

**BY ORDER OF THE COMMANDER
KIRTLAND AIR FORCE BASE**



KIRTLAND AIR FORCE BASE

INSTRUCTION 23-101

14 NOVEMBER 2011

Supply

**PRECIOUS METALS RECOVERY
PROGRAM (PMRP)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at www.e-Publishing.af.mil for downloading or ordering

RELEASABILITY: There are no releasability restrictions on this publication

OPR: 377LRS/LGRC

Certified by: 377 LRS/LM
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Pages: 16

This instruction implements Department of Defense (DoD) 4160.21-M, 18 August 1997, *Defense Materiel Disposition Manual*, Air Force Policy Directive (AFPD) 23-5, 26 March 2001, *Reusing and Disposing of Materiel*, and Defense Reutilization and Marketing Service (DRMS) Instruction 4160.14, May 12, 2008, *Operating Instructions for Disposition Management*. It augments Air Force Manual (AFMAN) 23-110, Volume 6, Chapter 4, 1 April 2009, *Precious Metals Recovery Program (PMRP)* and prescribes policies and procedures for Kirtland Air Force Base (KAFB) participation in the DoD Precious Metals Recovery Program.

This publication applies to all 377th Air Base Wing (377 ABW), the 150th New Mexico Air National Guard and associate units on KAFB. This includes any DoD organization or contractor managing, receiving, handling, storing, issuing, using, requisitioning, purchasing or shipping precious metals. It also encompasses disposing of precious metals, or items containing precious metals, including precious-metals-bearing scrap, sludge, solutions, powders, flake, black and white photographs, or other mixtures or forms. All DoD activities and DoD contractors at KAFB, regardless of organizational entity, must coordinate with the base PMRP manager, the Resources Protection Executive Committee (REPC) and the Defense Reutilization and Marketing Service (DRMS) to ensure a successful program. Units deploying to KAFB will participate in the PMRP. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847's from the field

through the appropriate functional's chain of command. See Attachment 1 for Glossary of References and Supporting Information.

1. Objective

1.1. To establish a base program to control and promote the economic recovery of precious metals from excess, used and surplus precious metal-bearing material and the use of recovered precious metals as government-furnished materiel and for other authorized AF uses. The metals covered in the PMRP include gold, silver, platinum, palladium, iridium, rhodium, osmium and ruthenium. As a practical matter, only four of the eight precious metals – silver, gold, platinum and palladium are routinely recovered.

2. Responsibilities:

2.1. 377th Air Base Wing Commander (377 ABW/CC) will:

2.1.1. Appoint a primary KAFB PMRP manager (and an alternate PMRP manager, when deemed appropriate) in writing, to act as the focal point for all matters concerning the PMRP.

2.2. The PMRP Manager will:

2.2.1. Provide a copy of the appointment letter to the DRMS and each using organization.

2.2.2. Ensure that each organization on the installation that is involved in the PMRP appoints a PMRP monitor and an alternate, as required. The appointment letter shall include, at a minimum, the PMRP monitor's/alternate's name, organizational account, phone number(s) and location. The PMRP monitor and alternate shall be appointed by the organization's commander or member of management for non-military entities.

2.2.3. Maintain a list of each organization and, using the locally developed product, 19E Daily Record for Metals, identify the precious metals issued during the month. This product will be used for periodic review.

2.2.4. Maintain a record of fine precious metals that are furnished as government-furnished materiel (GFM) including contract number and contractor's name and address.

2.2.5. Ensure that organizations that receive issue and use fine precious metals or high precious metals content items that are assigned Controlled Item Code (CIC) "R" appoint an individual, in writing, to receive and issue these items.

2.2.6. Ensure that each organization that generates a hypo-solution has a silver recovery unit in place. Where electrolytic units are installed, appoint, in writing, an individual to harvest the silver flake or sludge. Ensure a third party (one who does not operate the equipment or harvest the silver) witnesses the harvesting and weighs the flake, sludge or cartridge and signs the disposal document as being accurate and true.

2.2.7. Ensure that each unit initiates and maintains a self-assessment program. Include, at a minimum, control and protection of precious metals residue; compliance with receipt, issue, storage and turn-in procedures and periodic testing of hyposolution.

2.2.8. Prepare a schedule, visit each participating organization and conduct inspections at least once every 24 months to review the operations, documentation and compliance with overall program requirements. Prepare and maintain a report of deficiencies noted during inspections. Provide a suspense copy of findings to the organization for corrective action(s). Perform a follow-up visit within thirty days to ensure that unit monitors correct any discrepancies.

