

HW-68206



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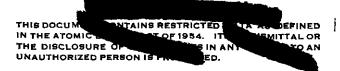
GLOSSARY OF HANFORD TERMINOLOGY

B. B. LANE

FEBRUARY 1, 1961





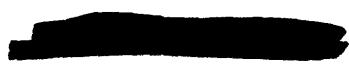


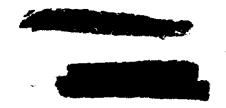
HANFORD ATOMIC PRODUCTS OPERATION

RICHLAND, WASHINGTON

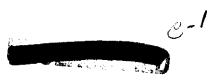
GENERAL ELECTRIC











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Compiled by

B. B. Lane

Technical Information Laboratory Auxiliaries Hanford Laboratories Operation Per OCC May 1973

Her Princer

February 1, 1961

Reviewed and Approved for Public Release by the NSAT PNNL ADD

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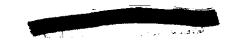
INTRODUCTION

The previous edition of this Glossary was issued in 1954 as HW-32464. In that time many new expressions have come into use and additional old terms have come to light. This edition revises and supersedes the former one and adds about 150 new words and abbreviations.

The scope has not been changed. The entries consist of Hanford jargon as it has been found in written reports and from personal conversations. Current security codes are not included. Trade names such as IMMERSCOPE and PROBOLOG are not included. Nor will there be found here codes for fuel elements, separations streams, or IBM computer programs.

Terms found to be obsolete are marked with an asterisk.

It will be a convenience to many readers of reports if authors will explain an abbreviation the first time it is used in the text. This is particularly important in the case of formal reports.



-4-HW-68206

*A

Uranium source designation. Virgin metal from Iowa

State College.

*A Slug

Standard uranium slug of 1.359" nominal diameter.

ADC

Analog to digital converter.

AlSi slop

Slug reject designation. Any piece on which AlSi has become attached to the exterior surface of the canned

assembly.

AMU level

Aqueous make up level.

December and and compressed primarily of Na off and Kill Slug reject designation: Air pooket

A PACE

Slug reject designation: Air pocket.

Adequacy Power Test.

A two-slop decontamination procedure consisting of (1) hardt t Adequacy Power Test. KMm Du, and (2) NHis estants and EDFA

AR

APT

Slug reject designation: Assembly Rejects. Includes wide braze line, AlSi slopover, non-seats, high caps, cocked caps, off cycle, out-of-process, can penetration,

spire leakers and internal can wall distortion.

Ash Can Slug

A tube filled loosely with enriched UO2 powder and

self-sintered at high temperatures.

A.S.P.

Alpha Simpson proportional counter, gas flow type.

ATP

Acceptance test procedure.

B Process

Unbonded canning process used for bismuth slugs and

special request material.

B Slug

Unbonded, canned bismuth slug.

Ball 3-X

Third safety device consisting of neutron absorbing balls

which would be released into the pile for additional

control to avoid a catastrophic event.

Banjo machine Bayonet

Compared to refuting during operation HW 73185 P.S

A sampling device approximately two feet long and fitted with a disposable pipet for taking process samples.

*Beta Experiment

To test the stability of fuel elements in liquid metal upon pile exposure to neutrons, particularly with respect

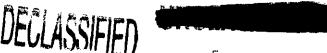
to U-235 alloys in liquid sodium.

Betty Snoops

Radiation detection instrument (Ion current type).

^{*} Entries considered to be obsolete.





HW-68206

BF3 Counter

A slow and intermediate neutron sensitive portable monitoring instrument.

Waste metal recovery designation. Uranium oxide re-

covered from bronze flux.

Big Sucker

BFC-6

Air filter type instrument used for counting alpha radiation by collecting dust in areas where there is

some possibility of product being associated with the dust in the air or as an aerosol of the product compound

itself.

*Bitrex Process

Separation of plutonium by BiPo₁ precipitation, metathesis of the plutonium product with KOH and blending with Redox oxidizer solution. The uranium stream was

piped to the TBP Plant for recovery of UNH.

*BL

Slug reject designation: Braze line. Pieces rejected

for wide layers of AlSi between cap and can.

BLC

Slug reject designation: Braze Layer Contamination. Includes braze layer impurity, pinholes in weld and lapover in weld.

BLI

Slug reject designation: Braze Layer Integrity. Includes wide weld beads, bond test rejects, radiograph voids and voids in braze layer after facing.

Blinker-Squawker

Rate Meter.

Blip

A defect on the wall of a reactor tube.

Blister

On a wall in a cold area, a lead protuberance which may shield a hot valve, instrument or assembly.

*Bloated Swine

A Geiger-Mueller tube.

BORP

Bottom of riser pressure.

BOTL

Bulk outlet temperature limit.

BPID

Book physical inventory difference.

*BPX

Bismuth Phosphate Plant with facilities capable of converting to Thorex Process.

