



Occurrence Report Writing

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Focus of Occurrence Report Writing Course

Terminal Objective:

- The student will be able to understand the requirements for completing a quality occurrence report

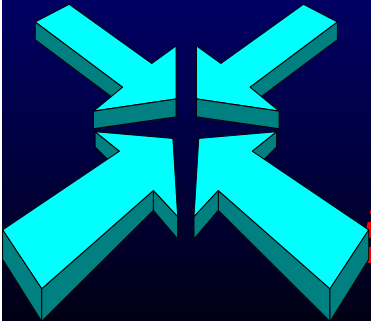




Focus of Occurrence Report Writing Course

Enabling Objectives:

- Understanding the complex-wide use of occurrence reports
- Writing strategies
- Understanding internal consistency
- Understanding what is required for each field in the occurrence report
- Hands-on use of ORPS database



ORPS Re-Engineering Completed

- ORPS has undergone a makeover
- Fewer criteria, new terminology, new focus
- Change from “Off Normal” and “Unusual Occurrence” to “Significance Categories”
- Not all reports require the same level of effort; more focus on a graded approach
- Contractor approval allowed for some occurrences
- More focus on reporting significant events

How Should an Occurrence Report be Written?

- Person with limited knowledge about facility operations or processes can understand:
 - What has happened;
 - What actions were taken;
 - Results of actions;
 - Causal Factors;
 - Corrective actions; and
 - Lessons learned





Reporting Instructions

- Those fields marked with an asterisk (*) are required for all reports (notification, update, final, short form)
- Those fields marked with a pound sign (#) are required under certain conditions (occurrence report type, report type, or the answer to a previous question)



Reporting Instructions

- Date and time format are the same for all affected fields (16, 17, 18, 19, 32, and 37):
 - Date format is mm/dd/yyyy: 07/01/2003
 - Time format is military, hhmm:
 - 6:30 AM would be 0630
 - 6:30 PM would be 1830
 - 11:00 AM would be 1100
 - 11:00 PM would be 2300
- NOTE: See Appendix D for a glossary of terms used for occurrence reporting.
- NOTE: See Appendix F for the example occurrence report used for this class.





****(1) Occurrence Report Number***

Automatically generated by the system. Includes:

- DOE Field Office
- Area Office (if applicable)
- DOE Contractor
- Facility
- Calendar Year the occurrence was first reported
- Sequential number of the occurrence by facility

Note: A temporary number is assigned until the Notification Report is successfully transmitted





**(2) Facility Name*

- Select the Facility Name from the drop-down menu.
- Note: Only facilities that you have authority with will show up in this drop-down menu.
- Balance-of-Plant: Consult with ONC if not sure of ORPS facility



**(3) Facility Function Code*

- Select the Facility Function code from the drop-down menu that best describes the activity/function performed at the facility selected. Only one selection is allowed.
- See Appendix A for list of choices





****(4) Site Name***

- This field is automatically generated by the system, and indicates the logged users' site. This field may not be modified.
- Examples:
 - Hanford Site - Project Hanford Management Contractor
 - Hanford Site - Pacific Northwest National Laboratory
 - Hanford Site - Bechtel Hanford Incorporated
 - Hanford Site - CH2M HILL Hanford Group, Inc.
 - Hanford Site - Bechtel National River Project



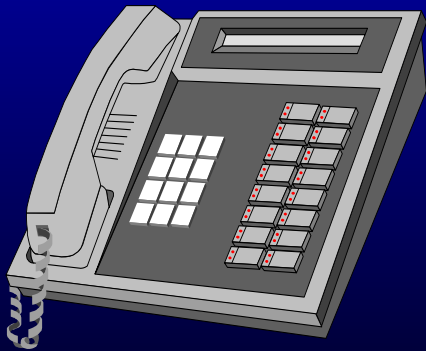
**(5) Manager/Designee*

- Enter the name of the responsible facility manager or designee who approved the report
- Select a name from the drop-down menu, or enter a name, phone number and title in the input boxes next to the drop-down menu (the drop-down menu overrides the input boxes)



