



## **2.0 CATEGORIZATION MATRIX OF REPORTING CRITERIA**

### **2.1 Purpose**

This section provides advice and information to help facilities and/or sites create a matrix of additional reporting criteria and follow-up actions. These actions are in addition to those specified in DOE Manual 232.1-1.

### **2.2 Scope**

Because all facilities and/or sites have the potential for different reporting requirements, Section 2.0 gives examples of ways to organize various reporting requirements. Each local matrix should be individually tailored to its facility or site function. A good matrix should make reporting requirements easily accessible to those individuals responsible for categorization and OR preparation.

### **2.3 Notification**

There are more than 200 individual reporting criteria in DOE Manual 232.1-1. These represent the majority of occurrences requiring prompt notification and followup to DOE. However, there are still other occurrences that require the contractor to notify both DOE and other regulatory agencies. Likewise, for a given occurrence, there may be other reports or forms that need to be prepared in addition to an OR.

### **2.4 Documentation**

The responsibility for the additional reporting criteria and requirements (not required by DOE Manual 232.1-1) often falls upon the Facility Manager. It is recommended that all of the reporting criteria be integrated into a single site document. The actual writing of reports (e.g., ORs or Computerized Accident Incident Reporting System [CAIRS] form) may fall upon the same individual for a given occurrence.

### **2.5 Other Reporting Criteria**

Depending on the facility and/or site, there are several different requirements that should be reviewed before the development of a matrix. These include the following:



DOE O 151.1: This order defines the requirements for site emergency plans and the development of Emergency Action Levels (EALs). DOE Manual 232.1-1 allows the integration of the "emergencies" from DOE Manual 232.1-1 with the EALs from DOE O 151.1. This should be done to avoid confusion between the two different usages of the emergency classification.

**NOTE:** The requirements of DOE O 151.1 are not as formal as those of DOE O 232.1 regarding written documentation (i.e., the OR). If the EAL criteria are used to replace a DOE Manual 232.1-1 emergency, care should be given to ensure that an OR will be written in accordance with the time requirements defined in DOE Manual 232.1-1.

Notification of Unusual Events (NOUE) Many sites have requirements for a prompt notification of what are called Notifications of Unusual Events. This is the lowest classification level of an emergency defined for commercial nuclear power stations, but is not used in DOE Order 151.1.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)  
The CERCLA environmental requirements are contained in 40 CFR 302.

#### Site-Specific Requirements

There are generally many facility- and/or site-specific requirements for occurrences that need to be reported. In some cases these have been added as additional unusual or off-normal occurrence criteria, and in other cases, they are added to a tier of criteria below the off-normal level. This lower tier, if needed, is completely defined by the facility and/or site in terms of the required notifications and the required follow-up reports.

Typical site-specific criteria include the following:

- Industrial Safety
  - Lost workday case
  - Restricted workday case
  - Medical treatment case
  - OSHA violations
  - Traffic accidents below DOE Manual 232.1-1 criteria but required by DOE O 5484.1
- Environmental
  - Site-specific requirements defined by the local/state regulatory agencies
  - Tracking of spills below DOE Manual 232.1-1 reportable quantity (RQ) threshold





- Facility Specific Operational Events
  - Events that interfere with the safe, efficient, and productive operation of the facility based on the specific and unique potential events applicable to each facility
- Health Protection - Contamination below the DOE reporting limit
- Other reports or forms

There are several requirements (DOE-driven and site-specific) that require additional reports and forms to be completed. These are easy to include in a matrix. Examples of additional reports that need to be addressed are as follows:

- Type A or B investigations as defined in DOE Order 225.1, *Accident Investigations*. (The format for these reports are different than the OR. The criteria for when a report is required overlaps with the criteria found in DOE Manual 232.1-1.)
- CAIRS forms for injuries, illnesses, property damage, and motor vehicle accidents are required by DOE Order 231.1, *Environment, Safety, and Health Reporting*.
- Investigation reports for motor vehicle accidents as defined in DOE O 225.1.
- Material Control and Accountability (MC&A) reports for Special Nuclear Material (SNM).
- Security reports.

