Table 1. INEL alpha low level mixed and non-mixed waste identification and description information.

Waste Category 2=ALLW	Mixed Waste 1=mixed 2= non-mixed	Key Code	Wastestream Identifier Code	Content Code	Waste Stream Name	Description	Generator Site	Combustibility 1=>90% 2=10-90% 3=<10%	Rad Level 1=CH 2=some RH	PCBs 1=expected 2=not expected	Asbestos 1=expected 2=not expected 3=unknown
Mixed Waste = 1											
2	1	155	ID-AEO-100	100	GENERAL PLANT WASTE	This waste steam, generated at Argonne National Laboratory-East, contains combustible and noncombustible items such as paper, rags, rubber gloves, plastic bottles, glassware, small tools, balances, and empty metal cans. The waste is usually separated into combustible and noncombustible streams. Prior to 1981, small amounts of absorbed organic wastes are included. Waste packaged prior to 1982 contains potentially unstable materials. The waste is packaged in bins. No free liquids should be present. There may be small amounts of sludges. The waste contains contaminated gas cylinders which are empty and have open valves. Aerosol cans may also be included. Prior to 1981, potentially unstable material such as nitrated organic resins and ether-based scintillation fluids were also included. Wastes are packaged in 3- and 5-gallon cans and the 55-gallon drums are segregated into combustible and noncombustible streams and placed in M-III bins.	Argonne National Laboratories-East	2	1	2	3
2	1	156	ID-AEO-101	101	CUT UP GLOVEBOXES	This waste stream, generated at Argonne National Laboratory-East, contains glovebox sections and associated equipment from decontamination and decommissioning operations. The waste is predominantly noncombustible. Organic content is around 3 lb/ft3. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. This waste is contained in M-III bins with half or full-sized plywood box liners. Miscellaneous items such as machines, tools, glassware, piping, filters, and cinderblock are contained in 20-mil PVC bags, heat sealed, and placed in the plywood liners. Gloveboxes are dismantled, wrapped in one or more layers of PE, and placed in the liners.	Argonne National Laboratory-East	2	1	2	3
2	1	297	ID-AEO-102	102	ABSORBED LIQUIDS	This waste comes from Argonne National Laboratory-East. It consists of liquids adjusted to pH 10 using NaOH which are then absorbed in vermiculite. No hazardous constituents have been identified in the waste.	Argonne National Laboratory-East	3	1	2	3
2	1	206	ID-AEO-104	104	ALPHA HOT CELL WASTE	This waste stream, generated at Argonne National Laboratory-East, contains alpha hot cell waste. Noncombustible and combustible waste are segregated. Combustible wastes include: paper, plastic and PVC containers, rubber O-rings and gloves, rags, and Q-tips. Noncombustible wastes include lab equipment, tools, fixtures, glassware, pipe, tubing, fitting, fasteners, firebrick, ferrous and nonferrous metal scraps and parts, and small electric motors. Sodium in the waste is reacted with ethyl alcohol, mixed with pelletized clay, and dried. Nitrates and oxidizing agents are neutralized or reduced, mixed with peletized clay, and dried to ferrous or ferric salts. The average organic content is 5 lb/ft3. The combustible content of some containers exceeds 25 volume percent, including packaging. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Thermal power does not exceed 10 watts per package. Surface dose rates average 5.3 R/hr and are limited to 30 R/hr. The waste is packaged in 17C 30-gallon drums. Individual waste items may be loose, contained in 4-inch diameter by 10-inch high portal cans, or contained in 1-gallon paint cans. Some metal or glass wastes are compacted. Some items may be contained in 7.5-gallon steel buckets, and then packaged, two buckets per package, in heat-sealed PVC bags. Since 1983, the heat-sealed bags are lined with kraft paper. These buckets of PVC-bagged waste contained in a 30-gallon drum liner and sealed inside another 20-mil PVC bag in a 30-gallon steel drum. The maximum weight for each drum is 200 lbs, and the maximum dose rate is 30 R/hr.	Argonne National Laboratory-East	2	2	2	3
2	1	300	ID-ANL-161	161	ANL-W ANALYTICAL CHEMISTRY LAB GLASSWARE	This waste stream was generated at ANL-W. It consists of glassware, paper, poly, and miscellaneous hardware generated during analytical chemistry laboratory operations. ID-ANL-161 contains both low-level (Interval 0) and transuranic (Intervals 1 through 34) waste. Since storage data for this content code have not been differentiated between low-level and transuranic classifications, all radiological characterization data for this content code are reported in the ALLW table. Low level and transuranic radionuclide and alpha activity concentration data are provided separately.	Idaho National Engineering Laboratory	2	2	2	3

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2	1	158	ID-BCO-201	201	NONCOMBUSTIBLE SOLIDS	This waste stream, generated at Battelle Columbus Laboratories, contains noncombustible items such as tools, crucibles, piping, valves, pieces of equipment, lead bricks, plexiglass , and filters. The organic content is minimal. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Prior to packaging, each waste item is given a smear test and then triple contained in either nylon reinforced plastic sheeting or PE bags. The waste is either placed in 55-gallon drums fitted with 90-mil liners or in M-III bins. Some drums which do not meet INEL packaging criteria are also overpacked in bins.	Battelle Columbus Laboratories	2	1	2	3
2	1	301	ID-BCO-202	202	COMBUSTIBLE SOLIDS	This waste stream, generated at Battelle Columbus Laboratories, contains such combustible items as wood, plastic suits, nylon reinforced plastic tent structures, shoe covers, rubber golves, and air hose. The waste is from decontamination and deactivation of the plutonium laboratory. The average wastes organic material content may range from 6 lb/ft3 (including the plywood liner) for bins to 8 lb/ft3 (excluding the 90-mil liner) for drums. No significant levels of fines should be present. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric or corrosive materials. Each waste item is given a smear test and then triple-wrapped in nylon reinforced plastic or triple-bagged in PE bags. The items are then placed inside 55-gallon drums with 90-mil liners, or in type M-III bins with non-removable plywood liners. Type M-III bins have also been used to overpack 17H drums that do not meet INEL packaging criteria.	Battelle Columbus Laboratories	1	1	2	3
2	1	302	ID-BCO-203	203	PAPER, METALS, GLASS	This waste stream, generated at Battelle Columbus Laboratories, contains a mixture of combustible and noncombustible items in roughly equal proportions. Combustible items include paper and paper products. Noncombustibles are primarily metal and some glass. The organic content is about 9 lb/ft3 in drums and about 5 lb/ft3 in bins. Combustibles, including packaging, may exceed 25 volume percent. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Prior to packaging, each waste item is given a smear test and then triple contained in either nylon reinforced plastic sheeting or PE bags. The waste is placed in 55-gallon drums fitted with 90-mil liners, or else placed in M-III bins. Some drums which do not meet INEL packaging criteria are also overpacked in bins.	Battelle Columbus Laboratories	2	1	2	3
2	1	303	ID-BCO-204	204	SOLIDIFIED SOLUTIONS	This waste comes from Battelle Columbus Labs. It is a Turco soap decontamination solution (used to decontaminate glove boxes from a Pu lab) which is solidified in Plaster-of-Paris.	Battelle Columbus Labs	3	1	2	3
2	1	72	ID-BTO-010	10	COMBUSTIBLES	This waste stream, generated at Bettis Atomic Power Laboratory, consists primarily of rags, gloves, plastic, paper, carbo-wax, filters, oil-contaiminated "absorbal" (diatomaceous earth), and rubber. The waste stream may also contain noncombustible items. The waste organic material may exceed 14 lb/ft3 for drums. Limited fines are expected from floor sweepings, powder, etc. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric, or corrosive materials. Small waste items are wrapped in plastic and placed inside 3.25-inch diameter by 7-inch high tin-plated steel cans with screw-on lids. The can is placed inside a steel "juice can" with roll-seam sealed lids. Larger items are wrapped in plastic and placed inside 4.375-inch diameter by 20 or 24-inch high tin-plated steel can. The sealed can was wrapped in plastic and placed inside 55-gallon waste drums lined with 90-mil drum liners. Between 15-80 cans fit in a drum. Prior to 1974, each drum was assayed by calculating weight differences to determine fissile content. After 1974, a U-232 assay gauge was used.	Bettis Atomic Power Laboratory	1	1	2	3

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2	1	142	ID-BTO-020	20	NONCOMPRESSIBLE, NONCOMBUSTIBLE	This waste stream, generated at Bettis Atomic Power Laboratory, contains noncompressible and noncombustible items such as absolute filters, solidified chemical waste, contaminated metal equipment, furnace brick, and highly contaminated glovebox equipment. Metal scrap could include bars, sheet, fixtures, small equipment tools, etc. made of carbon steel, stainless steel, inconnel, aluminum, copper, brass, and zirconium. Chemical wastes include spent chemical solutions and associated solids from the isotope and isotopic dilution analysis of nuclear fuel specimens. The residues were neutralized before being either mixed with absorbent material or solidified. The organic content is less than 14 lb/ft3. There may be some particulate material in the waste from absolute filters. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in the waste. Trace amounts of nitric acid or organic contaminants may be present. Individual waste items are separately packaged in plastic wrapping. Depending on size, some wrapped items are placed in (a) 3-1/4-inch diameter by 7-inches high screw-top, tin-plated steel cans, placed inside roll-seamed juice cans, or (b) larger 4-3/8-inch diameter by 20 to 24-inch high tin-plated steel cans. Chemical solutions are neutralized to a pH between 6-8 and mixed with "absorbal" in PE bottles or solidified in metal cans (which are wrapped in plastic..) These items are then placed inside prepared 55-gallon drums lined with 90-mil liners. Each drum was assayed by calculated weight differences, chemical analysis, or using an assay gauge.	Bettis Atomic Power Laboratory	3	1	2	3
2	1	34	ID-BTO-030	30	SOLIDIFIED GRINDING SLUDGE, ETC.	This waste steam, generated at Bettis Atomic Power Laboratory, consists of solidified grinding sludge and associated filters, rags, etc. The sludge can contain abraded grinding wheel material, which includes diamond dust, aluminum oxide, carborundum, and rubber. The waste is in either powder or cakes and contains not more than 10% of other waste items. The waste contains high levels of fines. In addition, the drums contain free liquids. The estimated organic content is less than 1 lb/ft3. No particle size data is provided. No free liquids should be present. No explosive, pyrophoric, or corrosive material should be in the waste. Both 17c and 6m 55-gallon drums were used for packaging the waste. Fissile content was determined by calculating the weight difference by chemical analysis or by an assay gauge.	Bettis Atomic Power Laboratory	3	2	2	3
2	1	299	ID-CPP-156	156	CHEM CELL RIP-OUT	This waste stream, generated at Idaho National Engineering Laboratory, contains steel piping, vessels, scaffolding, anti-contamination clothing, concrete, and welding slag. The organic content is minimal. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Most of the waste was placed into prepared boxes at the ICPP. Some of the waste is double wrapped in plastic. The boxes are FRP-reinforced plywood. Absorbent was added if moisture was present. ID-CPP-156 contains both low-level (Interval 0) and transuranic (Intervals 1 through 34) waste. Since storage data for this content code have not been differentiated between low-level and transuranic classifications, all radiological characterization data for this content code are reported in the ALLW data table. Low level and transuranic radionuclide and alpha activity concentration data are provided separately.	Idaho National Engineering Laboratory - ICPP	2	1	2	3
2	1	188	ID-INL-150	150	LABORATORY WASTE	This waste stream, generated at Idaho National Engineering Laboratory, contains laboratory waste form ANL-W including fluxwire, fission counters, HEDL samples, analytical samples dissolved and absorbed on Oil-Dri, glassware, vials, miscellaneous waste from gloveboxes, dissolved pellets absorbed on Oil-Dri, enriched and normal U3O8 pellets, aluminum foil, and capsules, TREAT waste capsules, chlorinated ion exchange resins, Pu sources, and irradiated GE caps. Lab waste from ICPP includes Kimwipes, trash, glassware, dissolved samples absorbed in Oil-Dri, analytical samples, gloves, etc. The organic content is highly variable, but is usually less than 14 lb/ft3. No sludges or free liquids should be present. Absorbents were added if moisture was detected in any wastes. No explosive or pyrophoric materials should be in this waste. Depending on when the wastes were packaged, the individual waste items may be contained in plastic, metal, or glass containers. Some of the containers are 2R containers. The containers are placed inside 55-gallon drums lined with two plastic liners. Some of the containers are wrapped in plastic, and others are placed directly into the drums. Oil-Dri absorbent is added if moisture is present.	Argonne National Laboratory-West and Idaho Chemical Processing Plant	2	2	2	3

