

INSTRUCTIONS FOR PREPARING OCCUPATIONAL EXPOSURE DATA FOR SUBMITTAL TO THE RADIATION EXPOSURE MONITORING SYSTEM (REMS) REPOSITORY

1. TRANSMITTAL LETTER

A transmittal letter containing the following information at a minimum will accompany each submittal to the REMS repository.

- Data filename.
- Operating system used to create the data file.
- Contact name and phone number of individual knowledgeable about the submittal.
- The number of records included in the submittal.
- The collective total effective dose (TED) for individuals included in the submittal.
- Other instructions that may be useful in processing the submittal.
- Signature and date of the organization's authorized representative.
- Description of the activities conducted at the facility during the monitoring year as it relates to the collective radiation exposure received. The text should include, at a minimum, a general explanation of increases or decreases in the annual collective TED, ED, and CED, a description of events concerning any TED in excess of 2 rems (20 mSv) or a dose in excess of any of the limits in 10 CFR 835 Subpart C including references to any Occurrence Reports related to the exposure, and any other unusual events or operational changes related to occupational radiation exposure at the facilities included in the submittal.

The exposure data file is to be error checked using the latest version of the REMSView program provided by the REMS repository and all reported errors resolved prior to transmitting the file to REMS. REMSView may be obtained from the DOE REMS Project Manager, or online at <http://www.hss.energy.gov/csa/analysis/remis/>

2. MEDIA REQUIREMENTS.

Data will be submitted to REMS via electronic media. Since the REMS data submittal contains Personally Identifiable Information (PII), the information requires protection against unauthorized access under the Privacy Act of 1974 (as amended) and DOE CIO Guidance CS-38A. Specific instructions for submitting the data file to REMS is provided on the REMS web site.

Other methods of electronic submittal may be acceptable, but must be approved by the DOE REMS Project Manager prior to submission. The data file may be compressed on the electronic media as long as instructions and required software needed to extract the data file are provided.

a. File Structure.

Each data record is to be of a fixed length. Extra spaces in the field should be padded with blanks. Do not use nulls (ASCII character 0), or tabs, or any other non-printable characters in any record. Terminate each record with a carriage return and line feed. Responses are required to all fields unless otherwise noted.

3. INSTRUCTIONS FOR PREPARING ELECTRONIC OCCUPATIONAL EXPOSURE DATA SUBMITTALS. Individual exposure data records required to be reported to the Radiation Records Repository will be formatted as shown in Table G-1.

Table G-1. Electronic Data Submittals.

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|---|--------------------|----------------------|------------|--------------|--|
| 1 | Monitoring Year | 2011 | 4 | 1-4 | Enter the year for which the monitoring results are being submitted. The monitoring year, as defined in 10 CFR 835.2 may differ slightly from the calendar year due to dosimetry processing schedules. |
| 2 | Organization Code | 1234567 | 7 | 5-11 | 7-digit organization code, available from the repository. Whenever possible, the appropriate CAIRS organization code should be used. |
| 3 | Facility Code | LAB #12 | 15 | 12-26 | The code representing the facility where the dose was received for the personnel exposure records. Organizations may determine the Facility Code using printable ASCII characters of 15 characters or less. The Facility Code assigned should remain consistent from year to year. |
| 4 | Facility Type Code | 61 | 2 | 27-28 | See Facility Type codes, Table G-4 |
| 5 | Phase of Operation | C | 1 | 29 | See Phase of Operation codes, Table G-5 |
| 6 | ID Number | 123456789 | 15 | 30-44 | The identification number for this individual. |

