

POLICY FLASH 2006-46

POLICY FLASH 2006-46

DATE: August 16, 2006

TO: Procurement Directors

FROM: Office of Procurement and Assistance Policy, MA-61
Office of Procurement and Assistance Management

SUBJECT: Contractor Protection of Personally Identifiable Information (PII)

SUMMARY: This Flash transmits information provided by the Department's Chief Information Office (CIO) regarding the DOE contractor safeguard of government personally identifiable information, whether at or away from a government facility.

Background:

Recent breaches in the security of personal information in the custody of federal government entities have resulted in the promulgation of guidance from the Office of Management and Budget (OMB) and the DOE CIO.

. What is the purpose of this initiative?

The purpose of this initiative is to apply protections offered by physical security controls when information is removed or accessed from outside of a DOE agency location. As a result, recent OMB and CIO guidance (listed below) concerning this subject is provided to ensure that all appropriate DOE contractors handling such information are made aware of its requirements. This guidance is part of an aggressive DOE-wide implementation of the Cyber Security Revitalization Plan and is intended to implement the protection mechanisms of PHI on all Federal information systems. To ensure consistent DOE-wide execution, OMB has requested that the Inspector General (IG) review the implementation safeguards identified in its M-06-16 memorandum consistent with DOE cyber security compliance monitoring activities. Additionally, the CIO has provided a "working" list of

examples of what is and is not PII for the purpose of implementing cyber security guidance. Please find the following at <http://cio.doe.gov/Cybersec/index.html>:

1. DOE CIO Memorandum dated July 25, 2006, "Transmittal of Recent 0 MB Memoranda on Protecting Personally Identifiable Information" with attachments:
 - a. 0 MB Memorandum M-06-16 dated June 23, 2006, "Protection of Sensitive Agency Information"
 - b. 0 MB Memorandum M-06-19 dated July 12, 2006, "Reporting Incidents Involving Personally Identifiable Information and Incorporating the Cost for Security in Agency Information Technology Investments"
2. DOE CIO Memorandum dated July 20, 2006, "Transmittal of Department of Energy Chief Information Officer Guidance-Protection of Personally Identifiable Information" with attached DOE CIO Guidance CS-38.
3. DOE Working Examples of Personally Identifiable Information dated August 9, 2006.

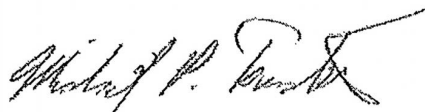
How will this affect work processes?

Contracting Officer's should inform and ensure contractors understand that under FAR 52.224-2, Privacy Act, protecting PII on laptops and removable storage media, whether in a government facility or accessed remotely, must be consistent with current DOE policy. Additional guidance may also be forthcoming.

Additional information regarding DOE's PII Cyber Security initiative may be obtained from William Huntman, OCIO. He can be reached on (202) 586-4775 or e-mail at Willia311.Hunjemat1@hq.doe.gov.

This Flash may be viewed at <http://m:ofossionals.pr.doe.gov>.

Questions concerning this Policy Flash should be directed to Denise P. Wright at (202) 287-1340 or Denise.Wright@b0oc.gov.



Michael P. Fischetti, Director
Office of Procurement and
Assistance Policy



Department of Energy
Washington, DC 20586

July 20, 2006

MEMORANDUM FOR HEADS OF DEPARTMENTS

FROM: THOMAS N. PYKE, JR.
CHIEF INFORMATION OFFICER

SUBJECT: Transmittal of Department of Energy Chief Information Officer
Guidance: Protection of Personally Identifiable Information

In keeping with the goals and processes outlined in the Cyber Security Program Revitalization Plan and to implement recent Office of Management and Budget (OMB) guidance, I am approving and issuing the attached Guidance, DOE CIO Guidance CS-38, Protection of Personally Identifiable Information.

This Guidance, which was developed by the Office of the Chief Information Officer (CIO) and reviewed by the Cyber Security Working Group, applies OMB memorandum, M-06-16, *Protection of Sensitive Agency Information*, and the sections of OMB memorandum M-06-19, *Reporting Incidents Involving Personally Identifiable Information and Incorporating the Cost for Security in Agency Information Technology Investments*, pertaining to the Protection of Personally Identifiable Information.

As we continue to issue Guidance as part of the aggressive implementation of the Cyber Security Revitalization Plan, I enlist your help to ensure that the criteria in this Guidance are promptly and adequately addressed within your organization. Key parts of this Guidance are to be fully implemented in early August 2006 according to the OMB memorandum M-06-16. Because of this, you and your staff should ensure that this Guidance is passed along quickly throughout your organization.

Please note that OMB memorandum M-06-16 requests that the Inspector General review the implementation of the safeguards identified in that memorandum to ensure they are in place by August 9, 2006. In addition, implementation of this Guidance, Department-wide, will be included in the cyber security compliance monitoring activities carried out by the Office of the CIO, the Office of the Inspector General, and the Office of Security and Safety Performance Assurance.

