

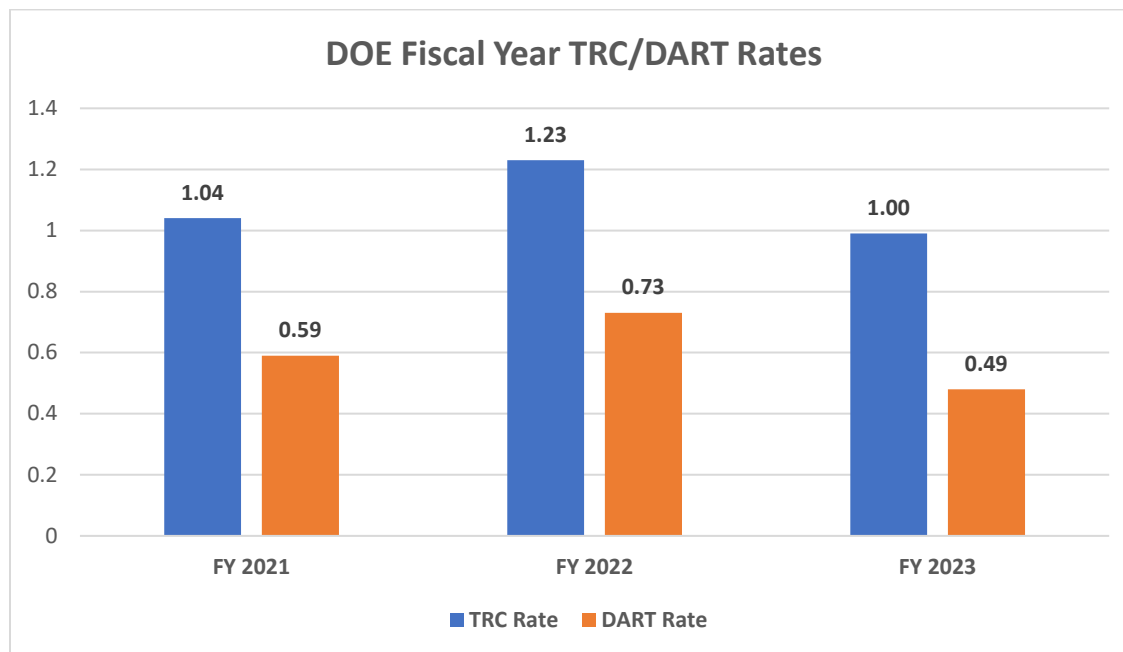
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Policy Awareness: Understanding TRC and DART Rates

The Total Recordable Case (TRC) and Days Away, Restricted, or Transferred (DART) rates are two of the most used safety performance metrics in the Department of Energy (DOE) enterprise. For example, these two metrics are often used by DOE in evaluating DOE contractor performance against the expectations in the Performance Management Evaluation Plan (PEMP). Some DOE requests for proposals will use them as an evaluation factor when awarding a contract. Some DOE contractors will use them to qualify subcontractors. Finally, the DOE Voluntary Protection Program (VPP) uses them as eligibility criteria for acceptance and continuation within the program. These recognized metrics provide an opportunity for an organization to benchmark their performance against others within the DOE complex and private industry.

DOE's TRC and DART rates are maintained through the DOE Computerized Accident/Incident Reporting System (CAIRS) which is a database used to collect, and ultimately analyze, DOE and DOE contractor reports of work-related injuries, illnesses, and fatalities. DOE Order 231.1B "Environment, Safety and Health Reporting" requires work-related injury and illness reports be submitted to CAIRS and is managed by the Office of ES&H Reporting and Analysis (EHSS-23).

Below is a chart showing the TRC and DART rates for the entire DOE enterprise for the past three fiscal years.



The recordkeeping data represent real injuries and illnesses (injuries and illnesses that required more than first aid) that occurred across DOE. CAIRS data does not provide a complete picture of workplace safety, but analysis of the CAIRS data can be used to recognize trends which can identify potential safety and health program weaknesses.

While TRC and DART rates are widely used, there is often a misunderstanding of what they mean and what they measure. This OPEX Awareness notice presents answers for some commonly asked questions to aid in understanding the meaning and relevance of these performance metrics.

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| What does TRC mean? | Total Recordable Case |
| What is the TRC rate? | It is the total number of work-related injuries or illnesses that resulted in "death"; "days away from work"; "job transfer or restriction" or "other recordable cases" as identified in columns G, H, I and J of the OSHA Form 300. This information is entered into a standard formula to arrive at the TRC rate. The 200,000 hours in the following formula represents the equivalent of 100 employees working 40 hours per week, 50 weeks per year, and provides the standard base for calculating the incidence rates. |
| How is the TRC rate calculated? | $\text{TRC Rate} = \frac{\text{Total \# of injuries and illnesses} \times 200,000}{\text{Total employee hours worked}}$ |

Here is a TRC example: Company ABC has 10 total "recordable" cases and, as a company, they have worked 500,000 hours this year.

$$\text{TRC Rate for Company ABC is } \frac{10 \times 200,000}{500,000} = 4.0$$

This means that for every 100 workers at Company ABC, four have had a recordable injury or illness.