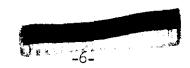
*BT

(1) Uranium source designation. Solid scrap from metal hydride.

(2) Waste metal recovery designations. Extrusion butts and very dirty rod ends.







Bull Slugs Candidate IPR fuel element, 1.8 inch 0.D aluminum

jacket with cored uranium.

Bumper Slug A modification of a self-supported slug with small

supports designed for use in ribbed tubes.

BW Slug reject designation: Bad Weld.

*C Uranium source designation. Experimental metal from

the University of California.

C - 6 Waste metal recovery designation. Sodium diuranate

salt from waste and neutralization cycle.

C Process Unbonded, cold sized canning process employing a fusion

weld closure.

C Slug Enriched uranium-aluminum alloy slug (approximately 4

per cent uranium by weight, of which 93.2 per cent is

U-235).

*Calcined Catalyst ThO2

Cart Poppy An instrument for use with air proportional and scintil-

lation probes.

CC Slug reject designation: Cocked cap.

CEP-1 Corrosion equipment prototype out of pile loop in KE

reactor.

CFEM Continuous Fuel Element Measurement device.

Chang and Eng Radiation detection instrument (Ion current type).

Chemical 10 - 66 Thorium.

*Chemical 12 - 7 Calcium metal.

*Chemical 14 - 92 Polonium.

*Chemical 18 - 12 Thorium oxide.

*Chemical 19 - 18 Magnesium oxide.

*Chemical 19 - 29 Nickel carbonyl.

*Chemical 37 - 77 Bismuth.

*Chemical 40 - 8 Gallium.

*Chemical 54 - 40 Lithium fluoride.

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*Chemical 60 - 48 Calcium.

*Chemical 62 - 50 Lithium-aluminum alloy.

*Chemical 64 - 52 Magnesium oxide.

*Chemical 66 - 54 Tritium.

*Chemical 68 - 56 Bismuth.

*Chemical 70 - 58 Gallium.

*Chemical 72 - 60 Polonium.

*Circle Four, Φ Fernald α rolled, salt bath β transformed uranium rod.

CMP Crane Maintenance Platform.

COH Can opening hood, Tritium Production and Isolation Process.

Cold Closure Closure of a slug can performed by upsetting can wall to form the cap. Also called Point Closure and Line Clo-

sure

*Combarate $Th(C_2O_4)_2.6H_2O$

*Combarcarbase ThO. CO₂H₂O

*Combarcle ThCl4. 8H20

*Combarfly ThO₂. 4H₂O

*Combarnite $Th(NO_3)_4$. $4H_2O$

*Combarox ThO2

Cored Slug Tubular slug, externally cooled only.

Cornpopper An indicating board connected to a scanner in such a way

that it shows by lights when temperatures in certain

selected tubes are exceeding certain values.

Cow Slugs Candidate IPR fuel elements 1.8 inches 0.D., 0.58 inch

I.D. aluminum jacket with uranium core.

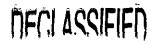
CPR Slug reject designation: Component Preparation Rejects.

Includes caustic pits, AlSi chips inside sleeves, AlSi leaking through sleeves, warped fuel elements, mixed components, concave or convex bottoms, wrinkled cans or

pop-ups due to moisture and stuck sleeves.

*CRD-2 Waste metal recovery designation. Impure uranium oxide

from chip recovery operation.









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*CRD-6 Waste metal recovery designation. Pure uranium oxide from chip recovery operation. Removal of electrical backup facilities during shutdown Critical Power -Grade S of a reactor. Critical Power -Planned removal of electrical backup facilities during Grade W operation of the reactor. Critical Power -Unscheduled loss of 13.8 kv bus(es) under emergency Grade Y conditions - or critical system low voltage low frequency or overload conditions making it necessary to shutdown reactors. Critical Power -Loss of one 230 kv supply to any area (unscheduled dis-Grade Y Alert continuity of the 230 kv HAPO loop) permitting Process Operations the choice of whether or not to continue reactor operations. Critical Power -Complete loss of electrical power to a reactor. Grade Z Cutie Pie Radiation detection instrument (Ion current type). CX Process Natural U-Zircaloy-2 coextrusion. *D Uranium source designation. Virgin metal from duPont. *D-2 Waste metal recovery designation. Uranium and uranium oxide fines grossly contaminated with foreign material. *D-6 Waste metal recovery designation. Pure uranium oxide from machining and extrusion press and quench tank. *DC Slug reject designation. Defective aluminum can. DCF Displacement column facility. Decree manling control DF Delta inhours. (See Inhour) Dih "Direct" ingots produced by simultaneous reduction and Dingots casting, also called massive derbies.

with the solvent extraction process.

DOG Dissolver off gas.

Do-bad

Dogboning An effect in which a slug of uranium becomes enlarged at

each end during heat treatment.



