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DEPARTMENT OF THE TREASURY

BUREAU OF ENGRAVING AND PRINTING

WASHINGTON, D.C. 20228

June 7, 2018

FOIA Request No. 2018-06-008

On June 4, 2018, the Office of the Chief Counsel - FOIA and Transparency Services of the Bureau of Engraving and Printing (BEP) received your Freedom of Information Act (FOIA) request under 5 U.S.C. §552 to obtain a copy of the printed tour narrative/spiel for the District of Columbia Facility tour.

The Office of External Relations found records responsive to your request. Enclosed are the records responsive to your request. No fees will be charged for processing your request.

If you have any questions regarding your request, please contact me at (202) 874-2500 or fax at (202) 874-2951.

Sincerely,

Leslie J. Rivera Pagán
Disclosure Officer

Enclosure: 5 pages

DCF TOUR SPIEL

Welcome to the Bureau of Engraving and Printing, my name is _____ and I'll be your tour guide today.

All U.S. currency is designed, engraved and printed here at the Bureau of Engraving and Printing in Washington, DC or at our facility in Fort Worth, Texas.

The mission of the Bureau of Engraving and Printing (BEP) is to develop and produce United States currency notes, trusted worldwide. As its primary function, the BEP prints billions of dollars - referred to as Federal Reserve Notes - each year for delivery to the Federal Reserve System. The Federal Reserve operates as the nation's central bank and serves to ensure that adequate amounts of currency and coin are in circulation. The BEP does not produce coins - all U.S. coinage is minted by the United States Mint.

The BEP also advises other Federal agencies on document security matters. In addition, the BEP processes claims for the redemption of mutilated currency.

In order to protect your money and keep counterfeiting low, the United States government continues to enhance the security of its currency. The counterfeiters aren't standing still, and neither are we.

The new $100 note is the latest denomination of U.S. currency to be redesigned with enhanced security features. It is the final denomination in a family of redesigned notes that was first introduced with the $20 note in 2003 and includes $50, $10 and $5 notes. The new notes remain the same size and use similar portraits and historical images to maintain an American look. The new designs include subtle background colors and enhanced security features including; watermarks similar to the portrait and visible when held up to a light, enhanced security threads that glow under ultraviolet light, micro-printing, and an improved color shifting ink that changes color when the note is tilted.

While the percentage of counterfeit notes in circulation remains small, there has been a jump in computer-generated notes. The purpose of the currency redesign is to stay ahead of widely available technologies used for some types of counterfeiting. Today you will see four stations of currency production.

G1) TOUR SECTION ONE (OFFSET PRINTING DIVISION)

Welcome to the offset printing division. This is the newest section at the Bureau, and yes, the color of money starts here. The Bureau has three Simultan presses in DC and three in our Texas facility. This press is 52 feet long, 14 feet wide, 12 feet tall and weighs 72 tons.

The Simultan is a sheet fed press used to print the color portion of new money. The press consists of eight printing units and has the capability of printing 14 colors at one time. The press can run at speeds up to 12,000 impressions per hour, and the feeder can hold up to 20,000 sheets of paper. The sheet travels down the elongated feed board printing both sides of the sheet simultaneously. After the printing process, the sheets are then deposited into one of three piles within the delivery. The Pressperson will extract a sheet from the delivery to examine for any defects or flaws. The Pressperson then takes the sheet to be scanned on one of the various scanning devices. The results are displayed on the monitors at each of the two color consoles, and the results are analyzed. The Pressperson will then make color corrections based on their expertise in order to maintain consistent color parameters. We are able to monitor and compare scanned information between the facilities here in Washington, D.C. and Fort Worth, Texas. This will insure that both printing facilities stay within the color and quality parameters put in place by the Federal Reserve Board.

G2) TOUR SECTION TWO (INTAGLIO PRINTING)

You are also seeing the BEP's Super Orlof Intaglio printing presses for currency production. The printmaking process used to produce U.S. currency is called Intaglio (in-tal-yo) Printing. In this process, a plate is engraved with a design, the plate is inked, wiped clean, and pressure is applied to force the ink from the grooves onto paper. The word "Intaglio" comes from the Italian, "In" + "tagliere" which means to cut in or to engrave. The bureau employs master engravers who are trained through 10-year apprenticeships. These engravers, specializing in portraitures or letters and numbers, create one "master plate." From this plate, a 32 note plate is created through a casting and chemical process.

These Intaglio presses have the latest technology to ensure the quality and security of U.S. paper currency. The new presses each weigh 57 tons and print with up to 20 to 40 tons of pressure. They are able to produce at speeds of 10,000 sheets per hour and in the future will be capable of producing 50 notes per sheet, compared to the 32 notes per sheet now produced. In addition, the Orlof presses are capable of printing four intaglio color inks. Included with the press they have installed a new color online inspection system to ensure the quality of the currency produced, and with the ongoing testing and research will be setting the example of future currency production.

