

**Office of Enterprise Assessments
Lessons Learned from Assessments of
Occupational Injury and Illness
Recordkeeping and Reporting
at U.S. Department of Energy Sites**



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**Office of Worker Safety and Health Assessments
Office of Environment, Safety and Health Assessments
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Acronyms

CAIRS	Computerized Accident/Incident Reporting System
CFR	Code of Federal Regulations
CRAD	Criteria and Review Approach Document
DART	Days Away, Restricted or Transferred
DOE	U.S. Department of Energy
DOE-SR	DOE Savannah River Operations Office
EA	Office of Enterprise Assessments
EM	Office of Environmental Management
LHCP	Licensed Health Care Professional
NNSA	National Nuclear Security Administration
OII	Occupational Injury and Illness
OSHA	Occupational Safety and Health Administration
SRNS	Savannah River Nuclear Solutions, LLC

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EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) Office of Environment, Safety and Health Assessments, within the independent Office of Enterprise Assessments (EA), conducted occupational injury and illness (OII) recordkeeping and reporting program assessments at four DOE sites between 2017 and 2018. The sites, selected to provide a cross-sectional view of programs across various missions and worker populations, are under the direction of the DOE Office of Environmental Management or the National Nuclear Security Administration. The objective of these assessments was to determine the effectiveness of OII recordkeeping programs and DOE field element oversight of contractor OII recordkeeping programs. This lessons-learned report identifies strengths and weaknesses, best practices, and recommendations, with the goal of promoting organizational learning and improving performance throughout the DOE complex.

Accurate and timely OII recordkeeping and reporting are critical to the safety of all operations across the DOE complex. By properly characterizing, recording, and analyzing this data, DOE line management and contractors can identify the types and causes of injuries and illnesses that occur and to implement timely and effective corrective actions. In addition, DOE contractors use injury and illness data as part of their contractor assurance systems to measure how effective they are in preventing OII cases, and DOE uses OII data to gain insight into safety performance.

Most assessed sites have developed and effectively implemented many aspects of their OII recordkeeping program. Some programs were noted as having strengths or best practices for sharing across the DOE complex, including establishing procedures and performance goals to investigate and report recordable injuries to the DOE Computerized Accident/Incident Reporting System (CAIRS) within seven days, and using workers' compensation case data to facilitate identification and classification of injuries occurring on site. However, some specific areas of weakness have prevented OII recordkeeping programs from being fully effective, typically resulting in under-reporting of the number of recordable injuries and illnesses.

EA identified common weaknesses at the assessed sites in a few specific areas. Some injury and illness cases were not properly classified using the Occupational Safety and Health Administration recording criteria at the four assessed sites. Three sites did not fully establish auditable case files supporting classification decisions. In addition, at three assessed sites, there were common deficiencies in Federal field offices' oversight of contractor injury and illness recording and recordkeeping programs which were identified as a factor in the accuracy and timeliness of contractor recording of injuries and illnesses into CAIRS.

Although the sample size of four sites is small, the data supports the need for continued DOE and contractor management attention to ensure that injury and illness reports are timely and accurate and support safety performance analysis and improvement efforts. Improvements in DOE oversight should be considered, and DOE field elements should consider increasing the rigor of their required quality assurance reviews of contractor injury and illness data.

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1.0 INTRODUCTION

The U.S. Department of Energy (DOE) Office of Environment, Safety and Health Assessments, within the independent Office of Enterprise Assessments (EA), conducted occupational injury and illness (OII) recordkeeping and reporting assessments at four DOE sites between 2017 and 2018. The assessed sites are under the direction of the DOE Office of Environmental Management (EM) or the National Nuclear Security Administration (NNSA). The objective of each assessment was to determine the effectiveness of OII recordkeeping programs, including field element oversight activities.

This lessons learned report identifies strengths and areas of weakness, a best practice, and recommendations, with the goal of promoting organizational learning and improving performance throughout the DOE complex.

1.1 Background

EA manages the Department's independent oversight program. This program is designed to enhance DOE safety and security programs by providing the Secretary and Deputy Secretary of Energy, Under Secretaries of Energy, other DOE managers, senior contractor managers, Congress, and other stakeholders with an independent evaluation of the adequacy of DOE policy and requirements, and the effectiveness of DOE and contractor line management performance and risk management in safety and security and other critical functions as directed by the Secretary. DOE Order 227.1A, *Independent Oversight Program*, describes and governs the DOE independent oversight program. EA implements the program through a comprehensive set of internal protocols and assessment guides.