An unknown contaminant in a solvent, which interferes





Dog Legs Offse

Offsets caused by wandering of the drill during the

fabrication of cored slugs.

Dogwood

Uranium enriched to 37.5% U-235.

Donut

A cast iron sleeve which fits over a gun-barrel and prevents neutrons from streaming through.

Door Stop

A sample container designed to contain a l ml. sampling pipet and provide a minimum of $2-\frac{1}{2}$ inch stainless steel shielding completely around the sample. So called on account of its weight and the difficulty of removing the plug.

DOP Test

A test performed by passing smoke from heated dioctyl phthalate through an air filter.

*Double Diameter

Dummy

A solid steel cylinder approximately eight inches in length, having for six inches a diameter of approximately 1.4 inches, and for the remaining two inches a diameter of one inch.

Double-Jacketed

Slug

See: Warning Slug.

DTX Process Differential thermal expansion canning process.

Dual Cans A standard can enclosed in an expanded can with walls

pressure welded together.

Duplex Slug

Solid thorium core encased in a thin foil of oralloy.

*E

Uranium source designation. Virgin metal from Electro-Met.

E Metal

- (1) Uranium isotopically enriched to 0.94% or 1.75% U-235 by weight.
- (2) Also called E-1 Metal.(3) Also called Ike Metal.
- (4) Also called Eisenhower Metal.

E-1 Metal

See: E Metal.

EBT

External bond tester.

ECT

Effective central tubes: the power level divided by the average of the ten most productive tubes in the reactor.

*Eggs

Cylinders of uranium cast on the end of a billet to be removed and used in testing the quality of the metal.

EGM

Eltronics Geiger counter survey meter.

Lisenhower Metal

See: E Metal.











Elephant Slugs Candidate IPR fuel element, 1.8 inches O.D., 0.58 inch

I.D., aluminum jacket with wafered uranium.

ELMO Experimental loop model out of reactor.

E-N Loading A loading pattern for tritium production with enriched

slugs and Al-Li slugs.

ER Lot A terminal lot of M and/or Z material which is stained

in processing and held in one lot until a suitable lot

size is accumulated for reprocessing and cleaning.

*F Uranium source designation. Virgin metal form

Mallinckrodt Chemical Works.

F Factor Specific activity factor (or isotopic correction factor)

= weight of Pu/count/min.

F Material Finished or purified graphite.

F Process Lead dip canning of A heat-treated uranium.

FETR Fuel Element Test Reactor.

*Fish Pole Measuring instrument for beta and gamma radiation.

*Fish Tail Slug reject designation. Describes discontinuities at

the end of rolled rods as a result of treatment given

in rolling.

Fissium Fs An alloy consisting of 0.5 w/o Zr, 2.6 Mo, 4 Ru, 0.6 Rh

and 2.3 Pd.

Five Fold Beta, gamma hand and foot counter.

Flower Pot A flower-pot-like container placed at the bottom of

vertical safety rod channels during the ball 3-X third

safety system installation.

Fly's Eye A viewing window behind the discharge face of a reactor.

FM Slug Standard uranium slug of 1.356 inches diameter and 4

inches nominal length.

Four Fold Alpha hand counter.

FR Slug reject designation: Facing Rejects. Includes

contour, length and finish.

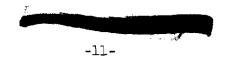
Frost Test A test for defects in a canned slug element, in which a

coating of acenaphthene melts in regions adjacent to unbonded areas when the element is passed through an in-

duction coil.







FT

Slug reject designation: Frost test. Any pieces exhibiting a melted area of any size on the frost coating upon passage through the frost test machine at the prescribed power level and travel rate. Rejects are classed as #1, 2, 3 or 4 to denote location and size of the defect.

*G

Uranium source designation. Eggs from metal hydride. (2) Waste metal recovery designation. Samp⊥e eggs.

Garbage can fuel element

A compacted UO, fuel element so called because of the longitudinal flutes which it contained.

Gatling Gun

A lead filled cylinder with a number of tubes passing through it parallel to the axis. Test materials are charged into a reactor from this gun and irradiated test materials discharged from the reactor into the gun. A portion of the gatling gun is designed to rotate about the axis of the cylinder to provide shielding when irradiated materials are in the gun.

GBCR

Graphite Connection Boiling Reactor.

Glory Hole

A cave in Gable Mountain for storage of product.

Green Metal

Crcy Spline

Irradiated metal which has not been cooled long enough to undergo processing. so wold of the would amonat of An underwater thermometer of the resistance type used

for plotting the river temperature rise pattern in effluent from a retention basin.

Grizzly

Greyfish

A coarse mask grill, usually made of steel, to restrict entry of large objects into the discharge line from the retention basin.

*Group I Metal

Eight-inch, gamma extruded, triple-dipped, outgassed, canned slugs.

*Group II Metal

Four-inch, gamma extruded, triple-dipped, outgassed, canned slugs.