Please contact Bill Huntman, Associate CIO for Cyber Security, at 202-586-1090, for additional information.

Thank you for your personal attention to ensuring that the content of this new Guidance is integrated into your organization's cyber security program as soon as possible.

Attachment



DISTRIBUTION LIST

Secretary

Deputy Secretary

Under Secretary of Energy

Assistant Secretary for Energy Efficiency and Renewable Energy

Assistant Secretary for Environmental Management

Assistant Secretary for Fossil Energy

Assistant Secretary for Nuclear Energy, Science and Technology

Director, Office of Civilian Radioactive Waste Management

Director, Office of Electricity Delivery and Energy Reliability

Director, Office of Legacy Management

Under Secretary for Science

Director, Office of Science

Under Secretary of Nuclear Security/Administrator National Nuclear Security Administration

Departmental Representative to the Defense Nuclear Facilities Safety Board

Assistant Secretary for Congressional and Intergovernmental Affairs

Assistant Secretary for Environment, Safety and Health

Assistant Secretary for Policy and International Affairs

Administrator, Energy Information Administration

Chief Financial Officer

Chief Human Capital Officer

Chief Information Officer

General Counsel

Inspector General

Director, Office of Economic Impact and Diversity

Director, Office of Hearings and Appeals

Director, Office of Human Capital Management

Director, Office of Management

Director, Office of Public Affairs

Director, Office of Security and Safety Performance Assurance

Power Marketing Administrations Liaison Office

Senior Intelligence Officer, Office of Intelligence and Counterintelligence

DOE CIO Guidance CS-38

**U.S. Department of Energy
Cyber Security Program**

**PROTECTION OF PERSONALLY
IDENTIFIABLE INFORMATION
GUIDANCE**



July 20, 2006

DOE CIO Guidance CS-38

I. PURPOSE.

This Department of Energy (DOE) Chief Information Officer (CIO) Guidance applies the Office of Management and Budget (OMB) memorandum, M-06-16, *Protection of Sensitive Agency Information*, and the sections of OMB memorandum M-06-19, *Reporting Incidents Involving Personally Identifiable Information and Incorporating the Cost for Security in Agency Information Technology Investments*, pertaining to the protection of personally identifiable information (PII).

The DOE CIO will review this Guidance annually and update it as necessary. Senior DOE Management and their operating units may provide feedback at any time for incorporation into the next scheduled update.

Attachment 2 contains the OMB definition of PII that should be used to implement this Guidance.

2. SCOPE.

This Guidance provides additional information for the protection of PII in all information systems operated by the Department and its contractors.

3. CANCELLATIONS.

None.

4. APPLICABILITY.

- a. primary DOE Organizations. This Guidance applies to all DOE Organizations listed in Attachment 1, *Primary Department of Energy Organizations to Which DOE CIO Guidance CS-38 is Applicable*.

Further, the DOE Under Secretaries, the NNSA Administrator, the Energy Information Administration, the Power Marketing Administrations, and DOE Chief Information Officer (CIO) (hereinafter referred to as Senior DOE Management) may specify and implement supplemental requirements to address specific risks, vulnerabilities, or threats within their subordinate organizations and contractors (hereinafter called operating units), and for ensuring that those requirements are incorporated into contracts.

- b. Exclusions. Consistent with the responsibilities identified in Executive Order (E.O.) 12344, the Director of the Naval Nuclear Propulsion Program will ensure consistency through the joint Navy and DOE organization of the Naval Nuclear Propulsion Program and will implement and oversee all requirements and practices pertaining to this DOE Guidance for activities under the NNSA Administrator's cognizance.

- c. DOE Unclassified Systems. Senior DOE Management PCSPs are to address this Guidance for all systems hosting unclassified information. DOE M 471.3-1, *Manual for Identifying and Protecting Official Use Only Information*, and DOE M 471.1-1, *Identification and Protection of Unclassified Controlled Nuclear Information Manual*, provide additional information for identifying unclassified information requiring protection.
- d. National Security S n t Senior DOE Management PCSPs are to address this Guidance for all DOE National Security systems. Executive Order 12829 (E.O. 12829), which established the National Industrial Security Program; the requirements of the *National Industrial Security Program Operating Manual (NISPOM)*; the Atomic Energy Act of 1954, which established Restricted Data information; DOE CIO Guidance CS-22, *Nat/011a/ Security Systems Controls Guidance*; and NIST SP 800-59, *Guidelines for Identifying an Information System as a National Security System*, provides additional guidance for identifying National Security systems.

5. IMPLEMENTATION

This Guidance is effective upon issuance. Except as noted below, DOE expects that Senior DOE Management shall address the criteria in this document within 30 days of its effective date.

This implementation of this guidance for the protection of PII on all Federal information systems must be completed by August 9, 2006, to be consistent with OMB Memorandum M-06-16, *Protection of Sensitive Agency Information*, dated June 23, 2006.

