

CAIRS Fiscal Year 2021 In Review

Introduction

The Department of Energy (DOE) uses the Computerized Accident/Incident Reporting System (CAIRS) database to collect and analyze reports of injuries, illnesses, and fatalities that occur during DOE operations in accordance with DOE Order 231.1B, “*Environment, Safety and Health Reporting.*”

This Operating Experience Summary (OES) provides a compilation of various metrics and indicators of DOE-wide injury/illness performance in Fiscal Year (FY) 2021, including new work-related pandemic reporting, and is based on CAIRS data as of November 1, 2021. The OES is intended to promote transparency and visibility into operating experience information that may benefit DOE line organizations and contractors in strong mission execution.

Background

The CAIRS database is managed by the Office of Environment, Health, Safety and Security (AU), Office of ES&H Reporting and Analysis (AU-23). The information contained in CAIRS provides a centralized collection of DOE accident/incident data that can support various safety and health related analyses, including developing trends and identifying potential hazards.

The recordkeeping data represents real injuries and illnesses (injuries and illnesses that required more than first aid) occurring within the DOE complex. While CAIRS does not provide a complete picture of workplace safety, analysis of CAIRS data can be valuable in evaluating safety programs.

FY 2021 CAIRS Reporting and Comparisons

As shown in Table 1, DOE had reported slightly more than 1,000 work-related injuries and illnesses into CAIRS each year over the past five years.

Table 1. Total cases submitted to CAIRS by FY

FY	Total number of cases
2017	1,057
2018	1,040
2019	1,107
2020	1,042
2021	1,384

FY 2021 showed an increase in cases reported, potentially impacted by the COVID-19 pandemic reporting. Of the 1,384 cases reported into CAIRS for FY 2021, 331 (24% of the total) were the result of work-related COVID-19 cases.

COVID-19 Pandemic Case Reporting into CAIRS

To ensure consistent reporting during the pandemic, AU issued a memo entitled, “*Guidance and FAQs for Recording and Reporting COVID-19 Cases,*” in October 2020. AU provided ongoing assistance on reporting COVID-19 cases into CAIRS and added a “pandemic” event reporting category to be able to identify and analyze COVID-19 cases. Results for these are shown in Tables 2 and 3.

Table 2. COVID-19 cases submitted to CAIRS for FY 2021 and FY 2020 by Program Office.

DOE Program Office	FY 2021	FY 2020
National Nuclear Security Administration	159	56
Science	107	15
Environmental Management	33	20
Nuclear Energy	27	8
Energy Efficiency and Renewable Energy	5	0
Total for FY 2021	331	99

Table 3. Number of all COVID-19 cases submitted to CAIRS for FY 2021 and FY 2020 by quarter.

FY Quarter	FY 2021	FY 2020
Quarter 1	208	0
Quarter 2	64	6
Quarter 3	19	12
Quarter 4	40	81
Total for FY 2021	331	99

Overall Injury/Illness Case Reporting into CAIRS

Table 4, below, is a summary of the total number of cases submitted to CAIRS for FY 2021 (and FY 2020 for comparison) classified by the event category that best describes the way the injury/illness was produced or inflicted by the source of the injury/illness.

Table 4. Total cases submitted to CAIRS classified by event category.

CAIRS Event Category	FY 2021	FY 2020
Bodily reaction and exertion	435	368
Pandemic	331	99
Contact with objects and equipment	320	295
Falls	169	164
Exposure to harmful substances or environments	94	56
Other events or exposures	16	40
Transportation accidents	13	14
Assaults and violent acts	5	3
Fires and explosions	1	3
Total for FY 2021	1,384	1,042

Tables 5 and 6 provide a summary of all cases submitted to CAIRS by Program Office and by quarter for FY 2021 (and FY 2020 for comparison).

Table 5. Total cases submitted to CAIRS by Program Office.

DOE Program Office	FY 2021	FY 2020
National Nuclear Security Administration	774	605
Science	306	181
Environmental Management	166	165
Nuclear Energy	97	66
Energy Efficiency and Renewable Energy	21	4
Fossil Energy	16	8
Power Administrations	3	11
Other Headquarters Level Organization	1	1
Legacy Management	0	1
Total for FY 2021	1,384	1,042

Table 6. Total cases submitted to CAIRS by quarter.

Fiscal Year Quarter	FY 2021	FY 2020
Quarter 1	401	248
Quarter 2	328	289
Quarter 3	315	171
Quarter 4	340	334
Total for FY 2021	1,384	1,042

Conclusion

CAIRS provides a valuable repository of workplace injury and illness metrics that, in combination with other site and mission-specific information, can be used to support prevention of adverse impacts and improved operations. This OES presents a high-level view of CAIRS data that can benefit from further analysis at a Program Office or site level. AU-23 is available to assist with and coordinate such analysis, as requested.

The Office of Environment, Health, Safety and Security, Office of ES&H Reporting and Analysis publishes OESs to promote safety throughout the DOE complex by encouraging the exchange of lessons learned information among DOE facilities.

For further information or assistance related to this OES, please contact Craig Schumann, CAIRS Program Manager, at (630) 252-9176 or craig.schumann@hq.doe.gov.