**(6) Manager Phone*

- Enter the full phone number, including area code.
- Field must include 10 numeric digits and not exceed 15 characters in total length
- Example: (509) 376-4664





**(7) Job Title*

- Enter the specific job title of the Manager/Designee
- Do not use acronyms



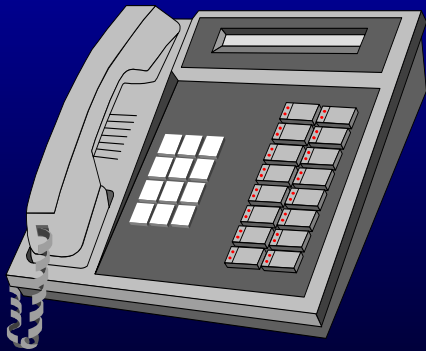
**(8) Originator/Transmitter*

- This field is automatically generated by the system, and displays the user ID of the logged in user.



**(9) Originator Phone*

- This field is automatically generated by the system, and displays the telephone number of the logged in user





**(10) Originator/Title*

- This field is automatically generated by the system, and displays the title of the logged in user.






****(11) Division/Project***

Identify the project or the contractor organization responsible for the facility at which the occurrence took place. Examples:

- Nuclear Material Stabilization Project
 - Waste Management Project
 - River Corridor Project
 - Spent Nuclear Fuel Project
 - Fast Flux Test Facility Project
 - Central Plateau Remediation Project
- 

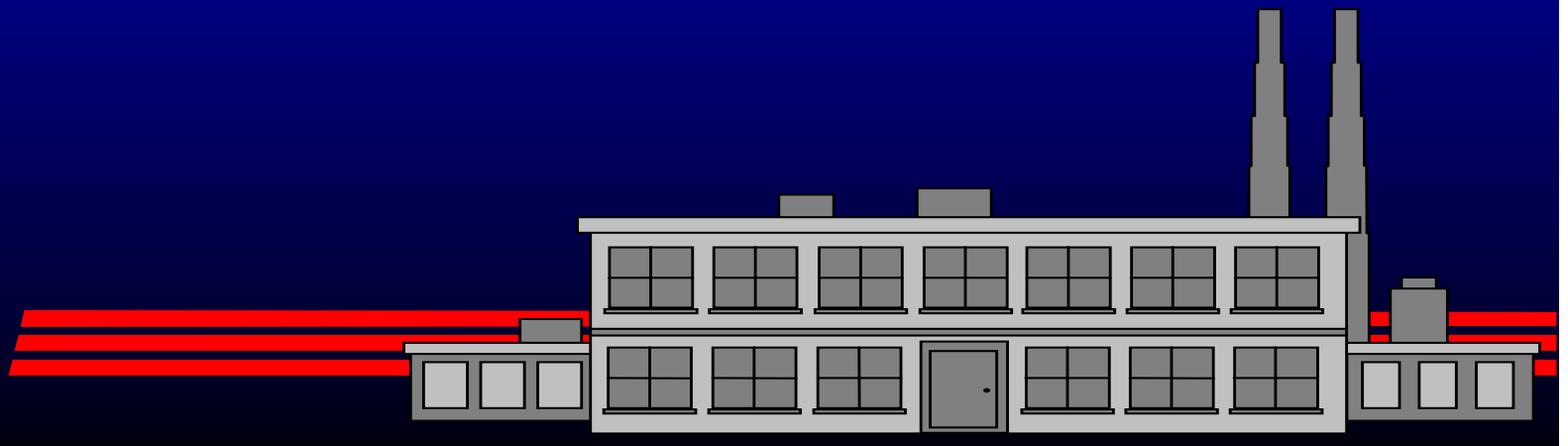


****(12) Secretarial Office***

- **Select the DOE Secretarial Office to which the facility is operationally responsible from the drop-down menu.**
 - **Refer to Appendix B for a list of DOE Secretarial Offices**
 - **Select only one secretarial office. If the facility is operationally responsible to more than one, select the one most involved with the work activity associated with the occurrence.**
- 


