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**Pacific Northwest Laboratory
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Pacific Northwest Laboratories
P.O. Box 999
Richland, Washington U.S.A. 99352
Telephone (509)

Telex 15-2874

September 6, 1985

Mr. Dan Baker
ADP Division
Richland Operations Office
Department of Energy
Richland, Washington 99352

Dear Mr. Baker:

SUBJECT: ADP Security Plan for IBM PC Workstation in the Math Building,
Room 1139 at PNL

Enclosed is an Updated ADP Security Plan for an IBM Personal Computer to be used in the Math Building at PNL for classified data base management. Using the equipment specified in this document and implementing the administrative and physical procedures as outlined will provide the secure environment necessary for this work to proceed.

If I can be of any additional help in this matter, please call me on 375-3779.

Very truly yours,

J.D. Fluckiger
Computing Systems Security Officer
Pacific Northwest Laboratory

JDF:ber

In Duplicate

cc: A. Johnston, PNL w/o Enclosures
J. Fox, PNL w/o Enclosures
R. Melton, PNL w/Enclosures
☒ B. Merrill, PNL w/Enclosures
D. Kenyon, DOE-RL w/Enclosures

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By Authority of CG-55-3,
LK Engle, 9-23-94.

By Jessi Mally, 11-22-94
Verified By SPR, 12-20-94

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NSA **DECLASSIFICATION**
TO
CLASSIFIER: **DATE:** 9 11 85
CLASSIFICATION AUTHORITY: Various *MULTIPLE*
☐ DECLASSIFY OR **UPGRADE**
☒ **ANDR** (Orig. Agency's Determination Req'd)

This document consists of:
15 pages, ~~_____~~

BATTELLE, PACIFIC NORTHWEST LABORATORIES

ADP SECURITY PLAN

3000 AREA MATH BUILDING, 1139 ROOM

Date Prepared: August 30, 1985

Submitted by: Ron Melton

PNL Approval by: [Signature]
Computing Systems Security Officer

Date: 9-11-85

[Signature] [Signature]
PNL Security

Date: 9-11-85

DOE-RL Approval by: _____
DOE-RL Security

Date: _____

Distribution:

- Copy #1: Dan Baker, DOE-RL
- Copy #2: Deborah Kenyon, DOE-RL
- Copy #3: J.D. Fluckiger, PNL
- Copy #4: Ron Melton, PNL
- Copy #5: Barry Merrill, PNL

MASTER

ADP SECURITY PLAN
MATH BUILDING

The enclosed document is a draft ADP Security Plan. This plan follows the outline provided by DOE Order 5636.2.

OUTLINE

- 1.0 NAME OF COMPUTING SYSTEM SECURITY OFFICER AND ADP SYSTEM
- 2.0 PURPOSE AND OPERATIONAL CHARACTERISTICS
- 3.0 CONFIGURATION AND DESCRIPTION OF ADP EQUIPMENT
- 4.0 PERCENTAGE AND LEVEL OF CLASSIFIED WORK
- 5.0 DESCRIPTION OF COMMUNICATION NETWORKS, BOTH INTERNAL AND EXTERNAL
- 6.0 STATEMENT OF THREAT
- 7.0 SECURITY PROCEDURES
 - 7.1 Physical Security
 - 7.2 Workstation System Security
 - 7.3 Classified Startup Procedure
 - 7.4 Classified Operations
 - 7.5 Classified Shutdown Procedure
 - 7.6 Security Audits
 - 7.7 Emanation Security
 - 7.8 System Maintenance
- 8.0 CONTINGENCY PLANS FOR THE WORD-PROCESSING SYSTEM
- 9.0 NACSI 5004 EVALUATION

1.0 NAME OF COMPUTING SYSTEM SECURITY OFFICER AND ADP SYSTEM

1.1 System Security Officers

Computer Systems Security Officer (CSSO) — J. D. Fluckiger
System Security Officer (SSO) — R. B. Melton
PNL Security Officer — Barry Merrill

1.2 System Name

Computers and Information Systems Section National Security Microcomputer Workstation.