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2	1	298	ID-INL-155	155	SCRAP	This waste stream, generated at Idaho National Engineering Laboratory, consists of a plastic glovebox, a hydraulic pump containing oil, vacuum pumps, centrifuges, tools, and experimental fuel capsules. The presence of hazardous materials is not known, but some absorbed oil is likely. The drums do not contain free liquids, but the box contains free liquids. Organic content of the box may exceed 6 lb/ft3. No sludges or free liquids should be present, except for the hydraulic pump oil in the box. No explosive or pyrophoric materials should be in this waste. The waste was placed directly into prepared drums or boxes, or else packaged in 1-gallon cans which were placed in prepared drums. The waste was generated in 1975 and 1979. Some of the waste is double wrapped in plastic. It is not known if the box is FRP coated.	Idaho National Engineering Laboratory	2	1	3	3
2	1	146	ID-MDO-803	803	METAL, EQUIPMENT, PIPES, VALVES, ETC.	This waste comes from Mound Laboratory and consists of stainless steel, carbon steel, and small amounts of aluminum-metal wastes in the form of valves, piping, wrenches, nuts, bolts, stainless steel tubing, spatulas, pans, hotplates, ringstands, etc. Limited amounts of combustible and noncombustible wastes are also present from Content Codes 810, 811, 812, 813, 814, 826, and 832. Content Code 832 is liquid mercury. Content code 812 is spent ion-exchange resin. Most of the waste is metal waste that is primarily from D&D operations. Some of the metals were leached with nitric acid, ultrasonically cleaned, and dried to remove above-discard amounts of plutonium. Waste is packaged in 1-gallon, plastic coated cardboard cartons which are in turn placed in two layers of PE bags and then placed into a 55-gallon drum. Some large metal waste is taped on the rough edges and sealed in two layers of plastic and then placed into a 55-gallon drum. Drums have drum rigid liners and a drum bag. Each carton is individually assayed. Contaminated elemental mercury from Content Code 832 must be segregated. The specific locations, by drum, of waste cartons from Content Code 832, mercury, are known. Therefore, the waste drums containing mercury will be easily identified and the mercury will be removed.	Mound Laboratory	3	1	2	3
2	1	160	ID-MDO-824	824	NONCOMBUSTIBLE EQUIPMENT BOXES	This waste stream, generated at Mound Laboratory, consists of large, noncombustible wastes such as tanks (stainless steel and tantalum), piping, ducting, conduit, electric motors, pumps, metallurgical presses, lathes, dissolvers, evaporators, furnaces, ladders, vacuum sweepers, 24 x 24 x 12-inch HEPA filters, fume hoods, gloveboxes, plexiglass glovebox windows, and floor tile. Limited amounts of combustible wastes (plastic tanks, fiberglass gloveboxes, plastic contamination control tents, etc.) are also included. Boxes filled with HEPA filters and cartons of resins may both contain excessive fines. Combustibles may exceed 25 volume percent in some boxes. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Some emptied cylinders with opened valves and punctured aerosol cans are included in the waste. All of this waste is packaged in standard or oversized boxes. Each item is generally wiped with wet rags and single or double contained in plastic. Open ends or openings are sealed. Oils or other liquids are drained from any equipment prior to packaging. Florco absorbent is added to each box for residual liquids. Polyurethane foam is added if necessary to help stabilize large equipment. Some boxes contain smaller plywood boxes, cartons, cans, or drums of waste items. All plywood boxes are coated with fiberglass-reinforced polyseter (FRP). Oversized boxes are not lined with plastic or cardboard liners.	Mound Laboratory	3	1	2	3

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2	1	77	ID-MDO-826	826	COMBUSTIBLE EQUIPMENT BOXES OR FLOOR SWE	This waste stream, generated at Mound Laboratory, includes two different types of waste depending on when the waste was generated. Prior to 1980, this content code was used for glovebox floor sweepings and rust. The actual amount of floor sweepings is small. After 1981, this content code is used for large, combustible waste items such as plastic tanks, plexiglass shielding and windows, wood, and fiberglass conveyor glovebox sections. These types of large combustible wastes were included in Content Code 824 prior to 1980. Limited amounts of smaller combustibles such as shoe covers and surgical gloves are also included. The organic content exceeds 6 lb/ft3. The waste is 100 volume percent combustible. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. All of this waste is packaged in standard boxes. Each item is generally rinsed with water, wiped with wet rags and single or double contained in plastic. Some items were placed directly into boxes without additional containment, depending on contamination levels. Floor sweepings are containted in 1-gallon plastic-coated cardboard cartons. Florco absorbent is added to each box for residual liquids. Each box is assayed using a box counter, and spot radiation and contamination checks are also done.	Mound Laboratory	1	1	2	3
2	1	58	ID-MDO-834	834	HIGH-LEVEL ACID	This waste comes from Mound Laboratory. It consists of acid liquids, mainly nitric, absorbed onto a clay called Florco. The Florco is then placed in a drum bag in a drum lined with a 90-mil poly liner. Analytical assay values are available for each drum.	Mound Laboratory	3	1	2	2
2	1	59	ID-MDO-835	835	HIGH-LEVEL CAUSTIC	This waste comes from Mound Laboratory. It consists of caustic waste and neutralized waste liquids, absorbed onto a clay called Florco. The Florco is then placed in a drum bag in a drum lined with a 90-mil poly liner. Analytical assay values are available for each drum.	Mound Laboratory	3	1	2	2
2	1	60	ID-MDO-836	836	HIGH-LEVEL SLUDGE/CEMENT	This waste is from Mound Labs. The waste consists of shower water, decontamination water, cooling water, and some acids and caustics which have been solidified in portland cement. The cement is poured into a drum lined with a 90-mil poly liner. Analytical assay values are available on a batch basis.	Mound Laboratory	3	1	2	2
2	1	304	ID-MDO-838	838	<10 nCi/g NONCOMBUSTIBLE	There is little information on this code. One drum of this waste was mistakenly shipped in 1975 from Mound Laboratory to INEL instead of a commercial disposal facility. Mound records indicate that this drum is combustible waste. According to the assay information, this waste has low TRU concentration.	Mound Laboratory	2	1	2	3
2	1	191	ID-MDO-842	842	CONTAMINATED SOIL	This waste, generated at Mound Laboratories, consists of soil, including small rocks and pebbles, generated from cleanup of a leak. All soil waste was dry when packaged. A few waste boxes also include picks, shovels, metal cans, rubber gloves, booties, respirators, plastic, and possibly an air hammer and chisel. Soils waste was packaged in small, plastic lined plywood boxes (42 x 20 x 39 inch); other waste was then placed on top of the soil before the box was sealed. Four of the small boxes were then packaged in a standard larger waste box (4 x 4 x 7 feet) lined with fiberglass-reinforced polyester. Assay was performed using radiochemical analysis on core samples taken from the contaminated area.	Mound Laboratory	3	1	2	3
2	1	305	ID-MDO-847	847	LSA < 100 nCi/g COMBUSTIBLE	This waste stream is from Mound Laboratory and consists of nonline generated combustible wastes such as plastic sheeting, paper, reagents, gloves (rubber,cloth), plastic bottles, wood, paper suits, and shoe covers. About 75% of the waste is compacted. The waste may be either dry or damp. This waste is mostly low specific activity (LSA). The average waste organic material content usually exceeds 14 lb/ft3 for drums. There should be no sludges, free liquids, explosives, compressed gases, pyrophoric, toxic, or corrosive materials. Combustibles were packed into plastic bags which were sealed and compacted inside prepared drums. The compaction ratio is about 4:1. About 25% of the waste is not compacted, due to the presence of noncompactible items such as wood. Drums were prepared according to post-1972 procedures. Prior to January 1982, drums were scanned for gamma radiation and assayed if readings above background levels were detected. After 1982, all drums were assayed.	Mound Laboratory	1	1	2	3