2.2.9. Notify the appropriate depot item manager of any items found to contain precious metals, if a Precious Metals Indicator Code (PMIC) has not been assigned, or if the PMIC is incorrect.

2.2.10. Act as liaison with DRMS to keep abreast of precious metals recovery techniques. Request guidance from DRMS concerning procedures for the recovery and transfer of precious metals.

2.2.11. Ensure that organizations that receive, issue, handle and use fine precious metals or high precious metals content items assigned a CIC "R" keep accurate records and ensure a disinterested third party audits these records and quantities of material on hand at least semiannually.

2.3. Unit Commanders will:

2.3.1. Appoint, in writing, a primary and alternate PMRP monitor for their organization. (Forward a copy of the appointment letter to the Base PMRP Manager).

2.3.2. Appoint, in writing, individuals to harvest silver flake or sludge from electrolytic units or to change silver recovery cartridges, if used by the organization.

2.3.3. Appoint, in writing, personnel, other than PMRP monitors, to receive, issue and turn-in fine precious metals or high precious metals content items assigned a CIC "R," if these items are used by the organization.

2.3.4. Provide proper Personal Protective Equipment (PPE) for safe handling of items assigned a CIC "R" if required. Requirement for PPE will be based on each specific item.

2.4. Appointed Organization PMRP monitors will:

2.4.1. Cooperate to the fullest extent, with the base PMRP manager and DRMS, to ensure compliance with PMRP guidance.

2.4.2. Attend initial PMRP training, when assigned, as an organization's PMRP monitor. Provide training to shop level monitors, if assigned by unit. Document all training provided to shop level monitors and maintain records.

2.4.3. If needed, develop and maintain an Operating Instruction (OI) to manage the organization's PMRP. Furnish copies of OI's to the base PMRP manager.

2.4.4. Develop and maintain a self-inspection checklist for the organization's PMRP. This checklist will include, as a minimum; the control and protection of precious metals residue, compliance with receipt, issue, storage and turn-in procedures. Perform self-assessments in January and July. The unit monitors must conduct a test and check the results daily for silver in the outflow while the unit is operating. The unit monitor must

conduct laboratory tests whenever daily field tests indicate silver discharge. The unit monitor must keep records on file in each work center.

2.4.5. Ensure proper handling, accounting, safeguarding and security of fine precious metals or high precious metals content items assigned CIC "R," silver flake or sludge and silver recovery cartridges.

2.4.6. Maintain accountable records for:

2.4.6.1. Fine precious metals received, issued and turned in to DRMS.

2.4.6.2. Silver flake harvested from electrolytic units and turned in to DRMS.

2.4.6.3. Silver bearing sludge harvested from electrolytic units and stripping tanks and turned in to DRMS.

2.4.6.4. Silver recovery cartridges turned in to DRMS.

2.4.6.5. Other precious metal scrap turned in to DRMS.

2.4.6.6. Maintain a hand receipt for any equipment provided by the Defense Logistics Agency (DLA) PMRP.

2.4.6.7. Ensure organizations' work centers generating precious metal scrap or precious metal items that retain their identity, collect and turn-in this material promptly to prevent the possibility of loss or theft.

2.4.6.8. Maintain a records folder for the organization's recovery program. The folder will contain the following information:

2.4.6.8.1. All appointment letters.

2.4.6.8.2. A current copy of KIRTLANDAFBI 23-101.

2.4.6.8.3. Any unit operating instructions, if applicable.

2.4.6.8.4. Copies of all internal and external inspection reports.

2.4.6.8.5. Unit copies of all turn-in documents.

2.4.6.8.6. Turn-in control log. This is an optional document for unit monitors; the work center must have a local document to track turn-ins.

2.4.6.8.7. Recovery Unit Test Log. Conduct a test and check the results, for silver in the outflow, while the silver recovery unit is operating. Laboratory tests will be as required or whenever indicated. This is an optional document for unit monitors but if it is not maintained in the unit's file, each work center must document all testing of discharges.

2.5. Resource Protection:

2.5.1. Organizations will use DoD 5200.8, *Security of DoD Installations and Resource*, AFI 31-101, *The Air Force Installation Security Program* and KIRTLANDAFBI 31-101, *Installation Security Instruction* as guides when establishing protection requirements for fine precious metals, items bearing precious metals and high precious metals content items.