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| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|---------------------------------|----------------------|------------|--------------|--|
| 7 | ID Type | SSN | 3 | 45–47 | The type of identification number used to identify the individual. See ID Type codes Table G-6. |
| 8 | First Name | Mary | 30 | 48–77 | Legal first name or initial |
| 9 | Middle Name | Q | 20 | 78–97 | Middle name or initial |
| 10 | Last Name | Public | 30 | 98–127 | Last name including title |
| 11 | Birth Date | 19760101 | 8 | 128–135 | Date of birth of individual (YYYYMMDD) |
| 12 | Sex | F | 1 | 136 | Sex of the monitored individuals |
| 13 | Occupation Code | 184 | 3 | 137–139 | See Occupation Codes, Tables G-7 |
| 14 | Monitoring Status | E | 1 | 140 | E General Employee, employee of the reporting organization, visiting researcher, or student P Member of the Public, including visiting dignitaries G Special Individuals as defined in Chapter III, paragraph 1b(1) |
| 15 | Exposure Type | R | 1 | 141 | R Routine P PSE, Planned Special Exposure E Emergency, exposure that occurred during an emergency when emergency dose limits and procedures were in effect |
| 16 | Monitoring Start Date | 20110101 | 8 | 142–149 | Date monitoring began for the reporting year (YYYYMMDD) |
| 17 | Monitoring End Date | 20111231 | 8 | 150–157 | Date monitoring ended for the reporting year (YYYYMMDD) |
| 18 | Effective Dose (ED) | 120 | 7 | 158–164 | The effective dose at 1.0 cm depth from external radiation sources, including neutron radiation in millirem. monitoring should be conducted in accordance with the guidance provided in the external dosimetry chapter of DOE G 441.1-1C <i>Implementation Guide for Use with Title 10, CFR, Part 835, Occupational Radiation Protection</i> , dated 2008. If monitoring is not provided, the field should be blank (padded with spaces). Enter NM as the associated measurement code. |
| 19 | Effective Dose Measurement Code | MV | 2 | 165–166 | Measurement code for the dose value. See Measurement Codes, Table G-8. |

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|--|-----------------------------|------------|--------------|--|
| 20 | Effective Dose from Neutron (ED - neutron) | 20 | 7 | 167–173 | The effective dose at 1.0 cm depth from neutron radiation in millirem. monitoring should be conducted in accordance with the guidance provided in the external dosimetry chapter of DOE G 441.1-1C <i>Implementation Guide for Use with Title 10, CFR, Part 835, Occupational Radiation Protection</i> , dated 2008. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. |
| 21 | Neutron Dose Measurement Code | MV | 2 | 174–175 | Measurement code for the neutron dose value. See Measurement Codes, Table G-8. |
| 22 | Equivalent Dose to the Lens of the Eye (EqD – Eye) | (blank, padded with spaces) | 7 | 176–182 | Equivalent Dose to the lens of the eye at a tissue depth of 0.3 cm in millirem, including the whole body dose from neutron radiation in millirem. monitoring should be conducted in accordance with the guidance provided in DOE G 441.1-1C. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. |
| 23 | Lens of the eye Dose Measurement Code | NM | 2 | 183–184 | Measurement code for the eye dose value. See Measurement Codes, Table G-8. |
| 24 | External Equivalent Dose to the skin of the Whole Body (EqD - SkWB) ¹ | 120 | 7 | 185–191 | Equivalent Dose from external radiation at a depth of 0.007 cm to the skin of the whole body, including the neutron dose in millirem. monitoring should be conducted in accordance with the guidance provided in DOE G 441.1-1C. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. This includes assessment of skin dose from non-uniform exposure of the skin required by 10 CFR 835.205(b). Per 10 CFR 835.702(b), recording of non-uniform equivalent dose is not required if the dose is less than 1 rem. |
| 25 | Skin Dose (WB) Measurement Code | MV | 2 | 192–193 | Measurement code for the skin dose (WB) value. See Measurement Codes, Table G-8. |

