

**BY ORDER OF THE COMMANDER,
436TH AIRLIFT WING (AMC)**



**DOVER AIR FORCE BASE
INSTRUCTION 21-203**

19 NOVEMBER 2003

Maintenance

**UNIT PRECIOUS METALS
RECOVERY PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Dover Air Force Base Instruction (DAFBI) establishes procedures and responsibilities for the processing of recoverable assets bearing precious metals. The overall intent of this instruction is to ensure that every effort is made to recover all unserviceable assets which contain precious metals; that these recoverables are stored and safeguarded adequately; and all the proper documentation from serviceable issue to the customer through the disposition to the Defense Reutilization Marketing Office (DRMO) is established to ensure an accurate audit trail. This DAFBI is applicable to all 436th and 512th Maintenance Group Elements that are required to utilize the Precious Metals Recovery Program (PMRP) and implements Air Force Manual 23-110, Volume VI, Chapter 4, *Air Force PMRP Program*, and DOD 4160.21M, Chapter 11, *Defense Material Disposition Manual* and CFR 459.12 Point Source Discharges.

1. Terms Explained.

1.1. For the purpose of this instruction, precious metals are defined as gold, silver, platinum, iridium, rhodium, osmium, and ruthenium or any combination of listed metals.

2. Objective.

2.1. Standardize the control, accounting, and reclamation of property which contains identified precious metals.

2.2. Identify management responsibilities for control of the supplies and equipment required to support the PMRP.

3. Responsibilities.

3.1. Organization/Using Activity Responsibilities.

3.1.1. Cooperate to the fullest extent with the installation PMRP monitors.

- 3.1.2. Maintain a current PMRP Instruction.
- 3.1.3. IAW AFMAN 23-110, vol 6, chapter 4, paragraph 4.2.5., affected elements will appoint in writing a PMRP monitor and alternate, and furnish a copy of the letter to the Base PMRP manager (BPMRP).
- 3.1.4. IAW AFMAN 23-110, vol 6, chapter 4, paragraph 4.2.6., affected elements will appoint in writing an individual(s) other than the primary or alternate program monitor to receipt for, issue, and turn-in to the BPMRP fine precious metals and precious metals bearing scrap items assigned Control Item Code (CIC) "R".
- 3.1.5. IAW AFMAN 23-110, vol 6, chapter 4, paragraph 4.2.7., Non Destructive Inspection element will appoint in writing an individual(s) to harvest silver flake and sludge from electrolytic units and to remove and replace recovery cartridges, when applicable.
- 3.1.6. IAW AFMAN 23-110, vol 6, chapter 4, paragraph 4.2.3., affected elements will appoint in writing an individual(s) in operations such as plating, grinding, boring, and stripping to receipt for, issue, turn-in of fine precious metals/precious metals bearing scrap and precious metals bearing items with CIC "R".
- 3.1.7. Ensure that the AF Form 2005, **Issue/Turn-In Request**, document has a scrap classification list code, proper unit issue/certified weight, organization, type scrap, and element PMRP monitor signature. A disinterested observer's weight certifying signature is also required on all precious metal scrap documents.
- 3.1.8. Initiate and maintain a self-inspection program to include, as a minimum, periodic documented testing of hypo solution from electrolytic/cartridge units to ensure unit is operating properly and complies with required issue and turn-in criteria.
- 3.1.9. Ensure the proper handling, accountability, safeguarding, and securing of all assets bearing precious metal to include fine precious metals as well as precious metals bearing scrap.

4. PRECIOUS METAL RECOVERY.

4.1. Recovery from Hypo Solution.

- 4.1.1. Obtain silver recovery cartridges and supplies from: Accu-Tech Industries, P.O. Box 3473 Edmond, OK 73083-3473.
- 4.1.2. Maintain a file of silver recovery cartridge transactions to include date cartridge was received from Accu-Tech Industries, serial number, turn-in date, weight and condition of the cartridge at turn-in. File turn-in receipts (DD Form 1348-1A, **Issue Release/Receipt Document**) and AF Form 2005 as back-up documentation.
- 4.1.3. Use unit of issue pound (lb), including the weight of the container, and enter the cartridge serial number in card columns 67-80 on the turn-in document.
- 4.1.4. Ensure expended cartridges are safeguarded prior to turn-in at DRMO.
- 4.1.5. Spent hypo solution will be labeled and managed appropriately by the generator as determined by laboratory results received by 436 CES/CEV.
- 4.1.6. Ensure cartridges are filled with water prior to installation to reduce channeling effect of the filler solution.