2.5.2. Determine locally specific protection requirements, such as the need for alarms, controlled areas and physical security of materials and equipment, considering the value of each category. Request guidance from the base Security Forces, 377 SFS/SFAR and the Resource Protection Manager when establishing these requirements.

3. Identification of Precious Metals:

3.1. **Precious Metal Indicator Codes (PMIC):** An assigned PMIC identifies items that contain precious metals. PMIC's, except "A", indicates recoverable items (see [Attachment 2](#)). Anyone discovering an item that might contain precious metals, without an assigned PMIC, will notify the base PMRP manager.

3.2. **Recoverable PMIC:** Assignment of a recoverable PMIC will cause a phrase to print on the issue document that identifies the type of precious metals it contains. All organizations using items with recoverable PMIC are tasked with turn-in or recovery of precious metals.

3.3. **Bench Stock Items:** The organizational Bench Stock Listings contain the PMIC assigned to bench stock items. Highlight, in blue, bench stock bin labels and shadow boards for precious metals items. This will assist with identification and aid in recovery of these items by requiring a one-for-one exchange whenever an item is issued.

4. Specific Recovery Procedures:

4.1. The base PMRP manager is not responsible for completing the recovery procedures. Instead, the base PMRP manager is responsible for assisting unit PMRP monitors to ensure that all economically feasible recovery procedures are followed. Expendable, scrap and recovered material will be turned in directly to DRMS, using the procedures in AFMAN 23-110.

4.2. **Scrap material.** Each organization or work center will have containers available for collection of precious metals scrap. Provide separate containers for each PMIC or scrap classification list (SCL) coded item (see [Attachment 3](#)). Collection of scrap by the PMIC or SCL is at the option of the generating organization or work center.

4.3. When possible, items that can be identified by their National Stock Number (NSN) should be separated, individually marked as unserviceable/condemned and processed according to procedures in AFMAN 23-110.

4.4. Do not place non-precious metal scrap in containers designated for precious metals scrap.

4.5. Each organization or work center will maintain a recovery log to record turn-in of precious metals scrap. This log will consist of the following information:

4.5.1. **Description of material.**

4.5.2. PMIC or SCL code, as applicable.

4.5.3. Weight of material turned-in, indicating gross, tare and net weights.

4.5.4. Signature of witness and date, if applicable.

4.6. Each PMIC or SCL will require a separate DD Form 1348-1A, *Issue Release/Receipt Document*. The organization will generate the DD Form 1348-1A via the DRMS Electronic Turn-In Document (ETID) page and ship the property as downgraded to scrap.

Organizations are individually responsible for obtaining a DRMS account, user identification/password at <http://www.drms.dla.mil>. Follow all steps in the ETID and the DD Form 1348-1A will be generated with all required information. Each organization will be assigned a block of numbers to assign to the ETID for tracking and identification purposes (see **Attachment 4**). All documents will contain the same basic information of FB4469 and the processing Julian Date.

4.7. For accumulated items with mixed NSN's or NSN's that cannot be specifically identified, identify the item by precious metals managed by Defense Supply Center Philadelphia (DSCP) (see **Attachment 5**).

4.8. Generators will coordinate with local DRMS to schedule the turn-in of property. The turn-in request will be required before an actual schedule can take place. Generator will visit the DRMS scheduling website at <https://www.drms.dla.mil/scheduling/generator/turn-in> to schedule the appointment or contact local DRMS representative for assistance in opening the appointment on the calendar.

4.9. After the property has been delivered to DRMS, delivery individual will forward a copy of the signed 1348-1A document to the base PMRP manager for filing.

DAVID J. HORNYAK, Colonel, USAF
Commander, Kirtland Air Force Base

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 31-101, *The Air Force Installation Security Program*, 08 October 2009

AFMAN 23-110, Volume 6, Chapter 4, *Precious Metals Recovery Program (PMRP)* 1 April 2009

AFMAN 33-363, *Management of Records*, 01 March 2008

AFPD 23-5, *Reusing and Disposing of Materiel*, 26 March 2001

DoD 5200.8, *Security of DoD Installations and Resource*,

DoD 4160.21-M, *Defense Materiel Disposition Manual*, 18 August 1997

DRMS Instruction 4160.14, *Operating Instructions for Disposition Management*, May 12, 2008