6. CRITERIA

- a. Program Cyber Security Plan. Senior DOE Management PCSPs are to direct operating units to develop, document, and implement PU policies and procedures consistent with criteria b. through e. immediately below.
- b. Use of Encryption

Implement the use of FIPS 140-2 Level 1 or higher encryption to protect all PII on laptops and on removable media, such as CDROMs or thumb drives.

- All laptop computers used by Federal employees and contractors who support Federal systems that contain PII should have an installed capability to encrypt all PII.
- All users of these laptops should be instructed to use this capability to protect all PII.

The following steps are to be followed to implement the criteria in this section:

- Identify all laptops that contain PI!
- Remove PII from all laptops for which its presence is not essential.
- Install encryption software for all laptops that will continue to contain PH or that will contain PH in the future.
- Provide training to the user(s) on the use of the encryption software.
- Provide direction to the user(s) that the encryption software is to be used to protect all PI! on the laptop.

It is recommended that the use of encryption protection be applied to laptops and all desktop computer systems as well, so as to provide increased protection against loss of portable devices and cyber attacks.

c. Two Factor Authentication!!

Use two-factor authentication for all individuals having remote access to PU other than their own.

d. Remote Access

Ensure that a time-out function is in place on all systems supporting remote access that requires re-authentication of remote users if there is a period of 30 minutes or longer of inactivity on their connection to the system.

e. Management of PH on Laptops and Removable Media

Establish and implement procedures throughout the organization so that any files containing PI! on laptops or removable media have been deleted, within 90 days, or that use of these files is still required.

Procedures are to include documentation of the regular use of these procedures for each laptop or removable media device that contains PH.

f. Reporting of incidents Involving PU

Ensure that all suspected or confirmed cyber security and physical security incidents involving PII are reported to the DOE Cyber Incident Advisory Capability (CIAC) within 45 minutes of discovering the incident. CIAC is to report the incident to US-CERT within one hour of discovery of the incident.

When reporting incidents as possibly involving PI!, there should be sufficient reason to believe that a security breach has occurred and that PI! is likely to have been involved. Otherwise, the incident should be reported following documented procedures for reporting all cyber security incidents.

DOE CIO Guidance CS-38

Reports to CIAC may be made via email to ciac@ciac.org, by phone to 925-422-8193 or by fax to 925-423-8002.

CIAC will report the incident involving PU to the US-Computer Emergency Readiness Team (US-CERT).

7. RESPONSIBILITIES.

It is expected that Heads of Departmental Elements will be given delegated authority from the Deputy Secretary in the near future relative to determining that data on mobile computers/devices are non-sensitive (Recommendation I in OMB M-06-16).

8. REFERENCES.

References are defined in DOE CIO Guidance CS-1, *Management, Operational, and Technical Controls*.

9. DEFINITIONS.

Definitions specific to this Guidance are defined in Attachment 2. Acronyms and terms applicable to all DOE CIO Guidance are defined in DOE CIO Guidance CS-1, *Management, Operational, and Technical Controls Guidance*.

to CONTACT.

Questions concerning this Guidance should be addressed to the Office of the Chief Information Officer, (202) 586-0166.

ATTACHMENT I

PRIMARY DEPARTMENT OF ENERGY ORGANIZATIONS TO WHICH DOE
CIO GUIDANCE CS-38 IS APPLICABLE

Office of the Secretary
Office of the Chief Financial Officer
Office of the Chief Information Officer
Office of Civilian Radioactive Waste Management
Office of Congressional and Intergovernmental Affairs
Departmental Representative to the Defense Nuclear Facilities Safety Board
Office of Economic Impact and Diversity
Office of Electricity Delivery and Energy Reliability
Office of Energy Efficiency and Renewable Energy
Energy Information Administration
Office of Environment, Safety and Health
Office of Environmental Management
Office of Fossil Energy
Office of General Counsel
Office of Hearings and Appeals
Office of Human Capital Management
Office of the Inspector General
Office of Intelligence and Counterintelligence
Office of Legacy Management
Office of Management
National Nuclear Security Administration
Office of Nuclear Energy
Office of Policy and International Affairs
Office of Public Affairs
Office of Science
Office of Security and Safety Performance Assurance
Bonneville Power Administration
Southeastern Power Administration
Southwestern Power Administration
Western Area Power Administration

ATTACHMENT2

GLOSSARY

Personally Identifiable Information (PH): Any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information which can be used to distinguish or trace an individual's identity, such as their name, social security numbers, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information which is linked or linkable to an individual.



EXECUTIVE OFFICE OF THE PRESIDENT ,
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

June 23, 2006

M-06-16

MEMORANDUM FOR THE HEADS OF DEPARTMENTS AND AGENCIES

FROM: Clay Jolmson III **VX**
Deputy Director for Management

SUBJECT: Protection of Sensitive Agency Information

In an effort to properly safeguard our information assets while using information technology, it is essential for all departments and agencies to know their baseline of activities.

