Advanced ORPS Search and Reports Techniques

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Introduction

Purpose of the Course

This class will provide you with training in some of the more advanced search techniques on the ORPS GUI. You will learn how to perform advanced Boolean logic searches and advanced narrative searches. You will also learn how to use the GUI date time stamps to freeze data as it existed at a particular point in time or to view changes during a specific time period.

Objectives

Upon completion of this class, you will be able to perform the following activities:

- Explain the order of precedence for Boolean operators and perform complex Boolean searches
- Perform advanced chronology date searches including a null search
- Explain how to specify multiple occurrence report numbers for a search
- Perform advanced narrative searches using a variety of operators and modifiers
- Explain the effect of exclusions when performing searches
- Know how to use the date range feature and explain the various options available

Advanced Boolean Searches

Boolean Logic

Every time you perform a search in the ORPS GUI you are using Boolean logic, either with the default operators within and between the search field selection areas or with operators you specify in the **BOOLEAN LOGIC SPECIFICATION** edit box. The ***ORPS GUI Basic Search Techniques*** section of this manual describes the basic Boolean operators (as shown in the table below). We will continue by discussing searches where you must use the **BOOLEAN LOGIC SPECIFICATION** edit box and the precedence rules that govern usage of the edit box, performing a search using the *NOT* operator, performing a search using nested search strings, and introducing the relational operator, = (equals).

Operator	Description
AND	Search terms combined with the Boolean *AND* will return occurrence reports that contain all of the search terms. For example, you could use a Boolean *AND* to specify all occurrence reports that occurred in 1995 *AND* had Richland Operations as the Field Office. Occurrence reports that include only one of the search terms (e.g., Occurrence Report Year is 1995, but Chicago Operations is the Field Office) will not be included in the set found by the search.
OR	Search terms combined with the Boolean *OR* will return occurrence reports that contain any of the search terms. For example, you could use a Boolean *OR* to specify all occurrence reports where 1994 is the OR Year *OR* where 1995 is the OR Year. Occurrence reports that include one or more of the search terms will be included in the set found by the search.
NOT	Search terms combined with the Boolean *NOT* can be used to exclude occurrence reports from a search. For example, you could use a Boolean *NOT* to select all occurrence reports where Albuquerque is the Field Office, but where 03B Vehicular Incidents is *NOT* the Nature of Occurrence.

Understanding the default logic is relatively easy if you simply remember that *AND* logic is applied between search fields and *OR* logic is applied between search field items. For example, the following logic is always applied when you select search fields (search fields are represented by a, b, and c):

a *AND* b *AND* c

There must be at least one space between operators and terms used in the expression.

Similarly, the following logic is always applied when you select search items (search items are represented by 1, 2, and 3) from the search fields:

(a1 *OR* a2 *OR* a3) *AND* (b1 *OR* b2 *OR* b3) *AND* (c1 *OR* c2 *OR* c3)

Any time the query you want to construct does not conform to the above rules, you are required to use the **BOOLEAN LOGIC SPECIFICATION** edit box. For example:

a OR (b1 AND b2) AND c

Any entry in the **BOOLEAN LOGIC SPECIFICATION** edit box overrides selections made in the **IDENTIFICATION**, **CHRONOLOGY**, or **NARRATIVE** selection boxes. Entries made in the edit box will be displayed in the selection boxes when the selection is refined.

Precedence Rules

You should keep in mind the following logic rules (called precedence rules) as you use the **BOOLEAN LOGIC SPECIFICATION** edit box.

- A search expression is read from left to right; however, some operators carry more weight than others and this will affect the interpretation of the expression. The *AND* operator takes precedence over the *OR* operator, while the *NOT* operator takes precedence over both *AND* and *OR*. Consider the following example:

  a *OR* b *AND* c

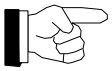
- This expression is interpreted to mean: "look for occurrence reports that contain *b* and *c*, or occurrence reports that contain *a*. If what you really want is for the *OR* operator to be interpreted first, you should use parentheses to force the order of operation.

(a *OR* b) *AND* c

- Parentheses indicate the order in which the directions are to be carried out. Information within parentheses is always performed first and then information outside the parentheses is performed next. Nested parentheses start with the innermost level. The following example means: "look for occurrence reports that contain *b* or *c* as well as *a*, or that contain *d*."

(a *AND* (b *OR* c)) *OR* d

NOTE



If you are uncertain as to how an expression will execute, include parentheses to ensure you are getting what you want. Extra parentheses will not affect the outcome of the search.

Since *AND* takes precedence over *OR*, in the previous example the external parentheses surrounding (a *AND* (b *OR* c)) are actually not needed; however, including the parentheses does not alter the results of the search and they help clarify the desired results of the search string.

Remember that the logic entered into the **BOOLEAN LOGIC SPECIFICATION** edit box only applies to search fields, not to the search field items (the default logic between search field items is always *OR*). However, you can enter a search field twice in the **BOOLEAN LOGIC SPECIFICATION** edit box to force the *AND* or *NOT* operator between field items. For example, a *AND* b *AND* b is equivalent to a *AND* (b1 *AND* b2).

Nested Search Strings

As indicated in the previous section, the innermost nested parentheses within a search string are considered first. For example, if you want to select all notification reports (8 - **OR Type**) for a specified time frame (25 - **Current Report** date), plus all update, update/final, and final reports (8 - **OR Type**) for the same time frame (25- **Current Report** date) where the discovery date (27 - **Discovery** date) is in the current quarter, you could enter the following search string in the **BOOLEAN LOGIC SPECIFICATION** edit box.

