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DOE-STD-1190-2007

DOE STANDARD ILLNESS AND INJURY SURVEILLANCE PROGRAM GUIDELINES



U.S. Department of Energy
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AREA OCSH

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Foreword

1. Use of this standard is not mandatory. Users should review the document and determine if it meets their purpose.
2. Comments (recommendations, additions, and deletions) that may be of use in improving this document should be addressed to: U.S. Department of Energy, Office of Health, c/o Dr. Cliff Strader, HS-13/270 Corporate Square Building, 1000 Independence Avenue, SW, Washington, DC 20585-0270.
3. This standard was developed through a consensus process by staff operating the DOE Illness and Injury Surveillance Program with expert review by data coordinators who report information to the Program. It was developed to facilitate the routine collection, analysis, and dissemination of information on the health of DOE contractor and subcontractor workers.

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1. SCOPE

This standard provides recommended guidelines for the performance of Illness and Injury Surveillance by occupational medicine programs at Department of Energy (DOE)-owned and operated sites and at DOE-owned, contractor-operated sites regulated by the Atomic Energy Act, Energy Reorganization Act of 1974, and Department of Energy Organization Act, 1977. The aforementioned Acts state that DOE has the legislative mandate to monitor the impact of its operations on the environment, the health of its workforce, and the residents of communities surrounding DOE sites.

2. PURPOSE

The purpose of this standard is to assist DOE and its contractors in the conduct of the Illness and Injury Surveillance Program (IISP). IISP assists DOE in meeting its responsibility to monitor the health of its workforce at DOE sites in order to identify health hazards in the workplace. Use of this standard will facilitate the initiation and efficient performance of Illness and Injury Surveillance Program duties at DOE sites.

The Illness and Injury Program recruits selected DOE sites to participate in this voluntary program. Participating sites can use the standard to clarify which data are requested for submission to the data center and how often submissions should be made. Use of the recommendations presented in the standard will enhance the performance of the program through improvement in the standardization and completeness of data necessary for basic epidemiologic surveillance of worker health and safety. Adherence to the guidance in the standard will produce higher quality data, and the quality of information derived from analyses of these data will lead to a better understanding of the health and safety status of workers at participating sites.

3. BACKGROUND

3.1 Illness and Injury Surveillance Mission

Illness and injury surveillance contributes to the overall Office of Illness and Injury Prevention Programs (HS-13) (formerly known as the Office of Occupational Health) mission to protect and promote the health of DOE workers. The goal of illness and injury surveillance is to assess morbidity and the overall health of the DOE workforce in order to

identify groups that may be at increased risk of occupationally related illness or injury. In this manner, the program identifies opportunities for interventions that reduce or eliminate risks to worker health. Illness and injury surveillance also provides a means by which the effectiveness of these corrective actions can be evaluated.

While the identity of individual workers is protected, illness and injury surveillance undertakes regular and systematic collection, analysis, and interpretation of data on illness and injury in the DOE workforce in order to:

- a. Determine the rates of illness and injury among workers,
- b. Identify increases in the risk of disease among workers,
- c. Provide information in response to questions from workers, medical staffs, Safety and Health management, labor, and others about possible occupational health effects, and
- d. Identify areas in which further investigation or studies should be initiated.

The program provides health information about the DOE contractor and subcontractor labor force, for Headquarters and field management, administrators, medical staffs, and labor groups, and facilitates timely response to health concerns raised by any of these affected groups.

3.2 Illness and Injury Surveillance Program Organization

The Office of Illness and Injury Prevention Programs at DOE Headquarters is responsible for establishing the IISP and setting policy and standards for the program. The Program is coordinated by the program manager with technical assistance provided by the IISP Data Center staff at the Oak Ridge Institute for Science and Education (ORISE). The Office of Illness and Injury Prevention Programs is also responsible for the analysis and interpretation of the Program's data and the generation of final reports based on these analyses. The program manager works with analysts at the Data Center and site staff to identify areas in which further investigation might be needed.