*Group III Metal

Four-inch, alpha rolled, lead-dipped canned slugs.

*Group IV Metal

Four-inch, alpha rolled, triple-dipped partially transformed slugs.

*Group V Metal

Four-inch, completely transformed, alpha rolled, tripledipped canned slugs produced subsequent to August 28, 1948.

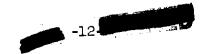
*Group VI Metal

Four-inch, completely transformed, alpha rolled, tripledipped canned slugs produced subsequent to June 27, 1949.









*Group VII Metal

Four-inch, completely transformed, alpha rolled, tripledipped canned slugs produced between November 30, 1949 and April 26, 1951.

*Group VIII Metal

Four-inch, completely transformed alpha rolled, tripledipped canned slugs produced subsequent to April 26, 1951.

*Group IX Metal

Eight-inch, completely transformed, alpha rolled, tripledipped canned slugs produced subsequent to January 16, 1952.

*Group X Metal

Four and eight-inch Simonds and Fernald rolled, HAPO or Fernald machined, triple-dipped canned slugs.

*Group XI Metal

Eight inch Fernald rolled and machined, triple-dipped canned slugs.

*Group XII Metal

Four-inch Fernald rolled and machined, triple-dipped canned slugs.

Gunbarrel

A steel sleeve which passes through the biological shield of a reactor at each tube channel. Process tubes pass through the gunbarrel into the graphite moderator.

×Η

Slug reject designation: Perforation in jacket.

H Metal

Simulated C or J slug.

*H-2

Slug for Beta Experiment. Titanium pin.

*****H-3

Slug for Beta Experiment. Zirconium pin.

*H-10

P-10 program in which some of the plutonium production in the H Pile would be given up in order to load P-10 target slugs, supplemented by J slugs, into this pile in sufficient quantity to achieve the desired temporary production requirement.

*Handee

Alpha hand counter.

HC

Slug reject designation: High cap (non-seat).

HCF

Hot channel factor (HW 67504) Horizontal control rods.

HCR

HCTF

Hanford controlled temperature facility.

*Heavy Metal

Designation for uranium at Argonne National Laboratory.

H.M.

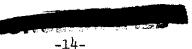
Measuring instrument chamber used with Beckman Micro-Micro ammeters and with or without Micromax Recorders to give a continuous record of gamma radiation level at points throughout the process buildings. It may be used to measure beta particles when equipped with a suitable open window.











*J Process

AlSi coating procedure for canning J Slugs.

J Slug

Enriched uranium-aluminum alloy slug (7.5 per cent uranium by weight, of which 93.2 per cent is U-235).

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*J-1

Slug for Beta Experiment. Uranium oxide in stainless

steel pins.

*J_4

Slug for Beta Experiment. Spun titanium pin.

Jumper

A precision section of pipeline or electrical equipment installed remotely as a connection between permanent nozzles on a wall and nozzles on process equipment. It may have control instrumentation built into it.

Juno

Alpha, beta, gamma dual shield ion chamber survey meter.

×Κ

Uranium source designation. Virgin metal from Mallinckrodt

Chemical Works.

K Material

Uranium cast at Fernald from unpickled derbies, plus a high proportion of recast stock whose hydrogen content

has been largely depleted.

*KC

Uranium source designation. Scrapped metal from Mallinckrodt Chemical Works.

Kitten

A recycle batch run which, under normal conditions, would be waste solution of an ordinary batch run in either "B" or "T" plant, but which contains a prohibitive per cent of product due to mechanical or operating failure during batch run.

*L

Uranium source designation. Virgin metal from Iowa State College.

Line Closure

See: Cold Closure.

Little Demon

See: PRTR.

Little Sucker

Air filter type instrument used for counting alpha radiation by collecting dust in areas where there is some possibility of product being associated with the dust in the air or as an aerosol of the product compound itself.

Long Tom

A horizontal alpha pulse chamber (counter).

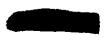
LIRAM

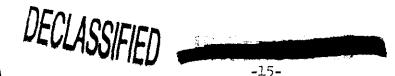
Linear remote area monitor.

LTR

Lattice Testing Reactor. Also called Physical Constants Testing Reactor (PCTR).







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LV Test

Leak vulnerability test.

LVDT

Linear Voltage Differential Transformer.

M-22

Measuring instrument used for checking gamma radiation

in stack gases on a shift basis.

*25 M

Eight-inch Fernald rolled and machined, lead dipped canned slugs charged in pile under Production Test

313-105-25M.

M Material

Uranium cast at MCW from virgin derbies which have been

pickled.

*M Slug

Standard machined uranium slug of 1.350 nominal diameter.

MABIE

A multi-stage agitated bed ion exchange contactor.

*Maple

F Pile

MARG

A unit equal to 10 grams of product content as calculated

at the time of discharge of the irradiated uranium.