## **2.6 Possible Format for a Matrix**

While it is not possible to define the optimum matrix for all sites, the following are typical column headings to summarize reporting criteria. It is recommended that when developing a matrix of additional reporting criteria and follow-up actions, that the numbering scheme specified in DOE Manual 232.1-1 (e.g., 2.A.UO(2)) be adopted.

- Site Numbering Schema -- Allow for the addition of other reporting systems (e.g., EALs, CERCLA).
- DOE Criteria -- The direct text from the applicable order.
- Site Guidance -- Augments the DOE criteria, if necessary. For those items to be reported at a site level, which are not required by DOE Orders, the detailed criteria is provided.
- Facility Guidance -- For larger sites where each facility may have its own interpretation (e.g., specific meter or gauge readings).



- Source -- A reference to where the criteria came from (e.g., DOE Manual 232.1-1 and DOE Order 151.1).
- Cross Reference -- A reference to any specific numbering schema used in the source document. This is used to define the nature of occurrence, if a site-specific numbering schema is used.
- Call-Out Listing -- Multiple columns defining different individuals that need to be promptly notified. This includes both DOE and contractor personnel.
- Procedure Reference -- A reference to any other procedure that needs to be followed given the specific occurrence (e.g., evacuation procedures).
- Reports -- A reference to the type of report(s) that will be required for this type of occurrence.

**2.7 Examples**

Tables 2-1 and 2-2 are examples of how a matrix has been incorporated into site-specific procedures.



**Table 2-1 Reporting Criteria Matrix (Example 1) (Sheet 1 of 2)**

REPORTING CRITERIA - (ALL SOURCES)						
WSRC #	DOE Text	Site Discussion	Source	Cross-Reference	Reporting Type /Who	Procedure
01-A UO 3	Any release that is not an emergency as defined in DOE 5500 series orders but requires immediate reporting (less than four hours) to Federal regulatory authorities. Release of a radioactive material that exceeds a federally permitted release by the amount of a Comprehensive Environmental Response, Compensation and Liability Act Reportable Quantity or, where no federally permitted release exists, the release exceeds the Reportable Quantity or triggers specific action levels for an outside Federal agency.	To be determined by Site Environmental Point of Contact (SEPC).	DOE Manual 232.1-1	2.A.UO(2)	OR Facility	
01-A ON 1	Any release of radionuclide material to controlled or uncontrolled areas that is not part of a normal monitored release and exceeds 50% of a CERCLA RQ specified for such material per 40 CFR 302.	To be determined by SEPC.	DOE Manual 232.1-1	2.A.ON(1)	OR Facility	
01-A NR 1	N/A	Leaks, spills, or releases of less than 50% of an RQ of radionuclides to controlled or uncontrolled areas (contaminated structures or the environment).	WSRC		SEPC-Log SEPC	
07-A UO 2	Any packaging or transportation activity (including loading, unloading, or temporary storage) involving the offsite release of radioactive material, etiologic agents, a reportable quantity of hazardous substance, or marine pollutants.	TBD	DOE Manual 232.1-1	6.A.UO(1)	OR Facility	