ORISE, under contract to the Office of Illness and Injury Prevention Programs, serves as the Illness and Injury Surveillance Data Center. The Data Center collects the data, checks for errors, ensures integrity of the data, manages the Illness and Injury Surveillance database, provides quality assurance, and analyzes the data. The Data Center is also responsible for coding diagnostic information in a standardized manner by trained nosologists. On request, the Data Center will return a copy of all coded data to the site that initially submitted it for use by on site analysts. The Data Center prepares initial drafts of reports that include an analysis of the observed illness and injury trends and provide information for “quick response” requests from DOE HQ or a participating site.

Each facility selects a site *data coordinator* who takes primary responsibility for coordinating the collection and transmission of surveillance data to the Data Center. The site data coordinator is the primary IISP point of contact at the site and coordinates with other site staff who participate as needed. The site data coordinator is expected to have training and experience in areas such as medical terminology, medical records or data management, direct or indirect access to the medical, safety (OSHA), and roster data, and an understanding of the organization of the site that facilitates identification of persons in the organizations responsible for the various data required for illness and injury surveillance.

4. DATA COMPONENTS OF ILLNESS AND INJURY SURVEILLANCE AT DOE SITES

Data collection focuses on contractor and subcontractor workers who are eligible to obtain return-to-work (RTW) clearances through the site occupational medicine clinic, and for whom the necessary personnel and medical records are available. The health data of subcontractor workers who are not required to clear through the contractor's medical system are not accessible to the IISP; they are, therefore, not included in illness and injury surveillance. Federal workers are not included in the IISP because they are not generally required to use the on site medical clinics and are not governed by the Occupational Safety and Health Act in the same manner as the Act addresses the safety and health of contractor workers. Several different types of information must be identified by the site Illness and Injury Surveillance data coordinator before data collection can proceed. It is the site data coordinator's responsibility to identify the organizations that maintain these data and to

arrange access to the needed information. The data are generally gathered from Personnel (for demographic information), Benefits (for disability retirement and death information), Medical (for return-to-work clearance data), and Safety departments (for OSHA logs). The DOE Headquarters-based Computerized Accident/Injury Reporting System (CAIRS) program may be able to supply OSHA data in lieu of the on site Safety departments.

Basic data collection includes:

- a. Roster of the current contractor and subcontractor workforce eligible to use the site medical clinic
- b. Occupational Safety and Health Administration (OSHA) No. 300 log entries,
- c. Data from visits to Occupational Medicine for treatment/evaluation of some health concern or condition, and return-to-work clearance data
- d. Disability retirement data for actively employed workers on the roster
- e. Deaths among actively employed workers on the roster, including cause of death information from a death certificate (or similar type of record, such as a medical report or autopsy report)

4.1 Data Elements

Data are organized into three groups for transmission to the Data Center. These groups are: (1) roster data, (2) illness and injury data, and (3) site specific data, including any additional data provided to the Data Center for analysis at the site's request.

- 4.1.1 *Roster data* include information concerning all contractor and subcontractor workers who are covered by DOE Rule 10 CFR 851 (Worker Health and Safety Rule). Information on the number and characteristics of workers on the roster are used to calculate the observed and expected rates of health events that occur in the workforce.