In 2017, EA performed an OII recordkeeping and reporting assessment of Nuclear Waste Partnership, LLC at the Waste Isolation Pilot Plant, at the request of the DOE Carlsbad Field Office. In 2018, EA performed OII recordkeeping and reporting assessments of Lawrence Livermore National Security, LLC at the Lawrence Livermore National Laboratory; Savannah River Nuclear Solutions, LLC (SRNS) at the Savannah River Site; and North Wind Portage and S&K Logistics Services, LLC at the Moab Uranium Mill Tailings Remedial Action Project, which is managed by the EM Grand Junction Office.

1.2 Scope and Methodology

This report presents EA's analysis of collected lessons learned from assessments completed by small teams evaluating identical elements of OII recordkeeping and reporting programs (see Appendix B for source documents). Table 1 shows the assessed sites, along with key elements of the assessments, associated contractors, DOE field elements, and DOE Headquarters program offices. The members of the EA report preparation team, the Quality Review Board, and EA management responsible for this lessons-learned report are listed in Appendix A.

The summary statements in Section 2 below reflect aggregated observations from the four reports published by EA. Those reports are a snapshot of conditions at the site at the time of the assessment. The issued reports, provided to the assessed organizations, may have resulted in corrective actions or enhancements not reflected in these discussions.

Table 1. OII Recordkeeping and Reporting Assessment Sites

Assessment Site	Key Elements Assessed	Contractor	DOE Field Element	DOE Headquarters Program Office
Waste Isolation Pilot Plant	OII Recordkeeping Program OII Record Review Federal Oversight Contractor Oversight	Nuclear Waste Partnership, LLC	Carlsbad Field Office	EM
Lawrence Livermore National Laboratory	OII Recordkeeping Program OII Record Review Federal Oversight Contractor Oversight	Lawrence Livermore National Security, LLC	Livermore Field Office	NNSA
Savannah River Site	OII Recordkeeping Program OII Record Review Federal Oversight Contractor Oversight	Savannah River Nuclear Solutions, LLC	Savannah River Operations Office	EM
Moab Uranium Mill Tailings Remedial Action Project	OII Recordkeeping Program OII Record Review Federal Oversight Contractor Oversight	North Wind Portage and S&K Logistics Services, LLC	Grand Junction Office	EM

The scope of these assessments included elements from Criteria and Review Approach Document (CRAD) EA-32-07, *Occupational Injury/Illness Recordkeeping*, Revision 0, March 9, 2017. EA used these criteria to determine whether the policies, procedures, and operational performance met DOE objectives for effectiveness in the areas examined.

1.3 Requirements and Guidance

DOE regulatory requirements for DOE contractors to identify, investigate, classify, and record occupational injuries and illnesses and report recordable cases to the DOE Computerized Accident/Incident Reporting System (CAIRS) are set out in 10 CFR 851, *Worker Safety and Health Program*. Title 10 CFR 851.23(a)(2) invokes by reference the 29 CFR 1904 Occupational Safety and Health Administration OII recordkeeping requirements, and 10 CFR 851.26(a)(2) requires contractors to follow DOE Order 231.1B, *Environmental, Safety and Health Reporting*. The OSHA recordkeeping requirements imposed by DOE are those used by other Federal agencies and by non-DOE private employers under the regulatory jurisdiction of OSHA; DOE applies these requirements to promote consistency in DOE safety performance data benchmarked to private industry. DOE Order 231.1B requires sites to enter injury and illness cases that meet OSHA recordability criteria in CAIRS in a timely manner, and also requires DOE field elements to conduct quality assurance oversight of these records.

Additional requirements for maintaining quality records and implementing a contractor assurance system that uses metrics to measure and improve safety performance are included in DOE Order 414.1D, *Quality Assurance*, and DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*, respectively.

2.0 OVERALL ASSESSMENT

The lessons learned in OII recordkeeping and reporting are based on analyzing and grouping significant observations from EA assessments according to the following five fundamental aspects:

- Classification of OII cases
- Subcontractor OII recordkeeping
- OII case records quality assurance
- CAIRS reporting
- DOE oversight of OII recordkeeping programs and records.

