refrigerators used to store materials such as ether should be completely spark-proofed so as to avoid the danger of explosion. If ether itself is to be used extensively, then all electrical outlets, apparatus and fixtures should be spark-proofed.

i. Wherever it is probable that poisonous or explosive vapors will be present, exhaust fans should be installed to carry these fumes away from the building.

j. Action should be taken to afford a secondary means of egress to personnel in the East and West Sections of the building. Either a window at each section with outside fire escapes or an inside escape hatch with stairs to the third floor should be installed.

k. Inflammables, acids and poisons should not be stored in such large quantities as were found in these attic areas of an office building.

l. If it is at all possible, this entire operation should be re-located in a more suitable area where the number of persons affected by accidents would be limited and where ventilation and egress would be greatly improved.

CONCLUSION:

4. The combination of dangerous materials and poor location makes for extremely hazardous working conditions for personnel in South Building and, in particular, for those in the Central and East Sections of the attic. Steps should be taken immediately to minimize the existing hazards or relocate the entire operation in a less populated area with the approved type of equipment and storage facilities normally connected with a chemical laboratory.

/s/

CIA Assistant Safety Officer

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Attachment: Description of Hazardous Conditions

SO:JEM/jg (30 July '53)

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 Office Memorandum • UNITED STATES GOVERNMENT

TO : Manager, West Area

FROM : Acting Chief, Safety and Protection Branch

SUBJECT: Safety and Fire Prevention Survey  
 2430 E Street, N.W.  
 Washington, D.C.

DATE: February 15, 1954

In Reply Refer To: 3PBPS

At the request of [REDACTED] Superintendent, State 25X1A9a  
 Group, our office participated in a survey of the fourth floor area  
 of the captioned building. The attached report and recommendations  
 are self-explanatory.

25X1A9a It is suggested that a copy of this report be forwarded  
 to [REDACTED], Safety Officer for the agency involved for his  
 information. Undoubtedly you will be working closely with [REDACTED] 25X1A9a  
 and others in his agency towards ultimate solution of the serious  
 fire and safety hazards noted.

Encl.

/s/

[REDACTED] 25X1A9a

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REPORT OF SURVEY - 2430 STREET, N.W., WASHINGTON, D.C.

Date of Visit: December 8, 1953

INSPECTOR: [REDACTED]  
TITLE: Fire Prevention Engineer

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Purpose of Visit: To conduct a special fire service visit and to consult with the representatives of the occupying agency relative to the adequacy of exits, as well as fire prevention and protection for the 4th floor storage and laboratory area.

Persons Contacted: [REDACTED] rintendent  
and other representatives  
of occupying agency.

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Conditions Found:

A. Construction and Protection

Building is of fire resistive construction normally three stories in height with attic. Within recent years the attic area has been remodeled and divided into several laboratory, shop and office rooms and a storage room for chemicals and flammable liquids.

Partitions generally throughout the attic are of plaster and cement asbestos board construction. Doors to the rooms are of light wood construction. Two masonry enclosed stairways are installed. The entire attic area is air conditioned.

A fire alarm system has been installed and a good supply of first aid fire appliances are conveniently available. No automatic sprinkler protection is provided however.

Due to strict security requirements special vault type locks have been installed on the exit doors through which egress would be affected. This type of lock is electrically actuated for personnel leaving the area during the normal daytime working hours. When an individual, either deliberately or accidentally, moves the dial on the outer side of the exit door, the lock is actuated and personnel in the rooms are trapped until freed by someone who knows the combination of the lock. In this area personnel could be locked and/or practically trapped, for some period of time as there is no other way out except through a small door which leads to a roof ledge. This is a situation which has actually happened. Often under these conditions occupants are not aware they are locked in and should an accident involving chemicals occur under such conditions undoubtedly they would be unable to leave the premises.

Occupancy: A large research laboratory together with small offices and a storeroom are located in the East end of this area. The remaining portion is used for miscellaneous laboratory, research, shop etc. space.