Are there things to consider when comparing TRC rates?

Yes. A single injury or illness has a much greater effect on the TRC rate for small employers. The table below demonstrates the effect of company size on TRC rates.

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|------------------------------|--|-----------------------------|
| Company A has 10 employees | with 20,000 work hours with 1 injury | The TRC rate is 10.0 |
| Company B has 500 employees | with 1,000,000 work hours and has 10 injuries | The TRC rate is 2.0 |
| Company C has 3500 employees | with 6,000,000 work hours and had 18 injuries | The TRC rate is 0.6 |

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| What does DART mean? | Days Away, Restricted or Transferred |
| What is the DART rate? | It is a subset of the TRC rate and is the total number of work-related injuries or illnesses that resulted in the most serious outcome of the case (as identified on the OSHA Form 300 in columns H or I) involving days away from work, or days of restricted work activity or job transfer, or both, that are entered into a formula similar to the one used for calculating TRC rates. |
| How is the DART rate calculated? | $\text{DART Rate} = \frac{\text{Total \# DART Cases} \times 200,000}{\text{Total employee hours worked}}$ |

Here is a DART example: Company ABC has 5 cases that involved workers missing work because of the injury or illness. The company had 500,000 employee hours worked this year.

$$\text{DART Rate for Company ABC is } \frac{5 \times 200,000}{500,000} = 2.0$$

This means that for every 100 workers, two workers at Company ABC have had a recordable injury or illness that resulted in days away/restricted days or job transfer.

Does every work-related injury or illness become a “recordable” case? No. The OSHA regulations (29 CFR Part 1904, which DOE and DOE contractors follow) define a “recordable” case as follows:

Recordable cases are work-related injuries and illnesses that result in:

- Death
- Loss of consciousness
- Days away from work
- Restricted work activity or job transfer
- Medical treatment (beyond first aid)
- Significant work-related injuries or illnesses that are diagnosed by a physician or other licensed health care professional (these include any work-related case involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum)
- Needlestick and sharps injuries that are contaminated with another person's blood or other potentially infectious material
- Medical removal under OSHA standards
- Occupational hearing loss
- Work-related tuberculosis cases

Consider this scenario where a worker received a cut on their arm:

If the worker only needed a bandage, then that is considered first aid and will not be a recordable case counting towards the TRC rate. If, however, a worker received a cut on their arm and one suture was required to close the wound, then that is considered medical treatment (beyond first aid) and is a recordable case counting towards the TRC rate.

Is there a difference in the TRC rate if the injury is an amputation compared to a laceration requiring just one suture? No. They are both counted the same when calculating the TRC rate.

When counting days away from work, is there a difference when a worker is hospitalized?

Do you count those days differently, and do the number of days in the hospital affect the DART rate? No. In some individual cases they may be a measure of injury or illness severity, but they do not affect the DART rate.

Are there limitations when using TRC and DART rates? Yes. There are many indicators used in evaluating a safety and health program. Historically, these rates have been used as a measure of an organization's safety and health performance. These rates are commonly called "lagging" or "trailing" indicators, meaning that an injury/illness has already occurred. This, however, is not necessarily indicative of future performance.

RECOMMENDATIONS

- DOE and DOE contractor management should analyze every work-related injury or illness that occurs in their respective organizations to identify causal factors. The organization should implement corrective actions to eliminate the causes of the injury or illness that will prevent recurrence. Sharing information in the form of lessons learned can benefit the entire DOE complex and is one mechanism for continuous improvement.
- Rather than comparing your organization's injury and illness rates to another organization, consider focusing on your organization's injury and illness history, identifying continuous improvement opportunities over the long term.
- High injury and illness rates do not necessarily indicate a lack of interest in safety and health. In fact, some organizations initiating or improving their Integrated Safety Management System (ISMS) may experience an initial increase in TRC/DART rates associated with the workers recognizing that, (1) the organization wants and encourages workers to report all types of injuries or illnesses no matter how minor, and (2) the organization has assured workers that, if they report injuries and illnesses, they are free from any reprisal. Each organization should have a defined strategy to continue to improve their ISMS. This strategy should incorporate the review of site-specific TRC and DART rates along with utilizing leading indicators such as worker participation in program activities, as well as the number and frequency of management walkthroughs, etc.

SUMMARY

TRC and DART rates are very familiar and readily available measures that can be used to identify issues and drive meaningful improvements in an organization. It is important to understand their meaning along with their limitations. As a reminder, DOE Order 231.1B states that **"Occupational injury and illness information must be analyzed to identify adverse trends and lessons learned, and develop corrective actions that prevent recurrence."**

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