Mallinckrodt, Inc.

BOX 10172 LAMBERT FIELD STATION, ST. LOUIS, MISSOURI 63145 • PHONE 314 291 0540

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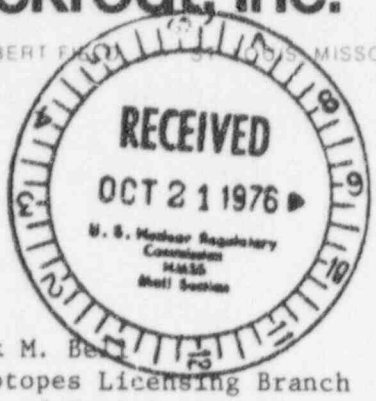
October 18, 1976



Mr. Jack M. Bell
Radioisotopes Licensing Branch
Division of Fuel Cycle and
Material Safety
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: U.S. NRC License
No. 24-04206-01

Dear Mr. Bell:

The purpose of this letter is to provide you the additional information requested in your June 1, 1976 letter regarding changes to our facilities brought about by the addition of Building 500 and the future addition of Building 600.

The present operations involving radioactive materials in our facilities are as follows:

Building 100

Production Department -
Processing, dispensing and packaging of invivo products
Processing, dispensing and packaging of invitro products.

Radiation Safety Department -
Radionuclide identification and assay of samples
Instrument calibration
Decontamination laundry
Bioassay determinations.

Building 200

Quality Control Department -
Radionuclide identification and assay of products
Animal testing with radioactive products
Sterility testing of radioactive products
Finished product quarantine storage.

R & D Department
Process development
New product development.

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Building 300

Distribution Department -
Finished product storage and order filling
Packing and shipping of customer orders.

Building 400

Distribution Department -
Receiving and delivery of incoming radioactive materials.

Building 500

Radiation Safety Department -
Survey and release of incoming radioactive materials
Survey and release of outgoing TYPE B shipments
Liquid radioactive waste storage and processing
Solid radioactive waste processing, packaging and storage
Ultra-TechneKow reclamation
Expired radioactive product component parts reclamation.

The future operations involving radioactive materials planned upon completion of Building 600 and subsequent renovation of Buildings 100,200, 300 and 400 are as follows:

Building 100

Production Department -
Dispensing and packaging of invitro products.

Radiation Safety Department -
Functions unchanged.

Building 200

Quality Control Department -
Functions unchanged but expanded when R&D vacates the facility.

Building 300

Distribution Department -
Functions unchanged.

Building 400

Distribution Department -
Finished product storage
Packing and shipping of customer orders.

Building 500

Radiation Safety Department -
Physical receipt of incoming radioactive materials
Other functions unchanged.

Building 600

Production Department -
Processing, dispensing and packaging of invivo products
Processing of invitro products.

We present the following information specifically related to the six items in your June 1, 1976 letter.

1. We do not know what the reduction factors will be for each radionuclide released in our plant effluent. HEPA filters and nuclear grade charcoal adsorbers have apparently remained as the best "state of the art" for removal of radioactive materials from our effluent air. Our efforts have been directed toward evaluating our present air filtration systems and replacing them with the best commercially available systems.

   Most helpful in this respect was the study of the levels of activity being released from our facility and the environmental levels around our facility which was begun on March 19, 1975 by the Radiochemistry Section of Allied Chemical - Idaho Chemical Operations at the request of the NRC Office of Inspection and Enforcement. Three particularly important pieces of information were obtained early in the study.

   1) A substantial fraction of the iodine collected downstream of our cleanup system was in particulate form.

      The HEPA filters (and charcoal adsorbers) in our present cleanup systems have mechanical seals consisting of rubber gaskets pressed against a knife edge by spring loaded crank mechanisms. We attribute the particulate activity found in our effluent to

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the ineffectiveness of this sealing method. For this reason, we selected HEPA filters and charcoal adsorbers having fluid filter-to-frame seals to prevent bypass of particulate material. Our new systems also have a final HEPA filtration downstream of the charcoal adsorbers not present in previous systems for back-up and for removal of charcoal fines.