Overall, EA observed that the assessed contractors' OII recordkeeping and reporting activities generally met the applicable DOE and OSHA requirements. The assessed sites adequately documented their OII recordkeeping procedures for identifying, investigating, and classifying OII cases and reporting to the CAIRS database. Some overall strengths were identified:

- Contractor workers interviewed by EA understood their responsibilities for reporting injuries and illnesses.
- Workers did not express fear of or identify any reprisal for reporting injuries and illness.
- CAIRS workhour exposure records typically matched local records and were properly determined.
- Contractors have generally established appropriate CAIRS organizational codes to report recordable OII cases that match their mission and workforce makeup.
- Most individuals responsible for contractor recordkeeping programs were appropriately trained and had experience relevant to their OII recordkeeping and reporting roles and authorities.

However, the assessed sites exhibited some of the following common weaknesses by not consistently:

- Properly applying OSHA classification criteria related to work-relatedness and restricted work activity
- Effectively recording and reporting subcontractor OII cases
- Establishing auditable case files containing information fully supporting classification decisions for each OII case
- Reporting or updating recordable OII cases in CAIRS within the required timeframes
- Conducting effective quality checks to identify discrepancies between local OII case records and CAIRS.

Except for the DOE Savannah River Operations Office (DOE-SR), DOE field elements were not conducting effective oversight of contractor OII recordkeeping and records.

2.1 Classification of OII Cases

Objective: *DOE contractor and subcontractor OII cases are accurately classified, and recordable OII cases, as well as work exposure hours, are reflected in CAIRS in a timely manner. (CRAD EA-32-07, Objective OII.2)*

Criterion: *OIIs are investigated and classified per 29 CFR 1904 criteria. (CRAD EA-32-07, Objective OII.2, Criteria 3)*

DOE contractors must investigate any injuries and illnesses that are reported to or identified by them and must classify those injuries and illnesses using the OSHA classification criteria. Cases are first evaluated to determine whether they are work-related – i.e., whether they result from events or exposures occurring in the work environment (unless an OSHA-specified exception applies). According to an OSHA interpretation letter (see Appendix C of this report), “a case is presumed work-related if an event or exposure in the work environment is a discernible cause of the injury or illness or of a significant aggravation to a pre-existing condition. The work event or exposure need only be one of the discernable causes; it need not be the sole or predominant cause.”

Work-related (occupational) injuries and illnesses are classified as either non-recordable (often referred to as first aid cases) or recordable. Recordable cases are of two types:

- Medical Treatment Only case: Cases where a licensed health care professional (LHCP) prescribed prescription medication or provided medical treatment beyond first aid.
- Days Away, Restricted or Transferred (DART) case: Cases where the injury or illness caused a worker to be away from work for at least one day beyond the day of injury, the worker was not able to perform one or more of his/her routine duties due to the injury or illness, or the worker was transferred to another position to accommodate work restrictions.

EA conducted a comprehensive quality check of each prime contractor’s injury and illness records for a one- to two-year period, as well as a review of the OII records of selected subcontractors working on site at the time of the assessments. EA identified OII classification errors at each site, including one case for the smallest contractor and up to 18 cases for the largest contractor. Most misclassifications resulted in under-reporting of recordable OII cases and associated incidence rates.

There were three primary reasons for the misclassifications. The first reason was that contractors did not sufficiently track subsequent medical treatment, prescription of medications, and or medical/work restrictions imposed by an LHCP or contractor management/supervision that would trigger a recordable case. For some contractors, pertinent medical records were filed separately from the safety-related recordkeeping case files and did not allow systematic linkage that would trigger a re-evaluation of case recordability.

The second reason was contractor management’s misunderstanding or misapplication of the OSHA recordability criteria for determining when a work/medical restriction limits a worker from conducting one or more of his/her routine duties (duties that a worker performs at least once in a normal 40-hour work week). In cases where supervision or an LHCP had issued a work restriction impacting one or more of the worker’s routine work activities, EA was commonly told that the contractor considers the worker not “restricted” if the worker remains “productive” by performing non-restricted work activities; for example, an employee could be assigned to perform only sedentary work, such as data input on a computer, if that task is only one of many that the employee would typically perform in a normal work week.