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|---|-----------------------------|------------|--------------|--|
| 26 | External Equivalent Dose to the Skin, Upper Right Extremity (EqD - UR) ¹ | 120 | 7 | 194–200 | Equivalent Dose from external radiation at a depth of 0.007 cm to the upper right extremity (e.g., right hand), including the neutron dose in millirem. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. This includes assessment of skin dose from non-uniform exposure of the skin required by 10 CFR 835.205(b). Per 10 CFR 835.702(b), recording of non-uniform equivalent dose is not required if the dose is less than 1 rem. |
| 27 | Skin - UR Measurement Code | MV | 2 | 201–202 | Measurement code for the Skin - UR value. See Measurement Codes, Table G-8. |
| 28 | External Equivalent Dose to the Skin, Upper Left Extremity (EqD - UL) ¹ | 150 | 7 | 203–209 | Equivalent Dose from external radiation at a depth of 0.007 cm to the upper left extremity (e.g., left hand), including the neutron dose in millirem. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. This includes assessment of skin dose from non-uniform exposure of the skin required by 10 CFR 835.205(b). Per 10 CFR 835.702(b), recording of non-uniform equivalent dose is not required if the dose is less than 1 rem. |
| 29 | Skin - UL Measurement Code | MV | 2 | 210–211 | Measurement code for the skin - UL value. See Measurement Codes, Table G-8. |
| 30 | External Equivalent Dose to the Skin, Lower Right Extremity (EqD - LR) ¹ | (blank, padded with spaces) | 7 | 212–218 | Equivalent Dose from external radiation at a depth of 0.007 cm to the lower right extremity (i.e., right foot, ankle, or lower leg), including the neutron dose in millirem. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. This includes assessment of skin dose from non-uniform exposure of the skin required by 10 CFR 835.205(b). Per 10 CFR 835.702(b), recording of non-uniform equivalent dose is not required if the dose is less than 1 rem. |

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|--|-----------------------------|------------|--------------|--|
| 31 | Skin - LR Measurement Code | NM | 2 | 219–220 | Measurement code for the skin - LR value. See Measurement Codes, Table G-8. |
| 32 | External Equivalent Dose to the Skin, Lower Left Extremity (EqD - LL) ¹ | (blank, padded with spaces) | 7 | 221–227 | Equivalent Dose from external radiation at a depth of 0.007 cm to the lower left extremity (i.e., left foot, ankle, or lower leg), including the neutron dose in millirem. If monitoring is not provided, the field should be blank (padded with spaces) and 'NM' should be entered as the associated measurement code. This includes assessment of skin dose from non-uniform exposure of the skin required by 10 CFR 835.205(b). Per 10 CFR 835.702(b), recording of non-uniform equivalent dose is not required if the dose is less than 1 rem. |
| 33 | Skin - LL Measurement Code | NM | 2 | 228–229 | Measurement code for the skin - LL value. See Measurement Codes, Table G-8. |
| 34 | Committed Effective Dose (CED) | 241 | 7 | 230–236 | The 50-year CED from intakes during the monitoring period in millirem. |
| 35 | CED Measurement Code | MV | 2 | 237–238 | Measurement code for the CED value. See Measurement Codes, Table G-8 |
| 36 | Radionuclide 1 | PU238 | 7 | 239–245 | The scientific abbreviation of the radionuclide taken into the body that contributed to the internal dose. Use the standard scientific format of "Xx999x", where "X" represents an alphanumeric and "9" represents a numeric character. List only the six highest contributors among the following fields. Enter only one radionuclide per field. Do not include daughter products. When possible, list the radionuclides in descending order of their contribution to the internal dose. |
| 37 | Radionuclide 2 | (blank padded with spaces) | 7 | 246–252 | The scientific abbreviation of the second radionuclide taken into the body. |
| 38 | Radionuclide 3 | (blank padded with spaces) | 7 | 253–259 | The scientific abbreviation of the third radionuclide taken into the body. |
| 39 | Radionuclide 4 | (blank padded with spaces) | 7 | 260–266 | The scientific abbreviation of the fourth radionuclide taken into the body. |
| 40 | Radionuclide 5 | (blank padded with spaces) | 7 | 267–273 | The scientific abbreviation of the fifth radionuclide taken into the body. |