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2	1	306	ID-MDO-848	848	LSA < 100 nCi/g NONCOMBUSTIBLE	This waste stream, generated at Mound Laboratory, consists of nonline generated noncombustible wastes such as tools, pipe, equipment, metal, glass, concrete, plaster, bricks, and dirt. Limited amounts of combustible wastes such as paper, rags, etc. are also included. The waste has the potential presence of excessive fines. Fines which may be present include soil, plaster, and concrete chips. The organic content is less than 14 lb/ft3. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. This waste stream is packaged in drums. Depending on size and contamination levels of individual items, the waste is contained in one or two plastic bags or placed directly into prepared waste drums. Each drum is lined with a 90 mil liner and a plastic bag. Florco absorbent is added to the bottom of the drum if dampness is suspected. Plywood spacers are added as needed on top of the liner lid. Each barrel is assayed by a drum counter or by portable gamma detecting instruments.	Mound Laboratory	3	1	2	3
2	1	29	ID-OFS-111	111	RESEARCH GENERATED WASTE NONCOMPACTIBLE	This waste includes waste generated at ANL-East and certified solid wet sludge from the Rocky Flats Plant. The ANL-E waste is derived from research activities performed in a laboratory environment. The waste includes concrete and laboratory apparatus. The waste is packaged in 55-gallon drums or in SWBs (standard waste boxes). The solid wet sludge from Rocky Flats Plant is cemented or dewatered sludge precipitated from aqueous waste treatment processes. Soils that are not contaminated with organic chemicals are also included. Rocky flats waste included in 111 is IDC 007, Building 374 solidified sludge. IDC 007 consists of immobilized low-level mixed waste materials from decontamination-precipitation and neutralization processes in the Building 374 Liquid Waste Treatment Facility. The wastewater treatment operation includes neutralization, radioactive decontamination (precipitation), filtration, evaporation, spray drying, salt immobilization, and filtrate sludge immobilization. The sludge from the rotary drum vacuum filter has a dry appearance but is still very moist. The dried sludge was transferred from the dryer directly into a 55-gallon drum. The sludge was dried, or had portland cement and diatomite added to absorb liquids. Note: Waste matrix composition listed is for Rocky Flats Waste.	Rocky Flats Plant and Argonne National Laboratory-East	3	1	2	2
2	1	157	ID-OFS-121	121	DECONTAMINATION AND DECOMMISSIONING WAST	This waste is generated at Argonne National Laboratory-East and Rocky Flats. The ANL-East waste is derived from decontamination and disposal of facilities and ancillary systems. The composition of the waste is unknown. The waste generated at Rocky Flats contains mainly Benelex which is a dense, laminated, lignocellulose hardboard made from wood chips and particles (Masonite Corp., Type 402). The Benelex is generally 2 inches thick. Some of the Benelex has lead shielding attached to it. Metal hinges and angle iron strongbacks are also present. Plexiglass is the other major constituent in the waste. The plexiglass thickness ranges from 2 to 4 inches. Both the Benelex and the plexiglass are combustible. The wase is packaged in standard RFP drums and boxes. Waste matrix composition listed is based on the opening and examination of several drums of IDC 302 waste. More than 94% ofthis waste is in boxes, where a larger percentage of benelex (large pieces) can be expected.	Argonne National Laboratory-East and Rocky Flats Plant	3	1	2	3
2	1	293	ID-RFO-000	0	NOT RECORDED - UNKNOWN	This waste stream was received prior to 1973. As container specific information was not entered into the database prior to 1973, these wastes are uncategorized. It is expected to be similar to other Rocky Flats was es received since 1973.	Mostly Rocky Flats Plant	2	2	3	3

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2	1	28	ID-RFO-001	1	FIRST STAGE SLUDGE	Waste consists of a wet sludge produced from treating aqueous process wastes, such as ion exchange column effluent, distillates, and caustic scrub solutions generated by Plutonium Recovery Operations (Building 771). Portland cement is added to the waste package for absorption of free liquids. Waste drums may periodically contain surgeons' gloves, glovebox gloves, etc. Since the fall of 1979, first-stage sluge (IDC 001) and Second stage sludge (IDC 002) have been combined into Content Code 1 - Combined sludge. Sludge is produced by treating aqueous wastes by the carrier precipitation process. Aqueous wastes are made basic, if necessary, with sodium hydroxide. Radioactive elements such as plutonium and americium are chemically precipitated from the liquid waste. Treatment chemicals include ferric sulfate, calcium chloride, magnesium sulfate, and flocculating agents. The treatment process produces a precipitate of the hydrated oxides of iron, magnesium, aluminum, silicon, etc., which also carries the hydrated oxides of plutonium and americium. The precipitate or slurry is filtered to produce a sludge containing 50 to 70 weight percent water. Liquid wastes were analyzed for fissile content prior to release from Building 771 and 774, and were retained at Building 771 for further treatment if contaminated with above-discard amounts of plutonium.	Rocky Flats Plant	3	2	2	2
2	1	31	ID-RFO-002	2	SECOND STAGE SLUDGE	Waste consists of a wet sludge produced from treatment of all other plant radioactive and/or chemical contaminated wastes and further treatment of the first-stage effluent. Portland cement was added to the waste package for absorption of free liquids. Second-stage sludge drums packaged prior to 1973 may contain other waste such as electric motors, bottles of chemical (usually liquid) wastes, mercury and lithium batteries, and small amounts of contaminated mercury in pint bottles. Radioactive sources were also periodically included in second-stage drums through 1979. Since the fall of 1979, Second stage sludge (IDC 002) have been combined into Content Code 1 - Combined sludge. Content code 2 is no longer used. Sludge is produced by treating aqueous wastes by the carrier precipitation process. Aqueous wastes are made basic, if necessary, with sodium hydroxide. Radioactive elements such as plutonium and americium are chemically precipitated from the liquid waste. Treatment chemicals include ferric sulfate, calcium chloride, magnesium sulfate, and flocculating agents. The treatment process produces a precipitate of the hydrated oxides of iron, magnesium, aluminum, silicon, etc., which also carries the hydrated oxides of plutonium and americium. The precipitate or slurry is filtered to produce a sludge containing 50 to 70 weight percent water.	Rocky Flats Plant	3	2	2	2
2	1	235	ID-RFO-003	3	ORGANIC SETUPS, OIL SOLIDS	Organic setups are produced from treatment of liquid organic wastes generated by various plutonium and nonplutonium operations. The organic wastes are mixed with calcium silicate to form a grease of paste-like material. Small amounts of oil-dri absorbent are usually mixed with the waste. Organic wastes such as degreasing agents (primarily trichloroethane), lathe coolant (machining oil and carbon tetrachloride), and hydraulic oils are generated primarily by plutonium fabrication operations. Other organic wastes include carbon tetrachloride; trichloroethylene; hydraulic, gearbox, and spindle oils; and trace concentrations of miscellaneous organic laboratory wastes. (organophosphates, nitrobenzene, etc.) In addition, unknown volumes of oil containing polychlorinated biphenyls (PCB) were processed with other organic wastes until 1979. Degreasing solvents generated by Building 444 operations are contaminated with beryllium.	Rocky Flats Plant	3	1	1	3

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Waste Category 2=ALLW	Mixed Waste 1=mixed 2= non-mixed	Key Code	Wastestream Identifier Code	Content Code	Waste Stream Name	Description	Generator Site	Combustibility 1=>90% 2=10-90% 3=<10%	Rad Level 1=CH 2=some RH	PCBs 1=expected 2=not expected	Asbestos 1=expected 2=not expected 3=unknown
2	1	57	ID-RFO-004	4	SPECIAL SETUPS (CEMENT)	This waste, generated at Rocky Flats Plant, consists of liquids absorbed on a cement mixture. The liquid wastes are not compatible with aqueous treatment processes and are handled separately due to their plutonium complexing nature. The majority of complexing chemical wastes are generated by various operations at Building 771, Plutonium Recovery operations. All waste are processed by aqueous waste treatment, building 774. The complexing chemicals include some alcohols, organic acids, and versenes (trademark for a series of chelating agents based on EDTA). All liquids are analyzed or assayed prior to release to Building 774 for treatment. Only below-discard contaminated wastes are released for processing. Above discard contaminated wastes are processed by plutonium recovery operations. The cement mixture used for absorbing complexing liquid wastes is composed of approximately 190 lb of Portland cement and 50 lb of pipe insulation cement, such as magnesia cement. The cements are placed in a prepared 55-gallon drum; the drum is them placed on a drum roller and rolled to ensure mixing of the cements. All liquid wastes are made basic prior to adding them to the cement mixture. Approximaterly 100 liters of liquid waste is then poured on the cement mixture and allowed to solidify. Aproximately 10 to 15 lb of portland cement is then added on top of the cemented liquid waste before the o-ring bag is removed from the glovebox. Since 1972, drums have been inspected for free liquids, proper packaging, and the use of proper content code. One to two quarts of oil-dri was placed on top of the outer, sealed polyethylene drum bag after inspection. In 1982, vermiculite replaced oil-dri to fill the remaining space between the outer, sealed polyethylene drum bag and the top of the rigid liner. Some drums may be filled with the empty polyethylene bottles used to transport the liquid waste to Building 774. A small amount of portland cement is added to each bottle before placement in a drum.	Rocky Flats Plant	3	1	2	2
2	1	223	ID-RFO-005	5	EVAPORATOR SALTS	Waste is generated at Rocky Flats Plant from aqueous waste treatment in building 774. Waste consists of a salt residue generated from concentrating and drying liquid waste from the solar evaporation ponds. The approximate chemical makeup of the salt is 60% sodium nitrate, 30% potassium nitrate, and 10% miscellaneous. Limited amounts of other wastes such as surgeons' gloves, paper, rags, and metal may be found in the waste drums. Portland cement was added to damp or wet salt when necessary. The majority or salt drums in storage at the INEL should be contaminated with <10 nCi/g TRU. Salt waste is no longer shipped to the INEL. Since 1972, drums have been inspected for free liquids, proper packaging, and use of the proper content code. After inspection, approximately 1 to 2 quarts of Oil-Dri was placed on top of the outer sealed polyethylene drum bag.	Rocky Flats Plant	3	1	2	3
2	1	35	ID-RFO-007	7	BLDG 374 DRY SLUDGE	Building 374 solidified sludge consists of immobilized low-level mixed waste materials from decontamination-precipitation and neutralization processes in the Building 374 Liquid Waste Treatment Facility. The wastewater treatment operation includes neutralization, radioactive decontamination (precipitation), filtration, evaporation, spray drying, salt immobilization, and filtrate sludge immobilization. The sludge from the rotary drum vacuum filter has a dry appearance but is still very moist. The dried sludge was transferred from the dryer directly into a 55-gallon drum. The resulting waste consisted of dispersible fines and was assigned IDC 007.	Rocky Flats Plant	3	1	2	2
2	1	192	ID-RFO-090	90	DIRT	This waste stream, generated at the Rocky Flats Plant, contains dry dirt and soil generated from cleanup of spills, leaks, etc. It may also include evaporator pond sludge. A limited amount of the waste may be damp. A limited amount may contain combustibles such as coveralls and gloves. Dirt is packaged in standard RFP drums. Sometimes the dirt is bagged before being placed in the drum.	Rocky Flats Plant	3	1	2	3
2	1	55	ID-RFO-112	112	SOLIDIFIED ORGANICS	Solid organic waste consists of absorbed organic liquids from production or laboratory processes. The content code certifiably packaged as 112 includes IDC 003.	Rocky Flats Plant	3	1	2	2
2	1	30	ID-RFO-113	113	SOLID LAB WASTE	Solid lab waste consists of cemented or absorbed neutralized aqueous laboratory waste and includes some waste from IDCs 004 and 292. Waste matrix composition listed is for IDC 004 waste, which accounts for most of the waste in this content code.	Rocky Flats Plant	3	1	2	2