2) The major fraction of the iodine passing through our cleanup system was in a volatile organic form.

3) The removal efficiency of our charcoal adsorbers decreased rapidly with time.

Ozone, acids and hydrocarbons, among many others, are known to "poison" charcoal adsorbers. Also, such conditions as relative humidity and temperature have great effect on the removal efficiency of charcoal. Our sterile enclosures are necessarily equipped with ultra-violet lamps which produce quantities of ozone. A variety of acids and hydrocarbons are used as reagents for producing our products. Water vapor from process heating increases the relative humidity. We do not know to what extent these variables will accelerate the aging of the charcoal adsorbers. We can say with some confidence that the release rate of Iodine-131, the primary radionuclide of concern, should be appreciably reduced and that the air concentrations at the point of discharge to the atmosphere should be lowered by one to two orders of magnitude.

Following is a comparison between our previous and new air treatment systems. Note in particular the design emphasis on increased retention time in the charcoal adsorbers.

The primary cleanup system for Building 100 studied by Allied Chemical consists of two parallel filtration banks, each of which has in series a single prefilter, HEPA and charcoal adsorber. These banks then connect to an enclosure for a single backup charcoal adsorber. The total units for this parallel/series system are 2 HEPA filters and 3 charcoal adsorbers. The system characteristics are listed in Table 1, attached.

Building 600 systems for handling volatile radioactive materials (I-131, I-125, Hg-203, Hg-197 and Se-75) have been designed to increase the bed depth and retention time. The total units for these systems will be 42 HEPA filters and 24 charcoal adsorbers with provisions for an additional 21 charcoal adsorbers. We do not plan to install the optional charcoal adsorbers upon startup.

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However, additional charcoal adsorbers will be added to any system which by air sampling data has a high release rate. The design characteristics are listed in Table 1 along with the manufacturer's filter media specifications.

Building 600 systems 1, 2 and 3 have HEPA filtration only for cleanup of the Mo-99/Tc-99m hotcell effluent. Drawing No. HB-0576, Revision B, and Drawing No. AC-7 are attached for your reference.

The Building 500 system, which has been operational since June, 1976, has 6 HEPA filters and 6 charcoal adsorbers in addition to 3 roughing prefilters and 3 secondary prefilters. The characteristics of this system are also listed in Table 1.

2. We intend to test the filtration efficiencies of all new systems by airborne radioactivity sampling. Continuous weekly air samples will be taken before and after the first HEPA filters, before and after the first charcoal adsorbers and after the last HEPA filters. This program will commence in the early stages of operation and will be ongoing. Visual inspections will also be made to assure that the fluid seals have been properly positioned with respect to the frames upon installation of new filters and upon filter replacement.

3. Manometers installed across the HEPA filters will be used to monitor the condition of air filtration systems. Manometers will also be installed on enclosures such as glove boxes. In addition, the face velocities of hoods will be measured periodically. The relationship will be determined between pressure drops across the treatment systems and the corresponding decrease in negative pressures in gloveboxes and in the linear velocities of fumehoods connected to the systems. The condition of charcoal adsorbers will be monitored by efficiency measurements as described in Item 2.

   The criteria for HEPA filter change are a minimum of 100 linear feet per minute for hood face velocities, or a minimum of 0.25 inches of water negative pressure for gloveboxes. The first charcoal adsorbers in a given system will be removed when air sampling data indicates that breakthrough of organic iodides has occurred. The remaining adsorbers will be moved forward one position and new charcoal adsorbers will be installed in the last position.

4. Copies of the security programs, presently in effect, are attached. The documents cover the following:

    1) Site Security

    2) Security Badges - Employee Identification

    3) Plant Keys

    4) Company Property Pass.

    Feasibility studies are being made to determine whether additional systems or programs may be required upon completion of our extensive expansion program scheduled for the end of 1977.