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|---|----------------------------|------------|--------------|--|
| 41 | Radionuclide 6 | (blank padded with spaces) | 7 | 274–280 | The scientific abbreviation of the sixth radionuclide taken into the body. |
| 42 | Committed Equivalent Dose to the gonads(CEqD - GO) | 97 | 7 | 281–287 | The 50-year Committed Equivalent Dose to the gonads from the intake of the radionuclides for this monitoring period, in millirem. |
| 43 | Committed Equivalent Dose to the breasts(CEqD - BR) | 13 | 7 | 288–294 | The 50-year Committed Equivalent Dose to the breasts from the intake of the radionuclides for this monitoring period, in millirem. |
| 44 | Committed Equivalent Dose to the red bone marrow(CEqD - BM) | 359 | 7 | 295–301 | The 50-year Committed Equivalent Dose to the red bone marrow from the intake of the radionuclides for this monitoring period, in millirem. |
| 45 | Committed Equivalent Dose to the lungs(CEqD - LU) | 189 | 7 | 302–308 | The 50-year Committed Equivalent Dose to the lungs from the intake of the radionuclides for this monitoring period, in millirem. |
| 46 | Committed Equivalent Dose to the thyroid(CEqD - TH) | 13 | 7 | 309–315 | The 50-year Committed Equivalent Dose to the thyroid from the intake of the radionuclides for this monitoring period, in millirem. |
| 47 | Committed Equivalent Dose to the bone surface(CEqD - BS) | 7260 | 7 | 316–322 | The 50-year Committed Equivalent Dose to the bone surface from the intake of the radionuclides for this monitoring period, in millirem. |
| 48 | Committed Equivalent Dose to the colon (CEqD - CO) | 13 | 7 | 323-329 | The 50-year Committed Equivalent Dose to the colon from the intake of the radionuclides for this monitoring period, in millirem. |
| 49 | Committed Equivalent Dose to the stomach (CEqD - ST) | 13 | 7 | 330-336 | The 50-year Committed Equivalent Dose to the stomach from the intake of the radionuclides for this monitoring period, in millirem. |
| 50 | Committed Equivalent Dose to the bladder (CEqD - BL) | 13 | 7 | 337-343 | The 50-year Committed Equivalent Dose to the bladder from the intake of the radionuclides for this monitoring period, in millirem. |
| 51 | Committed Equivalent Dose to the liver (CEqD - LV) | 1530 | 7 | 344-350 | The 50-year Committed Equivalent Dose to the liver from the intake of the radionuclides for this monitoring period, in millirem. |

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|--|--|------------|--------------|--|
| 52 | Committed Equivalent Dose to the esophagus (CEqD - ES) | 13 | 7 | 351-357 | The 50-year Committed Equivalent Dose to the esophagus from the intake of the radionuclides for this monitoring period, in millirem. |
| 53 | Committed Equivalent Dose to the skin (CEqD - SK) | 13 | 7 | 358-364 | The 50-year Committed Equivalent Dose to the skin from the intake of the radionuclides for this monitoring period, in millirem. |
| 54 | Committed Equivalent Dose to the remainder (CEqD - RE) | 1608 | 7 | 365-371 | The 50-year Committed Equivalent Dose to the remainder from the intake of the radionuclides for this monitoring period, in millirem. |
| 55 | Total Effective Dose (TED) | 361 | 7 | 372-378 | The sum of the Effective Dose and the Committed Effective Dose in millirem. |
| 56 | Total Organ Dose (TOD) | 7380 | 7 | 379-385 | The sum of the Effective Dose and the Committed Equivalent Dose to the maximally exposed organ in millirem. |
| 57 | Equivalent Dose to the Embryo/Fetus (EqD - Fetus) | (blank padded with spaces) | 7 | 386-392 | Equivalent Dose to the embryo/ fetus during the pregnancy from conception to the end of the pregnancy, in millirem. Dose determination should be made in accordance with DOE G 441.1-1C. |
| 58 | Comment Text | Further information for this dose record is contained in the Occurrence Report # | 140 | 393-532 | Text of the comment applicable to the dose record in the data file. Comments should be limited to information needed to assess the record, such as references to additional documentation concerning the record. If no comments are necessary, the record may be terminated with a carriage return and line feed at column 346 with one space entered for the comment. |

¹. Although not reported to REMs, compliance with the occupational dose limits specified in 10 CFR 835.202(a)(4) requires summation of the equivalent dose to the skin or to any extremity (i.e. data elements 24, 26, 28, 30 and 32) with the committed equivalent dose to the skin or to any extremity (i.e. data element 53). REMs will sum these data elements.