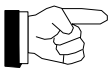
(8 and 25 and 25) or (8 and 25 and 25 and 27 and 27)

HINT

Because *AND* takes precedence over *OR*, the parentheses in the previous example are not necessary; however, we have included them to help you visualize what the search is actually going to accomplish. You may want to get into the habit of adding parentheses to your own search strings (even if they are not necessary) to help you visualize your search.

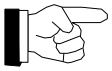
The entry in the previous example will provide the desired results, but notice the duplication of field numbers. The following is a simplified, more efficient version of this same entry.

25 and 25 and (8 or (8 and 27 and 27))

NOTE 

We have included two selection areas for **Current Report** date (25) and two selection areas for **Discovery** date (27) in order to accommodate date ranges that cannot be selected within the same selection area. If your date range can be selected from the same selection area, you only need to specify one selection area for each date field.

As your search strings become more complex, you will want to take time to think through exactly what you are trying to accomplish and determine the most efficient way to get there. This advanced preparation will be well worth the extra time you spend in the long run.

NOTE 

There is currently a limit of 512 characters that can be entered in the **BOOLEAN LOGIC SPECIFICATION** edit box.

Using the Boolean Logic Specification Box to Search

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.

2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.

3. Type the Boolean search string in the **BOOLEAN LOGIC SPECIFICATION** edit box.

REMINDER: To specify the Boolean search string, type the field numbers in the edit box separated by the appropriate operators. Operators and words must be separated by at least one space in the expression. To change the order in which the search items are carried out, include parentheses in the search string.

4. Click on the **REFINE** command button at the bottom of the page.

5. Specify search field values from the **ORPS OR SEARCH CRITERIA** page.

6. Click on the **FINISH** command button at the bottom of the page.

Exercise 1

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains occurrence reports where fires/explosions were caused by procedure problems and resulted in a Degradation of Safety Status or Vital System/Components.

2. Create a user-defined report that displays the Occurrence Narrative, Direct Cause, Contributing Cause(s), Root Cause, and Similar ORs.

3. Save the search profile as **Fires - Procedures**.

Exercise 2

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains all notification reports for April 13-19, 1997, plus all update, update/final, and final reports for April 13-19, 1997 where the discovery date is within the current year.

2. Create a generic lag report from discovery date to notification date. Which report has the largest lag?

Exercise 3

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains occurrence reports for Category "A" Reactors, except the Advanced Test Reactor (ATR), that were caused by training deficiencies.

2. Prepare a graphics report showing a distribution by facility.

Relational Operators

In addition to the standard Boolean operators (*AND*, *OR*, and *NOT*), you can also use a relational operator, = (equals), in the **BOOLEAN LOGIC SPECIFICATION** edit box to select reports that have equal values (matching data) in specified fields within the report.

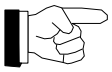

WARNING

The ability to include relational operators in the **BOOLEAN LOGIC SPECIFICATION** edit box is a prototype of future enhancements to the ORPS GUI. In the near future you will also be able to use additional operators, including the < (less than) and > (greater than) operators. Until the = operator changes from a prototype to a publicized enhancement to the ORPS GUI, double-check the results of searches you perform using the = operator.

For example, to select reports that have the same **Root Cause** and **Direct Cause**, type

15 = 17

in the **BOOLEAN LOGIC SPECIFICATION** edit box and then click the **REFINE** command button. The search is performed and you are provided with a count of the occurrence reports that have the same value for root cause and direct cause.

NOTE


When you use the = operator in the **BOOLEAN LOGIC SPECIFICATION** edit box, you are not presented with selection areas when you refine your search. Remember, you are asking the system to select those reports that have the same values for the specified fields; therefore, you have no need to indicate a specific value in a selection area.

If you include additional fields in the selection, you will be presented with selection areas for the additional fields. For example, to include **Facility** in the search, you would type

5 and (15 = 17)

in the **BOOLEAN LOGIC SPECIFICATION** edit box. When you click the **REFINE** command button, the comparison between **Direct Cause** and **Root Cause** is performed and a selection area is added so you can specify the **Facility**.

Comparing the Values of Specified Fields Within an Occurrence Report

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.

2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.

3. Type the numbers of the fields you want to compare, separated by the = operator, in the **BOOLEAN LOGIC SPECIFICATION** edit box.

REMINDER: You can include additional fields in the search string along with the fields you want to compare.

4. Click on the **REFINE** command button at the bottom of the page.

REMINDER: If you specified fields in addition to the ones you want to compare, you will be presented with selection areas for those additional fields. Fields that are being compared do not require selection areas.

5. If additional fields were included in the search string, specify search field values from the **ORPS OR SEARCH CRITERIA** page.

6. Click on the **FINISH** command button at the bottom of the page.

Exercise 4

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains 1996 and 1997 occurrence reports for Lockheed Martin Energy Systems, Inc., excluding the Y-12 Site, where both the direct and root cause are the same and were cited as equipment/material problems.

2. Create an **ORPS OR List** report. View the list and determine the site(s) that are represented.

3. Revise the search profile to exclude the K-25 Site instead of the Y-12 Site.

Exercise 5

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains occurrence reports for the Y-12 Site, excluding construction activities, where the direct cause and the root cause for an occurrence are the same causal factor classification.

2. Create a report showing the distribution by root cause. Which causal factor classification is associated with the highest number of occurrences?

3. Revise the search profile to contain occurrence reports for the Y-12 Site, excluding construction activities, where both the direct cause and root cause are equal and are cited as a defective or failed part.

Exercise 6

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains Final Occurrence Reports for the Savannah River Operations Office where reports were submitted as prefinals with no interim update reports.

2. Create a report showing a distribution on contractor. Which contractor is responsible for the largest number of reports?