5. The air flow patterns for Building 600 are shown on the attached Drawing No. AC-1. Arrows at the doors indicate room pressurization air flow. The pressure differentials are indicated on the drawing by the + or - symbols. Refer to the General Notes on Drawing No. AC-3 for the nominal values of these symbols in inches of water. Suitably sensitive pressure measuring devices will be installed at the doorways to all rooms or areas having a - symbol. These gauges will be monitored periodically after initial balancing of the total air handling system. Any major deviations from the initial pressure differentials will be corrected by readjustment of balancing dampers.

    The air flow pattern in Building 500 is from the air supply system located on the South wall toward the North end of the building. At this end of the building are three exhaust systems. During summer operations, a thermostatically controlled roof ventilator exhausts heated ceiling air. During winter operations, the roof ventilator shuts down and a damper mechanism in the supply system recirculates a portion of the air. Near floor level, a portion of the air downflows into the basement liquid waste retention tank area to prevent accumulation of moisture from where it is exhausted to the atmosphere. The remaining 3000 CFM of air sweeps into the radioactive waste processing room which contains ventilated enclosures connected to the effluent air treatment system. A portion of this air flows into the packaged radioactive waste storage tunnel entrance to an exhaust duct also connected to the air treatment system. This building has essentially no interior walls and therefore is not equipped with pressure differential area gauges. The face velocities of hoods in the waste handling area are maintained by HEPA filter change or by balancing dampers.

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6. All air from the Building 600 effluent treatment systems will be discharged from a common stack located atop of the penthouse. This stack is 20 feet in height and 42 inches in diameter. The total height of the stack above ground level is 65 feet. The design velocity of the airstream is 30 miles per hour at the point of discharge. Mounted above the stack is a horizontal circular steel plate. An inverted cone is attached concentrically to the steel plate. This deflector causes the air to be discharged in a horizontal plane 20 feet above the penthouse roof. The air expands radially until it decelerates to ambient wind velocities. A considerable dilution of the effluent occurs during the expansion and deceleration of the airstream. Eight environmental sampling stations are located 39 feet from the stack at all the major compass points as shown on the attached Partial Roof Plan. A 20 foot vertical mast is fixed to each of the station platforms to obtain air samples in the same horizontal plane as the stack discharge. The effects of radial expansion, wind velocity and wind direction combine to reduce the air concentrations to a very small fraction of the MPCa for unrestricted areas. An additional sample will be taken in the stack at the point of discharge. The air will be collected continuously and the samples will be analyzed weekly. Funds have also been provided to obtain a continuous stack monitor.

   A similar horizontal deflector is mounted above the Building 500 stack. This stack is 6 feet in height and 16 inches in diameter. The escape velocity of the airstream is approximately 24 miles per hour. To date, we have not installed environmental sampling stations on the roof of Building 500 since the air concentrations of Iodine-131 have averaged only 16% of the MPCa for unrestricted areas as measured at the point of discharge to the atmosphere. We do plan to install 4 environmental sampling stations on the roof if the concentrations climb to the 1 MPCa non-occupational level. They would be installed NE, SE, SW and NW of the stack at a distance of 27 feet.

Enclosures:
Table 1 - Charcoal Adsorber
Air Treatment Systems
Drawing No. HB-0576, Revision B
Drawing No. AC-7
Site Security
Security Badges - Employee Identification
Plant Keys

Enclosures - continued Page 8

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Enclosures - continued

Company Property Pass
Drawing No. AC-1
Drawing No. AC-3
Partial Roof Plan - Building 600

Sincerely yours,

MALLINCKRODT, INC.
MALLINCKRODT/NUCLEAR

Donald W. Soldan

Donald W. Soldan
Chief Radiation
Safety Officer

/lm
cc: NRC Region III Office

Table 1.