The third reason was apparent primarily at one site that has its own occupational medical services organization. EA noted an uncharacteristically high percentage of injury cases that the site judged not to be work-related (i.e., not occupational injuries) and thus focused on the reason for this observation during EA’s quality assurance review of OII records. This review showed that the medical services organization did not always apply the OSHA criteria for work-relatedness but instead, particularly for musculoskeletal-related injuries or illnesses, used alternative criteria based on another state’s workers’ compensation work-relatedness guidance/criteria. EA sampled 32 cases classified by the site as “not work related,” and identified that 13 of the sampled cases were improperly classified using the alternative criteria as not work related. Eleven of these 13 cases further met the OSHA criteria for recordable OII cases.

2.2 Subcontractor OII Recordkeeping

Criterion: *Contractors must ensure that work-related fatalities, injuries, and illnesses that occur to their subcontractor employees are recorded and reported accurately and in accordance with 29 CFR §§ 1904.4 through 1904.11, 1904.29 through 1904.32 and 1904.46 and Attachment 3, paragraph 1. (DOE Order 231.1B, Attachment 1, Section 2(a)(1))*

OII recordkeeping requirements for subcontractors fall into two basic categories:

- Subcontractors that augment or supplement the prime contractor's workforce and are supervised on a day-to-day basis by the prime contractor. Injury and illness cases for these subcontractors must be investigated, classified, and recorded by the prime contractor, and recordable OII cases for subcontracted supplemental labor must be included on the prime contractor's records (including OSHA 300 Logs and 300A Summaries).
- Subcontractors that independently perform a specific scope of work and the workers are not supervised by the prime contractor on a day-to-day basis. Injury and illness cases for these subcontractors must be investigated, classified, and recorded by the subcontractor on the OSHA 300 Logs and 300A Summaries. DOE prime contractors must report all subcontractor OII recordable cases to the DOE CAIRS.

EA identified two contractors that did not meet the requirements for investigating, classifying, and recording OII cases for subcontracted supplemental labor workers that they directly supervised on a day-to-day basis. In one case, the contractor directly supervised approximately 500 subcontracted supplemental labor employees. Not including supplemental labor workers in the prime contractor's OII records can lead to under-reporting of injuries to workers under control of the prime contractor and lost opportunities for feedback and improvement.

For independent subcontractors, all but one contractor evaluated by EA adequately identified independent subcontractor worker injuries for OII recordkeeping purposes. As a positive example, SRNS, which has a large number of subcontractors, effectively implemented a rigorous process using subcontractor technical representatives to immediately report subcontractor injuries and illnesses to recordkeeping managers for needed investigation and classification. Another contractor, using a procedure similar to SRNS's to report independent subcontractor injuries, was not fully effective because the contractor did not hold its subcontractors accountable for the immediate reporting of injuries as required. In its place, the contractor had defaulted to the use of a monthly data call to subcontractors requesting information on their workers' injuries and illnesses. EA determined that the reliance on a monthly data call did not support timely reporting of recordable OII cases into CAIRS (also see the discussion of late CAIRS reporting in Section 2.4, below). During a quality review of a sample of subcontractor OSHA 300 Logs and 300A Summaries, EA identified 20 recordable OII cases involving independent subcontractor workers. The prime contractor was unaware of 14 of the 20 cases, so those 14 cases were not reported to CAIRS as required or analyzed for safety feedback and improvement activities.

2.3 OII Case Records Quality Assurance

Criteria:

Auditable case files are established for each OII case containing information supporting classification decisions. (CRAD EA-32-07, Objective OII.2, Criterion 4 and DOE Order 414.1D, Attachment 2, Quality Assurance Criteria, Criterion 4, Management/Documents and Records)

Quarterly quality checks of local OII data and associated CAIRS records to ensure information is thorough, accurate, and consistent. (CRAD EA-32-07, Objective OII.2, Criterion 8)

Contractors are required to maintain quality records related to the identification, investigation, OSHA classification, and reporting of injuries and illnesses. OII records should support classification decisions and facilitate quality assurance checks, electronic reporting of recordable cases into CAIRS, and DOE OII recordkeeping oversight activities.

The content and quality of OII records varied greatly from site to site, with three of the contractors identified as needing to improve OII records to support OSHA classification decisions. The SRNS OII records were the most comprehensive and facilitated OSHA classification decisions and quality assurance reviews, with minor exceptions. In addition, SRNS recordkeeping managers also are involved with workers' compensation records, allowing them to use workers' compensation data to help identify new OII cases or data that could affect the recordability of OII cases based on OSHA criteria.