****(13) System/Building/Equipment***

- Identify all systems, equipment, or structural items involved in the occurrence
- For component failures/defective parts, include manufacturer, model number, size, etc.
- List the most significant items
- Additional information, if needed, can be provided in the Description of Occurrence





***(14) UCNI**

- Enter a "Y" or "N" to indicate if the report contains **Unclassified Controlled Nuclear Information (UCNI)**
 - When required, and when appropriate UCNI guidance is available, a reviewing official must make the final determination if the report contains UCNI
 - If appropriate UCNI guidance is not available, a reviewing official must make a preliminary determination that the report may contain UCNI
 - No classified or UCNI information is allowed on ORPS
 - If report has classified or UCNI information, then a non-sensitive version must be entered into ORPS. The classified or UCNI version must be handled in accordance with existing procedures that govern classified/sensitive documents
- 



**(15) Plant Area*

- Indicate the name of the site-specific area where the occurrence took place.
- Examples:

100 Area

200 East Area

200 West Area

300 Area

400 Area

600 Area

700 Area

1100 Area

3000 Area

Offsite

RCHN (Richland North)

RCHC (Richland Central)

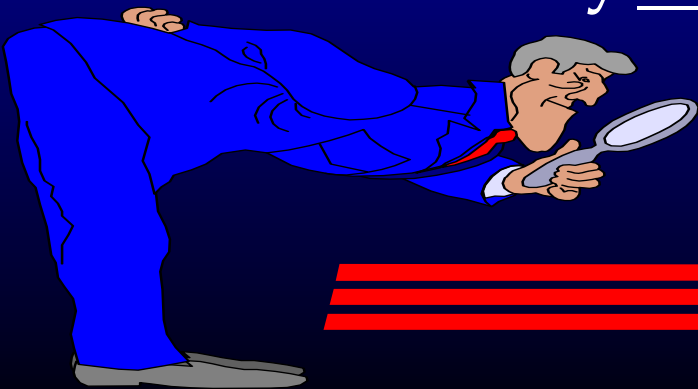
RCHS (Richland South)

Kenn (Kennewick)




**(16) Discovered Date/Time*

- Enter the date and time when facility staff discovered the event or condition being reported
- Discovery is defined as that time when facility staff become aware of a reportable event
- If another contractor or vendor discover an event or condition, discovery time is when facility staff are notified of the event



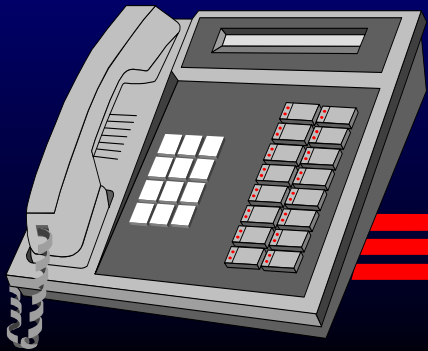


****(17) Categorized Date/Time***

- Enter date and time when the Facility Manager determined that the event or condition constituted Reportable Occurrence and determined its category (Significance Category 1-4 or E)
 - If the event is recategorized after the notification report has been submitted, enter the date and time the event was recategorized in field #25
- 

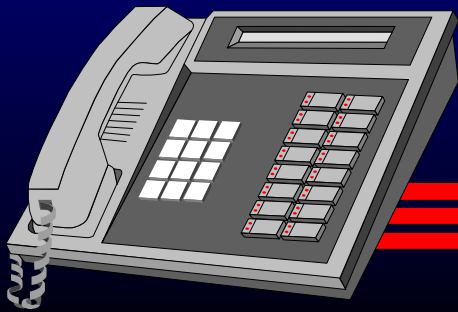
****(18) DOE HQ OC Notifications***

- Enter the date and time when the DOE HQ Operations Center was notified and the name and organization of the person notified
- This field is required for all reports categorized as Operational Emergencies and Significance Category (SC) 1 occurrences
- This field is required for SC-R (recurring) and SC-2 occurrences, as directed by the Field Office
- This field is required for SC-2, SC-3 and SC-4 occurrences marked with an asterisk (*)




#(19) Other Notifications

- Enter date, time, name, and organization for other notifications. This can include state and local agencies, DOE Facility Representative, contractor management or line management
- This field is required for all reports categorized as Operational Emergencies or SC-1 occurrences.