CHARCOAL ADSORBER AIR TREATMENT SYSTEMS

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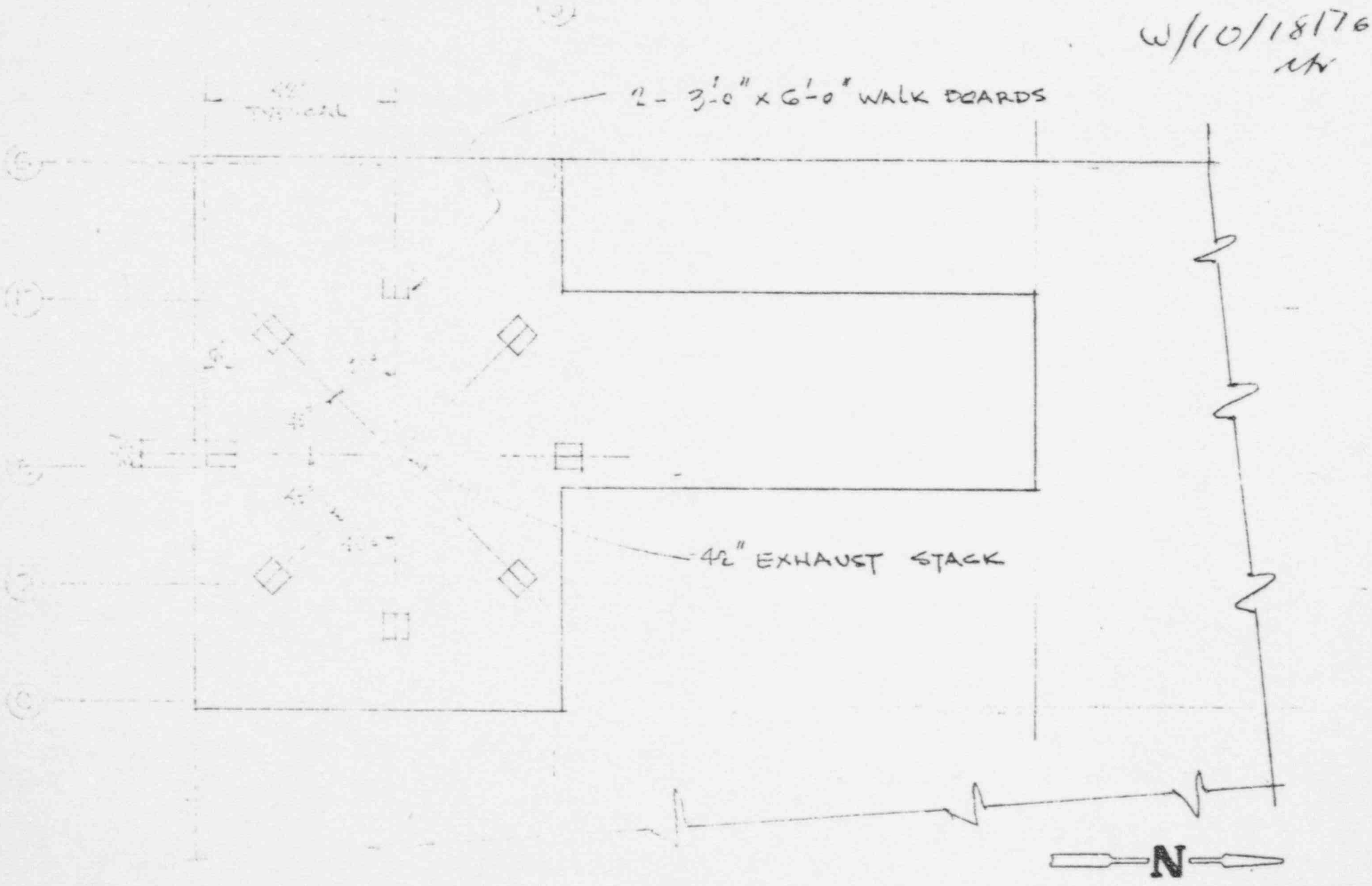
System No.	Flowrate (CFM)	Area (Ft^2)	Face Velocities (FPM)	(CM/SEC)	Bed Depth (CM)	Retention (SEC)
PRESENT SYSTEM CHARACTERISTICS					**BUILDING 100 PRIMARY SYSTEM**	
B 1.	1050	20.3	51.7	26.3	2.5	0.10
(Hotcell)	1750	20.3	86.3	43.8	2.5	0.06
					5.0	0.16
B 2.	700	20.3	34.5	17.5	2.5	0.14
	1750	20.3	86.3	43.8	2.5	0.06
					5.0	0.20
NEW SYSTEM CHARACTERISTICS					**BUILDING 500 SYSTEM**	
1	3000	40.5	74.0	37.6	10	0.27
SYSTEM DESIGN CHARACTERISTICS					**BUILDING 600 NEW SYSTEMS**	
4 + 5	1000	27.0	37.0	18.8	10	0.53
(Hotcells)					*15	0.80
6.	3000	40.5	74.0	37.6	5	0.13
					*10	0.27
6 + 6A	3000	40.5	74.0	37.6	5	0.13
	550	13.5	40.7	20.7	5	0.24
					10	0.37
					*15	0.51
7.	6500	81.0	80.3	40.8	5	0.12
					*10	0.25
8.	3110	40.5	76.8	39.0	5	0.13
					*10	0.26
9.	1000	13.5	74.1	37.6	5	0.13
					*10	0.27
10.	5870	81.0	72.5	36.8	5	0.14
					*10	0.27

