



Ames Procedural Requirements

APR 2815.3

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COMPLIANCE IS MANDATORY

Subject: IT Cable Plant and Equipment Access Controls

Responsible Office: Code IO / IT Operations Division

CHANGE LOG

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PREFACE

P.1 PURPOSE

- a. This document establishes Ames Research Center (ARC) and NASA Research Park (NRP) Information Technology (IT) Cable Plant access controls for the protection of Center and Moffett Field assets and infrastructure designated as "Cable Plant," as defined in paragraph 1.2. These access controls assure compliance with:
 - (1) Federal and NASA IT security requirements.
 - (2) NASA cabling access requirements.
 - (3) Federal and NASA safety requirements during execution of the cabling process.
 - (4) NASA, ARC IT Operations Division, and Industry electrical standards.
 - (5) National Electrical Code (NEC), National Fire Protection Association.
 - (6) NPR 2810.1 and alignment with cited elements of NASA ITS-HBK-2810.12-01 as stated within this APR.
- b. Exemptions to this requirement are current and future facilities on Ames and Moffett Field managed by NASA where organizations are approved by the Center CIO to maintain cable plant infrastructure within their building, or a specific facility, laboratory, room, etc.
- c. This APR facilitates ARC and NRP cable plant protection by providing the method and procedures necessary prior to accessing the ARC telecommunication closets, manholes, cabling, and associated wiring, and equipment.
- d. This APR also describes the access controls that the IT Operations Division will maintain to meet federal, agency, and Center requirements.

P.2 APPLICABILITY

- a. This directive is applicable to ARC and associated facilities (e.g., NRP facilities, Moffett Field facilities, etc.).
- b. This directive applies to contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements. This directive applies to all civil service and contractor employees, to all tenant personnel and to all special event/special outdoor event organizers and their personnel, while they are on-site in any of the included areas.
- c. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes an expected outcome, and "are/is" denotes descriptive material.
- d. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

P.3 AUTHORITY

- a. NPD 2810.1, NASA Information Security Policy
- b. National Institute for Standards and Technology (NIST) Special Publication 800-53¹

P.4 APPLICABLE DOCUMENTS AND FORMS

- a. NPR 2810.1, Security of Information Technology
- b. APR 8715.1 Chapter 26, Confined Space Entry
- c. ITS-HBK-2810.15-01, Access Control
- d. ITS-HBK-2810.12-01, Physical and Environmental Protection

P.5 MEASUREMENT/VERIFICATION

- a. Verification of conformance to requirements in this directive are measured through Center and Responsible Organizational management reviews, self-assessments, and subsequent analysis and reports of conformance to requirements, as well as periodic internal audits.
- b. ARC IT Operations Division (Code IO) personnel will routinely monitor IT infrastructure to ensure compliance.

P.6 CANCELLATION

None.

Eugene Tu
Director

DISTRIBUTION STATEMENT:

Internal and external distribution.

¹ <https://nvd.nist.gov/800-53>

CHAPTER 1 GENERAL

1.1 The IT Directorate/Office of the CIO, here forward referred as the Center IT Operations Division, is charged with maintaining and protecting ARC information technology assets under its purview. Many of these assets are not located within the confines of Code I controlled ARC space, i.e., “within the fenced-in area.” Therefore, it is necessary to implement additional controls to assure the protection of government assets and the safety of employees, tenants, visitors or contractors who may use or come in contact with these assets.

1.2 The cable plant consists of several types of IT equipment and materials located all over the Moffett Field area also known as Ames Research Center and the NASA Research Park. Cable Plant Assets include all conduit, wiring, runners, cable, servers, racks and other equipment located in the communications closets, manholes, pull boxes, Hoffman enclosures and data centers.

1.2.1 The IT Operations Division relies on several Center and agency controls already in place to mitigate the risk of damage or compromise. These requirements are listed in section P.4 above. NPR 2810.1 derives authority from the Federal Information Systems Management Act (FISMA), which requires that the National Institute Security and Technology (NIST) set of controls described in NIST 800-53 are implemented for all federally owned or controlled IT. Specifically, this APR addresses the access controls described in ITS-HBK-2810.15-01 and ITS-HBK-2810.12-01 and how the Center and IT Operations Division have implemented them.

1.3 There are approximately 150 Communications closet locations at ARC. The current state of the ARC cable plant assets include the following:

1.3.1 <https://teams.share.nasa.gov/arc/i/o/comm/cp/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2Farc%2Fi%2Fcomm%2Fcp%2FShared%20Documents%2FComms%20Closets%20Locations&FolderCTID=0x0120007DFA45915C89614BA892D72AB6D3B865&View=%7BF47BDEDA%2DB06F%2D438B%2DAF39%2DCC92AF31464B%7D> (restricted access)

1.3.2 For access to IT Operations Division restricted document, contact the Center IT Operations Division.

1.4 There are approximately 680 manholes, Pull Boxes, Hoffman Boxes, and 1 datacenter located throughout Moffett field.

CHAPTER 2 ROLES AND RESPONSIBILITIES.