3. Revise the search profile to exclude the contractor Westinghouse Savannah River Company.

Special Date Searches

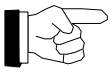
You can perform two special cases of date searches with the ORPS GUI. In the first case you can search for nothing in the field (null). The second special date search is the search for the existence of any value in the field (not null).

Null Searches

The ORPS GUI allows you to search for null values (nothing) in date fields. This has a number of practical applications. Just as an example, to select reports that have been rejected and have had an update report submitted in place of the final, you could search for a null value in the **FM SIGN-OFF** date. In actuality, simply a search on **REJECT COUNT** greater than or equal to one and **OR TYPE** of Update (not Update/Final) would provide the same information.

To indicate you want to perform a *Null Search*, you must leave the check boxes for the operators (<, =, >) unmarked. You must then select an arbitrary value from the date selection area.

NOTE



You have to mark *something* in the selection area (other than **None**) to perform a *Null Search*, although it does not matter what you mark. The purpose of marking something is to indicate to the system that you want to search that field. If nothing is marked, the system ignores the entire selection area.

Figure 2 shows the selection areas that would locate rejected reports that have had an update report submitted in place of the final.

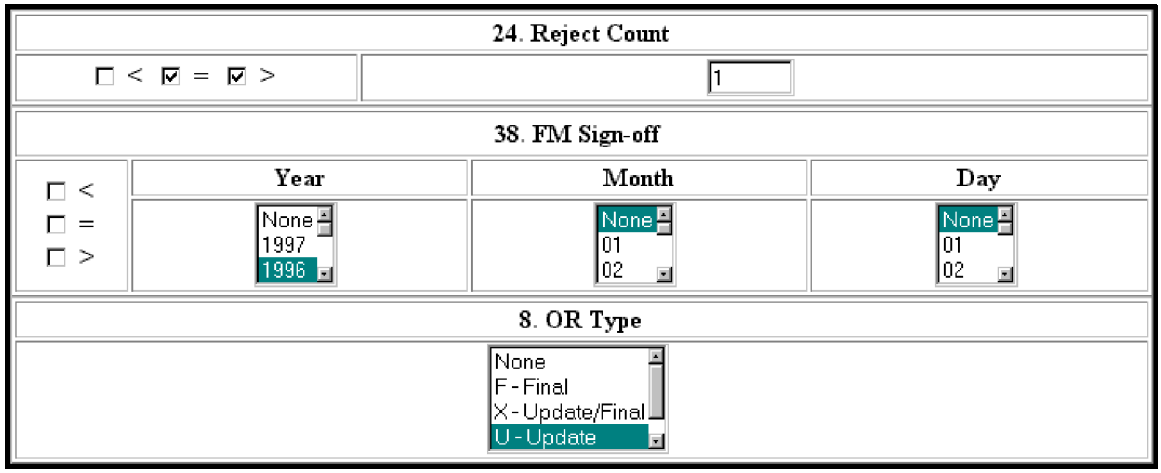


Figure 2 - Search criteria screen for a Null date field.

The profile for this search is displayed in **Figure 3**. Note that **FM Sign-off** is null.

Profile: "Null Example"

(Reject Count>=1) and FM Sign-off is null and OR Type='U'
and exclude Cancelled and
last modified through DB as of 04/05/97 17:10

Figure 3 - Profile display with Null included.

Performing a Null Search of a Date Field

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.

2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.

3. Select the date search field(s) that you want to search against from the **CHRONOLOGY** selection box on the **ORPS OR SEARCH CRITERIA** page. Select any additional search fields from the **IDENTIFICATION**, **CHRONOLOGY**, and **NARRATIVE** selection boxes.

4. Click on the **REFINE** command button at the bottom of the page.

5. Specify search field values from the **ORPS OR SEARCH CRITERIA** page. Highlight something (except **None**) within the date selection area. Remember, it does not matter what you select because the selection is ignored.

REMINDER: Do not mark any of the operators (<, =, >). In order to perform a *Null Search*, the operators must remain unmarked.

6. Click on the **FINISH** command button at the bottom of the page.

Not Null Searches

The opposite of a *Null Search* is a *Not Null Search*. Remember, when you search for null values you are checking for *nothing* in the field. Searching for not null values checks for the existence of *any* value in the field. A *Not Null Search* would be used when you want to know that something has occurred without regard to exactly when.

To perform a *Not Null Search*, mark the check boxes for all the operators (<, =, >) within the selection area. Since you are making a selection by marking the operators, you do not need to make any additional selections.

As an example, suppose you wanted to determine how many prefinal reports are awaiting the Program Manager's signature. To accomplish this, you could search for the existence of a **FR Sign-off** date. (If the Facility Representative has signed the report and it still appears as a prefinal report, it must be awaiting the Program Manager's signature.) **Figure 4** shows the selection areas that would provide us with these results.

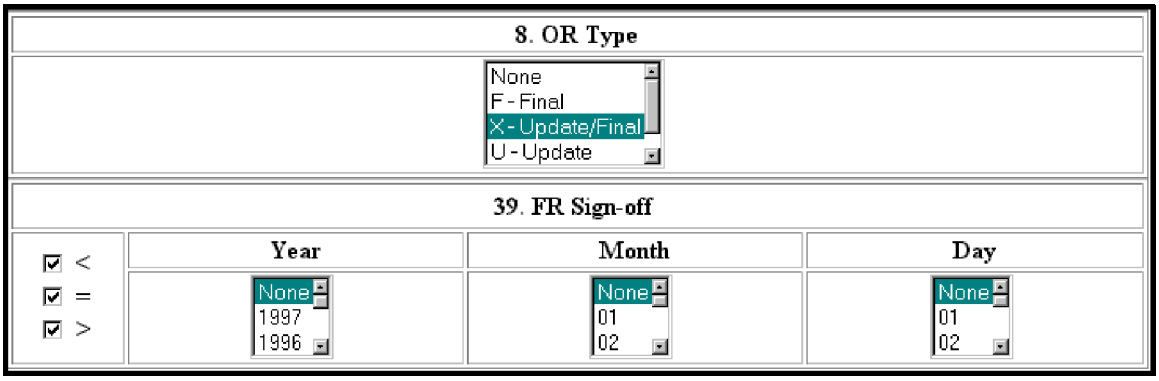


Figure 4 - Search criteria screen for a Not Null date field.