4. OCCUPATIONAL EXPOSURE DATA SUMMARY EXPLANATION.

Policies and procedures should be in place to ensure that duplicate monitoring results for an individual are not reported to the repository by more than one organization.

All equivalent doses will be in units of millirem, rounded to the nearest whole number and right justified within the appropriate field. If monitoring was not provided for a specific dose value, do not enter a value. Leave the field blank, padded with spaces, and enter NM in the corresponding measurement code field.

Occupational exposure monitoring should be provided in accordance with the guidance provided in the following DOE documents: DOE G 441.1-C.

Dose records for more than one facility are required only where radiation monitoring is performed and recorded for specific facilities. If only site-wide monitoring is provided, only one facility record code should be included in the submittal to represent the entire site. For individuals receiving dose at multiple facilities where the fraction of dose received at each facility code cannot be determined, the entire dose should be attributed to the facility where the majority of dose was received. If the facility where the majority of dose was received cannot be determined, the facility code where the individual spent the majority of the monitoring period should be used.

Comment records are required only if additional information is needed to assess the record.

Reporting of fetal exposure data is required for a declared pregnant worker. Fetal exposure data should be included in the submittal for the monitoring year that encompasses the pregnancy end date.

5. BIOASSAY AND INTAKE SUMMARY FILE EXPLANATION.

The following files must be submitted as separate ASCII files containing annual summary records for bioassay and intake information. These files should be submitted on the same media as the annual submittal as shown in Tables G-2 and G-3 respectively. The Bioassay Summary file should contain one record for each facility. The Intake Summary file should contain one record for each facility, radionuclide, and intake mode.

Bioassay Summary records are required to be reported when any individual participates in a bioassay program or in vivo monitoring during the monitoring year.

Intake Summary records are required to be reported when any individual has received a dose from intakes during the monitoring year. Monitoring results corresponding to doses not exceeding the thresholds listed in 10 CFR 835.702(b) need not be reported.

Table G-2. Bioassay Summary File.

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|----|-----------------|----------------------|------------|--------------|--|
| 1 | Facility Code | LAB #12 | 15 | 1–15 | The code representing the facility where the dose was received for the personnel exposure records. Organizations may determine the Facility Code using printable ASCII characters of 15 characters or less. The Facility Code assigned should remain consistent from year to year. |
| 2 | Monitoring Year | 2008 | 4 | 16–19 | Enter the year for which the monitoring records are being submitted. The monitoring year, as defined in 10 CFR 835.2 may differ slightly from the calendar year due to dosimetry processing schedules. |
| 3 | Total | 237 | 5 | 20–24 | Total number of individuals monitored in the bioassay program or in vivo monitoring during the year. |
| 4 | Routine | 233 | 5 | 25–29 | Number of routine bioassay performed during the year. |
| 5 | Special | 4 | 5 | 30–34 | Number of special bioassay or in vivo measurements performed during the year. |
| 6 | Urinalysis | 212 | 5 | 35–39 | Number of urine samples analyzed during the year. |
| 7 | Fecal | 32 | 5 | 40–44 | Number of fecal samples analyzed during the year. |
| 8 | In Vivo | 120 | 5 | 45–49 | Number of in vivo measurements performed excluding wound counts during the year. |
| 9 | Wound | 3 | 5 | 50–54 | Number of in vivo measurements performed on wounds during the year. |
| 10 | Other | 1 | 5 | 55–59 | Number of other measurements performed in order to determine internal dose for an individual during the year (e.g., air sampling or other method). |