Mark V Dissolver

A Dissolver for E metal for NPR fuels.

Massive Derbies

See: Dingots .

Mattress Plate

Steel plates located in the storage basin directly below the discharge face. Plates are installed at an angle such that the fuel elements receive a cushioned impact and at the same time are directed into the pickup chutes.

*MC-6

Waste metal recovery designation. Melt plant furnace insulation and lining materials contaminated with uranium

oxides.

*MD~2

Waste metal recovery designation. Impure uranium oxide

from melt plant operation.

*MD-4

Waste metal recovery designation. Used graphite grossly contaminated with uranium oxide from melt plant and

canning operations.

*MD-6

Waste metal recovery designation. Pure uranium oxide

from melt plant operation.

*Meat Wagon

A stainless steel lined army hospital railway car for

transporting product.

MEF

Metal examination facility.

+ Mint

Tritium.







-16-

*MJ-1 Redox Process.

*MJ-2 234-5 Facility.

*MJ-3 "Radio-lanthanum" Process or Rala Process.

*MJ-4 Tributyl Phosphate Process.

*MJ-5 Metal sweetening and conversion of UNH to UO3.

Micrometer PRV A pressure relief valve with a micro adjustment.

Minometer Radiation detection instrument (Ion current type).

MM Slug A canned assembly of alternating disks of Th and Al,

Mg, or Zr to which has been added 0.4 gms of U-235

per c.c.

Monitron Radiation detection instrument (Ion current type).

Monster A shipping cask.

MPAD Maximum permissible average dose.

MS Slug reject designation: Marred surfaces.

Mutton Gallium.

MWD/AT Megawatt days per adjacent or average ton (2000 lbs.)

of uranium.

MWD/CT Megawatt days per central ton (2000 lbs.) of uranium.

MWD/T Megawatt days per ton (2000 lbs.) of uranium.

*Myrnalloy Thorium.

*MZ Slug Standard uranium slug of 1.353 nominal diameter.

*N Uranium source designation. Virgin metal from Electro-

Met.

N Material Target material.

N Slug Lithium-aluminum alloy slug, nominally 3.5% lithium

by weight.

*NB Uranium source designation. Cast rods from National

Bureau of Standards.





NC

Slug reject designation: Not canned. This classification includes pieces which have been put through one or more stages of the canning process, but for some reason no portion has been inserted in a can.

Neut

A fast neutron sensitive portable monitoring instrument used to measure neutron radiation fields around an operating reactor.

*NH Slug

Nozzle

Aluminum - 3.5% lithium alloy slug, cold sized canned at HAPO by reclamation of 6 inch and 4.25 inch slugs manufactured during first P-10 program.

Nord for

Aluminum cylinder with a flange at one end which is bolted to the flange of a gunbarrel. The nozzle has pigtail connections for water feed. Lugs are provided at

the end of the nozzle to fasten tube cap.

NPF

Non-production fuel.

NPR

New Production Reactor.

*NR

Uranium source designation. Virgin metal from Electro-

Met.

*NS Slug

Aluminum - 3.5% lithium alloy scrap, reprocessed into rod and cold sized canned at HAPO.

NS

Slug reject designation: Non-seated slugs. Any piece in which the slug has not been pressed to the bottom of the can. This classification also covers pieces in which the cap is not completely seated against the upper end of the slug.

*NT Catalyst

Th(NO3)4. 4H20

NTPT

Nozzle-to-process-tube seal in PRTR.

Nucleometer

Rate meter.

*NX Slug

Aluminum - 3.5% lithium alloy slug, cold sized canned at HAPO by reclamation of 4 inch slugs manufactured during first P-10 program.

OC

Slug reject designation: Off-cycle in canning operation.

OCD

Operational charge-discharge.

*Olive

B Pile.

*Olive

Plutonium-238.





*1, 1, 1 Pieces

Indicates slugs have passed all three 300 Area tests

satisfactorily.

ORA

Organic recirculation apparatus.

Oralloy

Uranium isotopic alloy (93.4% U-235, 6.6% U-238).

OSI

Operational severity index.

Overbore Slug

An oversize slug approximately 2" in diameter by 8"

long for the C reactor overbore test.

*P

Slug reject designation. Penetration (bonding alloy

partially or completely dissolves can).

P-9

Heavy Water.

*P-10

Tritium and/or Tritium Production and Isolation Process.

*P-10-A Slug

Aluminum - 3.5% lithium alloy slug, cold canned during

first P-10 program at HAPO for the H-]O load.

P-10-A slugs were also used for flattening purposes.

P-11

Critical Mass Program.

P-12

Exponential Pile Program.

P-13

Navy fuel test channel.

*Paint Pail

Measuring instrument for beta and gamma radiation.

*Paint Pot

A windowed alpha survey meter.

*Palm

Neptunium-237.

[†]Palmolive

Program for recovery of Neptunium-237 and the subsequent

production and recovery of plutonium-238.