The National Institute of Standards and Technology (NIST) provided a checklist for protection of remote information. (See attachment) The intent of implementing the checklist is to compensate for the lack of physical security controls when information is removed from, or accessed from outside the agency location. In addition to using the NIST checklist, I am recommending all departments and agencies take the following actions:

1. Encrypt all data on mobile computers/devices which carry agency data unless the data is determined to be non-sensitive, in writing, by your Deputy Secretary or an individual he/she may designate in writing;
2. Allow remote access only with two-factor authentication where one of the factors is provided by a device separate from the computer gaining access;
3. Use a "time-out" function for remote access and mobile devices requiring user re-authentication after 30 minutes inactivity; and
4. Log all computer-readable data extracts from databases holding sensitive information and verify each extract including sensitive data has been erased within 90 days or its use is still required.

Most departments and agencies have these measures already in place. We intend to work with the Inspectors General community to review these items as well as the checklist to ensure we are properly safeguarding the information the American taxpayer has entrusted to us. Please ensure these safeguards have been reviewed and are in place within the next 45 days.

Attachment

Security Checklist

Protection of "Remote" Information

This checklist provides specific actions to be taken by federal agencies for the protection of Personally Identifiable Information (PII) categorized in accordance with FIPS 199 as moderate or high impact that is either:

- Accessed remotely; or
- Physically transported outside of the agency's secured, physical perimeter (this includes information transported on removable media and on portable/mobile devices such as laptop computers and/or personal digital assistants).

The specific intent is to compensate for the protections offered by the physical security controls when information is removed from, or accessed from outside of the agency location. Additionally, this checklist has been developed from existing guidance with the expectation that information security is a mission requirement essential to achieving the operational benefits of information technology without exposing the agency, its assets, or individuals to undue risk.

The security controls and associated control assessment methods/procedures in this checklist were taken from NIST Special Publication **800-53, *Recommended Security Controls for Federal Information Systems*** and NIST Special Publication 800-53A, *Guide for Assessing the Security Controls in Federal Information Systems* (Second Public Draft), April 2006. The controls and assessment methods/procedures in the checklist are a subset of what is currently required for moderate and high impact information systems. However, the checklist does include specific guidance on the technology to be used for some controls.

References:

Federal Information Processing Standards Publication (FIPS) **199, *Standards for Security Categorization of Federal Information and Information Systems***, February 2004.

NIST Special Publication **800-53, *Recommended Security Controls for Federal Information Systems***, February 2005.

NIST Special Publication 800-53A, *Guide for Assessing the Security Controls in Federal Information Systems* (Second Public Draft), April 2006.

¹For purpose of this Security Checklist the assessment methods and procedures outlined in NIST Special Publication 800 53A (Second Public Draft), dated April 2006, are considered mandatory. Updated control assessment methods and procedures will be effective upon final publication of Special Publication 800 53A.