*An empty housing is provided for additional charcoal adsorption as may be required.

FILTER MEDIA SPECIFICATIONS — BUILDINGS 500 AND 600

Filter Type	Dimensions	Efficiency
Roughing Prefilter	24 x 24 x 2	20% ASHRAE
Secondary Prefilter	24 x 24 x 12	*90% ASHRAE
HEPA	24 x 24 x 12	99.97% DOP
Charcoal Adsorber	24 x 24 x 16	99.9% FREON

*Installed in Building 500 Filter Bank only.



PARTIAL ROOF PLAN

BLDG. 600 1" = 30'

COMPANY PROPERTY PASS

1. Scope

This instruction describes how company property needed in conjunction with official business, or personal use, can be temporarily removed from the premises.

2. Responsibilities

2.1 Department supervisors are responsible for procedure compliance, resolves if contamination check is required, and inspects equipment prior to and upon return to his area.

2.2 Health/Physics Department performs, when necessary, a contamination check on equipment or materials leaving the plant site.

2.3 The supervisor of the Health/Safety Department is responsible for establishing over-all security policy for the plant and resolves any questions concerning passes.

2.4 Mallinckrodt/Nuclear personnel checking out company equipment for personal use assumes responsibility for the proper handling and return of such equipment. Cost for repair or replacement of damaged equipment as a result of negligence while in his care is then his.

Unauthorized removal of company property from the premises can result in disciplinary action or discharge.

3. Procedure

A temporary property pass (exhibit A) to be completed by

individual requesting removal of property from the plant. Property pass forms must be obtained from the area supervisor responsible for the property.

This supervisor will:

1. Determine if contamination check is required and notifies Health/Physics, if necessary.

2. Inspect good working order of equipment prior to leaving and upon return to his department.

3. Authorize release of property from his department by completion of property pass.

Property passes to be retained by authorizing supervisor. Upon return of company property the pass is so marked, held for thirty (30) days and destroyed.

EXHIBIT "A"

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MALLINCKRODT/NUCLEAR PROPERTY PASS	
NAME:	DEPT.:
DEPT. PROPERTY ASSIGNED TO:	
PROPERTY NO.:	
DESCRIPTION:	
CONTAMINATION CHECK REQUIRED ☐ NOT REQUIRED ☐	
CONTAMINATION CHECK BY:	
DATE OUT:	DATE TO BE RETURNED
INSPECTED OUT:	INSPECTED IN:
AUTHORIZED BY:	

PLANT KEYS

I. Introduction

This instruction outlines key systems at Maryland Heights, description of key zones, procedures for plant key issue and security policy concerning key usage.

II. Key Systems

The Maryland Heights facility basically has three key systems:

A. Exterior door key - specific exterior doors are commonly keyed with a key identified as an "EX" series. These keys are serially numbered for issue identification.

B. Internal areas within buildings have been segregated into departmental zones and keyed accordingly. This system reduces the number of keys for supervisory control. Each zone is individually keyed to maintain internal building security. Zone keys are so marked and serially issued.

C. Master keys - a limited number of master keys permitting entrance through exterior doors and zones areas have been issued to authorized personnel. These keys are coded "MX" and serially numbered for issue.