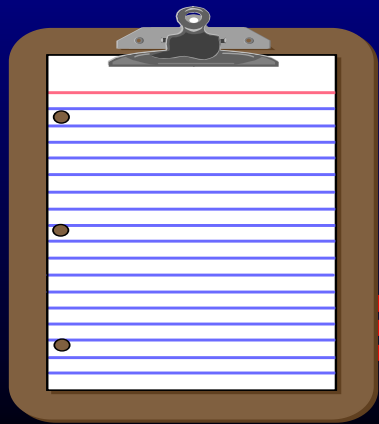
****(20) Subject/Title of Occurrence***

- Enter a brief title or concise description that best details nature, cause, and result of the occurrence
 - Use consistent terminology: Freeze Protection, Nuclear Safety Violation, Suspect/Counterfeit Items
 - Limited to 140 characters (2 lines of text)
 - For any Unreviewed Safety Question, put the “USQ” acronym in parenthesis following the Subject/Title
- 




**(21) Reporting Criterion/Criteria (Nature of Occurrence)*

- Select one or more Reporting Criterion/Criteria from Chapter 6 of DOE Manual 231.1-2 that best describes the Nature of Occurrence (NOC)
- At least one NOC is required, however, all that pertain should be entered
- NOTE: The Significance Category field (22) will contain the highest SC associated with the selected NOCs. For example, if NOCs associated with SC-1, SC-2 and SC-3 were selected, the significance category would be 1.






**(22) Significance Category*

- This field is automatically assigned by the system and is dependent on the Reporting Criterion/Criteria. Significance Categories include:
 - Category E
 - Category 1
 - Category R
 - Category 2
 - Category 3
 - Category 4
- 



#(23) *Recurring Event*

- If the event is being designated as a recurring event, check the box; otherwise leave it blank
 - When the box is checked, the Significance Category is automatically set to “R” regardless of the significance category derived from the NOC selected from Field #21
- 



(24) *Subcontractor Involved

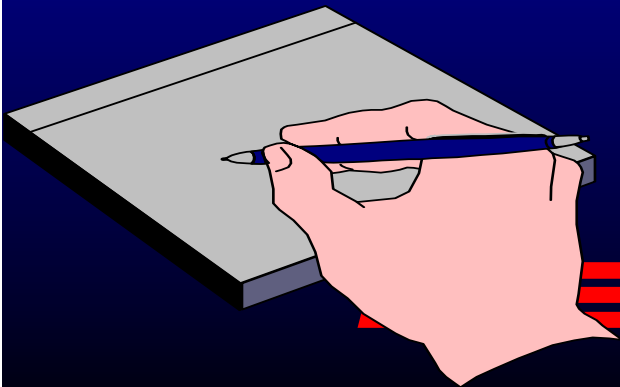
- If a subcontractor is involved in the occurrence, choose *Yes*, otherwise, choose *No*
- If *Yes* is selected, enter the name of the subcontractor



**(25) Description of Occurrence*

Requirements from DOE M 231.1-2, Section 5.4.1:


- The report should enable the general reader to understand the basic “who, what, where, when, how” of the event, the safety issues involved, and the actions taken.
- The first paragraph of the occurrence description should relay the essential nature of the event (i.e., a summary of the occurrence in newspaper style).