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	Roster Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique worker ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original ID number.
3.	*YearBorn	Year of birth (Must be in format of YYYY.)
4.	*Gender	Gender of worker. Accepted values: M,F
5.	*First Hire on Site Date	Date the worker was first hired to work on current DOE site (MM/DD/YYYY). Human Resources data should be utilized, but medical records may have this data. The First Hire Date is not identical to the Service Date, which often changes when contractors change under a new contract. To protect worker identity, this date may be submitted as MM/YYYY.
6.	Contractor Name	The employer of the individual
7.	Organization/Location	Generally offered as coded indicators of the specific organization and physical location at which work is performed. For workers whose jobs involve significant mobility around the site, the location code may be the physical location of primary assignment or the place at which the employee would receive mail.
8.	Job Title	The employer's administrative job title for the position held by the employee.
9.	Occupational Group	Standardized Categories, <i>See Appendix B. Data coordinators are expected to work with appropriate site personnel to classify individuals into one of these categories, based on the <u>primary</u> tasks they perform.</i>
10.	Pay Status	Salaried or Hourly. Accepted values: A,B,C,E,F,G,H,L,M,N,P,R,S,T,W
11.	Dosimeter Assignment Status	Indicates whether or not a dosimeter is currently assigned. Accepted values: Y,N

Data elements marked with an asterisk indicate required fields.

4.1.2 *Illness and injury data* provide adverse health outcome information on members of the current workforce identified in the rosters. A detailed explanation of illness and injury data elements is provided in Section 5.

4.1.3 *Site Specific Data* include additional data identified and provided by individual DOE sites at the site's discretion. Sites may wish to conduct illness and injury surveillance on a particular group of workers defined by a common exposure, workplace, enrollment in a wellness or monitoring program, or other variable of interest. The Data Center will manage these data and conduct analyses using them at the request of the site. A site must obtain guidance from the DOE Office of Illness and Injury Prevention Programs before submitting site-specific data. Each site that submits site-specific data must provide a data element name, definition, and determine a coding scheme for each variable specified. This information will be provided to the Data Center with separate coding documentation created by the site's surveillance staff. Special analyses can then be scheduled in consultation with cognizant site staff to address the site's needs. The Data Center can provide advice and consultation in the development of coding schemes on request from the site.

4.1.4 **Conduct of Epidemiological Studies by Site Staff**

The Office of Health supports the conduct of epidemiological investigations by site staff. However, it is necessary that site staff inform the DOE Office of Illness and Injury Prevention Programs (HS-13) of the proposed study prior to initiation. A copy of the study protocol, methodology, and evidence of a completed Institutional Review Board (IRB) review should be sent to the Director of the Office of Health. Copies of all reports and summaries prepared by site staff as part of their investigation should be submitted to the Office Director of HS-13 at the close of the investigation.

4.2 Data Preparation and Submission Schedule

Participating sites generate a complete, unabridged roster as of January 1 of each calendar year and generate updated rosters each quarter. Quarterly updates are generated approximately April 1, July 1, and October 1 of each year. Updated rosters may be submitted more frequently at the site's discretion. Arrangements for roster submissions on an alternative schedule must be made with the Data Center. Illness and injury data including selected information about various types of adverse health events must be reported monthly to the Data Center. Submissions are due at the Data Center by the 15th day of the following month; however, as stated previously, some sites have made arrangements to submit their data on a different schedule depending on their internal data capture systems. OSHA data are also submitted on a monthly basis when the site elects to capture these data directly from a source in their Safety organization. If annual CAIRS data submissions are substituted, only an annual submission is expected in conformance with the CAIRS program's data submission requirements.

4.3 Worker Confidentiality Protection

All data submitted to the Data Center contain unique, coded identification (ID) numbers to link the records of a particular worker. Each site should assign every worker on the roster a unique, permanent, coded ID number to protect the confidentiality of the worker included in the database. Only this coded number is used to identify data pertaining to the worker. Names, Social Security numbers, or other personal identification information will not appear in the Illness and Injury Surveillance database. Encoding an identifier should not be based on overly simplistic schemes, such as the reversal of the social security number, and must not produce duplicate identifiers. Moreover, the encryption scheme should not be based on an identifier such as a personnel number that is subject to change if there is a change in contractors. Only one worker may be assigned to an identification number. If the worker leaves the workforce, the identification number cannot be reassigned to a different individual. A former worker returning to the workforce should be reassigned his/her original identification number. Both numeric and alphanumeric identifiers are acceptable.