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2	1	56	ID-RFO-114	114	SOLIDIFIED INORGANIC PROCESS SOLUTION	Alpha contaminated solid inorganic process solution waste consists of cemented inorganic particulates of sludge-like (not chemically precipitated) wastes from plutonium recovery operations. The waste is packaged in 55-gallon drums or SWBs. Content code 114 includes some waste from IDCs 292 and 432. Waste matrix composition listed is for Item Description code (IDC) 292, the bulk of the waste. The waste is assigned a matrix parameter code (MPC) of S3123, based on IDC 292. The IDC 432 portion of the waste stream is MPC S3211.	Rocky Flats Plant	3	1	2	2
2	1	73	ID-RFO-116	116	COMBUSTIBLE WASTE	Combustible waste consists of cellulosic, plastic or cloth waste from various processes. The content codes certifiably packaged and included in 116 are 330, 336, 337, and 491.	Rocky Flats Plant	1	1	2	3
2	1	141	ID-RFO-117	117	METAL WASTE	Metal waste consists of discarded metal. The IDCs certifiably packaged and included in 117 are 320, 321, 480, and 488.	Rocky Flats Plant	3	1	2	3
2	1	120	ID-RFO-118	118	GLASS WASTE	Glass waste consists of discarded labware, windows, containers or raschig rings from various processes. The IDCs certifiably packaged and included in 118 are 440, 441, and 442. Waste matrix composition listed is for IDC 440. For IDCs 441 and 442, the "Other Glass" matrix would be mostly raschig rings.	Rocky Flats Plant	3	1	2	2
2	1	102	ID-RFO-119	119	HEPA FILTER WASTE	HEPA filter waste consists of HEPA filters or processed filter media from filter change operations. The IDCs certifiably packaged and included in 119 are: 376 and 490.	Rocky Flats Plant	2	1	2	1
2	1	93	ID-RFO-122	122	INORGANIC SOLID WASTE	Inorganic solid waste consists of waste such as insulation, firebrick, and concrete. The IDCs certifiably packaged and included in 122 are 371, 374, 377, and 422. The majority of the waste in this content code is waste generated during maintenance/stripout activities. (i.e. replacement of firebrick or insulation.) Waste matrix composition listed is for IDC 374, which makes up the bulk of the waste in this content code.	Rocky Flats Plant	3	1	2	3
2	1	129	ID-RFO-123	123	LEADED RUBBER	Leaded rubber waste consists of discarded leaded glovebox gloves and leaded aprons. The IDC packaged and included in 123 is 339.	Rocky Flats Plant	2	1	2	2
2	1	159	ID-RFO-241	241	AMERICIUM PROCESS RESIDUE	This waste stream, generated at the Rocky Flats Plant, consists of piping, flanges, valves, tools, equipment, PVC piping, glassware (flasks, broken ion exchange columns, etc.), glass filters, PE bottles, leaded glovebox gloves, paper, and plastics. Wastes were shipped only in 1972 and 1973, from renovation of the americium recovery line. Some of the containers are lead-lined. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Some dried residue of 7 N nitric acid, hydrochloric acid, and ammonium thiocyanate may be present. Smaller waste items are single and double contained in PE or PVC bags. Most of the bagged waste was placed in 13-inch high by 15.5-inch diameter Fibre-Paks. Larger items are placed directly inside 55-gallon drums. Fibre-Paks are usually wrapped with lead tape. Two Fibre-Paks fit in each drum. Most drums were lead shielded with 1/16- to 1/8-inch thick lead sheeting. Each drum was assayed. The waste matrix composition listed is based on drum sampling. No glassware or glass filters were contained in the sampled containers.	Rocky Flats Plant	2	2	2	3
2	1	32	ID-RFO-290	290	FILTER SLUDGE	This waste stream, generated at Rocky Flats Plant, consists of only one (1) drum of wet sludge from the incinerator off-gas system, recovery building filter plenums, pumps, etc. Content Code 290 was replaced with Code 292 in 1974. This waste contains free liquids. Organic content is less than 14 lb/ft3. No explosive, pyrophoric, or corrosive materials should be in the waste. The filter sludge was packaged in 1-quart ice cream cartons. Each carton was sealed. It is believed that each carton was bagged and sealed in a Vollrath 8802 stainless steel can. Cans were assayed and then placed in groups of 20 to 25 in prepared 55-gallon drums.	Rocky Flats Plant	3	1	2	2

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2	1	33	ID-RFO-292	292	CEMENTED SLUDGE	This waste stream, generated at Rocky Flats Plant, consists of sludge from the incinerator off-gas system, recovery building filter plenums, pumps, etc. Portland cement is added to absorb free liquids. The sludge may contain a limited number of surgical gloves. Content code 292 replaced Content Code 290 in 1974. Before 1977, sludge was sealed in PVC bags, double-contained in plastic and placed in 1-gallon metal paint cans. Portland cement was added to the bottom and top of the can. After 1977, sludge was placed in 1-gallon PE bottles with layers of Portland cement. Each can (or bottle) was assayed and placed in groups of about 25 into prepared 55-gallon drums. Drum preparation was in accordance with pre and post 1972 procedures. Starting in 1982, vermiculite replaced Oil-Dri as the material placed between the top of the waste material and the drum liner lid.	Rocky Flats Plant	3	1	2	2
2	1	171	ID-RFO-300	300	GRAPHITE	This waste stream, generated at the Rocky Flats Plant, consists of graphite molds used in casting plutonium metal. The waste may also include small amounts of surgical gloves. The graphite is in the form of broken mold pieces. Some of the graphite has been scarfed or wire-brushed to remove above-discard deposits of plutonium. The graphite molds are almost pure carbon and should be inert in storage. The waste is noncombustible, but if pulverized and well mixed it will burn. Fines are not packaged with the waste. Breakage and fines may result after packaging. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric or corrosive materials. Graphite pieces may be packed directly into prepared 55-gallon drums or else first packed inside Fibre-Paks. The Fibre-Paks are 13 inches high by 15.5 inches in diameter. Sealed Fibre-Paks are sealed inside single (PVC) or double (PVC and PE) bags. Two Fibre-Paks are placed in each prepared 55-gallon drum. Drums were packed according to the usual pre-1972 and post-1972 procedures. Each drum was assayed. Since 1972, the drums were also processed according to inspection and sealing procedures; and, since 1982, vermiculite instead of Oil-Dri was placed on top of the outer sealed PE drum bag.	Rocky Flats Plant	3	1	2	3
2	1	172	ID-RFO-301	301	GRAPHITE CORES	This waste stream, generated at the Rocky Flats Plant, is similar to graphite molds, Content Code 300. A graphite core is part of the shaped graphite mold used to cast plutonium metal. Some graphite molds are also included in this content code. This content code has not been used since 1977. The graphite has been broken into pieces, and some of the graphite has been scarfed or wire brushed to remove any above-discard deposits of plutonium. The graphite cores are almost pure carbon and should be inert in storage. The waste is noncombustible, but if pulverized and well mixed it will burn . Fines are not packaged with the waste. Breakage and fines may result after packaging. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric or corrosive materials. Graphite core pieces may be packed directly into prepared 55-gallon drums or else first packed inside Fibre-Paks. The Fibre-Paks are 13 inches high by 15.5 inches in diameter. Sealed Fibre-Paks are sealed inside single (PVC) or double (PVC and PE) bags. Two Fibre-Paks are placed in each prepared 55-gallon drum. Drums were packed according to the usual pre-1972 and post-1972 procedures. Each drum was assayed. Since 1972, the drums were also processed according to inspection and sealing procedures. Oil-Dri was placed on top of the outer sealed PE drum bag.	Rocky Flats Plant	3	1	2	3

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2	1	51	ID-RFO-302	302	BENELEX AND PLEXIGLASS	This waste, generated at Rocky Flats Plant, consists of Benelex, which is used for neutron shielding, and Plexiglas glovebox windows. Lead sheeting (1/8 to 1/4 in. thick) may be attached to some benelex pieces. Benelex was usually coated with fire-retardant paint. In addition to Plexiglas, other types of glass such as leaded-glass may be present in the waste. The waste may include limited amounts of surgeons' gloves, metal hinges on Benelex gloveport doors, pieces of angle iron attached to larger pieces of Benelex, and rubber gaskets from glovebox windows. Content code 302 replaced content code 464 during 1973. The majority of waste drums will contain pieces of benelex (gloveport doors, etc.) generated from routine maintenance and renovation projects conducted primarily in 1972. Plexiglas and other types of glass may be found mixed in with the benelex and/or segregated and contained in a limited number of waste drums. Pieces of benelex waste were usually placed directly into prepared 55-gallon drums. Any contaminated Benelex was usually contained in plastic bags or wrapped in plastic sheeting. Plexiglas windows were usually contained in plastic before being placed in a prepared 55-gallon drum. Oil dri may have been added to the waste drums. The waste boxes were generated during 1973 and 1974 and are believed to contain larger pieces of benelex shielding on angle iron frames that were removed during final fire cleanup operations in building 776. It is believed that the benelex came from the south foundry line in building 776, which was not directly involved in the 1969 fire and was decontaminated and placed back in operation. The waste matrix composition listed is based on opening and examination of several drums of IDC 302 waste. More than 94% of this waste is in boxes, where a larger percentage of benelex (large pieces) can be expected.	Rocky Flats Plant	2	1	2	3
2	1	143	ID-RFO-320	320	TANTALUM	This waste comes from the Rocky Flats Plant and consists of used tantalum crucibles, funnels, funnel inserts, and pour-rods. The waste is packaged in standard RFP fashion. Sharp metal edges are taped before packaging. Other metals may include tungsten, platinum, and lead. Some lead-lined containers are included.	Rocky Flats Plant	3	2	2	3
2	1	104	ID-RFO-328	328	FULFLO INCINERATOR FILTERS	Ful-flo (trade name) filters are in-line cartridge filters used to remove particulates from specific waste streams. The filters are one piece molded filters and the filter media is a red fibrous material or polypropylene.	Rocky Flats Plant	2	1	2	3
2	1	74	ID-RFO-330	330	DRY PAPER AND RAGS	This waste stream is the largest combustible waste stream, comprising 55% of the category by weight. The waste stream is from Rocky Flats Plant and primarily consists of line- and nonline-generated dry combustible materials such as paper, rags, plastics, surgical gloves, cloth overalls and booties, cardboard, wood, wood filter frames, PE bottles, and laundry lint. Some combustibles may be damp or moist. Limited amounts of noncombustibles such as glass, concrete, cement, leaded glovebox gloves, batteries, and metal scrap may also be present. The average waste organic material content may range from 6 lb/ft3 for boxes to over 14 lb/ft3 for drums. Limited fines are expected from floor sweepings, powder, etc. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric or corrosive materials. Depending on when and where the waste was generated at Rocky Flats, the waste packaging may vary. For wastes generated prior to 1975, packaging information is incomplete. Line-generated waste may be double contained in plastic or placed in PE bottles and then double bagged. Nonline-generated wastes were single-bagged .r placed directly into the waste container. Oil-Dri may have been added to some drums. After 1974, some waste was drummed, and some waste was placed in 4 ft x 4 ft x 7 ft boxes. Some combustibles are single, double or quadruple bagged or wrapped PVC and PE bags or plastic. Combustibles such as clothing and dryer lint are placed directly into 55 gallon drums. Some wastes are placed in 1-gallon PE bottles. Some drummed waste was repacked into boxes to reduce volume. During repacking, any noncombustibles were removed. Some boxes may contain moist combustible waste and up to 100 lb of Oil-Dri. Drums containing wastes from the Americium Recovery Line are lead-lined. Drums shipped prior to 1977 contain compacted wastes.	Rocky Flats Plant	1	2	2	3