Papoose

Capsule carbon specimen holders used in testing radia-

tion effects on graphite.

*PB.

Slug reject designation: Poor bond. Any piece which

exhibits an incomplete bond between the slug and the

cap or can.

PCCF

Poison column control facility.

PCE loop

Prototype concept evaluation for NPR.

*PCTI

Panellit Coordination Trip Identification system.









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PCTR Physical Constants Testing Reactor. Also called LTR.

Peanut Sample container (0.3 ml. capacity) for Building 231

analytical samples.

Pebble Slug Pellets of uranium imbedded in a matrix of magnesium

and U-235.

PEN Penetrameter, a sensitivity indicating device used in

radiographs.

Pen Slug reject designation: Penetration. Pieces which

have developed areas in which molten AlSi has passed

completely through the can wall.

*Penbarate $Th(C_2O_{\downarrow})_2$. 6H₂O

*Penbarcarbase Tho. Co₂. H₂O

*Penbarcle ThCl4. 8H20.

*Penbarfly ThO2. 4H20

*Penbarnite $Th(NO_3)_4$. $4H_2O$

*Penbarox ThO2

Perf A thick walled cylinder of aluminum which has holes

punched or drilled on its circumference. The perf is

used as a positioning piece for fuel elements.

Pete Radiation detection instrument used in determining the

counting rate of P-10 contaminated samples. Primarily a qualitative rather than quantitative instrument, it is semi-quantitative only in that it gives a higher counting

rate for more highly contaminated samples.

PH Slug reject designation: Pin-hole in weld.

PHA Pulse Height Analyzer.

Phoenix Shipping cask for lanthanum.

Pigtail A curved section of pipe used to feed the process water

into a process tube from a crossheader.

*Pine D Pile.

*Pipe Slug reject designation. Term used to describe a

shrinkage cavity in a casting.









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*Pirates 1-4

Pressurized in-reactor recirculation apparatus, tem-

perature elevated. Superseded by KER.

PITA

Process improvement test authorization.

Plurad

Radiation detection instrument (Ion current type).

Pluto

Radiation detection instrument (Ion current type).

Plutonium Cows

Plutonium nitrate solutions used in solvent extraction concentration of Am-241 which had grown from Pu-241. So called because the Am-241 is "milked" repeatedly from

the Pu-241.

Plutonium

Demonstration

Reactor

See: PRTR.

Point Closure

See: Cold Closure.

Poison

Any material, whether charged into a reactor or not, which absorbs neutrons and thus reduces the flux available for fission and capture.

*Polymer

Heavy water.

Рорру

Survey instrument for alpha surface contamination.

Poppy Amplifier

Rate meter.

*Postum

Irradiated bismuth slug.

Potato Drill

A drill about the shape of a large potato and having cutting edges on one end and sides; used to drill out compressed aluminum in a channel.

P-R Can

Product receiver (50 liter capacity) used to carry the process solution from Building 224 to Building 231.

PRCF

Plutonium Recycle Critical Facility.

*Precious Metal

Designation for uranium at Argonne National Laboratory.

*Product 79

ThO2

Projection Fuel

Elements

Hanford-type fuel element bearing projections so that the fuel element will support itself in a ribless pro-

cess tube.

Proteximeter

Radiation detection instrument (Ion current type).



PRP

Pu Recycle Program.

PRPR

See: PRTR.

PRTR

Plutonium Recycle Test Reactor. Also previously called Plutonium Demonstration Reactor, Plutonium Recycle Program

Reactor (PRPR), and Little Demon.

PSF

Poison spline facility.

PSRA PTFC Q Slug Parallel-series relay arrangement. Parcy Tank Farm Contentate

Thorium Slug.

PUREL Queenie Analyzer

Pu-Ur - Rossing - Cationtia.

Quickie

Method for discharging a ruptured fuel element within the minimum reactor down time.

Quickie Facility

Test hole 2d in KE reactor.

*Quinto Puss

A five-armed geiger counter installed in doorways.

*R-1

Slug for Beta Experiment. Uranium dioxide in stainless

steel pin.

*R-2

Slug for Beta Experiment. U-238 foil.

*R-3

Slug for Beta Experiment. Natural uranium wire and

347 stainless steel holder.

*R-4

Slug for Beta Experiment. Depleted natural uranium foil.

*R-5

Slug for Beta Experiment, U-235 and titanium pin in stain-

less steel jacket.

*R-10

Program in which the DR Pile would be devoted entirely

to P-10 production.

*R-50

See: MJ-3.

Rabbit Reactor

Concept of a heterogeneous lattice fluidized bed reactor.

RAD

Unit of absorbed dose equal to 100 ergs per gram. Absorbed dose of any ionizing radiation is the amount of energy imparted to matter by ionizing particles per unit mass of irradiated material at the place of interest. Replaces

R-C Can

Recycle can (50 liter capacity) used in the 231 Building

for accumulating plutonium solutions.

