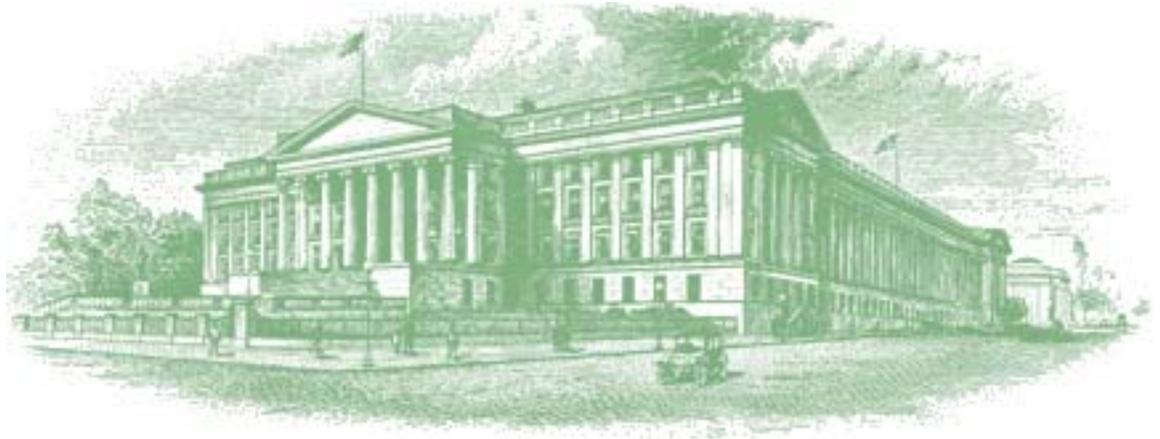




Audit Report



OIG-11-068

BILL MANUFACTURING: Improved Security Over the NexGen \$100 Notes Is Necessary

May 13, 2011

Office of
Inspector General

Department of the Treasury

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Abbreviations

BEP	Bureau of Engraving and Printing
ECF	Eastern Currency Facility
FRB	Board of Governors of the Federal Reserve System
JAMES	Department of the Treasury Joint Audit Management Enterprise System
OIG	Office of Inspector General
OPSEC	Operational Security
WCF	Western Currency Facility
WIP	work-in-process

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*The Department of the Treasury
Office of Inspector General*

May 13, 2011

Larry Felix
Director
Bureau of Engraving and Printing

As part of our on-going audit of the Bureau of Engraving and Printing's (BEP) production process for the NexGen \$100 notes, the purpose of this report is to convey our observations regarding physical security over the NexGen \$100 notes. In brief, we noted deficiencies related to the physical security over the NexGen \$100 finished notes and work-in-process (WIP) sheets¹ at both BEP's Eastern Currency Facility (ECF) in Washington, D.C., and Western Currency Facility (WCF) in Fort Worth, Texas. We found (1) inadequate security over finished notes and WIP sheets at ECF, (2) inadequate and inconsistent retention requirements for security video and digital recordings at both ECF and WCF, and (3) lack of updated Operational Security (OPSEC) plans to address security matters over NexGen \$100 finished notes and WIP sheets at ECF. While our audit of BEP's production of the NexGen \$100 notes is on-going, we consider these matters serious enough to warrant immediate corrective action by BEP. Accordingly, we are making three recommendations in this report to improve BEP facilities' security over NexGen \$100 finished notes and WIP sheets.

In a written response, BEP management provided their corrective actions taken or planned to implement the recommendations. We believe these actions are responsive to the intent of our recommendations and we verified the corrective actions that have been implemented as of the date of this report. The management response is included as appendix 1.

¹ NexGen \$100 notes are produced using currency paper sheets that allow for 32 "subjects" per sheet in the initial stages of production. In the final stages of production, the 32-subject sheets are cut into 16-subject sheets, printed with seals and serial numbers, and then cut into finished note form. This report uses the term "sheets" when referring to WIP and "notes" when referring to finished NexGen \$100s.

The Treasury Office of Inspector General's Office of Audit and Office of Investigations are jointly performing this audit to address significant problems encountered by BEP in the production of the NexGen \$100s and in response to a request from the Department of the Treasury Assistant Secretary for Management, Chief Financial Officer, and Chief Performance Officer. The objectives of our audit are to assess (1) the planning and implementation of the production process and the events that led to the problems in the production process; (2) the physical security over the notes that have been produced; (3) BEP's plans for the disposition of those notes; and (4) BEP's actions, taken and planned, to address the production problems. We began our audit in December 2010. As part of our audit which is the basis for this report, we (1) observed security practices in place at the ECF and WCF production facilities; (2) interviewed key BEP personnel involved with the production and security of the NexGen \$100 product; and (3) examined policies, procedures, and other documentation relating to physical security of the NexGen \$100 product.