4.1.7. Replace cartridges every 6 months, or when testing indicates cartridge replacement is necessary. Use litmus paper (Silver Est., Test Paper, Litmus, PN 196-5466, 1-Bk, NSN 6770-00-033-4342) to determine if the cartridge should be replaced.

4.1.8. IAW AFMAN 23-110, vol 6, chapter 4, paragraph 4.9.3.2., a disinterested witness will be used to verify the cartridge removal and to certify the weight of the used cartridge, as well as the weight of dried silver bearing flake. Both the harvester and the witness should individually weigh the harvested cartridge and flake since merely observing the weighing process could result in certifying an incorrect weight.

5. Resource Protection.

5.1. AFI 31-201, chapter 12, *Security Police Standards and Procedures*, must guide all Air Force activities, when establishing protection requirements for fine precious metals, precious metals bearing scrap, and high content precious metals bearing items. Specific protection requirements will be determined locally, considering the value of each category.

6. Turn-In Procedures.

6.1. The generating/using activity is responsible for turning in precious metals bearing scrap, sludge, flake, solutions, powders, amalgam, waste, other mix, and forms of excess fine precious metals following [Attachment 4](#) of this instruction.

7. Local Purchase.

7.1. Work centers using the government purchase card or other local purchase methods to procure stock listed/cataloged parts must establish local procedures to verify precious metals content. If a part contains precious metals, it must be managed in accordance with procedures outlined in AFMAN 23-110, vol 6, chapter 4.

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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DoD 4160.21M, Chapter 11, *Defense Material Disposition Manual*

AFI 31-201, Chapter 12, *Security Police Standards and Procedures*

AFMAN 23-110, Volume 6, Chapter 4, *Air Force Precious Metals Recovery Program*

Abbreviations and Acronyms

BPMRP—Base Precious Metals Recovery Program

CES—Civil Engineering Squadron

CEV—Civil Engineering Environmental Flight

CIC—Control Item Code

DRMO—Defense Reutilization Marketing Office

EMS—Equipment Maintenance Squadron

IAW—In Accordance With

OI—Operating Instruction

PM—Precious Metals

PMIC—Precious Metals Indicator Codes

PMRP—Precious Metals Recovery Program

Attachment 2

METALS COVERED BY THE DOD PRECIOUS METALS RECOVERY PROGRAM

METAL	EXAMPLE ITEMS
GOLD	Semiconductors, diodes, rectifiers, and transistors
SILVER	Photographic X-Ray film, photo processing solution (hypo), desalting kits, silver lined bearing and bushings
PLATINUM	Telescopic and microscopic crosshairs, electrical fuses, and slide resistant wire
PLATINUM FAMILY	
OSMIUM	Alloy for phonograph needles, fountain pen points, and bearings
PALLADIUM	Telephone relay contact points, ignition contact points, and electrical outlets
IRIDIUM	Telegraphic contact points, watch bearing, pen points, and scientific instruments
RUTHENIUM	Some electrodes and contacts
RHODIUM	Thermocouple wires and some military insignia

Attachment 3

PRECIOUS METAL (PM)

Code	Type of Precious Metal (PM)
A	Item does not contain precious metal
C	Item contains combination of two or more precious metals (silver, gold, platinum)
G	Item contains gold
P	Item contains platinum family metals
S	Item contains silver
U	Precious metal type is unknown
V	Precious metals type varies between manufacturers

Nomenclature NSN

Gold	9660-00-042-7733
Silver	9660-00-106-9432
Platinum Granules	9660-00-042-7768
Platinum Sponge	9660-00-151-4050
Palladium Granules	9660-00-042-7765
Palladium Sponge	9660-01-039-0320
Rhodium	9660-01-010-2625
Iridium	9660-01-011-1937
Ruthenium	9660-01-039-0313

Attachment 4

PRECIOUS METALS RECOVERY PROGRAM (PMRP)

A4.1. Procedures for Turn-in of Precious Metals.

A4.1.1. Package all precious metal in a manageable package. If the precious metal is sludge, it must be dried completely, prior to packaging.

A4.1.2. Fill out DD Form 1348-1A, **Issue Release/Receipt Document**, (contact LRS for assistance, if required).

A4.1.3. Weigh precious metal with packaging and enter the TROY weight in columns 25-29 of the DD Form 1348-1A.

A4.1.4. Contact Fort Meade, MD, DRMO, DSN 622-3687 (Janice Mullins) and make an appointment for drop-off/turn-in. Address for Fort Meade: Building P-77, Fort Meade, MD

A4.1.5. Deliver the precious metal to DRMO on the date and time of appointment.

A4.1.6. Prior to departing DRMO, assure you have obtained a copy of the DD Form 1348-1A to file in the PMRP book once returned to home station.