2.0 PURPOSE AND OPERATIONAL CHARACTERISTICS

The purpose of this facility is to provide classified database management capability for the National Security Program, C&IS Section, Engineering Physics Department, PNL, for technology transfer and critical technologies monitoring activities.

3.0 CONFIGURATION AND DESCRIPTION OF ADP EQUIPMENT

The location of the workstation equipment will be in the 3000 Area, Math Building, Room 1139. Figure 1 shows a floor plan of the building and the location of the room containing the workstation equipment. Figure 2 is a vicinity site plan showing the Math Building and its surrounding environment. A box is drawn to show the control zone of 250 feet around the outside of the building. Figure 3 is a to-scale floor plan of Room 1139, Math Building.

The Workstation equipment is an IBM Personal Computer with IBM Model 5150 RGB monitor, AST multifunction card, and Epson FX-100 dot matrix printer. The equipment components will be stored and used within Room 1139 at all times.

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1ST FLOOR PLAN

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SIMPLIFIED BUILDING LAYOUT	
MATH BLDG BNL VAW DIVD	
- R-A-222	

Figure 1, Building Layout

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Figure 3. Math Building, Room 1139 Diagram

4.0 PERCENTAGE AND LEVEL OF CLASSIFIED WORK (SECRET/NSI)

** The equipment is expected to be used 30-40% of total usage time on classified work. The remainder of the time will be used for unclassified database management and word processing and for transfer of output for reports from unclassified computers in various PNL computer centers.

5.0 DESCRIPTION OF COMMUNICATION NETWORKS, BOTH INTERNAL AND EXTERNAL

Communication software to allow communication external to Room 1139 exists with dialup phone connection to various PNL computer centers. Prior to use of this software, the classified shutdown procedure described in Section 7.5 will be used. During classified processing all cabling to the modem will be disconnected from the workstation and moved the appropriate distance away to meet DOE requirements.

6.0 STATEMENT OF THREAT

The major security threat to the workstation is the unauthorized access to human-readable classified information. Access to the information is authorized by clearance procedures on a "need-to-know" basis. Primary control of the classified information is the responsibility of the authorized custodians and users.

Classified information is maintained as hard-copy reports, tables, and on magnetic disks. Input to the system is from both classified and unclassified reports, manuscripts and computer output. Database and word processing output is printed report drafts, reports, tables, magnetic disks, and classified scrap. All of these classified materials (including printer ribbons and magnetic disks) are stored in combination-lock safes when not in use.

Magnetic media, such as disks that contain or once contained classified material, are handled as classified until proper magnetic erasure is completed. Unauthorized access to any of the magnetic media before proper erasure could disclose classified information. Computer memory also is treated as containing classified information until the memory is cleared using the classified shutdown procedure described in Section 7.5. Improper clearing of the computer memory after use could result in unauthorized access to classified information contained in the computer memory.

7.0 SECURITY PROCEDURES

7.1 Physical Security: Math Building

To assure a high degree of positive control of persons accessing the Math Building, all exterior doors are normally closed and locked or are under the control of PNL Security personnel. In addition, all exterior doors are alarmed with the sensors annunciating in the PNL Security Control Room. Normal entry/exit is via a single door at the northeast corner which is remotely controlled by mag-card and closed circuit TV.

Unescorted access is provided to L- and Q-cleared staff with the proper mag-card coding for access. During the workday between 6:00 a.m. and 6:00 p.m., the computerized access control system automatically monitors the door. After 6:00 p.m. on workdays and 24 hours a day on weekends and holidays, the door is controlled manually by a Security Control Room Operator, who permits access only after verification of the individual and his credentials.

Uncleared, building-assigned staff members in process for a clearance will be given unescorted access during the workday only. Such access will be provided by the Security Control Room Operator on a name list approved by the Manager of the Engineering Physics Department. An escort is required for these individuals during all off-hours.

Cleared DOE and OPM staff will be permitted unescorted access during the workday.

Uncleared staff members not assigned to the building, and non-Battelle visitors, regardless of their clearance (unless covered in above subparagraph) will be escorted at all times.