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Storeroom: A small room constructed of cinder block with a wooden door is located adjacent to the research laboratory near the main exit door. The only ventilation provided for this room is through a slatted louvre located at the lower portion of the south wall of the room. No automatic fire protection is provided. This storeroom appears to contain rather large amounts of flammable liquids and hazardous chemicals.

Ventilation: Ventilation and air conditioning is of the recirculating type.

Processed: The nature of the experimental and research work conducted in the laboratory introduces a severe potential accident or fire hazard. This would also be brought about in the event of fire or accident in the storage room. In this connection it was indicated that severely toxic gases might possibly be generated by chemicals coming in contact with acids, organic materials, etc. This might have far reaching and particularly severe results.

Discussion: A discussion was held on the site with representatives of PBS and the occupying agency relative to the safety and the evacuation of personnel in the event of fire, explosion or other accident particularly those in which deadly gases are liberated. Exits were discussed and a survey was undertaken to determine whether additional emergency exits could be provided. The installation of emergency exits to the roof through dormer windows was suggested but it appeared that this would be a costly procedure and would offer little or no solution to the problem as personnel evacuating in this manner would be stranded on the roof with no means of getting down. Then again, if strict security were imposed on these emergency exits, the same as on the present regular exits, no advantage would be gained. After much pro and con on the problem it was decided that representatives of PBS would submit a report with recommendations to alleviate the situation.

General: Flammable liquids, chemicals, acids, etc., such as those stored and used in the area offer a potential rather than an active hazard. The latter occurs only when the containers are accidentally dropped and broken; when accidents occur during processing and should the storage room be involved in fire. Under such conditions the hazard will depend upon the character of the chemicals and flammable liquids, handling or mixing operations, amounts in storage, etc. To correct this potentially hazardous situation which might well result in a serious accident, fire or explosion the following recommendations are offered:

#### RECOMMENDATIONS

1. Laboratory activities and the storage of flammable liquids, chemicals, acids, etc., constitute a serious fire and accident hazard in the area in question. It was indicated also that there exists a particularly serious exposure with respect to the possible liberation of lethal or toxic gases which might involve occupants and the public. Therefore, it is suggested that these operations be relocated in an adequately equipped and protected separate building, one story in height removed from the District of Columbia and/or other residential or congested area preferably in a remote urban location.

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2. As a less desirable alternate method of correcting the situation the following steps should be taken:

A. Storerroom -

(1) Relocate the present storeroom to the S.E. or N.E. corner of the 4th floor, preferably the N.E. corner.

(2) Divide the relocated storeroom by erecting a fire resistant wall to separate chemicals that are not compatible.

(3) Install a C.O.<sup>2</sup> automatic fire protection system in the storerooms.

(4) Provide adequate natural or mechanical ventilation for these storerooms.

(5) Install self-closing, fire resistive doors to the storerooms with a raised sill at least 4" high.

(6) Provide electrical fixtures of the explosion proof type in accordance with the National Electrical Code.

(7) Limit the aggregate supply of flammable liquids to 10 gal. and store in approved metal safety cans in a metal cabinet against outside wall of storeroom.

(8) Limit the amount of chemicals and acids to provide a reasonable degree of safety.

B. Research Laboratory -

(1) Rearrange the air conditioning to prevent the recirculation of hazardous gases to other portions of the building. It is suggested that the air conditioning for the laboratories and the storeroom for chemicals, flammable liquids, etc. be independent self-contained systems, which, would not distribute gases throughout the entire floor and/or other parts of the building in the event of accident. If this cannot be accomplished a remote control switch should be installed at some readily available location to shut off the air conditioning equipment immediately.

(2) Install tight fitting self-closing doors at the entrance to the research laboratory to swing in the direction of exit travel.

C. Exit Doors: Replace present corridor and stairway exit doors secured by vault type locking devices with an entirely new door which would offer security and provide an exit in case of extreme emergency. In this connection it is suggested that the replacement doors be constructed with full plate glass panels extending to within eighteen

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C. Exit doors (continued)

(18) inches of the floor. These doors could be equipped with vault type locks, etc., and also be provided with metallic foil which would transmit an alarm in event of unauthorized entry. An axe should be provided for breaking the door glass in an emergency.