The press on the left of the room prints the backs of the currency sheets in green ink. The sheets are then taken to a holding room to dry for 2 to 3 days. A common holding room, such as the one in the basement beneath this area, might contain $50 to $100 million dollars of notes at any one time, depending upon the denomination being printed. After the ink on the paper is dry, the faces of the notes are printed with black ink. Serial numbers, the Treasury Seal and the Federal Reserve Seal will be added to the faces of the notes in the last section of the tour. The notes will dry again for another 2

to 3 days before going on to the next phase of production. At any given moment in this building, there may be up to $300 million in various phases of production.

The currency paper is composed of 25% linen and 75% cotton, with red and blue fibers distributed randomly throughout to make imitation more difficult. The paper is made specifically for the Bureau of Engraving and Printing by Crane Paper Company in Dalton, Massachusetts and it is illegal for anyone other than the Bureau to possess this paper. Paper for denominations above the $2 bill is made with specific watermarks and security threads.

The decision on the amount of currency to be printed is made by the Federal Reserve Board, which is an independent government agency charged with regulating the currency to promote economic growth and financial stability.
95% of the currency we print is "replacement currency" put into circulation to replace worn out bills, which are collected and destroyed by the Federal Reserve Banks.
Only 5% of the Bureau's production increases the current supply. Now we will proceed to the next phase of currency production called OCIS.

G3) TOUR SECTION THREE (OCIS)

You have just entered the third phase of currency production called Off-Line Currency Inspection System, better known as OCIS. Not long ago currency inspection, now done by the computer below, was done by human eyes! The Off-line Currency Inspection System inspects both sides of the currency sheets for flaws, trims the edges of the paper, and cuts the 32 note sheets in half, into two 16 note sheets.

As each sheet enters the transport, the computer assigns it a number. The computer tracks 37 sheets of currency at one time. Each sheet is checked for the correct kind of ink for that particular denomination. Next, a special camera looks through the paper to ensure that the security thread and presidential watermark are present and in the right position.

As the sheet moves through the front camera box, a digital picture is taken. The picture compares four million tiny pixels with the master images. For each square that doesn't match, the computer locates it and displays a color for each square on a monitor showing the bookbinder how different the sheet is compared to the master image.

The sheet is then turned over, where the second camera views the back of the currency.

Amazingly, the entire inspection process takes place at a rate of less than half of a second per sheet. The bookbinders monitor the computer information and inspect sheets on a constant basis. The computers allow bookbinders to track printing flaws and errors so that they can be corrected.

After this, rotating knives trim the edges of the paper and cut the sheet in half; from one 32 note sheet, to two 16 note sheets.

Each half sheet is then sent to a good or bad bin. In the good bin, sheets are grouped in pairs of 1,000 and piled into a stack of 10,000 sheets.

This computer inspection process has helped to reduce the amount of currency we have to destroy and has increased our productivity.

We will now proceed to the fourth and final stage of currency production called COPE/PAK.

G4) TOUR SECTION FOUR (COPEPAK)

COPE/PAK is the fourth and final stage of currency production before the money is delivered to one of the twelve Federal Reserve Banks to be put into circulation.

The acronym COPE/PAK stands for: Currency Overprinting Processing Equipment and Packaging. The machinery in this area is the most automated and modern of its kind in the world.

If you have ever looked closely at one of the bills in your wallet, you saw that each bill has green Treasury Seals and serial numbers, as well as black Federal Reserve Seals and district numbers. The presses on the left are overprinting this important information, in sequential order, on the 16 note sheets. The serial numbers are added in sequential order and remain in order when the notes are cut.

100 sheets are stacked into a Plexiglas tray. You can see the 100 sheet stacks moving towards you, where they pass through two sharp guillotine cutters. The first cut is made horizontally, leaving the notes in pairs. The second cut is made vertically, and for the first time you see individual notes, 100 to a pile.

These are bound with denomination bands and are examined in a final random quality check by an expertly trained employee. If the employee spots any discrepancy, the entire batch of 100 notes will be pulled, creating a gap in the numerical sequence. Special substitution notes called "Star Notes" are then used to replace the batch of bills. Star notes have serial numbers ending with a star instead of a letter.

The machine at the back of the room is labeled "1,000 note bander." The rotating carousel collects 10 packages of notes and bands them together, resulting in a stack of 1,000 notes (one bundle). These notes are then shrink-wrapped and a bar code is affixed, which contains the notes serial numbers and Federal Reserve Bank information.

The next rotating carousel shrink-wraps four of these bundles into a final currency brick containing 4,000 notes. The bricks get placed onto skids, and then into a vault to await pick-up by the Federal Reserve. One brick of $100 bills would contain $400,000; one load of bricks would contain $64,000,000.

Now you have seen how your money is made, but I am sure that you already know how to spend it. So our tour exits to the gift shop where we have great products for purchase including uncut sheets of currency, shredded currency and other great items for sale. There are also exhibits and brochures to teach you more about your money.

If you have any additional questions, my name is _____ and I will be in the Visitor Center to answer them