Table G-3. Intake Summary File

| # | Data Element | Example Code or Data | Field Size | Column Range | Instructions |
|---|-----------------|----------------------|------------|--------------|---|
| 1 | Facility Code | LAB# 12 | 15 | 1–15 | The code representing the facility where the dose was received for the personnel exposure records. Organizations may determine the Facility Code using printable ASCII characters of 15 characters or less. The Facility Code assigned should remain consistent from year to year. |
| 2 | Monitoring Year | 2008 | 4 | 16–19 | Enter the year for which the monitoring results are being submitted. The Monitoring Year as defined in 10 CFR 835.2 may differ slightly from the calendar year due to dosimetry processing schedules. |
| 3 | Radionuclide | Pu238 | 7 | 20–26 | The scientific abbreviation of the radionuclide taken into the body. Use the standard scientific format of "Xx999x", where "X" represents an alphanumeric and "9" represents a numeric character. Enter only one radionuclide per record. Do not include daughter products or radionuclides that did not result in internal doses during the monitoring year. |
| 4 | Mode | W | 1 | 27 | Mode of the intake. H = Inhalation (record tritiated water intakes as inhalations.) G = Ingestion A = Absorption W = Wound, cut, puncture, injection or any other intake through broken skin. A separate record for each mode and radionuclide should be reported. |
| 5 | Collective CED | 3489 | 7 | 28–34 | The collective 50-years CED from intakes of this radionuclide and intake mode during the monitoring year, in millirem. |

6. FACILITY TYPE CODES.

The facility record should identify the facility type where the worker's doses were received. The facility type should reflect the original function of the facility even if activities in support of that function are no longer being conducted at the facility. Facility type codes are listed in Table G-4.

Tables G-4 through G-8 list codes used in filling out occupational exposure records.

Table G-4. Facility Type Codes.

| Facility Type Code | Facility Type Description |
|--------------------|-------------------------------------|
| 10 | Accelerator |
| 21 | Fuel/Uranium Enrichment |
| 22 | Fuel Fabrication |
| 23 | Fuel Processing |
| 40 | Maintenance and Support (site-wide) |
| 50 | Reactor |
| 61 | Research, General |
| 62 | Research, Fusion |
| 70 | Waste Processing/Management |
| 80 | Weapons Fabrication and Testing |
| 99 | Other |

7. FACILITY PHASE OF OPERATION CODES.

The phase of operation will be recorded for the calendar year for which the phase of operation is most appropriate. For facilities that transition between phases during a year, the phase that is appropriate for the majority of the calendar year should be recorded. Each DOE facility falls into one of the Phase of Operations shown in Table G-5. In general, each phase follows in sequential order, although a facility may forgo one or more phases or may not follow the order listed here.

Table G-5. Facility Phase of Operation Codes.

| Code | Phase of Operation | Definition |
|-------------|--|--|
| A | Construction (includes Major Renovation) | New facilities that are brought on line to replace or augment existing facilities. This phase includes major renovations for existing facilities but does not include environmental restoration construction. |
| B | Operations/Maintenance | Includes the normal, mission-related operations and maintenance of the reported Facility Type. |
| C | Stabilization | Facilities that have been declared to be surplus (assigned to the environmental restoration program). This includes facilities where all operations have been suspended but environmental restoration activities have not begun. This may include periods of surveillance and maintenance prior to environmental restoration activities. |
| D | Remediation | Period during which corrective actions that are necessary to bring the facility into regulatory compliance are being performed. |
| E | Decontamination and Decommissioning | Decontamination is the act of removing a chemical, biological, or radiological contaminant from, or neutralizing its potential effect on, a person, object, or environment by washing, chemical action, mechanical cleaning, or other techniques. Decommissioning is the process of closing and securing a facility. |
| F | Waste Management | This phase includes the management of wastes generated during the environmental restoration process. |
| G | Surveillance and Maintenance | This phase includes those activities that provide for the safety and protection of a facility after the environmental restoration phase. |
| Z | Other | All DOE facilities should fit into one of the above categories. "Other" should be used only in highly unusual circumstance. |

Table G-6. Identification Codes.

| ID Type Code | Identification Type Description |
|--|--|
| SSN | U.S. Social Security Number |
| PPN | Passport Number |
| CSI | Canadian Social Insurance Number |
| WPN | Work Permit Number |
| OTH | Other ¹ |
| ¹ Other identification numbers are unique identifiers assigned by the reporting organization when all other identification types are unavailable. The individual's SSN should be used whenever possible. The first 7 digits of an "other" identification number must be the organization code for the reporting organization. The remaining 8 digits of the ID number should be unique for each individual being submitted by the reporting organization. | |

Table G-7. Occupational Codes.