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SAD Memo #275  
28 Apr 54

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Chief, General Services Office, Building & Maintenance & Utilities Branch

Attn : Mr. [redacted]  
Chief, TSS/SAD

Thru : Chief, TSS

Safety and Fire Prevention Survey

Reference: 3PBPS dtd 15 Feb 54

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Auth:	HR 70-2
Date:	NOV 21 1978 By: 013

1. This Division has examined carefully the referenced Safety and Fire Survey and the recommendations accompanying it. Some of the recommendations have already been accomplished, others we feel might well be accomplished, and some we feel should be given no further consideration.

2. Listed below you will find our comments on the recommendations in the subject survey. Reference numbers found refer to the page, paragraph, and subparagraph on that survey.

a. Recommendation 1 (page 2): We do not feel that we can comment on this recommendation in more than a general way. We do agree that the functions now being carried on in the subject area might well be relocated; however, this is not a decision which we are in a position to make. Beyond concurring with the general thought, we have no comments.

b. Recommendation 2 (page 3):

Subrecommendation 1: This recommendation suggests the relocation of the present storeroom to either the Northeast or the Southeast corner of the fourth floor. We do not feel that the movement of the storeroom can be agreed to by this Division as this move would place the storeroom in the one case on the other side of the clerical offices from all operational personnel. Relocating the storeroom in the other suggested corner of the building would virtually necessitate the entire reconstruction of that end of the building which would not only involve the normal expense but would further require the relocation of large quantities of fixed laboratory benches and their accompanying pipes, sinks, etc.

Subrecommendation 2: This recommendation deals with the division of the storeroom by a fire resistant wall whose purpose would be to separate chemicals that are not compatible. In this Division's opinion very few chemicals are compatible with one another. We seriously doubt that any such separation of chemicals into compatible groups could be made. We have, as a result of a prior survey, removed all acids from the current storeroom to another storage area. We have further separated all inflammables and placed them in an all metal cabinet equipped with sliding

Metal doors./

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metal doors. Further separation appears to us to be impossible.

Subrecommendation 3: This recommendation deals with the installation of a CO<sub>2</sub> automatic fire extinguisher system in the storeroom. We are in complete concurrence with this recommendation.

Subrecommendation 4: This recommendation deals with the provision of adequate natural or mechanical ventilation for the storeroom. We are in complete concurrence with this recommendation but wish to point out that, in our opinion, this room cannot be naturally ventilated as the entire fourth floor area is wholly dependent upon an air conditioning system for any ventilation whatsoever. We do however, feel that the installation of a mechanical ventilation system, which services this storeroom only, would be an excellent move if it proves to be feasible from the construction standpoint.

Subrecommendation 5: This recommendation deals with the installation on the storeroom of a self-closing, fire resistant door with a raised sill. We have little opinion on this recommendation beyond the statement that the wooden door currently used on the storeroom is little less of a hazard than the plaster board wall which separates the storeroom from the hall. It would seem to us that if you are going to install a fire resistive door, some consideration to installing a fire resistive wall should also be given. It is felt that this entire recommendation might better be solved by the installation of the automatic fire extinguisher discussed in subrecommendation 3.

Subrecommendation 6: This recommendation deals with the installation of explosion proof electrical fixtures. It has our complete concurrence.

Subrecommendation 7: This recommendation deals with the limitation of the amount of flammable liquids which are to be stored. We feel that we have already reduced the amount of inflammable solvents to a minimum point consistent with our mission. Further reduction would necessitate the construction of an additional storage area somewhere in, or in the immediate vicinity of, South Building. The procurement time needed to replenish these solvents is so long that certain minimum stocks must be maintained in the area at all times.