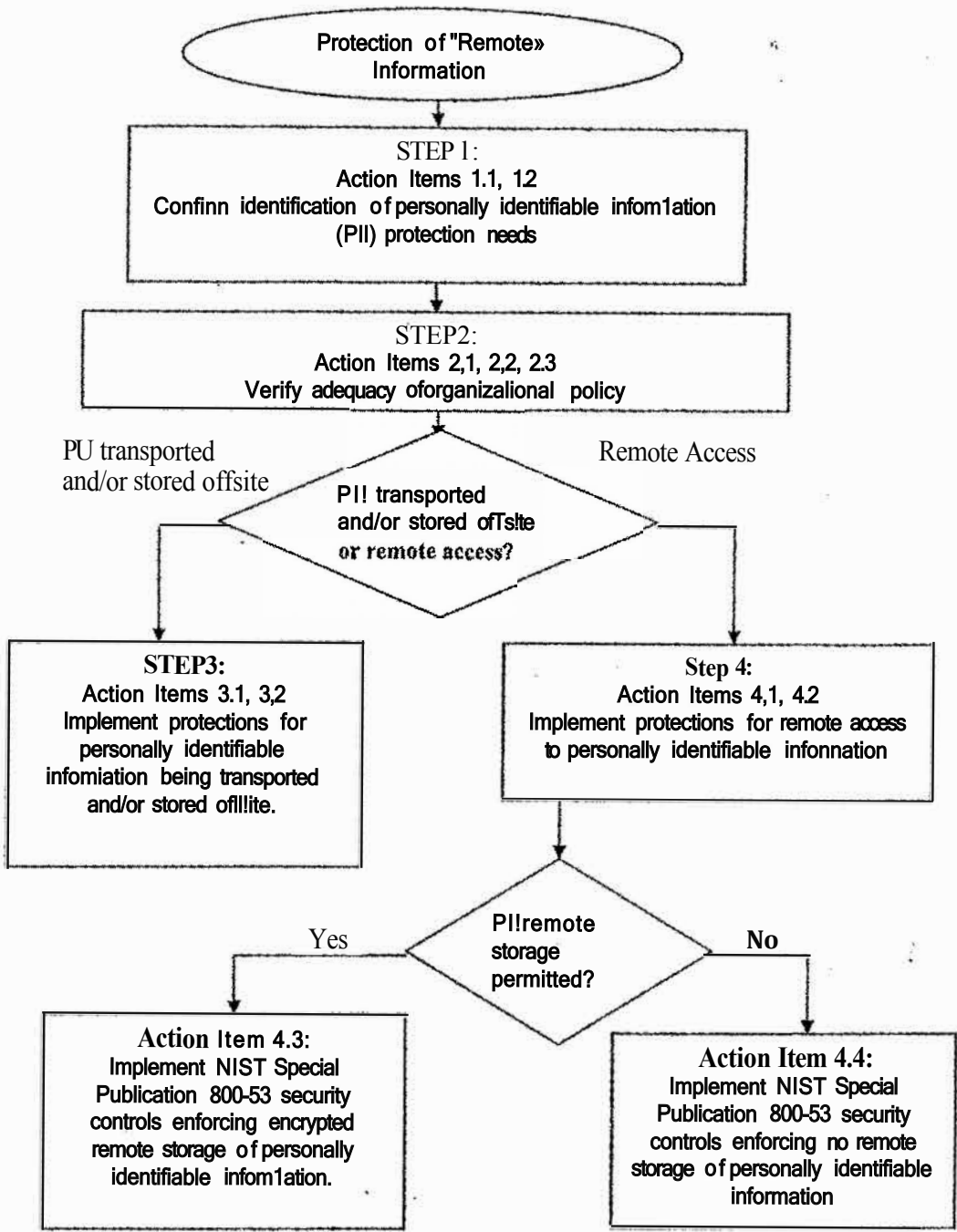


Figure: Process for Protection of "Remote" Information

SECURITY CHECKLIST FOR PERSONALLY IDENTIFIABLE INFORMATION THAT IS TO BE TRANSPORTED AND/OR STORED OFFSITE, OR THAT IS TO BE ACCESSED REMOTELY

	Procedure
	<p><i>Action Item 1.1:</i> Verify information categorization to ensure identification of personally identifiable information requiring protection when accessed remotely or physically removed.</p> <p><i>Action Item 1.2:</i> Verify existing risk assessment.</p>
	<p><i>Action Item 2.1:</i> Identify existing organizational policy that addresses the information protection needs associated with personally identifiable information that is accessed remotely or physically removed.</p> <p><i>Action Item 2.2:</i> Verify that the existing organizational policy adequately addresses the information protection needs associated with personally identifiable information that is accessed remotely or physically removed.</p> <p><i>Action Item 2.3:</i> Revise/develop organizational policy as needed, including steps 3 and 4.</p>
<p>> - - - - -</p>	<p><i>If personally identifiable information is to be transported and/or stored offsite, follow Step 3; for remote access to personally identifiable information, follow Step 4.</i></p>
	<p><i>Action Item 3.1:</i> In those instances where personally identifiable information is transported to a remote site, implement NIST Special Publication 800-53 security controls ensuring that information is transported only in encrypted form.</p>
	<p><i>Action Item 3.2:</i> In those instances where personally identifiable information is being stored at a remote site, implement NIST Special Publication 800-53 security controls ensuring that information is stored only in encrypted form.</p>
	<p>Check/1st Complete.</p>
	<p><i>STSP 4: Implement NIST Special Publication 800-53 security controls requiring authenticated, virtual private network (VPN) connection.</i></p>
	<p><i>Action Item 4.1:</i> Implement NIST Special Publication 800-53 security controls requiring authenticated, virtual private network (VPN) connection.</p>
	<p><i>Action Item 4.2:</i> Implement NIST Special Publication 800-53 security controls enforcing allowed downloading of personally identifiable information.</p>
	<p><i>If remote storage of personally identifiable information is to be permitted follow Action Item 4.3, otherwise follow Action Item 4.4.</i></p>
	<p><i>Action Item 4.3:</i> Implement NIST Special Publication 800-53 security controls enforcing encrypted remote storage of personally identifiable information.</p>
	<p>Checklist Complete.</p>
	<p><i>Action Item 4.4:</i> Implement NIST Special Publication 800-53 security controls enforcing no remote storage of personally identifiable information.</p>
	<p>Checklist Complete.</p>

Security Controls and Assessment Procedures

STEP 1: Confirm Identification of personally identifiable information protection needs.

Action Item 1.1: Verify information categorization to ensure identification of personally identifiable information requiring protection when accessed remotely or physically removed.

Guidance: The purpose of this step is to review the FIPS 199 security categorization of organizational information with the focus on remote access and physical removal. The intent is to ensure all personally identifiable information through which a moderate or high impact might result has been explicitly identified. For example, databases where the loss, corruption; or unauthorized access to personally identifiable information contained in the databases could result in a serious adverse effect, with widespread impact on individual privacy being one area of specific concern.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- PL-S PRIVACY IMPACT ASSESSMENT
SP 800-53A: PL-5.1, PL-5.2 (for high impact add: PL-5.3, PL-5.4)
- RA-2 SECURITY CATEGORIZATION
SP 800-53A: RA-2.1, RA-2.2, RA-2.3 (for high impact add: RA-2.4, RA-2.5)

Action Item 1.2: Verify existing risk assessment.