III. Description of Principal Key Zones

These are:

A. Zone #1 = Production Area

B. Zone #2 = Storeroom

C. Zone #3 =

D. Zone #4 = Quality Control

E. Zone #5 = Waste Room and Laundry

F. Zone #6 =

G. Zone #7 = Safety and Services

H. Zone #8 = Dispensing

I. Zone #9 = Research and Development

J. Zone #10 = Shipping and Warehouse

K. Q.C.H. = Quality Control Hold Area

IV. Procedures for Key Issue

A. Plant keys may be issued to an employee by the Supervisor of the Health/Safety Department only upon written request signed by his or her supervisor and approved by the department manager. The Health/Safety Department will maintain a log indicating what key was issued to what employee.

B. Should an employee terminate employment, the Personnel Department shall notify supervisors of the Health/Safety and Health/Physics Departments so keys and other company property can be returned. Supervisors of the above departments to provide Personnel Supervisor with a check-off list for his/her review prior to the exit interview with the employee.

A locked key cabinet containing extra plant keys is maintained in the Health/Safety Department. It is desirable that copies of specialized keys not covered above and used by plant supervision be stored in this box. This practice would enable entrance into such areas in the event of an emergency.

V. Security Policy

A. Any person in possession of an unauthorized key is subject to disciplinary action or dismissal.

B. Unauthorized duplication of any key to any door or locked equipment will result in immediate discharge.

C. Use of an authorized key to open some other lock which the key happens to fit is also grounds for immediate disciplinary action.

D. Loss of any key must be promptly reported to supervision. Keys may be recalled at any time and on-the-spot key checks may be conducted at any time by a supervisor or the security officer.

I. Policy

To prevent the entry of unauthorized personnel into the facility. Security badges and visitor identification tags are issued as a means of control.

II. Identification

Each employee will be issued an identification badge which he can be required to show for admission to company property and which he will display on his outside clothing when on company property.

Each supervisor is responsible to see that only properly identified personnel are within his areas of responsibility.

Provisions will be made for identification of visitors, contract and outside service personnel.

All visitors to the facility will sign the Visitor Register and be escorted.

III. Program

A. Badge Issuance

1. The Health/Safety Department will issue photo identification badges to employees and contractors.
2. Visitors to the facility will be issued visitor tags by the Receptionists located in Buildings 100, Research and Development and Building 300. Such tags will be issued after the visitor has signed the Visitor's Register and escort arrangements have been made. Such

tags will be issued after the visitor has signed the Visitor's Register and escort arrangements have been made. Such tags are to be returned to the Receptionist when the visitor signs out.

3. Mallinckrodt, Inc. personnel from other facilities must sign the Visitor's Register and display the identification badge on their person from that facility or be issued a temporary visitor's t-g.

4. Outside service and maintenance personnel regularly on the premises may be issued a semi-permanent outside contractor badge for the duration of their contract. Badges are to be surrendered upon employment or contract termination.

5. Replacement of lost or damaged badges is made by the Health/Safety Department upon presentation of a written request signed by the employee's immediate supervisor.

6. Badges of terminating employees will be collected by the Personnel Department and returned to Health/Safety Department.

7. Special measures will be taken to assure the proper identification of cleared personnel when such actions are required.

B. Responsibilities

1. Employees are responsible for:

a. Safeguarding their identification badge and

reporting promptly any theft or loss of it.

b. Displaying their badge on outer clothing in a prominent location when on the plant premises.

c. Showing their badge, when requested, for admittance to the premises.

d. Reporting to their supervisor the presence of any improperly or unidentified personnel in their work area.

2. Supervision is responsible for:

a. Seeing that only properly identified personnel are in their areas of responsibility.

b. Challenging improperly or unidentified personnel in their areas and if they cannot provide proper identification, return them to the appropriate port of entry for identification and badging.

c. Approving requests for replacement of lost or damaged badges.