KIRTLANDAFBI 31-101, *Installation Security Instruction*, 16 November 2009

Adopted Forms

DD Form 1348-1A, *Issue Release/Receipt Document*

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

CIC—Controlled Item Code

DLA—Defense Logistics Agency

DoD—Department of Defense

DRMS—Defense Reutilization and Marketing Service

DSCP—Defense Supply Center Philadelphia

ETID—Electronic Turn-In Document

GFM—Government-furnished materiel

KAFB—Kirtland Air Force Base

NSN—National Stock Number

OI—Operating Instruction

OPR—Office of Primary Responsibility

PMIC—Precious Metals Indicator Code

PMRP—Precious Metals Recovery Program

PPE—Personal Protective Equipment

RD—Records Disposition Schedule

REPC—Resources Protection Executive Committee

SCL—scrap classification list

Attachment 2

PRECIOUS METALS INDICATOR CODES (PMIC)

Table A2.1. Precious Metals Indicator Codes

PMIC	TYPE OF PRECIOUS METAL
A	Item does not contain precious metals.
C	Item contains a 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 metal type varies between manufactures

Attachment 3

STANDARD WASTE AND SCRAP CLASSIFICATION LIST (SCL) CODES

Table A3.1. Standard Waste and Scrap Classification List Codes

CODE	DESCRIPTION
PB1	Silver chloride magnesium batteries (battery construction consists of silver chloride positive plates w/aluminum-zinc magnesium alloy negative plates and uses water as the electrolyte). Examples: MK35, MK61, MK67 batteries and sonobouy batteries.
PB2	Silver zinc submarine batteries, consisting of large (30 lbs and over) batteries/cells, when in use, are interconnected to form one large battery. Cases may be of fiberglass or plastic construction (primarily research and DSRV submarine batteries).
PB4	Silver zinc batteries or battery cell sections which are in plastic.
PB5	Silver zinc batteries encased in metal or that have metallic attachments.
PB6	Silver-cadmium batteries.
PSC	Exhausted passive silver recovery cells used for recovery from photo fixer (hypo solution). Excludes steel wool metallic replacement cartridges.
P02	Expended hypo solution, derived from the processing of photographic films and papers.
P04	Photographic films and papers (exposed, unexposed, processed or unprocessed), x-ray, graphic arts, motion picture, photo-type setting, aerial, black and white, processed and other types of silver-bearing photographic film and paper.
P05	Ash from photographic films and papers generated from the incineration of exposed, unexposed, processed or unprocessed color film and other types of silver-bearing photographic film and paper.
P06	Exhausted chemical recovery cartridges used for recovery of silver from hypo solution by metallic displacement, including sludge recovered from cartridges.
P07	Cyanide-based liquids, sludge, powder or salts derived from plating and/or de-plating operations, may contain gold, silver or platinum family metals.
P08	Acid-based liquids, sludge, powders or salts derived from plating and/or deplating operations may contain gold, silver or platinum family metals.

P12	Silver-bearing batteries not otherwise classifiable.
P13	High temp alloys containing precious metals (gold, silver and/or platinum family metals) such as stator vanes, aircraft exhaust cones and aircraft panels. EXCLUDES: spark plugs, thermocouples and breakers.
P24	Segregated but not sorted, electrical and electronic scrap containing PM (gold, silver and/or platinum family metals) or a combination of metals. Scrap not segregated/classified at time of receipt or downgrade will continue to be processed under SCL H24.
P8A	Platinum family (platinum, rhodium, palladium, ruthenium, iridium and osmium), bearing and plated, such as platinum-plated electronic scrap, contact points/breakers, insignia coding boards, etc., excludes spark plugs, thermocouples and entire magnetos.
P8B	Silver-bearing, washed and/or plated material, such as silver-plated electronic scrap.
P8C	Gold-bearing and plated, including: badges, insignia, lapel pins and miscellaneous hardware, used anodes, turnings and clean gold-plated electronic scrap w/o foreign attachments.
P8E	Sorted electrical/electronic scrap containing gold, silver, platinum family metals, which is predominantly copper-based and may contain insignificant amounts of other non-removable metals, e.g., iron, aluminum, etc.; includes but not limited to, circuit boards/cards w/o metal frames/backs, although a small amount of metal is acceptable, plastic-housed connectors, silver/silver-coated wire and circuit breakers.
P8G	Precious metals bearing scrap containing beryllium.
P81	Platinum-bearing spark plugs (usually from aircraft).
P83	Platinum-bearing thermocouples and magnetos.
P84	Desalter kits.
P87	Dust and filters from vacuum systems or other systems that collect fine particles, sweepings and residue other than borings, turning, etc. May contain gold, silver or platinum family metals.
VCS	Precious metals bearing sweepings collected by vacuum cleaners.
VGM	Gold-bearing material such as powder, salts, foil, leaf and pellets, dental castings,