(25) *Description of Occurrence

Requirements from DOE M 231.1-2, Section 5.4.1:

- All information should be clear and succinct. Avoid redundant and unnecessary text, and lengthy “log book” accounts, unless a discussion of the event in chronological order is considered essential to understanding the event.
 - Complex and more significant occurrences should warrant a greater level of detail. Significance Category 4 occurrences would likely need only a short paragraph under Occurrence Description. However, all reports should present enough information so that the general reader understands why the event needs to be reported and what the effect was.
 - Avoid jargon and uncommon or site/facility -specific abbreviations and acronyms. If used, acronyms should be initially spelled out.
- 

*(25) *Description of Occurrence*


Requirements from DOE M 231.1-2, Section 5.4.1:

- Unless necessary to record and explain the event (e.g., suspect/counterfeit items or material), use general descriptions of equipment, procedures, etc., rather than presenting lengthy detailed titles and the numbers and letters assigned to those items.
 - Quantify the level of contamination, dose, release, and damage (e.g., estimate the acres of wild land burned) when possible, instead of merely stating a reportable limit was exceeded.
 - Use active rather than passive voice whenever possible. For example, write, "*the electrician severed the conduit*" rather than "*the conduit was severed.*"
- 




(25) *Description of Occurrence

Requirements from DOE M 231.1-2, Section 5.4.1:

- When appropriate for clarification, photos, sketches, and drawings must be maintained with the ORPS report. In addition, sites are encouraged but not required to make photos, sketches, and drawings available via a Web page, with the Web page address included as a hyperlink in the ORPS report.
 - **NOTE:** All other text fields in the occurrence report should meet these general requirements.
- 




**(25) Type of Information to be Included*

- The method of discovery
 - Any component failures and the failure mode
 - Any personnel errors involved, including type and result of error
 - Any procedural problem encountered
 - Loss of any safety equipment
- 




****(25) Type of Information to be Included***

- The response of any automatic or manual safety systems and the signals which initiated and terminated their operation
 - The duration of any failures
 - Operator actions that affected the course of events
 - Detailed information on contamination events (size of contaminated area, contamination levels [i.e., 20,000 dpm/100cm² beta/gamma])
- 



(25) *Writing Strategies

- Write concisely and clearly, focusing on facts
 - Include details such as size of contaminated area and contamination levels
 - Begin description with a summary/introductory sentence which contains what happened, when occurrence happened, and who discovered the occurrence
 - Make sure the first ten lines of the description have significant event information for the ORPS Summary Report
 - Follow the summary/introductory sentence with all pertinent facts in chronological order
- 




**(25) Example Description*

- Review field #25 of the PFP example occurrence report (Appendix F). This description follows the suggested format of the DOE Order and includes the level of detail and information necessary to ensure that anyone reading it can understand the event.





****(26) Operating Conditions***

- Describe the operational status of facility or equipment at the time of occurrence (temperatures, pressures, or other parameters)
 - For grass fires, vehicle accidents, etc., where operating conditions are not applicable, enter “Does not apply”
 - Limited to 140 characters (2 lines of text)
- 




**(27) Activity Category*

- Select the activity category (one only) that best describes the ongoing activity at the time of the occurrence.
- See Appendix C for list of possible entries.



