



**Department Of Veterans Affairs
Asset Management Service
152 US Highway 206 South
Hillsborough, NJ 08844**

September 24, 2003

ASSET MANAGEMENT SERVICE LETTER 1-03

TO: DIRECTORS, ALL VA MEDICAL FACILITIES

SUBJ: SHIPMENT OF CATHODES & PASSIVE UNITS TO ASSET MANAGEMENT SERVICE

1. Although cathodes must be shipped when full, on September 30, the end of the fiscal year, all cathodes in use must be shipped to the Asset Management Service (AMS), Hillsborough, NJ, regardless of the amount of silver collected on the cathodes. (**EXCEPTION:** If less than 100 gallons of fixer has been desilvered, leave the cathode in place). Cathodes must be received by AMS no later than (5) calendar days after the September 30th cutoff date. Cathodes received **AFTER** the 5 calendar days will be credited to the next fiscal year, with no exceptions. It is the responsibility of the facility Accountable Officer to assure that these cathodes are shipped in a timely manner so that each facility may be properly credited.
2. Standard Operating Procedures for the operation, management and shipment of silver recovery units, electrolytic and passive, are enclosed.
3. Please be advised that it is the responsibility of the facility Accountable Officer to post the enclosed instructions near each silver recovery unit so operators can refer to them should any questions arise.
4. When a cathode is ready for shipment, an advance copy of the VA Form 90-134, Combination Requisition and Shipping Ticket, must be mailed, under separate cover, indicating gross weight and method of shipment to the Director (902A), AMS, 152 US Highway 206 South, Hillsborough, NJ 08844.
5. Questions should be addressed to the Precious Metals Recovery Quality Assurance Specialists at 908-707-4344 or 707-4339.
6. Asset Management Service Letter 1-01, dated April 30, 2001, is hereby rescinded.
7. Reference: VA Directive and Handbook 7345, Sale, Abandonment or Destruction of Personal Property.

A handwritten signature in cursive script, appearing to read "S. E. Dufour".

S. E. Dufour
Director

Enclosures (3)

Recession Date: September 30, 2005

STANDARD OPERATING PROCEDURES

Maintenance of Electrolytic Recovery Units

In order to obtain the best possible results in the recovery of silver, the following instructions must be followed:

- 1. Operation:** Operation of the electrolytic silver recovery unit should begin when the solution (fixer) covers the top disc of the cathode to the depth of one inch, but below the shaft coupling.
- 2. Amperes and Time:** When starting an empty (clean) cathode, amperage settings should be set at 3-5 amps for the first three hours to establish a "base layer". This enables the silver to be more easily stripped from the cathode. After this layer is established, then amperage values can be increased to the 8-12 amp range. Also, all subsequent plating can be done at these values until the cathode is full. Timer clock should be set in accordance with the size of the silver recovery unit.
 - > Small silver recovery unit of 15-gallon size - time setting would be between 9 to 12 hours.
 - > Large silver recovery units of 30-gallon size - time setting between 18 to 24 hours.
- 3. Color:** At the end of processing time, the quality of silver extracted can be determined by the color of the silver being deposited on the cathode.
 - a. **White or Silver Color** - Plating amperage is too low. Increase this value slightly in steps of one amp until plating process shows an even gray shade.
 - b. **Even Gray Shade** - Plating process is good. This is the best plating color.
 - c. **Dark Brown, Black or Blue-Black** - This can be caused by two conditions:
 - (1) Amperage is too high. Reduce this value slightly in steps of 1 amp until plating process shows an even gray shade.
 - (2) No more silver remains in the solution and burning is occurring.
- 4. Solution Test:** As the quantity of silver in the batch of fixer decreases, the amperage readings start to fall off. A sample test can show if any more silver remains. Take a piece of copper rod or heavy copper wire and clean with a Scotch-Brite pad so that the copper is as shiny as a new penny.

After agitating the solution, submerge the rod in the tank for 15 seconds; upon removal, if a silvery color is noted on the rod, more silver is available and plating should continue for an hour or so at the original amperage setting. Repeat the test until the rod shows no silver color. When the rod shows no silver color, the batch is exhausted and should be drained. CAREFUL OBSERVATION OF THE ENTIRE PROCESS IS ESSENTIAL FOR MAXIMUM RESULTS!