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2	1	105	ID-RFO-335	335	ABSOLUTE 8 X 8 FILTERS	This waste stream, generated at the Rocky Flats Plant, consists of absolute filters used for filtering intake and exhaust air from glovebox lines. The filters are composed of wood or particle board frames and an asbestos-type filter media. The waste may include limited amounts of combustible materials (surgical gloves, etc.). Several sizes of filters may be present. This code has not been used since 1975. Since then absolute filters were processed as Content Codes 338 (insulation and CWS filter media) or 376 (cemented insulation and filter media). Some of the drums may be lead-lined. There is a lack of information about the particulate on the filter media. Although there may be some organic material, it should be less than 14 lb/ft3. Significant amounts of respirable fines may be present. No sludges or free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in this waste, except for some residual amounts of nitric acid. Each filter is double contained in PVC and PE bags and assayed. Up to 12-20 filters are placed in each prepared drum. Small amounts of Oil-Dri are added to drums containing damp filters. Drums were packed according to the usual pre-1972 and post-1972 procedures.	Rocky Flats Plant	2	2	2	1
2	1	75	ID-RFO-336	336	MOIST PAPER AND RAGS	The waste stream is from the Rocky Flats Plant and primarily consists of damp or wet line- and nonline-generated dry combustible materials such as paper, rags, plastics, surgical gloves, canvas, cardboard, wood, PE bottles, and rubber. Some combustibles may be damp or moist. Moisture content may range from damp to wet, and may include water, soaps, nitric acid, or caustic solutions. Limited amounts of noncombustibles such as glass, concrete, cement, leaded glovebox gloves, and metal scrap may also be present. These wastes are mostly from decontamination and cleanup work and may be from any plutonium area. Wastes shipped to INEL after 1975 will require processing to remove free liquids, and aerosol cans. The average waste organic material content may range from 6 lb/ft3 for boxes to over 14 lb/ft3 for drums. Combustibles in the waste exceed 25 volume percent. Limited fines are expected from floor sweepings, powder, etc. There may be some free liquids present. No explosives or compressed gases are present after 1976. No aerosol cans are present after 1977. Prior to 1975 some spontaneous ignition material and nitric acid may be included. Depending on when and where the waste was generated at Rocky Flats, the waste packaging may vary. For wastes generated prior to 1975, packaging information is incomplete. Waste may be placed directly into drums, or single or double contained in plastic. Some waste may also be placed in PE bottles and then double bagged. Oil-Dri may have been added to some drums. Drums were prepared according to pre and post-1972 procedures. Inspections were done and adsorbents (Oil-Dri and vermiculite) were added according to standard procedures. Some waste was also containerized in plywood boxes. The waste is contained in one to four layers of plastic. Oil-Dri and portland cement were added in layers with the waste. Depending on moisture conditions, the amount of adsorbent varies from 25-200 lb per box. Boxes were prepared according to pre and post-1972 procedures. After 1974, waste was typically double contained in PVC and PE bags or else placed in PE bottles and then double-bagged. Adsorbent was not added to the waste. Until 1977, some of the waste was compacted in prepared waste drums. Some drummed waste was also repacked into boxes to reduce volume. All drums are assayed. The fissile content of boxes is determined from the combined assays of the waste drums emptied into the boxes. After 1980, boxes received a second assay. Drums containing wastes from the Americium Recovery Line and lead-lined.	Rocky Flats Plant	2	2	2	3

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2	1	76	ID-RFO-337	337	PLASTICS, TEFLON, WASH, PVC	This waste stream is from the Rocky Flats Plant and consists of various types of plastics such as PE, polyvinyl chloride (PVC), Teflon (TFE), and nonleaded rubber items. The waste may be bags, vials, bottles, sheeting, and surgical gloves. Some other combustible wastes such as respirator facemasks and paper may be included. Some small amounts of noncombustible wastes may also be present. The average waste organic material content may range from 6 lb/ft3 for boxes to over 14 lb/ft3 for drums. Added adsorbents are not included in the fines evalutaion. There should be no sludges, free liquids, explosives, compressed gases, pyrophoric, toxic, or corrosive materials. Depending on when and where the waste was generated at Rocky Flats, the waste packaging may vary. For wastes generated prior to 1975, packaging information is incomplete. Waste may be placed directly into prepared drums or double contained in plastic bags. Small amounts of portland cement were added to bottles to absorb any residual liquids. Oil-Dri may have been added to some drums. Drums were prepared according to pre and post-1972 procedures. Inspections were done and adsorbents (Oil-Dri or vermiculite) were added according to standard procedures. Some waste was also containerized in plywood boxes. Boxes were prepared according to pre and post-1972 procedures. Some of the waste containers are lead-lined.	Rocky Flats Plant	2	2	2	3
2	1	106	ID-RFO-338	338	INSULATION AND CHEMICAL WARFARE SERVICE	This waste stream, generated at the Rocky Flats Plant, consists of asbestos and fiberglass filter media, asbestos-type pipe insulation , and other materials such as aluminum and wood frames, and compacted insulation waste. Some of the waste may be damp. This code was replaced in 1977 with Content Code 376 (cemented insulation and filter media). There is a lack of information about the particulates on the filter media. Although there may be some organic material, it should be less than 14 lb/ft3 for drums and 6 lb/ft3 for boxes. Significant amounts of respirable fines may be present. No sludges or free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in the waste, except for some residual amounts of nitric acid. The waste is contained in drums and boxes. The waste is generally double-contained in either PE or PVC bags or in 1-gallon PE bottles and single or double bags. The bottles were individually assayed. Some pipe insulation may be wrapped with tape, depending on contamination levels, and placed directly into drums. Absorbent was added to some drums containing damp waste. Drums were packed according to the usual pre-1972 and post-1972 procedures. Each drum was assayed. Each box was surveyed to determine a calculated fissile content. Coated and uncoated boxes were prepared according to standard pre-1972 and 1972-1974 procedures.	Rocky Flats Plant	2	1	2	1
2	1	130	ID-RFO-339	339	LEADED RUBBER GLOVES AND APRONS	This waste comes from the Rocky Flats Plant and consists of leaded rubber gloves and aprons. A limited amount of unleaded gloves, lead bricks, and lead sheeting may also be present. Content Code 463 was replaced by Content Code 339 in 1973. Waste is packaged in standard RFP fashion. Lead linings are present on some drums.	Rocky Flats Plant	2	2	2	3
2	1	107	ID-RFO-360	360	INSULATION	This waste stream, generated at the Rocky Flats Plant, consists of asbestos-type pipe insulation, asbestos gloves and fireblankets, and asbestos and fiberglass prefilter and filter media. The waste may include limited amounts of other materials such as aluminum and wood frames and compacted insulation waste. Some materials may be damp. The waste may include limited amounts of combustible materials such as surgical gloves. This code has not been used since 1973. Since then absolute filters were processed as Content Codes 338 (insulation and CWS filter media) or 376 (cemented insulation and filter media). There is a lack of information about the particulate on the filter media. Significant amounts of respirable fines may be present, expecially since some of the waste has been reduced to an "oatmeal" consistency from handling. Some waste which was wet was dried in a clothes dryer prior to packaging. No sludges or free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in this waste, except for some residual amounts of nitric acid. The waste is contained in drums and one box. The waste is generally double-contained in either PE or PVC bags. The bottles were individually assayed. Some pipe insulation may be wrapped with tape, depending on contamination levels, and placed directly into drums. Absorbent was added to some drums containing damp waste. Drums were packed according to the usual pre-1972 and post-1972 procedures. Each drum was assayed. The box was surveyed to determine a calculated fissile content. The time when the box was used is not known. Coated and uncoated boxes were prepared according to standard pre-1972 and 1972-1974 procedures.	Rocky Flats Plant	2	1	2	1