To help sites improve the quality of their OII records, EA developed a Recommended Content of an Auditable OII Case File document (see Appendix D of this report), which was shared with DOE site office and contractors during the assessment of each site. The OII file contents that EA's assessments most often identified as missing or needing improvement are:

- Injured worker's statement on how the injury occurred
- Injury-related medical treatments and prescription drugs that were prescribed/given as the OII case progressed, including those from offsite LHCP or personal medical providers
- All medical/work restrictions issued by an LHCP or the injured worker's management/supervision, and whether the restrictions prevented the worker from performing one or more of his/her routine job functions as defined by OSHA §1904.7(b)(4)(i)
- Documented classification decisions made by trained and qualified OII recordkeeping managers, along with the rationale for the decision (e.g., citation of OSHA classification criteria).

DOE regulatory requirements require contractors to conduct quarterly quality checks of their OII data to ensure that they have correctly classified injury and illness cases, properly documented the number of DART days (if any), and ensured that the local OSHA 300 Log and 300A Summary are accurate and consistent with the information reported in CAIRS. As a positive observation, the SRNS quality checks were identified as comprehensive and effective in finding and correcting OII record quality issues and most OII OSHA classification errors. EA identified two findings and one deficiency regarding three contractors' lack of and/or ineffectiveness in their quality assurance checks. Many of the OII case issues (misclassifications, incorrect DART day counts, and inconsistencies between the local OSHA records and CAIRS) noted by EA at these three sites would most likely have been identified and corrected if the sites had adequately conducted the required quality checks.

2.4 CAIRS Reporting

Criterion: *The organization electronically submits initial OII case reports to the CAIRS on or before the 15th or the last workday of the month, and cases are updated by the 10th of the month that follows each quarter until the case is closed. (CRAD EA-32-07, Objective OII.2, Criterion 5)*

CAIRS is the repository for all DOE Federal and contractor OII recordkeeping data. Timely CAIRS data entry is important to understanding and responding to emergent trends. Late OII case reporting can skew the safety performance statistics available to DOE organizations through CAIRS by keeping injury incidence rates lower than actual performance, particularly when CAIRS is viewed shortly after the end of

a quarter. Subsequently, the rates increase for months after as cases continue to be submitted late. In addition, DOE programs, field elements, the Office of the Associate Under Secretary for Environment, Health, Safety and Security and EA need reliable CAIRS OII case and incidence trend data for timely performance analysis and feedback.

Three of the four assessed contractors' CAIRS OII cases were entered late. For example, one contractor was noted as entering over 200 OII cases late (some cases up to a year late, with an average of 54 days late) over calendar years 2015 through 2017. Several reasons were identified for this contractor's late CAIRS reporting:

- OII recordkeeping procedures did not facilitate the collection of OII case data sufficient to support making classification decisions within the required seven days for inclusion on the OSHA 300 Log.
- Independent subcontractors were not held accountable for immediately notifying the contractor when injuries or illnesses occurred so that recordkeeping activities could be completed in a timely fashion.
- Elevating injury and illness cases through successively higher management levels of the contractor to external senior corporate management added unnecessary and significant delays in entering recordable OIIs in CAIRS.

As a separate oversight activity, EA evaluated a number of additional DOE contractors' CAIRS records to better determine the extent of late CAIRS reporting and concluded that many contractors chronically enter OII cases late in CAIRS.

EA identified SRNS as having a best practice for the timely entering of OII cases in CAIRS. The SRNS OII recordkeeping procedures and support mechanisms facilitate the investigation, classification, and documentation of injuries and illnesses on their OSHA 300 Log within the required seven days. SRNS, by procedure, also enters recordable cases in CAIRS at the same time the cases are entered in the OSHA 300 Log. For the periods evaluated, EA identified no late CAIRS entries for SRNS.

2.5 DOE Oversight of OII Recordkeeping Programs and Records

Objective: *DOE develops and implements mechanisms to ensure OII record data integrity and quality assurance. (CRAD EA-32-17, Objective OII.4)*

Criteria:

DOE line management conducts oversight and operational awareness activities of the contractor's OII recordkeeping and reporting program and recordkeeping classification decisions. (CRAD EA-32-17, Objective OII.4, Criterion 1)

Oversight activities are conducted by technically competent and experienced personnel. (CRAD EA-32-17, Objective OII.4, Criterion 2)

DOE line management performs periodic quality assurance checks of local injury OII recordkeeping data in the CAIRS database. (CRAD EA-32-17, Objective OII.4, Criterion 3)

DOE line management across the DOE complex relies increasingly on the contractors' assurance systems to identify and correct issues. Most contractor assurance systems include the analysis of OII records to identify emerging adverse safety trends and potential corrective actions. However, regular and effective DOE oversight to validate that OII records are accurate is important.