The ceiling panels in Room 1139 of the Math Building will be secured by locking clips (Figures 4 and 4a), which will provide evidence of unauthorized entry should a ceiling panel be removed. The office will also be equipped with Medeco Restricted Keyway door hardware. The door will be closed and locked at all times when the room is unoccupied.

7.2 Workstation System Security

The following security plan is designed to meet DOE Order 5636.2.

Room 1139 will be the primary classified workstation area. All classified magnetic disks and printed reports will be generated in this room. All classified material will be transported by a Q-cleared individual between Room 1139 in the Math Building and the Math Building Repository that is a combination-lock safe. All magnetic disks and printer ribbons will be clearly marked with the appropriate designation for their level of classification (i.e., SECRET/NSI) and treated as classified. All pages containing classified information will

**

be appropriately marked on top and bottom using preprinted paper.

Access to Room 1139 during classified operations will be limited to assigned ~~and~~ authorized Q-cleared individuals and will be controlled by key access. Uncleared individuals will not be allowed into the room. Key distribution is controlled through PNL security.

7.3 Classified Startup Procedure

Prior to initial classified operation of the workstation system, hardware and software system security features will be tested and demonstrated to be functional. *WHAT ARE THEY NOW?*

Routine classified startup of the workstation system will follow a prescribed procedure. A documented record of this process will be maintained by the SSO. At a minimum, this procedure will include:

1. Obtain the operating system software and classified magnetic disks from the classified repository and bring to the workstation area in Math Building, Room 1139.
2. Restrict access to the workstation area by locking the room door.
3. Disconnect all phone lines and telecommunication lines from workstation area.
4. Notify any occupants that classified processing is to begin, and to identify that all occupants have the appropriate level of security clearance.
5. Enter system software into the system.
6. Make appropriate entries in the Operations Log.

7.4 Classified Operations

A classified workstation environment will remain in effect until the shutdown process has been completed. System malfunctions for any reason will be reported to the SSO or to his designated alternate for corrective action. Any suspected breach of ~~ADP~~ security will be immediately reported to the CSSO and PNL Security.

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5111 Roxborough, Placentia, California 92670
(714) 990-5931

Page 1

PNL-D-410

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DIRECTIONS FOR INSTALLING CEILING TILE SECURITY CLIPS:

1. LIFT CEILING TILE.
2. SLIP U-SHAPED OPENING OF CLIP OVER EDGE OF CEILING TILE. ONE CLIP CENTERED ON EACH OF 4 SIDES OF TILE. TURNBUCKLE IS IN OPEN POSITION. (FIG. 1 LEFT)
3. LOWER CEILING TILE BACK INTO POSITION.
4. ROTATE TURNBUCKLE INTO CLOSED POSITION. (FIG. 2)
5. INSERT A #10-1 1/4" SHEET METAL SCREW INTO BOTTOM HOLE. TIGHTEN SCREW THROUGH TOP HOLE. (FIG. 2)
6. CEILING TILE IS NOW SECURED TO T-BAR AND CANNOT BE REMOVED FROM ABOVE WITHOUT LEAVING EVIDENCE OF ENTRY.

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5111 Roxborough, Placentia, California 92670
(714) 990-5931

ATTENTION

SECURITY, FACILITIES AND PLANT ENGINEERING ADMINISTRATORS

We are taking these few moments of your time to inform you of a product on the market and presently in use by Raytheon, General Dynamics, Sylvania, Magnavox and many other companies, that can solve your existing or future "Closed Area" ceiling security problems.

Detecting unauthorized entry or compromise of an area containing proprietary data or physical property is a requirement of U.S. Government Security as well as other agencies and services.

Our product, the Ceiling Tile Security Clip (Patent No. 4,062,164) allows you to convert a dropped ceiling of acoustic tile and T-bars into an approved "Closed Area" ceiling in a matter of hours with the aid of only a screwdriver.

This simple, inexpensive device, recognized for use with prior approval by the Defense Investigative Service, can save thousands of dollars of construction dollars and weeks or even months of construction time. Access above the ceiling is regained in minutes, when required, for maintenance etc.