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2	1	94	ID-RFO-371	371	FIREBRICK	This waste contains whole and broken pieces of construction bricks, cinderblocks, and firebrick. Waste generated in the 1971 to 1973 period includes firebrick from the Pu recovery incinerator and related refractory development and from four boilers; cinderblocks and other brick from routine maintenance and from D&D following the Rocky Flats Plant fire. Waste generated since 1973 is mostly firebrick from Pu recovery operations. The firebrick generated since 1973 is a high-alumina, high-strength, class F brick manufactured by Plibrico (Plicast 40). Typical composition is Al203 =95.67%, SiO2 = 0.03%, Fe203 = 0.10%, TiO2 = 0.01%, CaO = 3.6%, MgO = 0.8%, and Alkalies = 0.28%. Some of the incinerator firebrick is "scarfed" to remove surface contamination and then leached with nitric acid to recover Pu. Waste is packaged in standard RFP drums and boxes. After 1973, mostly drums were used and the waste was placed in PVC bags which were then placed into Fibre-Paks. Two Fibre-Paks fit in a drum. The single drum of Content Code 377 waste was determined by visual examination to be Content Code 371.	Rocky Flats Plant	3	1	2	3
2	1	190	ID-RFO-374	374	BLACKTOP, CONCRETE, DIRT AND SAND	This waste contains blacktop, concrete, reinforced concrete, cinderblocks, bricks, dirt, and sand. Limited amounts of waste may be damp. A limited amount may contain combustibles such as coveralls and gloves. The waste is generated from cleanup of spills and leaks, process changes, maintenance, and D&D operations. Portland cement is added to containers that contain wet or damp waste. Waste is packaged in standard RFP fashion in drums and boxes. Sometimes the waste is bagged before being placed in the containers.	Rocky Flats Plant	3	1	2	3
2	1	95	ID-RFO-375	375	OIL-DRI RESIDUE FROM INCINERATOR	This waste stream, generated at Rocky Flats Plant, includes Oil-Dri absorbent and waste from laundry and utility operations. Organic content should be less than 14 lb/ft3. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. The material is contained in 55-gallon drums. Inside the drums, the waste may be contained in PE bottles and/or metal paint cans and double-bagged in PE and PVC bags. Some waste may also be contained in PE residue process containers (RPCS). Drums were prepared and inspected according to pre and post-1972 procedures. Starting in 1982, vermiculite instead of Oil-Dri was used in the tops of the drums. The waste matrix composition listed is for the incinerator waste. No information is available concerning the laundry and utility operation waste.	Rocky Flats Plant	3	1	2	2
2	1	108	ID-RFO-376	376	CEMENTED INSULATION FILTER MEDIA	This waste stream, generated at the Rocky Flats Plant, consists primarily of filter media from pre-filters, absolute filters, etc., and limited amounts of insulation waste such as asbestos gloves and fire blankets. Portland cement is added to neutralize any residual nitric acid and reduce the potential for drum pressurization. The waste has a potential for excessive fines. Although there may be some organic material, it should be less than 14 lb/ft3 for drums and 6 lb/ft3 for boxes. Significant amounts of respirable fines may be present. No sludges or free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in this waste, except for some residual amounts of nitric acid. The waste is contained in drums and boxes. Waste generated prior to 1979 is generally double-contained in either PE or PVC bags, 1-gallon PE bottles and/or metal paint cans. Most of this waste was repackaged into 15-gallon plastic bags after thorough mixing with portland cement. Drums were packed according to the usual post-1972 procedures. Each drum was assayed. Each box was surveyed to determine a calculated fissile content. Boxes were prepared according to standard post-1972 procedures.	Rocky Flats Plant	2	1	2	1
2	1	217	ID-RFO-430	430	UNLEACHED ION COLUMN RESIN	This waste, generated at the Rocky Flats Plant, consists of anionic and cationic exchange resins used in the purification and recovery of plutonium and americium, respectively. The anionic resins were DOWEX 1-X4 and the cationic resins were DOWEX 50W-X8, both being polystyrene-divinylbenzene copolymers.	Rocky Flats Plant	2	1	2	3
2	1	218	ID-RFO-431	431	LEACHED RESIN	This waste, generated at the Rocky Flats Plant, consists of anionic and cationic exchange resins used in the purification and recovery of plutonium and americium, respectively. It is believed that the resins were Content Code 430 resins that were processed by leaching to recover plutonium. Content code was used during 1972 only.	Rocky Flats Plant	2	1	2	3
2	1	219	ID-RFO-432	432	LEACHED AND CEMENTED RESIN	This waste, generated at the Rocky Flats Plant, consists of anion and cation exchange resins used in the purification and recovery of plutonium and americium, respectively. The resins are leached and cemented before disposal.	Rocky Flats Plant	3	2	2	3

Table 1. INEL alpha low level mixed and non-mixed waste identification and description information.

Waste Category 2=ALLW	Mixed Waste 1=mixed 2= non-mixed	Key Code	Wastestream Identifier Code	Content Code	Waste Stream Name	Description	Generator Site	Combustibility 1=>90% 2=10-90% 3=<10%	Rad Level 1=CH 2=some RH	PCBs 1=expected 2=not expected	Asbestos 1=expected 2=not expected 3=unknown
2	1	121	ID-RFO-440	440	GLASS	This waste stream, generated at the Rocky Flats Plant, consists of glass sample vials, bottles, lead-taped sample vials, ion exchange columns, dissolver pots, laboratory glassware such as pyrex flasks and beakers, glovebox windows (glass, plexiglass, leaded glass), and crushed and ground glass. The waste includes limited amounts of other noncombustibles, such as metals, and limited amounts of combustible wastes. No sludges should be present although some glass vials may contain limited amounts of free liquids. No explosive, pyrophoric, or corrosive materials should be in the waste. The majority of drums do not contain respirable crushed glass fines or free liquids. Actual amounts of drums containing respirable crushed glass fines or free liquids have not been determined. The glass may be packaged with some variation depending on if it is whole, broken to pieces, or crushed or ground. Whole or broken glass may be packaged in 1-gallon PE bottles, in 13-inch high by 15.5-inch diameter Fibre-Paks (either loose or inside plastic bags inside the Fibre-Pak), or double -packed in plastic bags, with the outside of the outer bag taped for protection against sharp edges. Glassware such as sample vials may be taped together before packaging. Nonline generated glassware, light bulbs, and fluorescent tubes are usually crushed or ground and placed directly into a prepared 55-gallon drum. Drums were packed according to the usual pre-1972 and post-1972 procedures. Specific information on the box preparation was not available. Each drum was assayed. Since 1972, the drums were also processed according to inspection and sealing procedures; and, since 1982, vermiculite instead of Oil-Dri was placed on top of the outer sealed PE drum bag. A small number of the drums are lead-lined. Also, Oil-Dri was added to the glass waste if moisture was present.	Rocky Flats Plant	3	2	2	2
2	1	122	ID-RFO-441	441	UNLEACHED RASHIG RINGS	This waste stream, generated at the Rocky Flats Plant, consists of boronated glass rings used to minimize neutron multiplication in liquid storage tanks. Content Code 441, Unleached Rashig Rings, was used from 1971-79 as a separate stream and then combined with Content Code 442, Leached Rashig Rings. The rings are about 1.75 inch high and 1.5 inch in diameter, with a 0.25-inch wall thickness. The rings are heat and chemical resistant borosilicate glass with 11.8 - 13.8 weight % B2O3, with an isotopic content of 10B/11B of not less than 0.24. Some of the rings, which had above-discard amounts of plutonium, were leached with nitric acid to recover the plutonium and then rinsed with water, and dried. Some of the rings may be contaminated with small amounts of oil. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in the waste. Trace amounts of nitric acid or organic contaminants may be present. The rings are triple contained in PE or PVC and placed in a 10-inch high, 15.5-inch diameter Fibre-Pak. Two Fibre-Paks are placed inside a prepared 55-gallon drum according to the standard pre-1972 and post-1972 drum packing procedures. A few of the drums contain broken rashig rings in taped-closed, 4-liter PE bottles with double bags inside the bottles. Each drum was assayed. Since 1972, the drums were also processed according to inspection and sealing procedures; and, since 1982, vermiculite instead of Oil-Dri was placed on top of the outer sealed PE drum bag. A small number of the drums are lead-lined. Also, Oil-Dri was added to the glass waste if moisture was present.	Rocky Flats Plant	3	2	2	2
2	1	123	ID-RFO-442	442	LEACHED RASHIG RINGS	This waste stream, generated at the Rocky Flats Plant, consists of boronated glass rings used to minimize neutron multiplication in liquid storage tanks. Content Code 441, unleached rashig rings, was used from 1971-79 as a separate stream and then combined with Content Code 442, leached rashig rings. The rings are about 1.75 inch high and 1.5 inch in diameter, with a 0.25-inch wall thickness. The rings are heat and chemical resistant borosilicate glass with 11.8 - 13.8 weight % B2O3, with and isotopic content of 10B/11B of not less than 0.24. Some of the rings, which had above-discard amounts of plutonium, were leached with nitric acid to recover the plutonium and then rinsed with water and dried. Some of the rings may be contaminated with small amounts of oil. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in the waste. Trace amounts of nitric acid or organic contaminants may be present. The rings are triple contained in PE or PVC and placed in a 10-inch high, 15.5-inch diameter Fibre-Pak. Two Fibre-Paks are placed inside a prepared 55-gallon drum according to the standard pre-1972 and post-1972 drum packing procedures. A few of the drums contain broken rashig rings in taped-closed, 4-liter PE bottles with double bags inside the bottles. Each drum was assayed. Since 1972, the drums were also processed according to inspection and sealing procedures; and, since 1982, vermiculite instead of Oil-Dri was placed on top of the outer sealed PE drum bag. A small number of the drums are lead-lined. Also, Oil-Dri was added to the glass waste if moisture was present.	Rocky Flats Plant	3	2	2	2