DOE Federal elements at the assessed sites did not conduct effective oversight, including the required periodic quality assurance checks, of contractor OII records at three of the evaluated sites. In general, sites lacked sufficient numbers of adequately trained OII recordkeeping subject matter experts to conduct oversight, and the safety oversight schedules did not address formal OII recordkeeping activities. However, DOE-SR maintains a cadre of well-trained and experienced subject matter experts in this area, schedules and conducts regular OII recordkeeping program assessments, maintains real-time awareness of contractor injuries, and performs robust quality check activities. EA views the DOE-SR OII oversight as a factor in SRNS's implementation of a robust and effective OII recordkeeping program. In fact, EA was able to shorten its quality review of SRNS OII case records to one year of records because of the thoroughness of the most recent DOE-SR oversight assessment.

3.0 SUMMARY OF RESULTS

3.1 Best Practice

In preparing this lessons-learned report, EA identified one best practice that may be valuable to other DOE sites:

- **Timely CAIRS Entry.** The SRNS process for entering recordable OII cases in CAIRS within seven days is a best practice.

3.2 Recommendations

These recommendations are based on lessons learned that EA identified during its assessments in 2017-2018. While the underlying deficiencies and weaknesses from individual reviews did not apply to every site reviewed, the recommended actions are intended to provide insights for potential improvements at all DOE sites. Consequently, DOE organizations and site contractors should evaluate the applicability of the following recommended actions to their respective facilities and/or organizations and should consider using or adapting them as appropriate.

DOE Field Elements

- **OII Recordkeeping Oversight.** Ensure that contractor OII recordkeeping records are accurate and reflect actual safety performance through planned, CRAD-based oversight activities that include:
 - Using trained and experienced DOE OII recordkeeping subject matter experts to perform periodic quality checks of contractor OII records, including those in CAIRS. Consider using CRAD EA-32-07, *Occupational Injury/Illness Recordkeeping*, Objective OII.4 to conduct the periodic quality checks.
 - Conducting periodic assessments of contractor OII recordkeeping programs.
 - Formally directing contractors to correct discrepancies identified in OII records (see DOE Order 231.1B, Attachment 3, Section 1.h).

Site Contractors

- **Classification of OII Cases.** Ensure that injury and illness cases are classified in accordance with OSHA recordkeeping criteria by:
 - Using qualified OII recordkeeping managers to make documented classification decisions based on OSHA requirements and interpretations
 - Applying OSHA §1904.5(a) work-relatedness criteria and the associated OSHA interpretation in Appendix C to determine whether an OII case is work-related
 - Capturing all medical treatments and prescriptions as issued by the site medical director, offsite LHCPs, and/or personal physicians for injuries and illnesses, and ensuring that OII cases are recorded when a medical treatment meets OSHA criteria
 - Establishing procedures to document all medical/work restrictions imposed by contractor management/supervision or any LHCPs, and recording each OII case where restrictions prevent a worker from conducting one or more of his/her routine functions.
- **Subcontractor OII Recordkeeping.** Ensure that subcontractor OII cases are identified, investigated, and recorded on appropriate OSHA 300 Log and 300A Summary, and that recordable cases are entered in CAIRS in a timely manner.
 - **Subcontractor Supplemental Labor.** Contractors that subcontract for workers to supplement or augment their workforce and supervise the supplemental workers on a day-to-day basis must investigate, classify, and include recordable injuries of subcontract supplemental workers' injuries on their OSHA 300/300A Forms.
 - **Independent Subcontractor.** Contractors must ensure that their independent subcontractors' recordable OII cases are recorded on the subcontractor's OSHA 300/300A Forms and entered in CAIRS by the 15th or last day of the month. OII recordkeeping procedures and/or subcontract requirements need to ensure immediate notification of injuries.
- **OII Case Records Quality Assurance.** Ensure that OII records are accurate, support OSHA classification decisions, are auditable, and are consistent between the OSHA 300/300A Forms and CAIRS. Consider ensuring that auditable OII case files include the items listed in Appendix D of this report and that the quarterly quality checks of OII records/CAIRS for contractor and subcontractor records are in line with criteria 2 through 4 of CRAD EA-32-07, Objective OII.4.
- **CAIRS Reporting.** Ensure that OII recordkeeping procedures support the timely entry of new recordable OII cases in CAIRS, with quarterly updates until closed, as required by DOE Order 231.1B, Attachment 3, Section 1.d. Contractors should consider implementing the SRNS best practice of entering new OII cases in CAIRS on the day the cases are added to the OSHA 300 Log. (OSHA requires OSHA 300 Log entries within seven days after the contractor receives information that a recordable injury or illness has occurred.)