We conducted our work in connection with this interim report in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions in this interim report.

We plan to report on the other stated audit objectives going forward. As part of that work, we also plan to continue to monitor the physical security over the NexGen \$100s.

Findings and Recommendations

Inadequate Security Over NexGen \$100 Finished Notes and WIP Sheets at ECF

Security Weakness Over Finished Notes

According to BEP written policy, finished notes remaining in a production area should be kept to the absolute minimum necessary to continue operations. If finished notes are stored in a production area, the notes should be stored in a security cage under lock and seal and should be moved as soon as possible. We observed that ECF stored approximately 54.4 million finished NexGen \$100 notes in a production area. The notes were wrapped in protective plastic, but were not stored in a locked security cage. As of January 2011, some notes had been stored in the area for over 9 months. Normally, finished note products are moved to a secure, limited-access vault shortly after production.

BEP officials told us that the finished notes were stored in this production area due to limited available storage capacity and BEP's opinion that existing security measures and controls in place were adequate. While we acknowledge that BEP has certain security measures and controls in place for all of its production and storage areas, we believe the unique circumstance created by the production problems and resulting long-term storage requirements of the NexGen \$100s warrants special consideration. Storing finished notes in a production area for an extended period of time is in violation of BEP policy and no waiver for this action was documented. Additionally, we believe the finished NexGen \$100 notes stored in the production area are at increased risk of theft and loss when compared to other finished notes stored in a secure, limited-access vault because approximately 225 employees have access to this production area compared to 21 employees who have access to the vault.

Another matter of concern is that this particular production area does not fully meet the criteria established by BEP for a secured production area because the 26 windows in the area lack protective security features. BEP security officials told us they did

not request a waiver for this policy exception because of other security measures in place. For example, the 26 windows that lack protective features are on the third floor and there have been no security incidents that have occurred in the past related to these windows. Nevertheless, we believe this is a matter that requires management attention, and the rationale for any noncompliance with existing security requirements should be clearly articulated and documented.

Security Weakness Over WIP Sheets

According to BEP policy, production areas are not to be used for the long-term storage of WIP. At ECF, we observed approximately 4 million NexGen \$100 WIP sheets² stored in a production area rather than in a more secure, limited-access storage area. As of January 2011, some of the WIP sheets had been stored in the production area for about 4 months. Storing WIP sheets in a production area for an extended period of time is in violation of BEP policy and no waiver for this action was documented.

BEP officials told us that they did not move the sheets because they felt that the security measures and controls in place were adequate. While we acknowledge that BEP does have a level of security measures and controls in place for all of its production and storage areas, we believe the unique circumstance created by the production problems and resulting long-term storage requirements of the NexGen \$100 WIP sheets warrants special consideration. In this regard, approximately 460 employees currently have legitimate and routine access to the product on a daily basis. Additionally, the WIP sheets are at increased risk of undetected theft and loss because not all regular production process reconciliations are being performed.

² The approximately 4 million WIP sheets equal about 127 million notes when finished. In the production area in question, the sheets do not yet include seals and serial numbers and are still in uncut form.

Inadequate and Inconsistent Retention Requirements for Security Video and Digital Recordings

The length of time BEP currently retains security video tapes and digital recordings is not adequate given the potential long-term storage of the NexGen \$100 products. BEP's written policy requires retention of recordings for 7 years. Despite this policy, BEP officials told us that WCF currently retains recordings for 1 year for WIP and 3 years for finished goods, and ECF retains all recordings for 3 years. Current retention practices (1) do not comply with established policies, (2) are inconsistent between the two production facilities, and (3) are based on assumptions that products are moving through a normal production cycle and promptly delivered to the Federal Reserve System. At this time, the Federal Reserve System has not accepted delivery of the NexGen \$100 finished notes and the estimated storage timeframe is unknown.

Lack of Updated OPSEC Plans to Address Current Issues With the NexGen \$100 Products at ECF

BEP policy requires written OPSEC plans be established for sensitive and security areas that document security controls and physical security measures to protect bureau resources and products. Additionally, these OPSEC plans are to be reviewed annually and re-certified by security and operational managers and updated as needed to address security concerns.