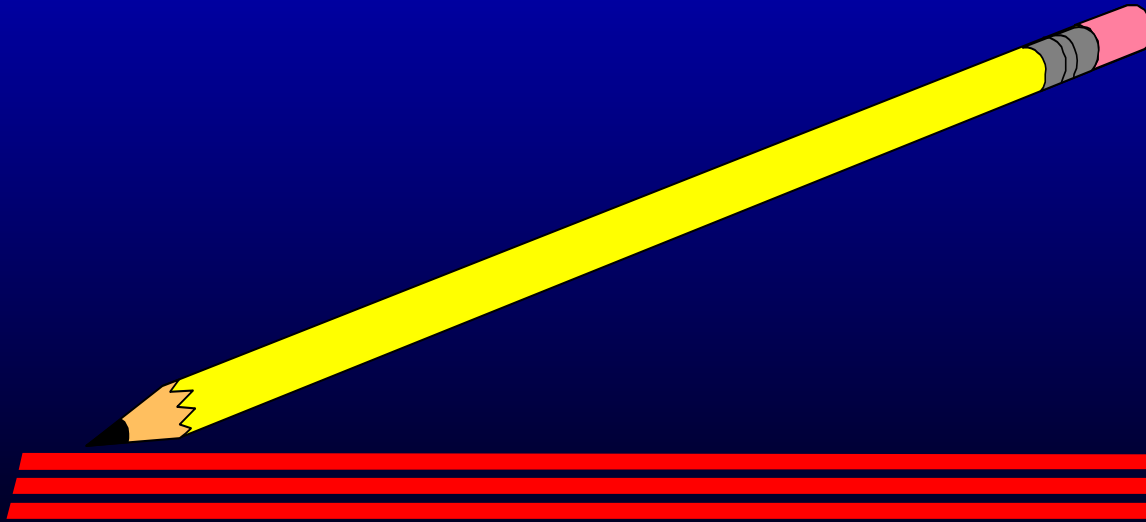


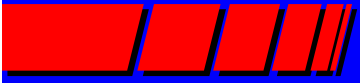
****(28) Immediate Actions Taken***

- Describe immediate or remedial actions taken to return the facility, system, or equipment item to service, and record results of those actions, if available
 - Should only include those actions taken in the short term (i.e., hours)
 - May include temporary measures to keep facility in safe standby condition or to permit continued operation of facility
 - List actions in sequential order
 - Other notifications (Field #19), if needed
- 

**(28) Writing Strategies*

- Write immediate actions to reflect what actually happened to stop occurrence from continuing
- Separate immediate actions into a list of items (improves readability)
- Include the results of immediate actions
- Maintain actual time order that immediate actions were taken






BREAK TIME!

PLEASE BE BACK IN 10 MINUTES






#(29) Cause Codes


- **Select the causes from the Causal Analysis Tree (Appendix E) that best represents the apparent causes of the occurrence (including direct, contributing and root causes).**
 - **If you select A3 (Human Factors) as a cause code, select any associated causes (couplets) from the couplet selection list.**
 - **Required for all Final Reports, except Short Form Reports.**
- 

#(30) *Description of Cause*

- **Discuss the causes of the occurrence, to include all causes and corrective actions identified.**
 - **Do not repeat a description of the occurrence, but discuss the results of the causal analysis.**
 - **The root cause analysis methodology used should be identified.**
 - **A detailed description of the corrective actions is required to demonstrate that the identified actions will adequately address the cause(s) of the problem.**
 - **This field is required for all Final Reports, except Short Form Reports.**
- 



#(30) *Writing Strategies*

- **Ensure information is consistent with other fields in the report**
 - **Include any corrective actions identified from the analysis of similar occurrences that may apply to the current event (i.e., were not previously identified)**
 - **Ensure that each identified cause is addressed by a corrective action (these corrective actions will be included in field #37)**
 - **Ensure the causes and corrective actions are in the same order as identified in field 29 (e.g., direct, contributing, root)**
- 



#(30) Example Description of Cause


Review Field #30 of the PFP example occurrence report. This provides the proper format and the type of information that should be included in this field. This field is one of the most important in the occurrence report. It is vital that all causes chosen in field 29 are analyzed, described, and assigned corrective actions in this field.



#(31) *Evaluation by Manager*

- Required field for a Notification Report if both answers to the questions in field #32 are “Yes”
- Facility Manager is responsible for providing an evaluation of the occurrence and its effect or possible effect on the facility, system, program, etc. (required on Final Report)
- Link any corrective actions identified from evaluation not related to a cause

#(31) *Evaluation by Manager*


- Discussion of similar occurrences (Field #35) and any possible impacts on previous corrective actions/root causes that relate to the current event.
 - Discussion of similar occurrences to determine if the issues in the report are isolated or programmatic in nature
 - Justification statement and expected date to submit Final Reports past their original due date
 - Required for all Update and Final Reports.
- 



#(31) *Example Evaluation*


The impact of this occurrence on the plant was the delay in responding to the loss of vacuum alarm condition for the Building 241-Z stack. The system impact was the loss of remote alarm capability for loss of vacuum for approximately 6.5 hours. However, system vacuum was never lost, and had an actual radioactive effluent release occurred, all applicable alarms would have functioned as designed and alerted plant personnel to respond.