5. Cathode Capacity: When the silver has collected to a thickness of approximately 1/2 inch on the outer edge of the cathode discs, the cathode is full and should be changed. If it is a cylinder cathode and there is approximately 1/2 inch of silver on the tip of the cylinder wall, the cathode is full and should be changed. With either type of cathode, the thickness is reached after processing approximately 600 to 800 gallons of fixer solution.

6. Storage Containers-- Jugs and various size storage tanks are available from Asset Management Service, Hillsborough, NJ, for the storage of spent fixer solution during peak operating times. The spent fixer solution can then be emptied into the recovery tank.

7. Maximum efficiency:

- a. Avoid spillage of fixer solution on or around motor, controller, wires, pumps, etc. Wipe up all spills IMMEDIATELY. Fixer is corrosive and will damage equipment.
- b. Clean carbon anodes with water and a Scotch-Brite pad each time a cathode is changed.
- c. Make sure all wiring connection and anode brackets are clean and tight to ensure a good current patch.
- d. If a new cathode does not slide into the coupling, hand ream the coupling with a 1/2" drill to remove excess silver in the coupling.
- e. Do not overfill plating tank. Overfilling causes the condition mentioned above.

If the silver recovery unit becomes inoperative or malfunctions in any way, contact Asset Management Service, at 908-707-4344 or 707-4339 for assistance or replacement.

STANDARD OPERATING PROCEDURES

Change and Preparation of Cathodes for Shipment

1. Cathode change:

- a. Turn off power and disconnect power cable.
- b. Carefully lift cathode, motor unit, and carbon anodes from plating tank place the assembly on its side. The entire assembly will be heavy, so exercise caution when lifting or setting down, or damage to the assembly will result.
- c. Loosen the set screw that holds the cathode to the coupling. Remove cathode and LET AIR DRY FOR AT LEAST THREE DAYS IN A SECURE AREA.

2. Preparation of cathode for shipment:

- a. Place dried cathode in polyethylene bag with cathode bottom (nut end) in box first, positioning nut in hole in block in the bottom of the box. Do not place paperwork inside of bag with cathode.
- b. Seal the bag and place the top shipping block over the shaft end of the cathode.
- c. Put top in place and seal with strong, wide tape. Do not pack the cathode with paper, styrofoam, nuts, etc.
- d. The cathode is now ready to be returned to Director (902A), Asset Management Service (AMS), 152 US Highway 206 South, Hillsborough, NJ 08844.

NOTE: *The loaded cathode (including Cathode Record Identification Card, VA Form 10-9040) should be sent to Asset Management Service immediately. DO NOT HOLD AT FACILITY. Contact the facility Accountable Officer for proper shipment instructions.*

STANDARD OPERATING PROCEDURES

Passive Silver Recovery Systems

1. Act-1 and Tandem 200 cell change-out times are determined by fixer volume passing through the units.

a. The Act-1 single cell passive silver recovery unit can process up to 200 gallons of fixer before the cell has to be changed.

b. A Tandem 200 dual cell passive silver recovery unit can process as much as 200 gallons of fixer before the primary (first) cell is ready to change. When 200 gallons of fixer have passed through the unit, only the primary cell should be changed. After another 200 gallons have passed through the unit, both cells should be changed and the procedure starts over again.

c. At times the amount of fixer volume that has passed through the unit is undetermined. A simple test to determine if the cell is ready to change out is to press a thin bladed screwdriver into the cell. If the screwdriver goes in easily, it's time to change the cell.

NOTE: *PASSIVE SILVER RECOVERY CELLS SHOULD NEVER BE LEFT IN PLACE FOR MORE THAN 1 YEAR.*

2. When determined it is time to change out the passive cell, call the Asset Management Service (AMS) Precious Metals Quality Assurance Specialists at (908) 707-4344 or 4339 to request replacement.

3. The replacement cell will be sent to the requestor in a container, which will include a heavy-duty plastic bag. The full passive unit cell(s) is to be placed in the heavy-duty plastic bag and **MUST BE AIR-DRIED** before shipping to Director (902A), AMS, 152 US Highway 206 South, Hillsborough, NJ 08844.