The profile for this search is displayed in **Figure 5**. Notice that the **FR Sign-off** is not null.

Profile: "Not Null Example"

OR Type='X' and (FR Sign-off is not null)
and exclude Cancelled and
last modified through DB as of 04/07/97 21:04

Figure 5 - Profile display with Not Null included.

Performing a Not Null Search of a Date Field

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
3. Select the date search field that you want to search against from the **CHRONOLOGY** selection box on the **ORPS OR SEARCH CRITERIA** page. Select any additional search fields from the **IDENTIFICATION**, **CHRONOLOGY**, and **NARRATIVE** selection boxes.
4. Click on the **REFINE** command button at the bottom of the page.
5. Specify search field values from the **ORPS OR SEARCH CRITERIA** page.
6. Mark all the operators (<, =, >) within the date selection area.
7. Click on the **FINISH** command button at the bottom of the page.

Exercise 7

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Locate occurrence reports for the Idaho Operations Office that are awaiting Facility Representative signature.

2. Locate occurrence reports for the Idaho Operations Office that are awaiting Program Manager signature.

Exercise 8

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Locate rejected reports for the Albuquerque Operations Office that have not been resubmitted as prefinal.

2. Locate rejected reports for the Albuquerque Operations Office that have not been resubmitted as prefinal and require action (i.e., have not been resubmitted as an update report).

Exercise 9

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Locate DOE Defense Programs occurrence reports with open corrective actions.

2. Locate DOE Defense Programs occurrence reports for the Nevada Operations Office with open corrective actions.

Multiple Occurrence Report Numbers

In HP ORPS, we primarily selected multiple occurrence reports by **OR NUMBER** to screen occurrence reports to narrow selections resulting from a narrative search. The enhanced narrative search capabilities of the ORPS GUI, combined with the improved screening feature, will greatly minimize the need to select multiple occurrence reports by **OR NUMBER.**

In the **OR NUMBER** selection area, you are only allowed to type one sequence number in the **NUM** edit box. If you want to select multiple occurrence reports by number, you have several alternatives. Each option is discussed in the following sections.

Sequence Number Edit Box

The first option for selecting multiple reports by occurrence report number involves the **OR NUMBER** selection area. If nothing is entered in the **NUM** edit box in the **OR NUMBER** selection area, the default is all. For example, to select all occurrence reports that occurred during a specific year for a particular facility, make the appropriate selections in the **FAC** and **YEAR** portions of the **OR NUMBER** selection area, and leave the **NUM** portion blank. **Figure 6** displays the **OR NUMBER** selection area that will select all reports for facility **ATR** that occurred in **1997**.

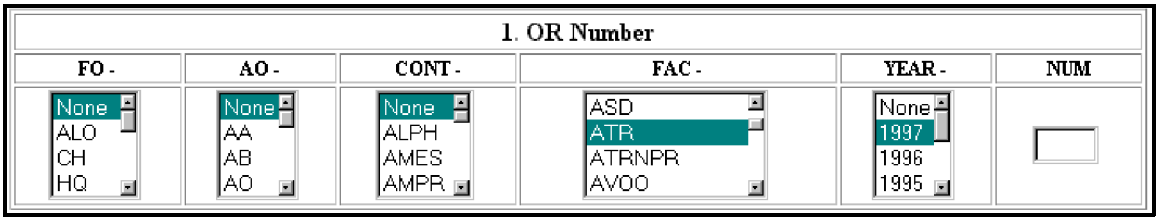
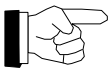


Figure 6 - OR NUMBER selection area for all ATR reports in 1997.

NOTE



It is not necessary to fill in all the items in the **OR NUMBER** selection area. Usually **FAC** (facility), **YEAR**, and **NUM** (sequence number) are enough to fully define a particular record. However, including all information may improve system performance.

Sequence Number Field

The next option for selecting multiple reports by occurrence report number involves the **SEQUENCE NUMBER** field, which is available in the **IDENTIFICATION** list on the **ORPS OR SEARCH CRITERIA** page. (See **Figure 7**.)

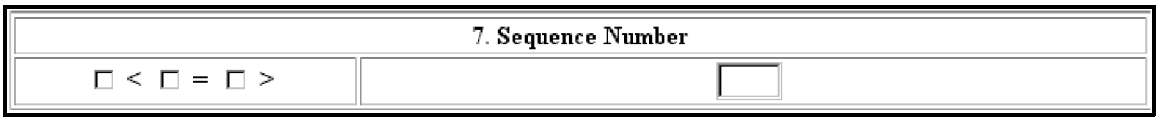


Figure 7 - The **SEQUENCE NUMBER** edit box.

In addition to an edit box where you can enter the sequence number, this box contains <, =, and > operators. These operators give you the ability to select a range of numbers. On the **ORPS OR SEARCH CRITERIA** page, you can combine **OR NUMBER** and **SEQUENCE NUMBER** selection areas to select multiple occurrence reports.