3. Health/Safety Department is responsible for:

a. Specifying media used for the various badges and for developing over-all employee identification policy.

b. Spot checking employees entering the plant or within the plant for proper identification and reporting irregularities to the appropriate department supervisor.

c. Filling lost badge replacement requests, recording

badge losses, and recovering lost identification where possible.

4. Personnel Department is responsible for:

   a. Coordinating issuance of badges to new employees with the Health/Safety Department.

   b. Recovery of badges from terminating employees.

SITE SECURITY

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INTRODUCTION

The attached procedures have been developed as a means to secure the site against unauthorized entry, preventing access to or removal of licensed material or company classified information, company or employee personal property.

Such procedures are directed to the Maryland Heights operations but can be adapted to other Mallinckrodt/Nuclear facilities.

I. Responsibilities

A. The Plant Manager is responsible for:

Establishing over-all security policy for the Mallinckrodt/Nuclear facilities.

B. The Supervisor of Health/Safety Department is responsible for:

1. Development and implementation of security programs.
2. Assigning personnel to open plant preceding normal work hours.
3. Acting as liaison between Mallinckrodt and CDA (Central District Alarm Company), contracted guard service and the County Police.
4. Issuing CDA cards and plant keys at the request of department managers.
5. Investigating security infractions reported by CDA, local police or others.
6. Auditing over-all program to insure that effective procedures are enforced.

C. The security of Mallinckrodt/Nuclear personnel and Mallinckrodt assets, tangible and intangible, is the responsibility of management at all levels.

D. Each employee has a responsibility to protect Mallinckrodt/Nuclear assets against theft, reporting strangers within the plant to their supervisors and following the administrative practices prescribed.

II. CDA Alarm System - Brief Description

CDA is an electronic surveillance system using magnetic contacts on exterior doors and windows. Should any door or window be opened after the system has been activated, a signal is transmitted to CDA Central, who responds by notifying the County Police. The County Police have been instructed to respond to the site and investigate cause.

When securing the building, it is important to physicaliy check doors and windows to determine if they are closed and locked. Such action eliminates false alarms.

III. Opening and Securing Building During Normal Business Hours, Monday through Friday

A. Opening Building

Specified doors in Buildings 100/200 - 300/400/500 and gates will be opened by an authorized employee at 6:30 a.m.

B. Securing building and premises - time schedule and responsibilities

1. 4:30 to 5:30 p.m.

Between the hours of 4:30 to 5:30 p.m. any exit door may be used by employees.

2. After 5:30 p.m.

   a. Supervisory or management personnel shall report all names of employees scheduled to work past 5:30 to the guard at Station 69.

   b. The guard shall enter above names in "weekend and off-hours" log. When work is completed, the supervisor shall notify the guard they are leaving so he can check them off the list.

   c. The guard will lock all exterior doors, windows and gates. (Traffic gate to remain open should Distribution Department be working over.)

3. 6:00 p.m.

   The guard will make unscheduled rounds of the site between 6:00 p.m. and 11:00 p.m.

4. 10:30 to 11:00 p.m.

   a. The security guard will re-check after-hours log at the end of the Second Shift to determine if all employees have left the site.

   b. When all employees have gone, the security guard will determine if the CDA alarm is set in Buildings 300 and 600. If the Night Traffic Clerk is on duty, he will be responsible for setting the alarm in Building 300. Production Supervision shall be responsible for 600. If the Traffic Clerk or the 600 Production Supervisor is not on duty, the security guard will be responsible for setting the alarms in Buildings 100/200, 300/400/500 and 600 and locking the main traffic gate.

   c. Supervisors remaining in the plant after 11:00 p.m. shall be responsible for the security of the facility, setting the CDA alarm, clearing with CDA that the alarm works and locking the

gates prior to leaving the site.

IV. Shunt Key System

Due to the work schedule of the Production Departments, a special CDA shunt system has been installed in the exterior doors of the KOW assembly room to provide special entry or exit without disturbing the activated CDA system.

V. Shunt Key Issue

A. Shunt keys will be issued by the Health/Safety Supervisor to Production Department supervision.

B. When authorized use of the shunt key is required, the Production supervisor shall:

Issue shunt key by use of a key ledger book. Ledger to indicate who key was issued to, date and time issued, for what reason, signed by employee and confirmed by supervisor.