Standard installation is four (4) clips per full ceiling tile. The clips are made of metal and painted white. (See attached installation directions.)

Please contact your cognizant government security representative for approval of clip usage prior to submitting any orders.

Should you require additional information, please contact Mr. Don Williams at the above address or telephone number. Thank you for your attention, we hope we can serve you in the near future.

Yours truly

Rita Cousins
Betty Vinyard

Rita Cousins
Betty Vinyard

FIGURE 4a. Documentation on Ceiling Security Clips

Small Business Owners

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7.5 Classified Shutdown

The classified shutdown process will be documented and maintained by the SSO. The procedure to be followed is:

1. Log off the system.
2. Remove all data storage devices (disks) and the printer ribbon from the system.
3. Run the software to purge the system internal memory, and physically unplug the system including all peripheral equipment.
4. Return the system software and all classified material (magnetic disks, printer ribbons and any printed pages used or generated during the current session) to the classified repository.
5. Make appropriate entries in the Operations Log.

Security procedures for access control and physical protection of the facility will remain in effect during classified shutdown, including the limiting access to Room 1139. The door to Room 1139 will be locked at any time the room is not occupied.

7.6 Security Audits

Implementation of all security measures for the classified workstation system will be monitored by the Computer Protection Program Manager (CSSO) and PNL internal security staff. Any auditing of the security measures installed with this system will be done by appropriate Federal agency staff in cooperation with PNL's CSSO and internal security staff in compliance with DOE Order 5636.2 which details the procedures and responsibilities for auditing and evaluating security measures for classified ADP systems. Information available for evaluating the use or tracking the improper use of the system will be the Operations Log for startup and shutdown. This log maintains information as to the user of the system, when they logged on, and when they logged off.

On request, PNL's internal auditing staff will be made available to help in any manner requested that does not compromise the security of the information and data being maintained on this system.

7.7 Emanation Security

The workstation equipment will be installed in accordance with specifications set forth in NACSIM 5203 "TEMPEST Guidelines for Facility Design and RED/BLACK Installation." A preliminary evaluation of this facility indicates that the equipment designated in Section 3.0 can be used without TEMPEST modification in the area described. A power line filter and phone cable shielding will be

completed before classified work begins. This configuration meets the requirements of NACSI 5004.

The CAA is defined as the building perimeter of the Math Building.

7.8 System Maintenance

System maintenance will normally be performed by cleared PNL personnel. Should the need arise to use uncleared personnel for system maintenance, the SSO will have responsibility to insure that all classified information is removed from the work area (including clearing the CRT display) and that shutdown procedures described in Paragraph 7.5, above, are completed. All uncleared personnel will be continuously escorted by a Q-cleared individual.

8.0 CONTINGENCY PLANS FOR THE WORKSTATION SYSTEM

It is not intended that a backup classified workstation be maintained for this system. If extended system downtime occurs, other arrangements will be made at that time.

9.0 NACSI 5004 EVALUATION, IBM PC Workstation, Math Building, Room 1139

Zone ratings for the following equipment are from Appendix A of the document, "Tempest Zone Assignments for Information Processing Equipment." The zone ratings for the equipment configuration checked above are:

- IBM 5150 Personal Computer; IBM color/monochrome monitor Zone 3-5
- Epson Model FX/MX Dot Matrix Printer Zone 1-5

Equipment Factor = E3; Zone 3 Equipment

Facility Zone/CS Factor = C4 (CS greater than 80 m).

Equipment Factor (E3) + CS Factor (C4) = Hazard Factor (H4)

Information Sensitivity:

Volume = (Medium) (Time of use is between 2-8 hrs)

Classification = Secret/NSI

Volume (Medium) + Classification (Secret) = Sensitivity Factor (I2)

Risk Factor:

Accessibility = A4 (User controls entire building and at least 80 m of surrounding area.)

Sensitivity Factor (I2) + Accessibility Factor (A4) = Risk Factor (R4)

Risk Factor (R4) + Hazard Factor (H4) = Countermeasures (CM4)

(CM4 = selected red/black installation procedures.)