| DOE Code | DOE Occupational Categories | Cross-Reference SOC Code (ranges)¹ |
|-----------------|--|--|
| 001 | UNKNOWN | |
| 110 | MANAGERS AND ADMINISTRATORS | 11–14 |
| | PROFESSIONAL | 15–39 |
| 160 | Engineers | 16 |
| 170 | Scientists | 17–19 |
| 184 | Health Physicists | 1843 |
| 200 | Miscellaneous Professionals | 20-25, 32–34 |
| 260 | Doctors and Nurses | 26–30 |
| 350 | Technicians | 35–39 |
| 360 | Health Technicians | 36 |
| 370 | Engineering Technicians | 37 |
| 380 | Science Technicians | 38 |
| 383 | Radiation Monitors/Technicians | 383 |
| 390 | Miscellaneous Technicians | 39 |
| 400 | SALES | 40–44 |
| 450 | ADMINISTRATIVE SUPPORT AND CLERICAL | 45–47 |
| | SERVICE WORKERS | 50–52 |
| 512 | Firefighters | 512 |
| 513 | Protective Force | 513/4 |
| 521 | Food Service Employees | 521 |
| 524 | Janitors | 524 |
| 525 | Miscellaneous Service Employees | 523, 525/6 |
| | AGRICULTURAL WORKERS | 55–58 |
| 562 | Grounds keeper | 562 |
| 570 | Forest Workers | 57 |
| 580 | Miscellaneous Agricultural Workers | 55, 561, 58 |
| | REPAIR/CONSTRUCTION WORKERS | 60–65 |
| 610 | Mechanics/Repairers | 60–61 |
| 641 | Masons | 641 |
| 642 | Carpenters | 642 |
| 643 | Electricians | 643 |
| 644 | Painters | 644 |

| DOE Code | DOE Occupational Categories | Cross-Reference SOC Code (ranges)¹ |
|-----------------|--|--|
| 645 | Pipe Fitters | 645 |
| 650 | Miners/Drillers | 65 |
| 660 | Miscellaneous Repairers/Construction Workers | 63, 646 |
| | PRECISION/PRODUCTION WORKERS | 67–78 |
| 681 | Machinists | 681 |
| 682 | Sheet Metal Workers | 682 |
| 690 | Operators, Plant/System/Utility | 69 |
| 710 | Machine Setup/Operators | 71–76 |
| 771 | Welders and Solderers | 771 |
| 780 | Miscellaneous Precision/Production Workers | 67, 683–688, 722–78 |
| | TRANSPORT WORKERS | 81–83 |
| 820 | Truck Drivers | 8212–8214 |
| 821 | Bus Drivers | 8215 |
| 825 | Pilots | 825 |
| 830 | Equipment Operators | 83 |
| 840 | Miscellaneous Transporters | 81, 8216–824, 828 |
| 850 | HANDLERS/LABORERS/HELPERS | 85–87 |
| 910 | MILITARY PERSONNEL | 91 |
| 990 | MISCELLANEOUS WORKERS | 99 |

¹Refers to the Department of Commerce's Standard Occupational Classification (SOC) Manual (1980).

Table G-8. Dose Measurement Codes.

| Code | Meaning | Definition |
|-------------|-------------------|--|
| MV | Measured Value | Indicates that measurements were performed for the specific individual to determine the dose for that individual. This measurement code would apply in all cases where individual external dosimetry was used or where the individual participated in a bioassay program (including whole body or lung count) that was used to determine the individual's internal dose. |
| PV | Preliminary Value | Indicates that this measurement is an interim estimation and expects to be updated in a subsequent revision and submittal of this dose record. This measurement code should be used when the final dosimetry or bioassay results are not yet available but the submittal is due. |
| CV | Calculated Value | Indicates the value given was calculated from indirect measurements such as monitoring performed on other workers or determined from a time-motion study or other analysis such as air sample for internal exposures. The value given represents the final results of the calculation, but the value was not measured directly for the monitored individual. A comment record may be provided to explain the reason and method of calculation. |
| NM | Not Monitored | Dosimetry was not provided and was not required to be provided. |
| ND | Not Detectable | Monitoring was performed but the results were below the detection limit of the measurement instrumentation. |