Guidance: The purpose of this step is to apply the results from the previous action item and operational experience to confirm or modify as needed the existing risk assessment associated with remote access and physical removal of personally identifiable information.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- RA-4 RISK ASSESSMENT UPDATE
SP 800-53A: RA-4.1, RA-4.2, RA-4.3 (for high impact add: RA-4.4, RA-4.5)

STEP 2: Verify adequacy of organizational policy.

Action Item 2.1: Identify existing organizational policy that addresses the information protection needs associated with personally identifiable information that is accessed remotely or physically removed.

Guidance: This step is primarily to identify the existing policy related to the security and privacy needs associated with personally identifiable information accessed remotely or physically removed from agency-controlled areas.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

See action item 2.3.

Action Item 2.2: Verify that the existing organizational policy adequately addresses the information protection needs associated with personally identifiable information that is accessed remotely or physically removed.

Guidance: Having determined which existing policy is applicable to the remote access or physical removal of personally identifiable information, the purpose of this action item is to verify the adequacy of that policy. The policy should address the following specific questions:

- I. For *Personally Identifiable Information* physically removed:
 - a. Does the policy explicitly identify the rules for determining whether physical removal is allowed?
 - b. For personally identifiable information that can be removed, does the policy require the information be encrypted and that appropriate procedures, training, and accountability measures are in place to ensure that remote use of this encrypted information does not result in bypassing the protections provided by the encryption?
2. For *Personally Identifiable Information* accessed remotely:
 - a. Does the policy explicitly identify the rules for determining whether remote access is allowed?
 - b. When remote access is allowed, does the policy require that this access be accomplished via a virtual private network (VPN) connection established using agency-issued authentication certificate(s) or hardware token?
 - c. When remote access is allowed, does the policy identify the rules for determining whether download and remote storage of the information is allowed? (For example, the policy could permit remote access to a database, but prohibit downloading and local storage of that database.)

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

See action item 2.3.

Action item 2.3: Revise/develop organizational policy as needed, including steps 3 and 4.

Guidance: Based upon the results from the previous action items, the organizational policy is revised or developed to fully address the questions posed in the previous action items.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- AC-1 ACCESS CONTROL POLICY AND PROCEDURES
SP 800-53A: AC-1.1, AC-1.2, AC-1.3, AC-1.4 (for high impact add: AC-1.5, AC-1.6, AC-1.7)
- AT-1 SECURITY AWARENESS AND TRAINING POLICY AND PROCEDURES
SP 800-53A: AT-1.1, AT-1.2, AT-1.3, AT-1.4 (for high impact add: AT-1.5, AT-1.6, AT-1.7)
- AU-1 AUDIT AND ACCOUNTABILITY POLICY AND PROCEDURES

- SP 800-53A: AU-1.1, AU-1.2, AU-1.3, AU-1.4 (for high impact add: AU-1.5, AU-1.6, AU-1.7)
- IA-1 IDENTIFICATION AND AUTHENTICATION POLICY AND PROCEDURES
 SP 800-53A: IA-1.1, IA-1.2, IA-1.3, IA-1.4 (for high impact add: IA-1.5, IA-1.6, IA-1.7)
- MP-1 MEDIA PROTECTION POLICY AND PROCEDURES
 SP 800-53A: MP-1.1, MP-1.2, MP-1.3, MP-1.4 (for high impact add: MP-1.5, MP-1.6, MP-1.7)
- SC-1 SYSTEM AND COMMUNICATIONS PROTECTION POLICY AND PROCEDURES
 SP 800-53A: SC-1.1, SC-1.2, SC-1.3, SC-1.4 (for high impact add: SC-1.5, SC-1.6, SC-1.7)

If personally identifiable information is to be transported and/or stored offsite, follow Step 3; for remote access to personally identifiable information, follow Step 4.

STEP 3: Implement protections for personally identifiable information being transported and/or stored offsite.

Action Item 3.1: In those instances where personally identifiable information is transported to a remote site, implement NIST Special Publication 800-53 security controls ensuring that information is transported only in encrypted form.

Guidance: The intent is to apply the controls necessary to ensure that personally identifiable information is appropriately encrypted prior to being removed from the area under agency control.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- MP-5 MEDIA TRANSPORT
 SP 800-53A: MP-5.1, MP-5.2, MP-5.3 (for high impact add: MP-5.4, MP-5.5)
- SC-13 USE OF VALIDATED CRYPTOGRAPHY
 SP 800-53A: SC-13.1, SC-13.2 (for high impact add: SC-13.3, SC-13.4)

Action Item 3.2: In those instances where personally identifiable information is being stored at a remote site, implement NIST Special Publication 800-53 security controls ensuring that information is stored only in encrypted form.