Reduced Con A converted hospital in well car.









REP Loop Rupture equipment prototype loop in KE reactor.

*RG Rubber glove line, for production of fabricated weapon

components, 1949-1953.

RM Radiation monitoring.

RMA Remote mechanical line which replaced the RG line for

production of fabricated weapon components.

RMB Remote mechanical line for refabrication of weapon

components.

RMC Remote mechanical line for production of buttons, similar

to RMA, but having more provision to reduce radiation

exposure to personnel.

ROL Reactor Operating Limits.

RTD Resistance temperature detector.

*RU Uranium source designation. Virgin metal from Electro-Met.

RW Radiological warfare.

S-22 Measuring instrument used for checking gamma radiation

in ponds and drainage canals on a bi-weekly basis.

*Sampson Air propelled ratemeter, a battery powered portable

survey meter.

Sandy Radiation detection instrument (Ion current type).

SBVM Swelling behavior volume monitored.

SCORESYFAT Self container recycle system for actuating Toepler,

Tritium Production and Isolation Process.

Scott Jr. or Sr. A machine which delivers a horizontal thrust through a

system of compressed air, pistons and a ram.

Scram An automatic shutdown of a reactor occurring when a safety

system is activated by one or more equipment failures or

measuring devices.

Segmented Fuel

Element

A slug composed of longitudinal segments, each segment being bonded to the Al webbing and tubing which incases

it.

Sentinel Prototype of a remote area monitoring instrument.







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Sevac Process Particular method of vacuum canning resulting in AlSi

brazed uranium.

Sharing and Delibrate change in a region on his is more smaller.

Sigmion Radiation detection instrument (Ion current type).

Smithfield Midget A small ion chamber survey meter so called because it

was improvised from empty tins of Smithfield deviled ham.

Snout Facility Test hole 4c in KW reactor.

SORT Sonic orientation resonance tester.

Soup Bowl An instrument having a hemispherical detection chamber

for measuring penetrating radiation.

Spider Aluminum support secured to a fuel element so that the

fuel element can be used with a ribless process tube.

Spire Pulser An electrically driven pulser for an AlSi pot.

Spike Elements Zircaloy-clad Pu-Al alloy fuels.

SPR Supplementary production reactor.

Squaw A specially canned uranium slug to which the papoose is

joined. The complete assembly is used to irradiate gra-

phite.

Squawker-Blinker Rate meter.

SS Slug reject designation: Sleeve scratch. This classi-

fication includes any piece whose surface is marred in

the course of removing the piece from the sleeve.

SS Slug reject designation: Stuck sleeve.

SSA 100 Program IBM program for accounting for nuclear materials in the

100 areas.

SSDB Solid State Diffusion Bonding.

STPM Single tube prototype mockup.

Striped Load Balanced charges of enriched uranium, poisoned with

enriched target element.

STT Shielded Transfer Tank, from ORNL.

Surf Slug reject designation: Surface Rejects. Includes

inclusions, stains and other surface defects.





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Sweater

Protective metal coating or envelope deposited on a

slug core.

*SX

Uranium slug of dimensions to fit Clinton Pile (ORNL).

*T Metal

Uranium.

TAI

Trip-After-Instability.

TAS

Toepler actuating system, Tritium Purification and

Isolation Process.

*Task I (234-5 Bldg.) Wet chemistry (EAH-6) (Equipment and Handling).

Task I-II

Wet chemistry through fluorination.

*Task II

Dry chemistry (EAH-6).

*Task III

Reduction (EAH-6).

*Task IV

Casting (EAH-6) Now called foundry and not Task IV.

*Task V

Machining (EAH-6).

*Task VI

Coining (EAH-6).

*Task VII

Coating (EAH-6).

*Task VIII

Inspection and packing (EAH-6) Now known as Final

inspection and packing.

TBI

Trip-Before-Instability.

TC Bundles

Bundles of thermocouple wires from the reactor tubes.

TCC

Total control criterion.

T Cp

Slug reject designation: Thin cap. Any piece in which

the cap has been faced to less than specified thickness.

*Tea Kettle

Reaction vessel used in the analytical laboratories for

the chemical assay for plutonium.

TF Lot

A terminal lot of bare uranium pieces which have been

accumulated at the 305 Test Reactor after acceptance

sampling tests have been completed.

TFC

Tube filling capacity of a fuel element.

TGM

Thyac Geiger counter survey meter.





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TIG

Tungsten inert gas welding process.

Tip-Off

Cast aluminum device which is hung on the discharge face nozzles prior to tube discharges. Tip-off directs -

the discharged material to the storage basin.

T I be

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IMT

Total metallic impurity.

TOA

Top of annulus.

TOE

Time operated efficiency.

TORP

Top of riser pressure.

Totem Pole

See: TP.

Δū

A Beta, gamma survey meter with an extension probe.