Subrecommendation 8: This recommendation deals with limitation of the amount of chemicals and acids. The same statements given in subrecommendation 7 are applicable here.

c. Recommendation 2b (page 3): This recommendation deals with the reconstruction of the air conditioning in the research laboratory to prevent recirculation of hazardous gasses. This recommendation has, in a way, been accomplished by the installation of remote control shut-off switches so that air circulators may be rapidly shut off in an

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emergency.

d. Recommendation 2c (page 3): This recommendation deals with the replacement of corridor stairway and exit door with a new door composed of full plate glass panels which may be removed with an axe in case of emergency. This Division is willing to concur with this recommendation but wishes to point out that any such move would, of necessity, have to be approved by [REDACTED] TSS Security Officer.

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3. This Division stands ready at any time to discuss in full detail any of the above recommendations or our comments on them. If such a discussion is desired please do not hesitate to contact either myself or [REDACTED] of this Division.

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[REDACTED]  
Chief, TSS/SAD

Attachments: 1

Distribution:

- Orig & 1 - Addressee w/attach
- 1 - Chief, TSS w/attach
- 1 - Chief, TSS/L&SO w/attach
- 1 - TSS/ADMIN ([REDACTED] w/attach
- 1 - TSS/SAD w/attach

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Originator: [REDACTED] frd

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Chief, DD/P/TSS

Director of Security

Relocation of TSS/SAD Facilities Presently Located In South Building Attic.

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1. On 20 July 1953, the CIA Asst. Safety Officer accompanied by [redacted] TSS, completed an inspection of the central and east sections of South Building attic. As a result of this inspection, a paper entitled "Description of Hazardous Conditions, South Building Attic", was prepared by the CIA Asst. Safety Officer and was concurred in by [redacted] Chief, TSS/SAD and [redacted] Deputy Chief, TSS/Research Analysis Branch. This description contained statements to the effect that there are potential hazards from cyanide, bromine, hydrogen fluoride and phosgene gases. A fire or explosion could possible change these potentials into a very active hazard. The description further stated that the various laboratories in these areas use the following explosives and/or inflammables:

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- alcohol
- acetone
- chloreform
- benzene
- ether
- tank of acetylene
- tank of oxygen

2. As a result of the inspection of South Building Attic, a formal Fire and Safety Survey Report was prepared. This report contained recommendations designed to minimize the hazards existent in the area. One of the recommendations made was to relocate the operations, if at all possible, to a more suitable area. Copies of this report were forwarded on 12 August 1953 to Chief, Technical Operations, TSS, and to the Chief, GSO, for necessary corrective action.

3. At the request of the Asst. Safety Officer and with the approval of [redacted] TSS Liaison and Security Officer, arrangements were made for an inspection of the area on 8 December 1953 by a PBS Fire Prevention Engineer. As a result of this inspection, a report was prepared and forwarded on 15 February 1954 to the Manager of the West Area (PBS). Copies of this report were made available to the Space, Maintenance and Facilities Branch, LO, and to TSS/SAD. A copy of the report was recently

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obtained by the Asst. Safety Officer through the courtesy of [redacted] 25X1A9a  
[redacted] TSS. The primary recommendation contained in this report suggested the relocation of this operation in a separate one story building removed from the District of Columbia, or other residential congested areas. A preference was indicated for a remote urban location. The report also contained a "less desirable alternate method" of correcting the hazardous conditions found in the attic.

4. With regard to the alternate recommendation, [redacted] 25X1A9a  
Chief, TSS/SAD, prepared a report dated 28 April 1954 showing which steps have been taken to comply with these recommendations, the most noteworthy of these being the segregation of acids and inflammable liquids from the chemical storeroom.

5. With due consideration to the previously noted facts, it is determined that this operation must be relocated to comply with the primary recommendation of the General Services Administration, namely, to relocate the laboratory in a more suitable and less densely populated area. This move will not only lessen the possibility of serious effects to Agency personnel and the public, but to the Director of Central Intelligence who is to occupy space in this building. The imperative need for completely secure and safe office space for the Director is, of course, of paramount importance. It is therefore requested that the laboratory be moved to suitable quarters before the DCI moves to South Building.

Sheffield Edwards

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