Maintaining the confidentiality of information for each worker is of the highest importance; therefore, the occupational medicine department at each site will assign every worker on the roster a unique, permanent, coded identification number to be used on all data submitted for illness and injury surveillance. In all communications with the Data Center at ORISE or the Office of Illness and Injury Prevention Programs at DOE Headquarters, worker information will reference only the coded identification number of the individual. All reports and analyses that use worker information will be summarized and grouped so that individual information cannot be disclosed or tracked back to a specific worker. These methods of maintaining confidentiality minimize the possibility of violating privacy protections laws, rules and standards.

The protection and use of DOE-owned personnel and medical records are regulated under the authority of the Privacy Act of 1974 (5 USC 552a, as amended). Rules on the routine use of these records are published in DOE implementing regulations (see Federal Register / Vol. 68, No. 125 / Monday, June 30, 2003 page 38756.) Similar requirements exist for contractor-owned medical records, which are regulated under authority of the Health Insurance Portability and Accountability Act (HIPAA). Department of Health and Human Services (HHS) regulations implementing HIPAA are published in 45 Code of Federal Regulations Parts 160, 162, and 164. The Department of Energy regulations implementing the Privacy Act of 1974 are published in 10 Code of Federal Regulations Part 1008. For those clinics operating under HHS guidelines for covered entities, the Illness and Injury Surveillance Program has adapted its data requests to ensure that it accommodates the site's response to HHS requirements. These adaptations are managed on a site by site basis, often taking the form of meeting site-determined criteria for de-identification of data. States also require compliance with confidentiality protection rules and standards as conditions for maintaining professional licenses.

5. Types of Illness and Injury Health Events

Four major categories of illness and injury events eligible for reporting to the Illness and Injury Surveillance Program are described below:

5.1 *Return To Work*. These events consist of all illnesses and injuries reported by workers who are required to clear through the site's Occupational Medicine clinic to be pronounced "fit-for-duty". Health events are eligible for reporting regardless of whether they are determined to be occupational. Return-to-work clearances indicate the number of days absent, but alternative work schedules have become increasingly common and the number of actual work days absent may be difficult to determine by examining the dates of absence. Sites must identify methods to determine the length of absence when alternative work schedules are involved. Although the Illness and Injury Surveillance Program accepts illness absence data involving any length of absence, most analyses focus on those events involving absences of 40 or more consecutive work hours. This analysis criterion is derived from Order 10 CFR 851, which requires a fitness for duty examination at the occupational medicine clinic following any occupational illness or injury, or when an employee returns after five or more consecutive workdays of absence (or the equivalent period for a worker on an alternative work schedule) for a non-occupational illness or injury. The data elements for return-to-work events include:

	Return-to-Work Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique worker ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original identification number.
3.	*Record Status	New, Change, Delete – Accepted values: N,C,D
4.	*Date began**	Date absence began (MM/DD/YYYY)
5.	*Diagnosis	Provide the narrative description of the diagnosis of illness or injury as reported by worker. Supporting documentation from a personal physician is not required but can be used to help determine the diagnosis if available.
6.	*RTW date**	Return-to-work date (MM/DD/YYYY)

Data elements marked with an asterisk indicate required fields.

Diagnostic information will be abstracted from the medical clinic's return-to-work clearance form if applicable. The program does not require a personal physician's report; the worker's self-reported reason for absence is sufficient. This information will be used by trained nosologists at the Data Center to determine the proper *International Classification of Disease, 9th Revision Clinical Modification (ICD-9-CM)* codes for the health event in a standardized manner. A narrative description of the diagnoses is preferred. Sites that code their diagnostic data using the ICD9-CM codes submit only the coded information to the Data Center. If the Data Center's quality assurance procedures indicate that the site-coded diagnoses do not differ from the Data Center's codes, consideration will be given to allowing sites to submit the ICD-9-CM codes in lieu of text. The level of agreement between site-generated ICD-9-CM codes and those assigned by the Data Center's nosologists will be assessed periodically as part of the program's quality assurance process.