To specify the bounds of a range, you have to include two **SEQUENCE NUMBER** selection areas in your search. Specify the beginning of your range in the first box (i.e., => 19) and the end of your range in the second box (i.e., <= 25). To obtain two **SEQUENCE NUMBER** selection areas, type **1 and 7 and 7** in the **BOOLEAN LOGIC SPECIFICATION** edit box. (**1** is the **OR NUMBER** field and **7** is the **SEQUENCE NUMBER** field.) **Figure 8** shows the selection areas that would select reports with sequence numbers **3** through **6** for **ATR** for **1997**.

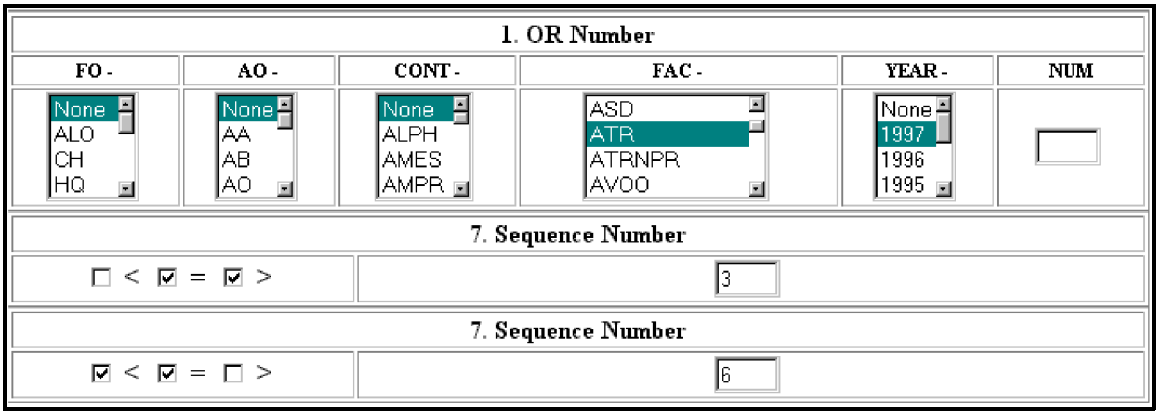


Figure 8 - Selection areas to select a range of **OR NUMBERS**.

Boolean Logic Specification Edit Box

As discussed in the previous section, you can get multiple selection boxes for a field by entering the field numbers in the **BOOLEAN LOGIC SPECIFICATION** edit box separated by the *AND* or *OR* operators (up to a 512 character limit). This is the last option we will present for selecting multiple reports by number.

To select multiple reports that do not fall into sequence, enter each report number in a separate **OR NUMBER** selection area. For example, to select the following occurrence reports

ALO--GEO-GJO-1993-0002
ID--MKF-MKEM-1993-0003
RL--WHC-TPLANT-1995-0021

in the **BOOLEAN LOGIC SPECIFICATION** edit box, type

1 or 1 or 1

and click **REFINE**. Then make the appropriate selections in the three **OR NUMBER** selection areas that are added to the **ORPS OR SEARCH CRITERIA** page. (See **Figure 9**.)

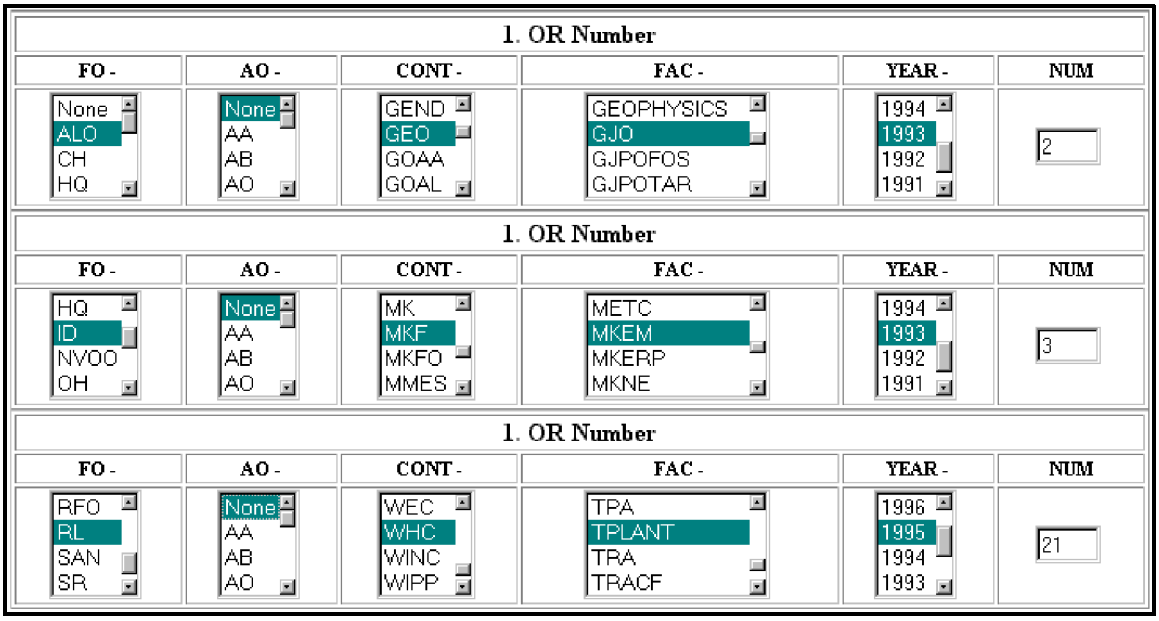


Figure 9 - Example of multiple **OR NUMBER** selection areas.