Guidance: The intent is to apply the controls necessary to ensure that personally identifiable information remains appropriately encrypted during remote storage. This includes establishing and training users on the rules of behavior and information use that will help prevent unencrypted forms of the information from being stored on remote components of the information system.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- PL-4 RULES OF BEHAVIOR
SP 800-53A: PL-4.1, PL-4.2, PL-4.3, PIA.4, PL-4.5 (for high impact add: PL-4.6, PL-4.7)
- SC-4 INFORMATION REMNANTS
SP 800-53A: SC-4.1, SC-4.2 (for high impact add: SC-4.3, SC-4.4)
- SC-13 USE OF VALIDATED CRYPTOGRAPHY
SP 800-53A: SC-13.1, SC-13.2 (for high impact add: SC-13.3, SC-13.4)

STEP 4: Implement protections for remote access to personally identifiable information.

General Guidance: This step is executed when the policy allows remote access to personally identifiable information.

Action Item 4.J: Implement NIST Special Publication 800-53 security controls requiring authenticated, virtual private network (VPN) connection.

Guidance: The intent is to apply those controls necessary to both mandate and achieve connections from remote components of the information system to an internal agency network via a virtual private network (VPN). The VPN is established based upon authentication using agency-controlled certificates or hardware tokens issued directly to each authorized user.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- AC-17 REMOTE ACCESS, with Enhancements (1), (2), and (3)
SP 800-53A: AC-17.1, AC-17.2, AC-17.3, AC-17.4, AC-17.5, AC-17.6, AC-17.7, AC-17.10, AC-17.11, AC-17.13, AC-17.15 (for high impact add: AC-17.8, AC-17.9, AC-17.12, AC-17.14, AC-17.16)
- IA-5 AUTHENTICATOR MANAGEMENT
SP 800-53A: IA-5.1, IA-5.2, IA-5.3, IA-5.4, IA-5.5, IA-5.6 (for high impact add: IA-5.7, IA-5.8, IA-5.9)

Action Item 4.2: Implement NIST Special Publication 800-53 security controls enforcing allowed downloading of personally identifiable information.

Guidance: This action item is executed when the policy allows personally identifiable information to be downloaded to a remote location. The intent is to apply controls necessary to enable and enforce only appropriate downloading. Included are controls for accessing only allowed information, for least privilege (of downloaded information) necessary to perform duties, for what information is allowed to be transmitted across a remote connection, and for maintaining accountability for actions taken across the remote interface.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- AC-3 ACCESS ENFORCEMENT, with Enhancement (1)

- SP 800-53A: AC-3.1, AC-3.2, AC-3.3, AC-3.4, AC-3.7, AC-3.8.(for high impact add: AC-3.5, AC-3.6, AC-3.9)
- AC-4 INFORMATIONFLOWENFORCEMBNT
 SP 800-53A: AC-4.1, AC-4.2, AC-4.3 (for high impact add: AC-4.4, AC-4.5)
- AC-6 LEAST PRIVILEGE
 SP 800-53A: AC-6.1, AC-6.2, AC-6.3, AC-6.4 (for high impact add: AC-6.5, AC-6.6)
- AC-13 SUPERVISION AND REVIEW -ACCESS CONTROL, with Enhancement (1) for high impact information
 SP 800-53A: AC-13.1, AC-13.2, AC-13.3, AC-13.4 (for high impact add: AC-13.5, AC-13.6, AC-13.7, AC-13.8, AC-13.9)
- AU-2 AUDITABLE EVENTS
 SP 800-53A: AU-2.1, AU-2.2, AU-2.3 (for high impact add: AU-2.4, AU-2.5)
- AU-6 AUDIT MONITORING, ANALYSIS, AND REPORTING, with Enhancement (1) for high impact information
 SP 800-53A: AU-6.1, AU-6.2, AU-6.3 (for high impact add: AU-6.4, AU-6.5, AU-6.6, AU-6.7)

If remote storage of personally identifiable information is to be permitted follow Action Item 4.3, otherwise follow Action Item 4.4.

Action Item 4.3: Implement NIST Special Publication 800-53 security controls enforcing encrypted remote storage of personally identifiable information.

Guidance: This action item is executed when policy allows personally identifiable information to be downloaded to a remote location. The intent is to apply those controls that both mandate and achieve encrypted storage of the information at the remote location.

Related SP 800-53 controls and associated SP 800-JJA assessment procedures:

- PI 4 RULES OF BEHAVIOR
 SP 800-53A: PL-4.1, PL-4.2, PL-4.3, PL-4.4, PL-4.5 (for high impact add: PL-4.6, PL-4.7)
- SC-4 INFORMATION REMNANTS
 SP 800-53A: SC-4.1, SC-4.2 (for high impact add: SC-4.3, SC-4.4)
- SC-13 USE OF VALIDATED CRYPTOGRAPHY
 SP 800-53A: SC-13.1, SC-13.2 (for high impact add: SC-13.3, SC-13.4)

Action Item 4.4: Implement NIST Special Publication 800-53 security controls enforcing no remote storage of personally identifiable information.