••Some sites consider the reporting of the specific date an absence began and the return to work date to be too explicit to conform to HIPAA privacy requirements. In lieu of these dates, they calculate and report the duration of absence and provide a less precise indication of the dates such as the month and year, but not the day of the event. If needed to satisfy site-specific legal requirements, alternative reporting formats can be arranged in consultation with the Data Center.

5.2 Occupational Safety and Health Administration (OSHA) Recordable events.

These data include all illnesses and injuries that are considered recordable as defined by the Occupational Safety and Health Act of 1970, and 29 CFR Part 1904. OSHA-recordable events are those that occur on the job and involve: (1) fatalities, regardless of time between injury and death, or the length of illness; (2) cases other than fatalities that result in lost workdays; and (3) nonfatal cases without lost workdays that result in transfer to another job or termination of employment, or require medical treatment other than first aid or involve loss of consciousness or restriction of work or motion.

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Various methods of collecting OSHA data may be employed. Sites may either abstract data from the OSHA No. 300 log or assemble the information from a related data base. Alternatively, many sites have chosen to take advantage of the DOE Directive DOE O 231.1A, Environment, Safety, and Health Reporting, which contains the reporting requirement that mandates an annual submission of OSHA data to CAIRS. A copy of the annual CAIRS data can be returned to the data coordinator directly from CAIRS. The data coordinator is then responsible for replacing personal identifiers from the CAIRS data set with the Illness and Injury Surveillance Program's coded identifier. The de-identified data are then submitted to the program's Data Center. It is important to note that no DOE Headquarters staff involved with the IISP receives a copy of the identified CAIRS data. Unless the site data coordinator believes that local sources of OSHA data are more complete than the data submitted to CAIRS, this approach is recommended because it is cost effective, comprehensive, maintains worker privacy and confidentiality, and is consistent with the site's reporting of occupational health events to CAIRS.

The data elements collected from the OSHA No. 300 log or generated by the site's data coordinator include:

	OSHA No. 300 Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original identification number.
3.	*Record status	New, Change, Delete. Accepted values: N,C,D
4.	*Date of event	Column D of OSHA's Form 300 (Rev. 01/2004)
5.	*Days lost due to injury	Code for occupational injury without workday loss/restriction (Note if Column J of OSHA's Form 300 (Rev. 01/2004) is checked and Column M(1) is also checked.)

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6.	*Days restricted due to injury	Column K of OSHA's Form 300 (Rev. 01/2004), to be filled in only if an <u>illness</u> is involved
7.	*Occupational Injury Code	Column L of OSHA's Form 300 (Rev. 01/2004), to be filled in only if an <u>illness</u> is involved
8.	*Days lost due to illness	Code for occupational illness without workday loss/restriction(Note if Column J of OSHA's Form 300 (Rev. 01/2004) is checked and Column M(2, 3, 4, 5, or 6) is also checked.)
9.	*Days restricted due to illness	Illness or Injury, as described in columns <u>E</u> and <u>F</u> of OSHA's Form 300 (Rev. 01/2004)
10.	*Occupational Illness Code	Coding cannot be provided without a description of the event (see item 11)
11.	*Description of event	A narrative description is necessary in order to provide an occupational illness code. Otherwise the event cannot be coded.

****Data elements marked with an asterisk indicate required fields.****

Clearly, some OSHA-recordable health events could involve long-term disability leave followed by an eventual RTW clearance. In such cases the RTW clearance record for such a worker would be reported as well as the worker's OSHA recordable health event.

5.3 *Disability (DIS)*. These health events are the result of a disability that leads to retirement. On notification from the Personnel Office (or other information source) that a worker has left the work force due to a disability retirement, but no information on the medical condition resulting in the disability retirement is available, site occupational medicine staff are encouraged to contact the worker to obtain a diagnosis. For a disability retirement, the data coordinator should report the following information:

	Disability Retirement Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original identification number.
3.	*Record status	New, Change, Delete. Accepted values: N,C,D
4.	*Term date	Date worker terminated employment
5.	*Diagnosis	Narrative description of the illness or injury resulting in disability retirement

Data elements marked with an asterisk indicate required fields.