TP Lots

A terminal lot of M and/or Z pieces which have been

accumulated at the 305 Test Reactor.

TPX Process

TBP Plant with facilities capable of converting to Purex

Process.

Trombone

A sampling device approximately two feet in length and having a sliding action for drawing a sample into a 1 ml. pipet threaded on the end, used for extraction and first cycle solutions in the separation process.

Tru-Line Slugs

Slugs having mating protrusions or recessions on the ends

to assure proper alignment in the pile.

TTR

Thermal Test Reactor.

*Tuballoy

Uranium.

TW

Slug reject designation: Thin Wall.

ΧŢΧ

Waste metal recovery designation. Uranium turnings for

machining.

*TXB

Waste metal recovery designation. Uranium briquettes

made from TX metal.

*TXBE

Waste metal recovery designation. Pickled briquettes

made from TX metal.

TWFM.

Travelling Wire Flux Monitoring.

UFZ

Unit flattened zone.

×υм

Waste metal recovery designation. Uranium rod ends

from machining.







A process for making large reductions per pass in metals Uniskanning

by passing the work between a rigid backing surface and

high pressure rolls or non-galling radiused surfaces.

UR Uranium recovery farm.

US Slug reject designation: Ultrasonic reject on the basis

of transformation tests.

UT-1, to UT-6 Ultrasonic testers designed and built at Hanford for

determining grain size, transformation, integrity and

bonding.

v Slug reject designation: Closure radiograph of a void.

Vac - Sniff Qualitative measuring instrument used to detect active

gases.

Vacuum Can Measuring instrument for beta and gamma radiation.

Victoreen Geiger counter survey meter. VGM

VSR Vertical safety rod.

¥Ψ (1) Uranium source designation. Virgin metal from

Westinghouse.

(2) Site location for Hanford.

*W Slug (1) Uranium slug manufactured at Hanford Works.

(2) A natural uranium slug classified as free of defects

on the basis of Zyglo and pickle inspection.

Rate meter. Walkie-Poppy

Walkie-Talkie Rate meter.

Warning Slug A solid uranium core inserted into a uranium sleeve and

bonded to it and to an aluminum jacket by the single-

dip AlSi canning process. Also called Double-Jacketed Slug.

*Water Probe Counter Portable Geiger-Mueller counter used to measure the

activity of water in the retention ponds.

WBC Whole body counter.

WC Slug reject designation: Wrinkled can. Any piece on

which the exterior surface of the can wall exhibits a

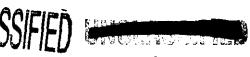
depression or elevation of varied size and depth.

Weasel An ion chamber for measuring comparative gamma activity

of fuel elements under water at various distances.







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Weasel

A mechanical device for logging the curvature of a

process tube.

WGR

Water-cooled, graphite-moderated reactor.

*Whiz-Bang

Piece of compressed air equipment used until February,

1945 in canning slugs.

Window Effect

The phenomenon of hotter water in tubes allowing "hotter" neutrons to pass more freely between the metal and the

graphite and vice versa.

Witch Hazel

Gallium.

Woodsplitter

Induction heating device used in simulating pile thermal

conditions in testing individual slug cores.

WR

Slug reject designation: Welding rejects. Includes pits in weld, oxide, weld penetrations, weld overhang and dimples.

WR Vault

Waste recovery vault in TBP process.

Wrap-Around Slug

U-235 or U-235-Al alloy pipe, clad with aluminum and inserted into a process tube. A solid cylinder of lithium-aluminum alloy clad with aluminum is inserted into this pipe. The uranium pipe thus has a cooling annulus on each side of it.

X~22

Measuring instrument used for checking gamma radiation in suspected locations for periods of thirty minutes to

four hours.

*X Metal

Uranium.

*X Slug

(1) Recovered uranium slug with lower weight than Z-Slug.

(2) A natural uranium slug accepted for pile use on the basis of Zyglo and pickle inspection but not entirely

free of metal quality defects.

*XC

Uranium source designation. Cast rods from Iowa State

College.

*XCR

Uranium source designation. Special test material from Iowa State College made by melting and letting metal

soldify in the same vessel.

*XD

Uranium source designation. Rolled metal from duPont.

*XK

Uranium source designation. Rolled metal from Mallinckrodt

Chemical Works.

XLMP

Experimental loop model in H Reactor.



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*XRU

Uranium source designation. Rolled metal from Electro-Met.

*Z Metal

(1) Lithium.

(2) Thorium in early reports.

*Z Slug

Designation for any recovered uranium slug.

Zeus

Radiation detection instrument (Ion current type).

Zircaloy-2

Tin-Zirconium alloy.

Zircaloy-3

Iron-Tin-Zirconium alloy.

Zircaloy-4

Chromium-Iron-Tin-Zirconium alloy with 70 ppm Ni.

&

Indicates slug has gone through autoclave test.