A review of similar occurrences revealed that 2 OSR-related occurrences (RL – PHMC-PFP-2002-0022 and RL – PHMC-PFP-2002-0033) did not involve communications problems or have similar root causes. Because of this, no additional corrective actions have been identified, and no programmatic problem exists.





****(32) Further Evaluation***

- Provide a "Y" for yes or an "N" for no
 - Should be "Y" for a Notification or Update Reports, indicating that further evaluation is necessary before a Final Report is submitted; should be "N" for Canceled or Update/Final Reports.
 - If "Y" is chosen indicating that further evaluation is required, then a "Y" or "N" must be indicated for the question: If yes, before further operation?
 - If "Y" is chosen indicating that further evaluation is required before further operation, then the person or organization that will perform the evaluation, and the anticipated completion date of the evaluation must be included, and field #31 must be completed with an evaluation of the occurrence.
- 



#(33) Integrated Safety Management (ISM) Codes

Enter one or more ISM codes from the list below:

- 1 – Define Scope of Work**
- 2 – Analyze the Hazards**
- 3 – Develop and Implement Hazard Controls**
- 4 – Perform Work Within Controls**
- 5 – Provide Feedback and Continuous Improvement**

This field is required for all Final Reports.



#(34) *Lessons Learned*

- Describe what lessons can be learned from this occurrence, in order to help prevent similar events from happening
- Required only for the Final Report (not including Short Form Reports)






#(35) Similar Occurrence Report Numbers

- Indicate similar occurrence(s) for your facility (or other facilities) by appropriate report number
- Identify any known commercial reactor Licensee Event Reports (LER) or other related documents that describe similar occurrences
- Identify occurrences that might suggest a generic problem that may result in a common lessons learned
- Similar occurrences must be analyzed to determine if events are isolated or programmatic in nature; also to ensure previous corrective actions/root causes were adequate (see fields #30 and #31)
- Required for Final Report (except Short Form Report). One report per line:
 - » RL--PHMC-PFP-2003-0022
 - » RL--PHMC-PFP-2003-0033






#(36) User-Defined Fields (2)

- These optional fields can be used by the Facility Manager to store facility-specific information (e.g., a cross-reference to performance indicator data or a site-specific number or name)
 - Fields cannot exceed 124 characters in length
 - Example: OSR, Violation, Stack
- 

#(37) *Corrective Actions*

- Enter a complete description of each corrective action (CA) and the target date when completion is anticipated
 - If using ORPS as your CA tracking system, and Actual Completion Date must be entered when the CA is closed
 - If using local CA tracking system, a local CA reference number must be entered, and the Actual Completion Date is not required
 - CA with a local CA tracking number are considered closed.
- 



#(37) *Corrective Actions*

- **Use action words such as: change, repair, replace, train, build, etc.**
- **Must be able to relate a corrective action to a cause identified in field 30, or the evaluation in field 31**
- **Allow adequate time to complete the corrective action**