5.4. *Death of an Active Worker (DEA).* The date and cause of death of an actively employed worker are reportable, when available. This information is usually obtained from the death certificate or other reliable data source. Family members are often required to submit copies of death certificates to the appropriate Human Resources Office when they apply for survivor benefits, and these death certificates can also assist determination of cause of death. Submit the following information:

	Death of an active worker Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original identification number.
3.	*Record status	New, Change, Delete. Accepted values: N,C,D
4.	*Date of death	This the date of death of the employee
5.	*Immediate cause of death	The immediate cause of death is the disease (condition) or complication that occurred closest to the time of death.

Data elements marked with an asterisk indicate required fields.

6. Other Data Collection

6.1 *Monitoring Data*: In the absence of specific industrial hygiene measurements, one indirect indicator of potential exposures is the enrollment of workers in various monitoring programs designed to detect exposure to potentially harmful substances. Such enrollment provides an accessible, albeit crude, indicator of those workers at greater risk of exposure to various substances with potential to affect their health. The monitoring data collected by the IISP report the enrollment of an individual in various monitoring programs found at DOE facilities such as lead monitoring, beryllium monitoring, dosimetry, and periodic spirometry for respirator users. Appendix A contains a coded list of the more common monitoring programs found at DOE facilities. Data coordinators are urged to alert the Data Center and the IISP Program Director at any time concerning new or additional monitoring programs that do not currently appear in Appendix A.

Data to be reported for workers involved in one or more monitoring programs should be submitted by January 31 and July 31 of each calendar year. Each submission reflects the monitoring status of workers as of the beginning (January 1) and midpoint (July 1) of that calendar year. Any participating site may aggregate the monitoring status of workers on these two dates into one data file for submission by July 31 of each calendar year: In this case, the data would include the monitoring status of workers for both the beginning (January 1) and midpoint (July 1) of that calendar year. Data should be included for each monitoring program in which the worker is enrolled, as indicated in the table below. The following data elements should be reported for each monitoring program in which the worker is enrolled. For workers involved in many monitoring programs, coordinators can submit as many of these records per worker as required, but should put only one monitoring code in each record.

For the monitoring program, the following information should be submitted:

	Monitoring Program Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original identification number.
3.	*Monitoring code	Indicates specialized monitoring program in which an individual may participate (e.g., asbestos, beryllium) <i>See Appendix A</i>
4.	*Start date	The date on which the individual was enrolled in the monitoring program.
5.	*Stop date	The date on which the individual's enrollment in the monitoring program ended
6.	*Record status	New, Change, Delete. Accepted values: N,C,D

Data elements marked with an asterisk indicate required fields.

6.2 *Administrative Data:* The Illness and Injury Surveillance Program collects administrative data in order to assess the completeness of reporting from participating sites on an unscheduled basis. The IISP uses these data only for quality assurance purposes. These data are not part of routine reporting. Administrative data elements include beginning and end dates of absences noted as sick leave in Human Resources time and attendance reporting data. They are compared with illness related absences reported through the return to work clearance process. The comparison provides an indication of the completeness of absence ascertainment derived from return to work clearance data.

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The administrative data collected are minimal, generally including only the following data elements:

	Administrative Data Element Name	Description
1.	*Site Code	A unique code that identifies the site. Site code is provided by ORISE Data Center.
2.	*Unique ID	Unique worker identification number associated with each worker in order to link records. ID to be determined by site. The unique ID number is never changed for a worker and is never reassigned, should a worker leave the workforce. A worker who leaves the workforce and later returns should receive his/her original identification number.
3.	*Beginning date of absence	The first day of absence as indicated by reported sick leave from time and attendance records
4.	*End date of absence	The day on which an absence ends, as indicated by reported sick leave from time and attendance records
5.	*Record status	New, Change, Delete. Accepted values: N,C,D

Data elements marked with an asterisk indicate required fields.