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Waste Category 2=ALLW	Mixed Waste 1=mixed 2= non-mixed	Key Code	Wastestream Identifier Code	Content Code	Waste Stream Name	Description	Generator Site	Combustibility 1=>90% 2=10-90% 3=<10%	Rad Level 1=CH 2=some RH	PCBs 1=expected 2=not expected	Asbestos 1=expected 2=not expected 3=unknown
2	1	131	ID-RFO-463	463	LEADED RUBBER GLOVES AND APRONS	This waste comes from the Rocky Flats Plant and consists of leaded rubber gloves and aprons. A limited amount of unleaded gloves, lead bricks, and lead sheeting may also be present. Content Code 463 was replaced by Content Code 339 in 1973. Waste is packaged in standard RFP fashion. Lead linings are present on some drums.	Rocky Flats Plant	2	2	2	3
2	1	52	ID-RFO-464	464	BENELEX AND PLEXIGLASS	This waste, generated at Rocky Flats Plant, consists of Benelex, which is used for neutron shielding, and Plexiglas glovebox windows. Lead sheeting (1/8 to 1/4 in. thick) may be attached to some benelex pieces. Benelex was usually coated with fire-retardant paint. In addition to Plexiglas, other types of glass such as leaded-glass may be present in the waste. The waste may include limited amounts of surgeons' gloves, metal hinges on Benelex gloveport doors, pieces of angle iron attached to larger pieces of Benelex, and rubber gaskets from glovebox windows. Content code 302 replaced content code 464 during 1973. The majority of waste drums will contain pieces of benelex (gloveport doors, etc.) generated from routine maintenance and renovation projects conducted primarily in 1972. Plexiglas and other types of glass may be found mixed in with the benelex and/or segregated and contained in a limited number of waste drums. Pieces of benelex waste were usually placed directly into prepared 55-gallon drums. Any contaminated Benelex was usually contained in plastic bags or wrapped in plastic sheeting. Plexiglas windows were usually contained in plastic before being placed in a prepared 55-gallon drum. Oil dri may have been added to the waste drums. The waste boxes were generated during 1973 and 1974 and are believed to contain larger pieces of benelex shielding on angle iron frames that were removed during final fire cleanup operations in building 776. It is believed that the benelex came from the south foundry line in building 776, which was not directly involved in the 1969 fire and was decontaminated and placed back in operation.	Rocky Flats Plant	2	1	2	3
2	1	144	ID-RFO-480	480	NONSPECIAL SOURCE METAL	The waste comes from the Rocky Flats Plant and consists of nonline-and line-generated wastes. The waste may be in the form of gloveboxes, glovebox windows, furnaces, lathes, drill presses, ducting, piping, angle iron, tanks, downdraft tables, part carriers, respirator filters, ultrasonic cleaners, control panels, electronic instrumentation , vacuum sweepers, pumps, motors, railing, stairs, metal racks and trays, hotplates, empty metal produce, and paint cans, carts, power tools (saws, drills, etc.), hand tools (wrenches, hammers, saws, chisels, gauges, etc.), chairs, desks, tables, typewriters, filing cabinets, crushed 55-gallon drums, etc. The waste may also include limited amounts of combustible wastes. The waste is packaged in standard RFP fashion. Sharp metal edges are taped before packaging. Some lead-lined containers are included.	Rocky Flats Plant	3	2	2	3
2	1	145	ID-RFO-481	481	LEACHED NONSPECIAL SOURCE METAL	This waste comes from the Rocky Flats Plant and consists of the smaller pieces of the waste described under Content Code 480 that have been washed with hot water to recover plutonium. The waste is packaged in standard RFP fashion. Sharp metal edges are taped before packaging. Some lead-lined containers are included.	Rocky Flats Plant	3	2	2	3
2	1	109	ID-RFO-490	490	CHEMICAL WARFARE SERVICE FILTERS	This waste stream, generated at the Rocky Flats Plant, consists primarily of whole HEPA filters, absolute filters, CWS (chemical warfare service) filters, and prefilters. The filter frames are usually wood, but a limited number are aluminum. The filter media is asbestos-type and fiberglass-type (nomex). There is a lack of information about the particulate on the filter media. Although there may be some organic material, it should be less than 14 lb/ft3 for drums and 6 lb/ft3 for boxes. Significant amounts of respirable fines may be present. No sludges or free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in the waste, except for some residual amounts of nitric acid. The waste is contained in drums and boxes. Drums should be similar to Content Code 335 drums. Each filter was generally double-contained in either PE or PVC bags and then placed in prepared drums. Each drum was assayed. Drums of Content Code 490 waste have not been shipped to INEL since 1975. Boxes contain filters which are single or double-contained in plastic bags, along with their original cardboard shipping boxes. In boxes prepared after 1974, the boxes are flattened and the filters are crushed. About 12 uncrushed or 25-30 crushed HEPA filters will fit into a box. Portland cement and Oil-Dri were typically added to any containers which contained damp filters. Drums and boxes were prepared and packed according to the usual pre-1972 and post 1972 procedures. Each drum was assayed. Each box was surveyed using the cumulative assay value of the individual filters, determined from drum assays. One box which was shipped in 1972 is apparently mislabeled and is believed to contain metal waste.	Rocky Flats Plant	2	1	2	1

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2	1	78	ID-RFO-900	900	LOW SPECIFIC ACTIVITY PLASTICS, PAPER, E	This waste stream is from the Rocky Flats Plant and primarily consists of nonline-generated combustible materials such as plastics, paper, empty PE bottles, booties, paper, plastic sheeting, and surgical gloves. The waste may be dry or damp. Limited amounts of noncombustibles may also be present. The waste stream is the same as Content Code 330 and has not been used since 1974 except for 3 barrels of U-238 contaminated wastes added in 1975. The waste stream is not discussed together with Content Code 330 because of some different descriptive information in the data base. The waste is mostly low specific activity (LSA, <100 nci/g) . The average waste organic material content usually exceeds 14 lb/ft3 for drums and 6 lb/ft3 for boxes. There should be no sludges, free liquids, explosives, compressed gases, pyrophoric, toxic, or corrosive materials. Depending on when and where the waste was generated at Rocky Flats, the waste packaging may vary. Most wastes were placed directly into prepared 55-gallon drums or boxes. Up to 15 lb of portland cement was added where necessary to absorb small amounts of free liquids in containers. Drums and boxes were prepared according to pre and post-1972 procedures. Inspections were done and adsorbents (Oil-Dri and vermiculite) were added according to standard procedures. All drums are assayed. The fissile content of boxes is determined by surveying the contents and calculating the quantity of fissile material.	Rocky Flats Plant	1	1	2	3
2	1	161	ID-RFO-950	950	LOW SPECIFIC ACTIVITY METAL, GLASS, ETC.	This waste stream, generated at Rocky Flats Plant, contains primarily nonline generated noncombustible wastes from maintenance and renovation. Items in this waste include electrical conduit, water and steam pipes, tools, control panels, electronic instrumentation, light bulbs, windows, office equipment (typewriters, chairs, desks, filing cabinets, etc.), lead shielding, and structural metal. Limited amounts of combustible wastes such as paper, rags, etc. are also included. Most of this waste is contaminated with less that 100 nci/g TRU. The organic content is less than 14 lb/ft3 for drums and less than 6 lb/ft3 for boxes. Fines should not be present in excessive amounts. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. This waste stream is packaged in drums and in boxes. Depending on size and contamination levels of individual items, the waste is single or double contained in plastics or placed directly into prepared waste drums or boxes. Drums and boxes were prepared according to standard pre and post-1972 procedures. Oil-Dri absorbent is added to many of the containers. Each drum is assayed. Boxes are surveyed for the calculation of fissile contents.	Rocky Flats Plant	2	1	2	3
2	1	79	ID-RFO-970	970	WOOD	This waste stream is from the Rocky Flats Plant and primarily consists of wood in the form of lumber, plywood, filter frames, and possibly ladders. Somer other items such as plastic sheeting, Kimwipes, and other combustibles are also present. Plastic sheeting may have some paint coatings. Limited noncombustibles such as nails and sheetrock may also be included. Content Code 970 has not been used since 1978; it is similar to Content Code 330. The average waste organic material content usually exceeds 6 lb/ft3 for boxes and 14 lb/ft3 for drums. Limited sawdust fines are expected. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric or corrosive materials. Depending on when and where the waste was generated at Rocky Flats, the waste packaging may vary. Most wastes were placed directly into prepared boxes. Wastes such as filter frames were flattened, double-bagged, and placed in prepared 55-gallon drums. Drums and boxes were prepared according to pre-and post-1972 procedures. Inspections were done and adsorbents (Oil-Dri and vemiculite) were added according to standard procedures. All drums are assayed. The fissile content of boxes is determined by surveying the contents and calculating the quantity of fissile material.	Rocky Flats Plant	1	1	2	3
2	1	61	ID-RFO-976	976	BLDG 776 PROCESS SLUDGE	This waste is from Rocky Flats. The waste consists of sludge from floor drains in a Pu process facility that have been cemented in portland. The cement is described as a poor grade. Also, may be laundry sludges, material contents given are for an organic laundry sludge.	Rocky Flats Plant	3	1	2	2
2	1	62	ID-RFO-978	978	LAUNDRY SLUDGE	This waste is from Rocky Flats. The waste consists of sludge from laundry operations that have been cemented in portland. The cement is described as a poor grade.	Rocky Flats Plant	3	1	2	3

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2	1	193	ID-RFO-990	990	DIRT	This waste stream, generated at the Rocky Flats Plant, contains dry dirt and soil generated from cleanup of spills, leaks, etc. It may also include evaporator pond sludge. A limited amount of the waste may be damp. A limited amount may contain combustibles such as coveralls and gloves. Dirt is packaged in standard RFP drums. Sometimes the dirt is bagged before being placed in the drum. Information given is the same as IDC 090.	Rocky Flats Plant	3	1	2	3
2	1	294	ID-RFO-9999	9999	PRE-73 DRUMS	This is not an official Item Description Code (IDC). It was created to represent IDC zero (0) wastes which were generated prior to 1973, but were not adequately tracked to presently identify specific waste streams. As the mission of Rocky Flats changed very little during the years of operation, it is expected that waste streams generated after 1973 are similar to the pre-1973 waste streams.	Mostly Rocky Flats Plant	2	2	2	3
2	1	240	ID-TAN-162	*	TAN DECON SOLVENT WASTES	Decontamination and decommissioning of a decontamination facility. Waste stream generated in four dip tanks that drained into a common sump. [Note high alpha-activity on containers in storage.]	Idaho National Engineering Laboratory	3	1	2	2
2	1	241	ID-TAN-163	*	TAN DECON HEAVY METAL SOLIDS AND DEBRIS	This waste stream is dry solids (appears as sand) water rinsed from contaminated materials. The waste is from decontamination and decommissioning of a decontamination facility. High alpha content.	Idaho National Engineering Laboratory	3	1	2	2
2	1	779	LB-W011	*	ACIDIC AQUEOUS SOLUTIONS/SOLIDS w/METALS	Blocks and sheets of lead contaminated with radioactive isotopes. Material used as shielding in accelerators or near radioactive sources. No storage information (volume, mass) is available for this waste stream as of this report date.	LBL		1	2	2
2	1	774	LB-W012	*	BASIC SOLIDS w/METALS - HIGH ALPHA	Lab packed solutions and solids with metals and radionuclides. Alpha contamination greater than 10 nCi/g but less than or equal to 100 nCi/g. No storage information (volume, mass) is available for this waste stream as of this report date.	LBL	1	1	2	2
2	1	780	LB-W014	*	LIQUIDS/SOLIDS CONTAINING SOLVENTS & OIL	Labpacks with contaminated acid solutions, bases, oils, solvents, cyanides, asbestos, or PCBs. Some contaminants are non-RCRA. The waste in this stream have not undergone sufficient initial characterization to enable assignment to one of the other LBL streams. As characterization continues, the waste in this stream will be assigned to another LBL stream. No storage information (volume, mass) is available for this waste stream as of this report date.	LBL		1	3	3
2	1	781	LB-W017	*	ORGANIC SCINTILLATION FLUIDS	No storage information (volume, mass) is available for this waste stream as of this report date.			1		
2	1	782	LB-W018	*	AQUEOUS/SOLID OXIDIZERS	No storage information (volume, mass) is available for this waste stream as of this report date.			1		
2	1	783	LB-W019	*	DEBRIS CONTAMINATED w/ ORGANIC VOLATILES	No storage information (volume, mass) is available for this waste stream as of this report date.			1		