2.1 The Chief Information Officer/Code I Director shall:

- a. Establish and maintain this directive in alignment with NIST 800-53 for the protection of information assets to include the cable plant.
- b. Designate a Cable Plant Manager and the supporting Contract Manager.
- c. Act as final decision maker and the chair of the Center IT Management Board if disputes between directorates occur regarding cable plant access approvals.
- d. Act as final signing authority for Cable Plant work orders or delegate to another Code I personnel.

2.2 The IT Operations Division Chief shall:

- a. Act as or delegate key authorizer (CIO responsibility) for server rooms and telecommunications closets.
- b. Assign biannual safety and security inspections of telecommunications closets.

2.3 The Cable Plant Manager shall:

- a. Assure that each telecommunications closet and Cable Plant equipment has a notification sign affixed to the door, designating the POC for access requests.
- b. Assure all Cable Plant equipment is in a locked controlled area; equipment in shared closets will have physical separation from Code I equipment.
- c. Review Cable Plant access requests and make determination on how to proceed. If approval is not granted, provide explanation for why and how to reconcile if possible.

2.4 The IT Operations Contract Manager shall:

- a. Provide authorization to access telecommunication closets as backup to the Cable Plant Manager.
- b. Maintain a roster of pre-authorized people who may access the telecommunications/wiring closets.
- c. Provide subject matter expertise when requested by Cable Plant Manager regarding equipment in communications closets.

2.5 Supervisors shall:

- a. Ensure employees know that IT and communications equipment located in their buildings may not be accessed without proper permission as described in this APR.
- b. Be aware of where the telecommunications closets in their building are located.
- c. Assure that facilities managers under their supervision do not provide unauthorized access to communications closets in their buildings.
- d. If damage to IT Operations Division equipment occurs under the direction of a supervisor, the responsible supervisor or his/her organization will pay for the cost of repairs.

2.6 Protective Services Representatives shall:

- a. Be allowed to access telecommunications closets or manholes when responding to an emergency.
- b. Notify the CIO when protective service personnel will access or have accessed telecommunications closets.

2.7 Employees (including contractors and others described in paragraph P.2) shall:

- a. Only access telecommunication closets, telecommunication lines or manholes with prior approval from the Cable Plant Manager.
- b. Not run, relocate, pull, lay, replace or repair cable located in the communications closets, along cabling paths, datacenters or manholes under the purview of the IT Operations Division.
- c. Notify Cable Plant Manager before accessing a shared telecommunications closet (belonging to another organization) for any reason because access may affect IT Operations Division equipment or transmissions.

Note: An approved access request is not necessary for these shared communications rooms, but the Center Cable Plant Manager must be notified.

- d. If damage to IT Operations Division cable plant or related equipment occurs, the responsible party or his/her organization will pay for the cost of repairs.

CHAPTER 3 REQUIREMENTS

3.1 Conduit and Wiring Closets (Telecommunications Closets)

3.1.1 All conduit, wiring, runners, cable, servers, racks and other equipment located in the communications closets are the property of the US government and all laws, regulations and NASA policies covering government equipment will be honored.

3.1.2 Telecommunication closets will be kept locked at all times. POC for accessing telecommunication closets will be posted on the door of entrance.

3.1.3 Unauthorized tampering or overriding access controls to the telecommunication closets can be subject to disciplinary action.

3.2 Manholes.

Note: Manhole covers can be observed throughout the Center, generally on the street or sidewalks. These are located on federal property and are therefore subject to all federal law, regulations, and NASA policies regarding federal property.

3.2.1 No access to manholes is allowed without proper authorization from the Cable Plant Manager or designee at Ames Research Center.

3.2.2 If access has been authorized, all OSHA safety precautions for accessing manholes, such as those covered in APR 8715.1 Chapter 26, will be acknowledged prior to access.

3.3 Data Centers. The data centers are located within the confines of ARC (not at NRP or Moffet Field).

3.3.1 Only certain Code I personnel have access to the data centers with PIV badge controlled access or cyber locks. The list of authorized personnel who can access the data centers is kept by the data center manager and the cable plant manager.

3.3.2 Non-authorized personnel must be escorted at all times when accessing the data center.

3.3.3 If a subcontractor working at Ames for less than two weeks needs access to any data center, their names must be on the access authorized list held by the Cable Plant Manager. If PIV has not been completed for a temporary employee, the employee must be escorted at all times while in the data center.

3.4 Process for Requesting Access to Cable Plant Areas.

3.4.1 If a legitimate need exists to access the telecommunication closets, send a request via NASA email to the Cable Plant Manager or IT Operations Division Chief with the following information:

- a. Name of person(s) who require access
- b. Reason/justification for Access
- c. Name of NASA sponsor
- d. Name of contract or program
- e. Costing code – if funding will be associated and collected by IT Operations Division.

3.4.2 The requestor will be notified within two weeks of the approval status. If disapproved, the reason will be provided.

3.4.3 If access was disapproved, an appeal can be made to the IT Operations Division Chief.

APPENDIX A. ACRONYMS

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|------|---|
| ARC | Ames Research Center |
| CFO | Chief Financial Officer |
| CIL | Center Integration Lead |
| CIO | Chief Information Officer |
| IT | Information Technology |
| NIST | National Institute for Standards and Technology |
| NRP | NASA Research Park |
| OSHA | Occupational Safety and Health Administration |
| PIV | Personally Identified Verification |
| POC | Point of Contact |