6.3 Quality Assurance

The purpose of all quality assurance monitoring is to ensure the unimpeded flow of accurate, complete data to the Data Center. The administrative data described above are used to assess completeness of reporting absences related to illness or injury through comparisons of the occupational medicine clinic's RTW data with the absences identified through time and attendance information collected by the Payroll Office.

A second type of quality assurance addresses our concern that sites which provide only ICD-9-CM codes instead of a narrative explanation of diagnoses must have a high level of agreement with the nosologic coding provided by the Data Center. To address this concern, about two percent of records are randomly selected by the Data Center periodically for coding comparisons. The Data Center evaluates coded data for accuracy and completeness of the information in its data base compared with the information available on hard copy records. The resulting error rate information is then provided to

the site data coordinator. If quality assurance issues are detected, continued quality assurance monitoring of the site's data submissions will be conducted to evaluate the success of corrective actions at the site.

7. ANALYSES AND REPORTS

The IISP's various workforce health evaluations, periodic surveillance activities, and special investigations involve the publication of numerous reports. Annual site-specific summary reports present workforce demographics, summarize illness and injury health event absences, and present rates of occurrence of selected diseases and injuries, both occupational and non-occupational, for an individual site. Periodically the IISP also publishes rollup reports that emphasize the assessment of broad trends and the overall experience of the DOE workforce at major categories of facilities, e.g., decommissioning and decontamination, research and development, and weapons facilities. Additional reports address particular occupational groups or diagnosis categories of interest; recent assessments have evaluated trends in hypertension and diabetes among DOE's aging workers. Special topic reports can examine particular types of injury or illness or evaluate a broader spectrum of health issues in a particular segment of the workforce, such as a particular occupational group, age group, or gender. The IISP also supports special investigations initiated in response to worker health concerns at a site, issues noted by site medical or safety personnel, or reviews undertaken in response to management concerns. These investigations are summarized in final reports that are made available on the program's internet home page upon release. In all cases, only summaries and aggregate data are presented in IISP reports, ensuring the privacy of all workers employed at participating sites.

The distribution of information from Illness and Injury Surveillance analyses targets a broad audience, including workers and their organized labor management representatives; the occupational medicine departments at DOE sites; Headquarters and site Environment, Safety and Health management; and the Office of Illness and Injury Prevention Programs at DOE Headquarters. Distribution takes the form of both hard copy and Internet publication, with electronic notification to interested stakeholders when relevant reports are published on the Office of Illness and Injury Prevention Programs Internet home page at <http://www.eh.doe.gov/health/epi/surv/index.html>. Reports are made available to the general

public through DOE's reading rooms located at or near DOE sites throughout the United States, and access to the reports is available to the public on our Internet home page.

APPENDIX A

CODES FOR ROSTER DATA ELEMENT 'MONITOR'

Indicates any specialized monitoring program in which an individual participates (e.g., beryllium, lead, asbestos, regular urinalysis sampling, etc.).

Monitoring codes are as follows:

<i>Surveillance Programs</i>	<i>Certification Programs</i>
S001 Asbestos Worker	C001 Crane Operator (incidental)
S002 Benzene Worker	C002 Crane Operator (Professional)
S003 Beryllium Worker	C003 DOT Driver
S004 Cadmium Worker	C004 FAA Class I Pilot
S005 Carcinogens Worker	C005 FAA Class 11 Other Flight Personnel
S006 Formaldehyde Worker	C006 Fire Department/Emergency Brigade
S007 Hazardous Waste Workers/ HAZMAT	C007 Fissile Material Handler
S008 Hearing Conservation/Protection	C008 Forklift Operator (incidental)
S009 Lead Worker	C009 Forklift Operator (Professional)
S010 Radiation Worker	C010 Heavy Equipment Operator
	C011 Laser Operator
	C012 Nonreactor Nuclear Facility Operator
	C013 Nuclear Material Handler (CPP only)
	C014 Personnel Security Assurance Program (PSAP)
	C015 Personnel Security Sensitive (PSS)/Human Reliability Program
	C016 QA/Nondestructive Test Inspector
	C017 Reactor Operator
	C018 Respirator User
	C019 Rigger
	C020 Security Force
	C021 Test Designated Position (TDP)
	C022 Welder