End of waste category 2 mixed waste 1

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Mixed Waste = 2											
2	2	764	CH-ANL-RDA	*	ANLW ALPHA LOW LEVEL WASTE	Alpha Low-level radioactive waste being stored at ANL-W storage facilities.			1		
2	2	207	ID-INL-153N	153	COMBUSTIBLE LAB WASTE	This waste stream was generated at the Argonne National Laboratory-West at the INEL. Most of the waste is organic and combustible materials including paper, wood, PVC and plastic containers and items, rubber gaskets and gloves, leather, rags, towels, Q-tips, tubing, filter media, abrasive media, and metal pieces. Small residuals of moderators and fuel are trapped on the filters. One of the 28 total drums of content code 153 waste is stored at the Transuranic Storage Area (TSA) for contact-handled waste. The other 27 drums are stored at the Intermediate Level Transuranic Storage Facility (ILTSF) for remote handled waste. The organic content may exceed 14 lb/ft3. Combustibles, including packaging, may exceed 25 volume percent. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Individual waste items may be loose or plastic bagged. Combustibles and noncombustibles are segregated to separate waste cans. Each can is weighed and assayed. The inner waste cans are loaded into an outer waste drum, along with a lead shield plug. Assays are done for each can and for the drums. Waste stream is non-mixed, because lead is used for shielding only and not considered a part of the waste stream.	Idaho National engineering Laboratory	1	2	2	3
2	2	162	ID-MDO-825N	825	NONCOMBUSTIBLE EQUIPMENT DRUMS	This waste stream, generated at Mound Laboratory, is similar to content code 824 except that the waste items are smaller and can fit inside drums. The stream consists of noncombustible wastes such as small tanks, piping, small valves, tools, hot plates, presses, grinders, metallurgical polishers, ringstands, concrete, floor tile, sheet metal, electric motors, pumps, metallurgical presses, dissolvers, ladders, vacuum sweeper filters, sweeper hose, and glass. Limited amounts of combustible wastes such as plastic tanks are also included. The organic content is less than 14 lb/ft3. Respirable fines should be within limits. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. Some emptied cylinders and fire extinguishers with opened valves are included in the waste. The waste stream is packaged in drums except for one standard sized box, which should be correctly labeled content code 824. Some items are wiped down prior to packaging. Each item is generally single or double contained in plastic. Florco absorbent is added to the bottom of each drum. Plywood spacers are added between the drum liner and the drum lid. Each barrel is assayed.	Mound Laboratory	2	1	2	3
2	2	36	ID-RFO-095N	95	SLUDGE	This waste stream, generated at the Rocky Flats Plant, is sewage sludge from cleaning stabilization ponds. The sludge may be moist or dry, and may consist of fines, chunks or pieces of dried cake. Shipment of sewer sludge to the INEL stopped in 1976. The waste contains high levels of fines. In addition the drums may contain free liquids. The sewage sludge should contain less than 10 nCi/g TRU elements. Organic content in the sludge is not known. No free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in the waste. Sewer sludge was placed directly into prepared 55-gallon drums until 1974. Drums were prepared according to pre and post-1972 procedures. Portland cement was added to the bottom and top of the inner bag. If the sludge was moist, portland cement was also added in layers with the sludge. Since 1974, packaging was changed to 4 x 4 x 7 ft fiberglass-reinforced polyester (FRP) coated plywood boxes due to the pressure buildup in the drums. Each box was lined with a PE bag and a cardboard liner. About 90 lb of portland cement was added to the bottom and top of each box. Fissile content of the sewage was determined by radiochemical analysis of sludge samples.	Rocky Flats Plant	3	1	2	2
2	2	173	ID-RFO-115N	115	GRAPHITE WASTE	Graphite waste consists of discarded graphite molds, laboratory equipment and furnace equipment (whole pieces) from plutonium casting of laboratory operations. The content codes certifiably packaged and included in 115 are 300, 302, and 312.	Rocky Flats Plant	3	1	2	3

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2	2	174	ID-RFO-310N	310	GRAPHITE SCARFINGS	This waste stream was generated at the Rocky Flats Plant. Graphite scarfings are the pieces of graphite waste generated from scarfing or scraping graphite molds to remove adhered plutonium. The scarfings were not leached with nitric acid to recover plutonium, because the plutonium content was not at above-discard levels. Scarfings which had above-discard plutonium levels were leached and then identified as content code 311. This waste contains excessive fines. This waste is almost entirely carbon powder and granules. The waste should be inert in storage, but it is essentially 100% combustible. The waste is packaged with no free liquids, sludges, explosives, compressed gases, pyrophoric or corrosive materials. Scarfings are collected into 1-gallon PE bottles. Each bottle is sealed inside PVC and PE bags, and then assayed. About 15-20 bottles will fit into a drum. Drums were packed according to the usual pre-1972 and post 1972 procedures. Since 1972, the drums were also processed according to inspection and sealing procedures, and, since 1982, vermiculite instead of Oil-dri was placed on top of the outer sealed PE drum bag.	Rocky Flats Plant	3	1	2	3
2	2	175	ID-RFO-370N	370	CRUCIBLE, LECO	This waste stream includes blank Leco crucibles and caps used for sample analysis. The crucibles are 1 inch high by 1 inch diameter, made of fired silica based ceramic. The crucibles were used to calibrate the Leco anlayzer, and contain fused amounts of accelerating metals (iron, tin, copper, titanium, stainless steel, etc.) used for blank calibration. The crucibles should be unbroken except for those generated prior to 1975, which were broken before packaging. When broken, there should be minimal respirable or dispersable fines . The waste stream handling and packaging is as follows: blank crucibles and caps were placed into 1-gallon metal paint cans, about 150-200 per can. The can lid was placed and sealed with tape. each paint can was double-bagged out the glovebox in PVC or PE-PVC bags and placed in prepared 55-gallon drums, about 20-25 cans per drum. Prior to 1972, 90-mil sealed rigid liners were used in addition to the two PE bags. Since 1972, drums were inspected (and corrected where needed) for free liquids, proper packaging, and proper content code. One to two quarts of Oil-dri was placed on the outer sealed PE drum bag. Starting in February 1982, 3-12 lb of vermiculite was used to fill the space between the outer drum bag and the rigid liner.	Rocky Flats Plant	3	1	2	3
2	2	189	ID-RFO-372N	372	GRIT	This waste stream, generated at the Rocky Flats Plant, consists of grit such as aluminum oxide and iron fines and pellets used in grit-blasting operations and spent silica gel desiccant. The waste has the potential of excessive fines. The only organic material is the packaging, which averages about 5 lb/ft3, excluding the drum liner. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. The material is contained in 55-gallon drums. Inside the drums, the grit may be contained in PVC or PE bags in Vollrath stainless steel cans or in 1-gallon PE bottles inside PVC and PE bags. Silica gel is placed directly into the prepared drums. Drums were prepared and inspected according to pre- and post-1972 procedures.	Rocky Flats Plant	3	1	2	3
2	2	194	ID-RFO-425N	425	FLUID BED ASH	This waste , generated at the Rocky Flats Plant,consists of ash generatd from the experimental pilot and demonstration fluid bed incinerator plants. Combustibles used for experiments were contaminated with low levels of Pu. Ash is packaged in standard RFP drums. Drums were assayed and fissile quantities calculated.	Rocky Flats Plant	3	1	2	2
2	2	96	ID-RFO-960N	960	CONCRETE, ASPHALT, ETC.	This waste, generated at the Rocky Flats Plant, is primarily concrete and asphalt with limited amounts of dirt and combustibles. The code was replaced by 374 in 1973. Content code 374 is considered under the soils, asphalt, and sands waste stream. The major source for this waste is concrete from removal of six reinforced-concrete aqueous treatment tanks. Other sources include concrete from cutouts for doorways, and asphalt from a spill. Information about the waste is not complete. The waste is packaged in standard RFP drums and boxes.	Rocky Flats Plant	3	1	2	3

Table 1. INEL alpha low level mixed and non-mixed waste identification and description information.

Waste Category 2=ALLW	Mixed Waste 1=mixed 2= non-mixed	Key Code	Wastestream Identifier Code	Content Code	Waste Stream Name	Description	Generator Site	Combustibility 1=>90% 2=10-90% 3=<10%	Rad Level 1=CH 2=some RH	PCBs 1=expected 2=not expected	Asbestos 1=expected 2=not expected 3=unknown
2	2	37	ID-RFO-995N	995	SLUDGE	This waste stream, generated at the Rocky Flats Plant, is sewage sludge from cleaning stabilization ponds. This waste also contains a limited number of drums containing sludge generated by plutonium recovery operations. The sludge may be moist or dry, and may consist of fines, chunks or pieces of dried cake. Shipment of sewer sludge to the INEL stopped in 1976. The waste contains high levels of fines. The drums contain free liquids. The sewage sludge should contain less than 10 nCi/g TRU elements. Organic content in the sludge is not known. No free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in the waste. Sewer sludge was placed directly into prepared 55-gallon drums until 1974. Drums were prepared according to pre and post-1972 procedures. Portland cement was added to the bottom and top of the inner bag. If the sludge was moist, portland cement was also added in layers with the sludge. Since 1974, packaging was changed to 4 x 4 x 7 ft fiberglass-reinforced polyester (FRP) coated plywood boxes due to the pressure buildup in the drums. Each box was lined with a PE bag and a cardboard liner. About 90 lb of portland cement was added to the bottom and top of each box. Fissile content of the sewage was determined by radiochemical analysis of sludge samples.	Rocky Flats Plant	3	1	2	2
2	2	208	ID-TRA-154N	154	SAMPLE FUEL	This waste stream was generated at the INEL. These wastes include actinide neutron sources, a radium needle, small vials of fuel, and metal containers of experimental fuel capsules. The organic content is less than 14 lb/ft3. Combustibles, including packaging, may exceed 25 volume percent. No sludges or free liquids should be present. No explosive or pyrophoric materials should be in this waste. These wastes are packaged three different ways, depending on when the packaging was done. Pu-Be sources packaged in 1975 were placed in a carbon steel pipe, which was cemented and encapsulated into the center of a 55-gallon drum. In 1978, Pu-Be sources were packaged in four 55-gallon drums. Wastes packed in 1980 were wrapped plastic, placed in paraffin lined 15-gallon drums, and then placed in 55-gallon drums.		2	2	2	

End of waste category 2 mixed waste 2