Guidance: This action item is executed when policy allows personally identifiable information to be remotely accessed only if not stored locally. The intent is to apply

those controls necessary to achieve remote use without local storage. The implementation of these controls will result in only necessary information being transmitted to the remote component of the information system. An example is transaction-based database access that provides no more information to the remote information system component than necessary for the immediate transaction. Another example is allowing downloading of only partial information to mitigate the risk by reducing the potential impact; for example, only extracts/views of a database or only views of statistical information.

Related SP 800-53 controls and associated SP 800-53A assessment procedures:

- AC-3 ACCESS ENFORCEMENT, with Enhancement (1)**
SP 800-53A: AC-3.1, AC-3.2, AC-3.3, AC-3.4, AC-3.7, AC-3.8 (for high impact add: AC-3.5, AC-3.6, AC-3.9)
- AC-4 INFORMATION FLOW ENFORCEMENT**
SP 800-53A: AC-4.1, AC-4.2, AC-4.3 (for high impact add: AC-4.4, AC-4.5)
- AC-6 LEAST PRIVILEGE**
SP 800-53A: AC-6.1, AC-6.2, AC-6.3, AC-6.4 (for high impact add: AC-6.5, AC-6.6)
- AC-13 SUPERVISION AND REVIEW-ACCESS CONTROL, with Enhancement (I) for high impact information**
SP 800-53A: AC-13.1, AC-13.2, AC-13.3, AC-13.4 (for high impact add: AC-13.5, AC-13.6, AC-13.7, AC-13.8, AC-13.9)
- AC-17 REMOTE ACCESS, with Enhancements (1), (2), and (3)**
SP 800-53A: AC-17.1, AC-17.2, AC-17.3, AC-17.4, AC-17.5, AC-17.6, AC-17.7, AC-17.10, AC-17.11, AC-17.13, AC-17.15 (for high impact add: AC-17.8, AC-17.9, AC-17.12, AC-17.14, AC-17.16)
- AT-2 SECURITY AWARENESS**
SP 800-53A: AT-2.1, AT-2.2, AT-2.3 (for high impact add: AT-2.4, AT-2.5)
- AU-2 AUDITABLE EVENTS**
SP 800-53A: AU-2.1, AU-2.2, AU-2.3 (for high impact add: AU-2.4, AU-2.5)
- AU-6 AUDIT MONITORING, ANALYSIS, AND REPORTING, with Enhancement (I) for high impact information**
SP 800-53A: AU-6.1, AU-6.2, AU-6.3 (for high impact add: AU-6.4, AU-6.5, AU-6.6, AU-6.7)
- PL-4 RULES OF BEHAVIOR**
SP 800-53A: PL-4.1, PL-4.2, PL-4.3, PL-4.4, PL-4.5 (for high impact add: PL-4.6, PL-4.7)
- SC-4 INFORMATION REMNANTS**
SP 800-53A: SC-4.1, SC-4.2 (for high impact add: SC-4.3, SC-4.4)

DOE Working Examples of Personally Identifiable Information (PII)
August 9, 2006

WHAT IS PU:

1. Social Security Numbers in any form are PII
2. Place of Birth associated with an individual
3. Date of birth associated with an individual
4. Mother's maiden name associated with an individual
5. Biometric record associated with an individual
 - a. Fingerprint
 - b. Iris scan
 - c. DNA
6. Medical history information associated with an individual
 - a. Medical conditions, including history of disease
 - b. Metric information, e.g. weight, height, blood pressure
7. Criminal history associated with an individual
8. Employment history and other employment information associated with an individual
 - a. Ratings
 - b. Disciplinary actions
 - c. Performance elements and standards (or work expectations) are PH when they are so intertwined with performance appraisals that their disclosure would reveal an individual's performance appraisal.
9. Financial information associated with an individual
 - a. Credit card numbers
 - b. Bank account numbers
10. Security clearance history or related information (Not including actual clearances held)

WHAT ISN'T PU:

1. Phone numbers (Work, Home, Cell)
2. Street addresses (Work and personal)
3. Email addresses (Work and personal)
4. Digital pictures
5. Birthday cards
6. Birthday emails
7. Medical information pertaining to work status (X is out sick today)
8. Medical information included in a health or safety report
9. Employment information that is not PII even when associated with a name
 - a. Resumes, unless they include an SSN
 - b. Present and past position titles and occupational series
 - c. Present and past grades

- d. Present and past annual salary rates (including performance awards or bonuses, incentive awards, merit pay amount, Meritorious or Distinguished Executive Ranks, and allowances and differentials)
 - e. Present and past duty stations and organization of assignment (includes room and phone numbers, organization designations, work e-mail address, or other identifying information regarding buildings, room numbers, or places of employment)
 - f. Position descriptions, identification of job elements, and those performance standards (but not actual performance appraisals) that the release of which would not interfere with law enforcement programs or severely inhibit agency effectiveness
 - g. Security clearances held
 - h. Written biographies (like the ones used in pamphlets of speakers)
 - i. Academic credentials
 - i. Academic credentials, e.g. Ph.D, MS, BS, AA
 - ii. Schools attended
 - iii. Major or area of study
10. Personal information stored by individuals about themselves on their assigned workstation or laptop (unless it contains an SSN)