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	C023 Security Inspector (defensive)
	C024 Security Inspector (offensive)
<i>Additional Codes</i>	<i>Additional Codes (continued)</i>
A001 1,1,1-Trichloroethane	A019 Laboratory Workers
A002 Alkanes	A020 Management or Executive health monitoring
A003 Antimony	A021 Mercury
A004 Best Team	A022 Methylene Chloride
A005 Carbon Monoxide	A023 Methylene Dianiline (MDA)
A006 Carbon Tetrachloride	A024 Nickel
A007 Ceramic Fibers	A025 Painters
A008 Chloroform	A026 Pesticide
A009 Chromates/Chromium	A027 Polychlorinated biphenyls (PCB)
A010 Cobalt	A028 Radiation: Internal Burden
A011 Confined Space	A029 Tetrachloroethylene
A012 Cyanide	A030 Titanium
A013 Diver	A031 Toluene
A014 Driver (non-DOT)	A032 Transportation, Department of (DOT)
A015 Health Care Personnel	A033 Trichloroethylene
A016 Heat/Hot Environment	A034 Zinc
A017 Heights	A035 Nanotechnology worker
A018 Isocyanates	

APPENDIX B

STANDARDIZED OCCUPATIONAL CATEGORIES

Management (M) – Predominately office work at a desk; first level supervisor and above; anticipated risks primarily ergonomic

Administrative Support (A) – Predominately office work at a desk; heavy computer usage; anticipated risks primarily ergonomic. This category includes but is not limited to information technology, clerical, and secretarial staff.

In-House Professionals (I)– Predominately office work at a desk typically without supervisory responsibilities. The risks are primarily ergonomic.

Field Professionals (F)– Frequently works outside of their office in areas such as but not limited to laboratories, testing areas, and construction areas. Potential for exposure to chemical or radiation hazards.

Technical Support (T)– Workers who typically support the field professionals and have hands-on work situations. Potential for exposure to chemical or radiation hazards; the potential for exposure may be higher than for the field professionals.

Biohazard (B)– Workers who have the potential for exposure to biological hazards. This includes medical technicians, nurses, laboratory staff, animal caretakers, physicians, and veterinarians.

Service (S)– Typically includes but is not limited to custodians, drivers, laborers, laundry workers, linemen, mail clerks, pilots, railroad engineers, records center workers, stationary engineers, utility workers, and water plant operators. These workers support and maintain the facility’s infrastructure and have the potential for a broad range of exposures. Most work is not performed sitting at a desk.

Security and Fire (E) – Typically includes protective forces and firefighters.

Crafts (C) – Typically includes bargaining unit employees and laborers. They have the potential for a broad range of exposures.

Line Operators (O)–Typically workers who are involved in process, operation, or line activities at the facility. Potential for chemical and/or radiation exposure on a regular basis.

Guests (G) – Employees on short-term assignments or internships. Typically includes guest scientists, postdoctoral fellows, co-op students, and interns. Potential for exposure dependent on job assignment.

Unknown (U) – Job title is missing.

CONCLUDING MATERIAL

Review Activity:

<u>DOE</u>	<u>Field Offices</u>
NA	AL
EE	CH
EH	ID
EM	OH
SC	RL
FE	RP
NE	SR
RW	

Preparing Activity:

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BNL	NTS
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LANL	Pantex
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INL	SRS
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