Creating a Search Profile that Selects All Occurrence Report Numbers for a Facility

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
3. Select **OR NUMBER** from the **IDENTIFICATION** selection box.
4. Click on the **REFINE** command button.
5. Select values, if needed, from the **FAC** and **YEAR** selection boxes. *DO NOT* enter a value in the **NUM** edit box.
6. Click on the **FINISH** command button at the bottom of the page.

Creating a Search Profile that Contains a Range of Occurrence Report Numbers

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.

2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.

3. Select **OR NUMBER** from the **IDENTIFICATION** selection box. Scroll down the box to **SEQUENCE NUMBER** and add this item to the selection by doing a *[CTRL]+[CLICK]*.

REMINDER: If two **SEQUENCE NUMBER** selection areas are needed, type **1 and 7 and 7** in the **BOOLEAN LOGIC SPECIFICATION** edit box in place of Step 3.

4. Click on the **REFINE** command button.

5. Select values, if needed, from the **FO**, **AO**, **CONT**, **FAC** and **YEAR** selection boxes. *DO NOT* enter a value in the **NUM** edit box.

6. Check the **SEQUENCE NUMBER** check boxes to specify the required range.

7. Type the sequence number that will bound the range into the **SEQUENCE NUMBER** edit box.

8. Click on the **FINISH** command button.

Creating a Search Profile that Contains Multiple Occurrence Report Numbers

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.

2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.

3. In the **BOOLEAN LOGIC SPECIFICATION** edit box, enter the field number for **OR NUMBER** (1) followed by an *OR* operator. Repeat this sequence for the desired number of selection areas (i.e., **1 or 1 or 1** will provide three selection areas).

4. Click on the **REFINE** command button.

5. For each selection area, select values, as needed, from the **FO**, **AO**, **CONT**, **FAC** and **YEAR** selection boxes. Enter the appropriate value in the **NUM** edit box.

6. Click on the **FINISH** command button.

Exercise 10

As you work, write down the steps you took. These notes will act as a reminder when you take similar actions in the future.

1. From the user-defined report created in Excercise 1 and saved as the search profile titled **Fires-Procedures**, identify the Similar Occurrences cited in the occurrence reports. Edit the search profile to include at least one of these occurrence report numbers.

Exercise 11

As you work, write down the steps you took. These notes will act as a reminder when you take similar actions in the future.

1. Create a new search profile that contains occurrence reports where vehicular incidents resulted in an occupational injury.

2. Identify the Similar Occurrences cited in the occurrence reports. Edit the search profile to include at least one of the Similar Occurrence report numbers.

Advanced Narrative Searches

You initiate a search of a narrative field by selecting the field from the **NARRATIVE** selection box on the **ORPS OR SEARCH CRITERIA** page. When you refine the search, an edit box is presented for the narrative field. You can enter a simple or complex string in the edit box without regard to the size of the box. The entry will automatically wrap to a new line and scroll beyond the bottom margin of the edit box, allowing long search strings.

The ***ORPS GUI Basic Search Techniques*** section of this manual provides an introduction to basic narrative searches. In this section, we will expand on that discussion and present additional techniques that will help you construct complex narrative searches.

Narrative Search with ORPS GUI vs. HP ORPS

The ORPS GUI uses the Topic® search engine for narrative searches. You should be aware that a narrative search string processed by Topic will produce results much different from the same string entered on HP ORPS. These differences are identified in the following discussion and must be kept in mind as search strings are developed. Note that some of this information is presented in the ***ORPS GUI Basic Search Techniques*** section of this manual, but is worth looking at again in the context of a comparison to HP ORPS.

The following are a few of the general guidelines to be considered when entering narrative searches:

- Case is not considered when a search is performed. Text search strings can be entered in upper-, lower- or mixed case. This applies to both search words and operators.

- The basic operators (*AND*, *OR*, and *NOT*) can be entered in a search string without any special formatting. These are reserved words in Topic and, by default, will be considered as operators when included in a search string. If they are to be used as a search word rather than an operator, they must be enclosed in quotation marks. For example, the search string *slipped and fell* will search for records containing both the words “slipped” and “fell.” To search for the phrase “slipped and fell,” the *AND* operator must be enclosed in quotation marks, e.g., *slipped and fell* or *slipped and fell*.”

- The default implementation of a search, referred to as a simple search, will locate stemmed variations of the search words. This is similar to, but more extensive than, the wildcard narrative search on HP ORPS. Whereas HP ORPS only locates words with different endings for the specified base, Topic locates all instances of words having the same stem, as defined in the system dictionary. For example, a search for

the word *protection* will locate records with the words “protection,” “protect,” “protective,” “protected,” etc. In order to search for a particular word only, the search word must be enclosed in quotation marks. For example, use the search term *protection* to search for occurrence reports containing only the word “protection.” The *<WORD>* operator can also be used to search for a specific word.

- Two or more words separated by a space are searched for as a phrase, e.g., *fall protection*. This search string will locate all records containing the phrase “fall protection,” or records containing stemmed variations of the phrase, such as “fallen protective barrier.”

- Where multiple operators are included in a search string, *AND* takes precedence over *OR*. This is the opposite of the precedence found on HP ORPS. Parentheses can be used to further define the order of evaluation of an expression. The use of parentheses in query expressions (especially complex ones), while not required, is recommended to ensure that the query expression is interpreted as desired. Information within parentheses is processed first. Where nested parentheses exist, processing begins with the innermost level. For example, in the search string *slipped or tripped and fell*, “tripped and fell” is evaluated first, followed by “or slipped.” The search string *(slipped or tripped) and fell* would be used to locate records containing either of the words “slipped” or “tripped” in addition to the word “fell.”