**Table 2-1 Reporting Criteria Matrix (Example 1) (sheet 2 of 2)**

Reporting Criteria (all sources)						
WSRC #	DOE Text	Site Discussion	Source	Cross-Reference	Reporting Type /Who	Procedure
07-A UO 3	A vehicle, vessel, rail or air incident or accident (without personal injury) that presents significant impact on ability of facility to conduct transportation operations and: a) results in release of radioactive or hazardous materials above Federal permit, Federal regulatory, or DOE Standard limits, or b) involves significant degradation of safety equipment, or c) are the result of failure or significant degradation of administrative controls required to ensure safety.		DOE Manual 232.1-1	6.A.UO(4)	OR Facility	
07-A ON 1	Any vehicular incident with injury(s) involving Departmental property resulting in a lost workday case.	The determination for the LWC requires the concurrence of the ESH&QA OS&H Department	DOE Manual 232.1-1	3.B.ON(1)	OR, SF-91, 5484.X At fault facility	8Q-P41
07-A ON 2	Any packaging or transportation activity involving: a) the offsite release of nonradioactive hazardous material, or any quantity of the hazardous waste, or b) the onsite release of radioactive materials, etiologic agents, hazardous substances, hazardous waste, or marine pollutants.	TBD	DOE Manual 232.1-1	6.A.ON(1)	OR Facility	

OR = Occurrence Report  
 SEPC = Site Environmental Point of Contact  
 LWC = Lost Workday Case  
 TBD = To Be Determined  
 CFR = Code of Federal Regulations  
 QA = Quality Assurance  
 ES&H = Environment, Safety & Health  
 OS&H = Occupational Safety & Health  
 RQ = Reportable Quantity  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act



**Table 2-2 Reporting Criteria Matrix (Example 2) (sheet 1 of 2)**

Condition/Event	Group 2 - Environmental	E	UO	ON	Clarification/Notes	Cross Reference
I. Operations	1.a Loss of incoming AC power and failure of all backup emergency power systems, supplying AC power to safety class systems, to operate for a category A reactor.	X			Event must also meet the criteria for a classified emergency in accordance with site emergency plan or facility EALs.	
	1.b Loss of any primary confinement/containment that results in uncontrolled hazardous material/energy release.	X			Event must also meet the criteria for a classified emergency in accordance with site emergency plan or facility EALs. For a hazardous material release, the event must meet emergency criteria in Group 2.B of this procedure.	
	2.a Any actuation of safety systems, automatic protection systems or engineered safety features, except under approved testing.		X		This includes events that have a programmatic impact (i.e., fire form discharge, criticality audio alarm, etc.)	
	2.b Weather conditions/natural phenomenon causing serious disruption of facility activities.		X		Not intended to include site delays/early releases unless weather condition causes significant impact to facility operations.	



**Table 2-2 Reporting Criteria Matrix (Example 2) (sheet 2 of 2)**

Condition/Event	Group 3 - Personal Safety			E	UO	ON	Clarification/Notes	Cross Reference
A. Occupational Illness/Injury	2.a	Any occurrence due to DOE operations resulting in a fatality or terminal injury or illness.			X		Requires submittal of CAIRS Form X, Type A investigation	ID SD 5484.1B
	2.b	Any one occurrence resulting in five or more lost workday cases as defined by 29 CFR 1904.			X		See 2.a note.	ID SD 5484.1B
	3.a	Any occupational illness or injury that results in inpatient hospitalization.				X	Requires submittal of CAIRS Form X, Type B investigation	ID SD 5484.1B
B. Vehicular Incidents  Note: Transportation incidents without injury must be reported per Group 6.	1.a	Inflight aircraft occurrence involving a highjacking or bomb threat that poses a threat to the health and safety of the aircraft, its occupants, or the general public.	X				Event must meet the criteria of a classified emergency in accordance with the site emergency plan or facility EAL.	
	2.a	Any vehicular incident resulting in fatality, injury, or illness classified under Group 3, Section A, UO requirement.			X		See Group 3, Section A, UO note. May require submittal of CAIRS Form X.	Group 6 WV-984
	2.b	Any vehicle incident involving DOE property with fatality(ies) to a person(s) other than DOE personnel or DOE contractor personnel.			X		May require submittal of CAIRS Form X.	Group 6 ID SD 5484.1B WV-984

CAIRS = Computerized Accident Incident Reporting System

E = Emergency

UO = Unusual Occurrence

ON = Off Normal

CFR = Code of Federal Regulations

AC = Alternate Current

EAL = Emergency Action Level