BEP security officials stated that OPSEC plans for the ECF production areas containing the stored NexGen \$100s discussed above are not current and have not been re-certified on an annual basis. Additionally, no changes have been made to the plans to address specific concerns regarding the production problems and long-term storage of the NexGen \$100s. Until such time as BEP and the Federal Reserve System determine the disposition of the notes, BEP faces a number of unknowns in terms of storage timeframes and available storage capacity.

According to BEP security officials, the reason the OPSEC plans were not current is because of policy revisions. Among other

things, security personnel stated they are implementing a new quantitative risk assessment methodology including surveys and vulnerability assessments for each area. Once an area is evaluated, a written security plan will be completed and a specific Area Security Plan will be developed and posted in the operational area. BEP security officials also stated that as a result of our review, ECF elevated the storage issue related to the NexGen \$100s to the top of its list of areas to be evaluated.

Recommendations

We recommend that the Director of BEP do the following:

1. Safeguard all NexGen \$100 finished notes and WIP sheets at ECF in secured nonproduction areas that have limited and controlled access. To the extent practicable, the finished notes and WIP sheets should be stored in one location.

Management Response

To provide additional security, BEP (1) relocated finished notes into a Category I vault, (2) moved WIP sheets (except the amount staged for normal production purposes) into Category I and III vaults, and (3) documented decisions made throughout the unfolding of this matter in a security plan covering processing of NexGen \$100 work. BEP stated that at this time, it is not practicable for all NexGen \$100 sheets and finished notes to be stored in one location. However, appropriate offices are evaluating vault space options and updating BEP's 2008 vault study, which may provide options to increase vault space.

BEP also emphasized that while it had taken these steps to further enhance security over NexGen \$100 work in response to the audit recommendation, it is BEP's position that NexGen \$100 finished notes and WIP sheets within BEP facilities were secure, even for the longer duration that NexGen product remained in production areas while production decisions were pending. BEP states the decision to store the finished notes in a production area was made after careful consideration and was based on multiple compensating controls in place, such as

cameras, access control systems, locking mechanisms, etc. BEP officials stated that the area is not readily accessible to external intruders due to its location. Persons allowed in this production area must clear through a stringent suitability determination and background investigation with some of the highest standards in the federal government. BEP restricts access to the area to those cleared individuals with direct work responsibilities in the area. Finally, BEP officials stated that finished notes stored in the production area were stringently protected and inventoried on a periodic basis by production and compliance personnel.

OIG Comment

The actions taken by BEP are responsive to the intent of the recommendation and we verified that the finished notes and WIP sheets have been moved to secured vaults and storage areas.

2. Evaluate the policy and practices to retain video and digital recordings at ECF and WCF in light of the potentially long-term storage needs of the NexGen \$100 finished notes and WIP sheets.

Management Response

BEP will retain already recorded NexGen video footage until the work is accepted by the FRB, destroyed, or another decision is made by the BEP Director. In addition, BEP is evaluating retention options with its new digital video storage system.

OIG Comment

BEP's planned actions generally meet the intent of the recommendation. However, BEP will need to establish an estimated date for completing its planned actions and record that date in the Department of the Treasury's Joint Audit Management Enterprise System (JAMES). In addition, BEP should formalize changes in retention dates as policy.

-
3. Ensure that written security risk assessments and area security plans at ECF are updated and regularly re-certified in accordance with BEP policy. In addition, the plans should appropriately address security over NexGen \$100 finished notes and WIP sheets.

Management Response

BEP has been working to establish a security risk assessment program and expects the formal policy to be signed shortly. As part of BEP's risk analysis methodology, comprehensive security vulnerability assessments (security surveys) are conducted and security measures for a given section are derived based on the risk designation of the asset(s) it contains. These assessments replace OPSEC plans required under current policy. During fiscal year 2010, BEP completed numerous security surveys at ECF. During fiscal year 2011, BEP will conduct additional assessments, which cover the remaining areas requiring study. Once completed, the equivalent of the previous OPSEC Plan will be on file for every section and any changes required to Area Security Plans will be made and refresher training provided to affected BEP personnel. Areas containing the NexGen \$100s have been moved to the top of the risk assessment schedule.