Simple Syntax

When you specify single words for which to search in a narrative field and you do not enclose them in double-quotation marks, you are using *simple syntax*. With simple syntax, the system performs something called *stemming*. Stemming selects documents that include one or more *variations* of the search word you specify. Stemmed searches must be based on real words (i.e., the stem itself must be a real word), and both the stem and the variations of the words that the stemmed search locates must be defined in the system dictionary.

It is important to recognize that uncommon technical words and their stems are probably not included in the system dictionary. This means that a stemmed search will not be performed on these words. To search for variations of these technical words, you must perform a wildcard search (see the discussion of ***Wildcard Operators*** on page 35.)

Suppose, for example, that you wish to locate all occurrence reports for 1996 (**OR Year**) categorized as Unusual (**OR Category**) that contain any stemmed variation of the word

contaminate in the **Title/Subject**. **Contamination** and **contaminated** are stemmed variations of **contaminate** and would therefore be located.

A GUI stemmed search is not equivalent to the wildcard narrative search on HP ORPS. A wildcard search on HP ORPS locates words with different endings for the specified base, whereas a stemmed search on the GUI locates all instances of words having the same stem, as defined in the system dictionary. In the previous example, a GUI search for **contaminate** would also retrieve **contamination** and **contaminated**. An HP ORPS search for **contaminate@** would retrieve **contaminated** but not **contamination** because of the spelling variation.

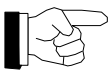
Explicit Syntax

When you enclose individual words or phrases in double-quotation marks, you are using *explicit syntax*. Explicit syntax interprets words or phrases literally. For example, if you choose to search the **Title/Subject** field and enter the word **contaminate** in the edit box (explicitly in double-quotation marks), the system will not search for the stemmed variations of **contaminate**, such as **contamination** or **contaminated**. Only those reports that contain the specific word **contaminate** in the **Title/Subject** field will be selected.

You would also need to use explicit syntax to include reserved words such as ***and*** or ***not*** in a search string. By default, these words will be considered operators when included in a search string. If they are to be used as search words rather than operators, they must be enclosed in double-quotation marks.

Operators and Modifiers

In addition to basic text searches, you may use various operators and modifiers in your search expressions to better define a query. Some of the more useful of these are described below, along with sample applications.

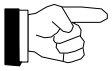


The operators and modifiers that are discussed in the ***ORPS GUI Basic Search Techniques*** section are not repeated in this section.

PARAGRAPH Operator

The **<PARAGRAPH>** operator selects reports that include all of the search elements you specify within a single paragraph. You can specify search elements in random order or sequential order (using the **<ORDER>** modifier). Reports are selected if the search elements appear in the same paragraph.

Simple Syntax: **expose <PARAGRAPH> asbestos**
Locates occurrence reports that contain stemmed variations of the word **expose** (e.g., **exposure**, **exposed**) and stemmed variations of the word **asbestos** *in the same paragraph*.

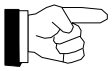
NOTE 
To search for three or more words or phrases in the same paragraph using simple syntax, you must use the **<PARAGRAPH>** operator between each word or phrase.

Explicit Syntax: **<PARAGRAPH> (exposure , asbestos)**
Locates occurrence reports that contain the literal word **exposure** and the literal word **asbestos** *in the same paragraph*.

SENTENCE Operator

The **<SENTENCE>** operator selects reports that include all of the words you specify within a single sentence. You can specify search elements in random order or sequential order (using the **<ORDER>** modifier). Reports are selected if the search elements appear in the same sentence.

Simple Syntax: **alpha <SENTENCE> contaminate**
Locates occurrence reports that contain stemmed variations of the word **alpha** and stemmed variations of the word **contaminate** (e.g., **contamination**, **contaminated**) *in the same sentence*.

NOTE 
To search for three or more words or phrases in the same sentence using simple syntax, you must use the **<SENTENCE>** operator between each word or phrase.

Explicit Syntax: **<SENTENCE> (alpha , contamination)**
Locates occurrence reports that contain the literal word **alpha** and the literal word **contamination** *in the same sentence*.

WORD Operator

The **<WORD>** operator selects reports that include one or more instances of a word you specify. Stemmed variations of the word will not be considered.

NOTE 
This is basically the same as using explicit syntax. There is no explicit application/example for the **<WORD>** operator.

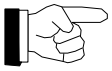
Simple Syntax: **<WORD>contaminate**
Locates occurrence reports that contain the literal word **contaminate**.

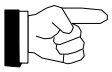
Explicit Syntax: None

CASE Modifier

The **<CASE>** modifier is used with the **<WORD>** or **<WILDCARD>** operator to perform case-sensitive searches, based on the case of the word or phrase specified.

<CASE><WORD>Contamination
In this example, only those occurrence reports that contain the word **Contamination** will be selected. Occurrence reports that contain **contamination** or **CONTAMINATION** will not be selected. Since ORPS data has been randomly entered with respect to case, the **<CASE>** modifier would not be a meaningful search method.

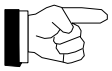
NOTE 
By default, occurrence reports containing any instances of a search word or phrase are retrieved regardless of case.

NOTE 
You can only use the **<CASE>** modifier with the **<WORD>** or **<WILDCARD>** operators.

NOT Modifier

The **<NOT>** modifier is used with a word or phrase to exclude occurrence reports that contain the word or phrase.

electrical <AND> safety <AND> violation <AND><NOT> lockout/tagout
This example would select only those occurrence reports that contain the words **electrical** and **safety** and **violation** but not the word **lockout/tagout**.

NOTE 
You can only use the **<NOT>** modifier with the operators *AND* and *OR*.