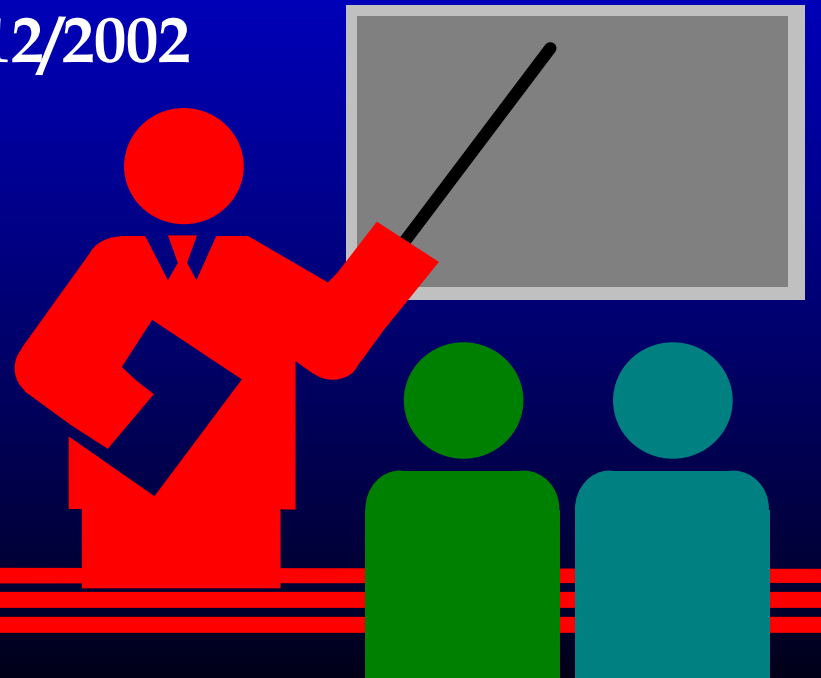
#(37) CA Example

01) The following actions have been completed:

Disciplinary action was taken and RadCon Personnel were counseled on procedure compliance.

Target Completion Date: 04/12/2002

Actual Completion Date: 04/12/2002





#(37) CA Example

02) RadCon personnel were instructed on the need to verify that all alarms have cleared prior to proceeding to the next stack. The air sample filter change procedure, ZH-100-102, has been changed to make it easier to use and understand.

Target Completion Date: 04/15/2002

Actual Completion Date: 04/15/2002



#(37) CA Example

03) Route occurrence report to applicable personnel for review and lessons learned.

Actionees: PJ Morris, PFP/Laboratory RadCon

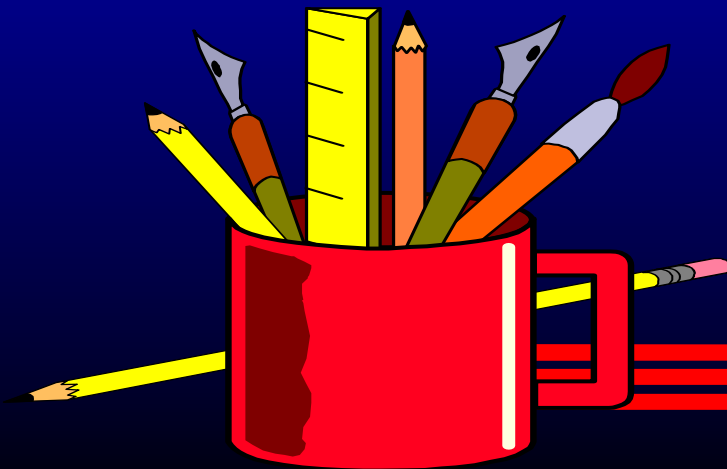
Target Completion Date: 05/31/2002

Actual Completion Date: Not given



#(38) Facility Representative Comments

- Used for RL/ORP evaluation of the occurrence, including corrective actions and follow-up activities
- Only required when explaining why a Final Report has been rejected





#(39) Program Manager Comments

- Used by the Program Manager to evaluate the occurrence, including corrective actions and follow-up activities
- Only required when explaining why a Final Report has been rejected





THE END! ANY QUESTIONS?

Remember to use these helpful resources:

1. *The Report Writer's Guide*

(<http://www.rl.gov/orps/hlanapp.doc>)

2. *HNF-PRO-052 (CAMS Manual)*

3. *HNF-PRO-060 (Occurrence Reporting)*

4. *Clear Writing Courses*

5. *The ONC staff, 24-7 (376-3030)*