	brazing alloys, dental lingual bars or alloy, gold wire and all other gold-bearing materials with 90 percent purity or better.
VPM	Platinum family-bearing material such as dental alloys, scraps, sweepings, jewelry, laboratory ware, wire and all other platinum family bearing materials, with 90 percent purity or better.
VSF	Metallic silver flake derived from electrolytic processing of hypo solution. WOOG δ cells (small electrolytic units used with dental processors for reclamation of silver) and sludge derived from cleaning electrolytic silver recovery units and/or holding tanks.
VSM	Silver-bearing material consisting of used anodes, drillings from anodes and grain silver, wire for welding or brazing and all other silver, with 75 percent or better purity. Includes unused silver pellets for dental amalgam.
Unit of measure is grams for all SCL V codes.	

Attachment 4

ASSIGNED DOCUMENT NUMBERS FOR TRANSFER TO DRMS

Table A4.1. Assigned Document Numbers for Transfer to DRMS

Organization Code	Document Number (FB4469 and Julian Date)
121GC	7001 – 7049
227GP	7050 – 7099
150 th NMANG	7100 – 7199
389AP	7200 – 7249
400AG, 410AG, 411AG,	7250 – 7299
400CE, 400CN, 400EE, 400EP, 400GC, 400IS, 400SP, 400VC, 400VE, 400VR, 403CE, 403CN, 403EE, 403GC, 403VC, 403VR, 403WP, 406AG, 406CN, 406EE, 406GC, 406HF, 406IS, 406VC, 406VE, 412CN, 412EE, 412GC	7300 – 7399
400QB, 403QB, 406QB	7400 – 7499
408BS, 408CE, 408ET, 408FG, 408FS, 408H6, 408PH, 410H1, 410PH, 410TC, 410TD, 410VC	7500 – 7599
408VE, 408VR, 410VR, 412VC, 412XD, 413GC, 427VG, 427VR	7600 – 7699
408WP	7700 – 7749
410AP, 411CE, 411PH, 411SP, 411TC	7750 – 7799
410ET	7800 – 7849
400FN	7850 - 7899

Attachment 5

PRECIOUS METALS MANAGED BY DSCP

Table A5.1. Precious Metals Managed by DSCP

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	9660-00-039-0320
Rhodium	9660-01-010-2625
Iridium	9660-01-011-1937
Ruthenium	9660-01-039-0313

Attachment 6

SOURCES OF PRECIOUS METALS

Table A6.1. Sources of Precious Metals

SILVER-BEARING MATERIALS	
Anodes	Assemblies – Electrical
Silver-Zinc Batteries	Silver-Cadmium Batteries
Silver-Zinc Batteries	Silver-Magnesium Batteries
Blanking Scrap-Punchings	Brazing Alloys
Brushes – Electrical Motors	Bullion
Chemical Salts	Clad Bi-Metals
Coin Silver	Contacts
Dental Amalgam	Film
Industrial X-ray	Medical X-ray
Lithographic	Photographic Negatives
Filters – Plating	Flake from Hypo solution
Hook – Plating Nodules	Jewelry Sweeps
Paints and Paste	Paper – Reproduction
Plated Electrical Parts	Plated Service Pieces
Plated Wire	Powders – Granulated
Punch Outs	Relays – Electrical
Resins	Silver-Lined Bearings – Diesel Locomotive
Sludge-Plating and Precipitates	Solutions – Plating
Sterling Silver	Tin-Lead Alloys – Contaminated
Turning Wave Guides	Wiping Rags
GOLD-BEARING MATERIALS	
Brazing Alloys	Clad Metal Parts
Electrical Contacts	Dental Alloys
Dental Scrap	Dental Sweeps and Grindings
Diodes	Filled Scraps
Filters	Flashing
Foil	Hook-Plating Nodules
Jewelry Scrap	Paints and Paste
Peelings	Placer Gold
Plated Parts – Electrical	Plate Wire
Powders	Printed Circuit Boards
Punch Outs	Resins – Plating
Salts – Chemical	Sludge – Plating
Solutions	Sponge
Tin-Lead Alloys	Contaminated Transistors
Wiping Rags	Wire