When key is returned, the time of return is indicated on ledger, signed in by employee and supervisor.

NOTE: Unauthorized use or possession of a shunt key can result in disciplinary action or dismissal.

VI. Saturday Operations

Saturday operations will be covered by Production Supervisor on duty.

A. Responsibilities

1. Contact CDA by phone, enter building to deactivate alarm for the day and open main traffic gate. (All exterior doors to remain locked). Should employees desire to enter building,

they should ring front door bell or buzzer.

2. Act as coordinating supervisor for employees of other departments assigned to work without supervision.
3. Handle,or contact others from management call list,in event of emergencies (occupational injuries, fire, power failures, etc.)
4. Remain on site until all work activities are completed. When leaving, check "weekend and after-hours" log, secure premises, notify CDA and activate alarm.

VII. Sunday and Holiday Operations

The supervisor of employees scheduled for duty acts as the responsible supervisor and has the responsibility for opening and securing the plant when all business activities are finished.

NOTE: All employees entering the plant on weekends or holidays must sign in on "weekend and after-hours log". For weekend use, log to be placed near receptionist's desk (Building 100), Building 300 vestibule and Building 600 entrance area.

VIII. Special Entry

The right to enter the building during off hours not covered above is a privilege which entails specific responsibilities. Failure to comply with the security requirements concerning plant entry and exit, can result in loss of privilege, disciplinary action, or dismissal.

IX. Deactivate and Securing CDA Alarm

A. Any authorized holder of a plant key and CDA card may enter the plant and deactivate CDA alarm system. CDA must always be contacted prior to entering Buildings 100/200, 300/400/500 and 600.

Prior to entering or closing Buildings 100/200, 300/400/500 and 600 the following instructions must be followed to prevent nuisance false alarms to the St. Louis County Police Department.

A. Entering Buildings 100/200, 300/400/500 and 600

1. Call CDA from the call boxes located on the front entrance of Building 100, the South entrance of Building 300 and the front entrance of 600. Do not enter buildings to make the phone calls. This must be done from the phone located on the outside.
2. Give name, Company,and card number and advise which building you are to enter.
3. Unlock door and enter building. This system is designed such that it will automatically turn itself off when you break the alarm.

B. Setting the CDA alarm

1. Determine that all doors and windows are locked.
2. Prelock door that you will exit through. This is done so that all you have to do is close the door as you leave and it will automatically lock.
3. Call CDA from within the building. Give name, company, card number and advise you are setting the alarm in such and such building.
4. Go to the alarm controls which are located in the following buildings:

   Building 100/200 - Closet next to ladies' rest room, main office area - Building 100.

Building 300/400/500 - Telephone Room located in Southeast corner of the Order Department, Building 300.

Building 600 - Front entrance area.

5. If all doors and windows are closed and locked, the needle on the control should read in the red area.
6. When the above is confirmed, press the red button and the amber light on the left should come on. When this happens, walk out the previously locked door and secure.

X. Visitor Control

I. Procedure

This instruction outlines procedures for on-site visitors to Mallinckrodt/Nuclear facilities.

A. Visiting salesmen, service contractors, or professional representatives will contact receptionist and sign in on visitor's log indicating their name, who they represent, and the Mallinckrodt/Nuclear representative they are to contact.

B. Mallinckrodt/Nuclear contact or tour sponsor will be responsible for visiting parties while on the premises. This supervisor, in addition, will be responsible for securing protective equipment, clothing, shoes, and radiation dosimetry, if required.

C. After completion of business within the site, the supervisor will escort the visitor or visitors to the receptionist, where they will sign out.

Unidentified and unescorted personnel within the plant may be asked to leave the site if their visit is not authorized by a Mallinckrodt/Nuclear supervisor or manager.

Visits by family and friends of Mallinckrodt/Nuclear employees

will not be permitted unless clearance has been granted by Plant Manager or employee's department manager.

OVERSIZE
DOCUMENT
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SEE APERTURE CARD FILES

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