OIG Comment

BEP's planned actions meet the intent of the recommendation. We also found that in May 2011, BEP issued policies for security risk assessments and area security plans that replace the previous OPSEC plan requirements. That said, we consider this recommendation to be open until BEP completes its security risk assessments and area security plans for areas containing the NexGen \$100s. BEP will need to establish an estimated date for completing these actions and record that date in JAMES.

* * * * *

We appreciate the courtesies and cooperation extended by your staff as we inquired about these matters. Major contributors to this report are listed in appendix 2. A distribution list for this

memorandum is provided as appendix 3. If you wish to discuss this report, you may contact me at (202) 927-5904.

/s/

Kieu T. Rubb

Director, Procurement and Manufacturing Audits



DEPARTMENT OF THE TREASURY
BUREAU OF ENGRAVING AND PRINTING
WASHINGTON, D.C. 20228

INFORMATION MEMORANDUM FOR AUDIT DIRECTOR KIEU T. RUBB, OFFICE OF INSPECTOR GENERAL (OIG)

THROUGH: Rosie Rios /s/
Treasurer of the United States

FROM: Larry R. Felix /s/
Director
Bureau of Engraving and Printing (BEP)

SUBJECT: Draft Interim Audit Report: Improved Security Over the
NexGen \$100 Notes is Necessary

Thank you for the opportunity to review the OIG's draft interim report "Improved Security Over the NexGen \$100 Notes is Necessary," dated March 22, 2011. The BEP offers the following comments on the draft interim report.

Recommendation 1

Safeguard all NexGen \$100 finished notes and Work-In-Process (WIP) sheets at the Washington, DC Facility (DCF) in secured nonproduction areas that have limited and controlled access. To the extent practicable, the finished notes and WIP sheets should be stored in one location.

Response

To provide additional security, the BEP took the following actions:

- 1) Relocated finished notes into a Category I vault.
- 2) Moved WIP sheets (except the amount staged for normal production purposes) into Category I and III vaults. At this time, it is not practicable for all NexGen \$100 sheets and finished notes to be stored in one location. However, appropriate offices are evaluating vault space options and updating our 2008 vault study, which may provide options to increase vault space.
- 3) Documented decisions we made throughout the unfolding of this matter in a security plan covering processing of NEXGEN \$100 work.

While we have taken these steps to further enhance security over NexGen \$100 work in response to this audit recommendation, the BEP wants to emphasize our position that NexGen \$100 finished notes and WIP sheets within BEP facilities were secure – even for the longer duration that NexGen product remained in production areas while production decisions were pending.

After careful consideration, and based on multiple compensating controls, such as cameras, access control systems, locking mechanisms, etc., the BEP stored finished notes in highly secure space. The area is not readily accessible to external intruders due to its location. Persons allowed in this production area must clear through a stringent suitability determination and background investigation with some of the highest standards in the federal government. BEP restricts access to the area to those cleared individuals with direct work responsibilities in the area. And, finally, finished notes stored here are stringently protected and inventoried on a periodic basis by production and compliance personnel.

Recommendation 2

Evaluate the policy and practices to retain video and digital recordings at the DCF and WCF in light of the potentially long-term storage needs of the NexGen \$100 finished notes and WIP sheets.

Response

In accordance with the security plan signed by the Director, the BEP will retain already recorded NexGen video footage until the work is accepted by the FRB, destroyed, or another decision is made by the Director. In addition, we are evaluating retention options with our new digital video storage system.

Recommendation 3

Ensure that written security risk assessments and area security plans at the DCF are updated and regularly re-certified in accordance with BEP policy, and appropriately address security over NexGen \$100 finished notes and WIP sheets.

Response

The BEP has been working to establish a security risk assessment program and expects the formal policy to be signed out shortly. As part of BEP's risk analysis methodology, comprehensive security vulnerability assessments (security surveys) are conducted and security measures for a given section are derived based on the risk designation of the asset(s) it contains. These assessments replace Operational Security Plans required under current policy. During fiscal year 2010, BEP completed numerous security surveys at the DCF. During fiscal year 2011, BEP will conduct additional assessments, which cover the remaining areas requiring study. Once

Appendix 1
Management Response

completed, the equivalent of the previous Operational Security Plan will be on file for every section and any changes required to Area Security Plans (ASP) will be made and refresher training provided to affected BEP personnel. As mentioned in the OIG report, areas containing NexGen \$100s have been moved to the top of the risk assessment schedule.

OIG comment: This response was received by our office on May 6, 2011.

Appendix 2
Major Contributors to This Report

Office of Audit

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