Office of the Associate Under Secretary for Environment, Health, Safety and Security

- **Clarification of OSHA Injury and Illness Recordkeeping and Recording Criteria.** Consider developing enhanced outreach to the DOE complex to emphasize and clarify injury and illness recording and reporting requirements.
- **Quality Assurance Reviews.** Ensure periodic quality assurance reviews of DOE and DOE contractor occupational injury and illness recordkeeping and reporting practices are conducted in accordance with DOE Order 231.1B, *Environment, Safety and Health Reporting*, section 5.e.(4).

Appendix A Supplemental Information

Office of Enterprise Assessments Management

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Appendix B
Source Documents

- EA Report, *Office of Enterprise Assessments Assessment of Occupational Injury and Illness Recordkeeping and Reporting at the Waste Isolation Pilot Plant – July 2017*
- EA Report, *Office of Enterprise Assessments Assessment of Occupational Injury and Illness Recordkeeping and Reporting at the Lawrence Livermore National Laboratory – June 2018*
- EA Report, *Office of Enterprise Assessments Assessment of Occupational Injury and Illness Recordkeeping and Reporting at the Moab Uranium Mill Tailings Remedial Action Project – July 2018*
- EA Report, *Office of Enterprise Assessments Assessment of Occupational Injury and Illness Recordkeeping and Reporting at the Savannah River Site – August 2018*

Appendix C
OSHA Letter of Interpretation Regarding Work-relatedness of OII Cases

The excerpts below from an OSHA letter of interpretation (<https://www.osha.gov/laws-regs/standardinterpretations/2014-02-28>) dated February 28, 2014, clarify the determination of work-relatedness:

Section 1904.5(a) provides that injuries and illnesses must be considered work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing condition. Work-relatedness is presumed for injuries or illnesses resulting from events or exposures in the work environment, unless an exception in section 1904.5(b)(2) specifically applies. Accordingly, for a case to be work-related there must be a causal connection between the injury or illness and an event or exposure at work. For OSHA recordkeeping purposes, causality is established if work is a cause. The work event or exposure need only be a cause of the injury or illness; it need not be the sole or predominant cause. See, the preamble to the final rule revising OSHA's recordkeeping regulation 66 Federal Register 5929-32, 5946 and 5948. Also, "it is not necessary that the injury or illness result from conditions, activities, or hazards that are uniquely occupational in nature." 66 Federal Register 5929.

Under OSHA's recordkeeping system, normal body movements in the work environment, such as walking, bending down or sneezing, are "events" which trigger the presumption for work-relatedness if they are a discernible cause of an injury.

Appendix D
Recommended Content of an Auditable OII Case File

As a best practice, DOE OII case file records should include:

- First report of injury (injury/illness report)
- Statements from the injured worker and any witnesses
- Results of the safety investigation and/or fact-finding meeting
- Health services, hospital, and emergency room in/out medical record for the injured person
- Medical diagnosis for injury case (from health services, hospital/emergency room, contracted occupational medical provider, and/or other medical providers/referrals)
- Medical treatment provided at each medical visit, including types of medical devices (e.g., rigid splint) applied
- Prescribed medication (at initial and any follow-up medical evaluations)
- Health/medical services, other LHCP, or supervisor/manager direction on imposed medical/work restrictions and how restrictions impact the worker's ability to perform routine work activities (updated for each set of restrictions as the OII case progresses)
- Workers' compensation case information that can be used to cross-check OII case (e.g., new cases opened, payments for medical prescriptions or treatment or payments for time off from work due to an injury)
- Documented classification decision rationale (i.e., why the case is or is not OSHA recordable)
- DOE Form 5484.3, *Individual Accident/Incident Report*, for OSHA recordable cases
- Corrective actions (or linkage to corrective actions in the local issue tracking system)