ORDER Modifier

The ***ORPS GUI Basic Search Techniques*** section describes the **<NEAR>** operator. Remember, the **<NEAR>** operator locates occurrence reports that contain specified words that fall in close proximity (within 1000 words) of each other. With the **<NEAR>** operator, the order of the words is not considered. To locate occurrence reports that contain words in a specific order, use the **<ORDER>** modifier.

The **<ORDER>** modifier is used to express the order in which search elements must occur. If search items do not occur in the specified order in an occurrence report, the occurrence report will not be selected.

<ORDER><SENTENCE> (exposure , 100 mrem)
This example would select only those occurrence reports containing the word **exposure** followed by the phrase **100 mrem** in the same sentence.

The version of Topic presently in use for the ORPS GUI only supports the **<ORDER>** modifier when used in the Explicit Syntax, as shown.

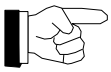
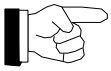
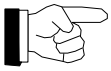
NOTE

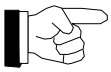
You can only use the **<ORDER>** modifier with the operators **<PARAGRAPH>**, **<SENTENCE>**, and **<NEAR/n>**.

Wildcard Operators

In addition to the operators discussed above, the wildcard operator locates occurrence reports that contain matches to a search string containing variables. Wildcard characters that can be used to represent variable portions of a search string are described below.

Explanation of Wildcards		
Character	**Function**	**Example**
?	Specifies one of any alphanumeric character.	**?at** Locates reports that contain any one of the following: **hat**, **bat**, **cat**, **rat**, etc.
*****	Specifies zero or more of any alphanumeric character.	**sa*** Locates reports that contain any one of the following: **safety**, **saline**, **sat**, **satisfy**, **salient**, etc.

Explanation of Wildcards		
Character	**Function**	**Example**
[ ]	Specifies one of any character in a set.	**<WILDCARD> 'c[aou]t'** Locates reports that contain any one of the following: **cat**, **cot**, **cut**. NOTE  You must specify the **<WILDCARD>** operator and enclose the word that includes a set in back quotes ('). Also, sets cannot contain spaces.
{ }	Specifies one of each pattern separated by a comma.	**<WILDCARD>'electri{c,city,cian}'** Locates reports that contain any one of the following: **electric**, **electricity**, **electrician**. NOTE  You must specify the **<WILDCARD>** operator and enclose the word that includes a pattern in back quotes ('), and sets cannot contain spaces.
^	Specifies one of any character *not* in the set.	**<WILDCARD> 'st[^oa]ck'** Locates reports that contain **stick** or **stuck** but not **stock** or **stack**. NOTE  You must specify the **<WILDCARD>** operator and enclose the word that includes a pattern in back quotes ('), and sets cannot contain spaces.

Explanation of Wildcards		
Character	**Function**	**Example**
-	Specifies a range of characters in a set.	**<WILDCARD> 'c[a-r]t'** Locates reports that contain any three-letter word from **cat** to **crt**. NOTE  You must specify the **<WILDCARD>** operator and enclose the word that includes a pattern in back quotes ('), and sets cannot contain spaces.

Performing a Narrative Search

1. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
2. Click on the **NEW** command button in the **OR SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
3. Select a search field from the **NARRATIVE** selection box.
4. Click on the **REFINE** command button.
5. Type the words, phrases, operators, and modifiers in the narrative field edit box.
6. Click on the **FINISH** command button.

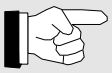
Exercise 12

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Locate records for the Richland Operations Office with the phrase *limiting condition for operation* in the Subject/Title.

2. Some reports will use the term *limiting condition of operation* instead. Revise the search to locate these records also.

NOTE



The **<NEAR>** operator only works with words, not with phrases, so **limiting** and **condition** must also be joined with an operator. Normally you would use **<NEAR/1>** to search for adjacent words. However, if multiple instances of the **<NEAR/n>** operator are used in the same query they must be the same.

3. Add the records that contain the acronym LCO.

Exercise 13

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Locate records that contain the phrase *pressure switch* in the **Description of Cause** and the **Corrective Actions**.

2. Modify the search to include variations such as *pressure differential switch, pressure activated switch*, etc.

3. Modify the search to exclude those records that contain the exact phrase *pressure switch*.

Exercise 14

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Perform a search to locate the word *SAM* in the Occurrence Narrative.

2. Refine the search to locate records that contain only the acronym *SAM*.

Exclusions and Date Range Features

Exclusions

Exclusions allow you to exclude certain types of reports from your selections. By default, cancelled reports are excluded. You can also exclude UCNI and USEC reports, which are included by default. Exclusions are identified by a check mark in the associated box in the **EXCLUDING** section.

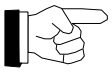
The exclusions that were in effect when a search profile is saved (e.g., excluding UCNI and excluding Cancelled) are saved with the profile. However, the exclusions that are marked on the **ORPS OR SEARCH AND REPORTS** control panel at the time the report is generated are the exclusions that are actually used to create the report. For example, if a profile was saved with only the default Cancelled excluded and later a report is generated using that profile but with both UCNI and Cancelled checked, both will be excluded (see **Figure 10**). If you have forgotten what exclusions were included with the saved profile, simply select the profile and click the **EDIT** criteria command button. The exclusions that were saved will be shown on the **ORPS OR SEARCH CRITERIA** page. Note the exclusions and then backup to the previous page and mark the appropriate exclusions.

Profile: "Untitled"

Field Office='RL' and OR Year='1995' and Occurrence Category='U'
and exclude UCNI and exclude Cancelled and
last modified through DB as of 02/26/97 15:09

Figure 10 - Profile displayed to determine exclusions.

NOTE



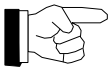
A future enhancement to the ORPS GUI is planned that will allow simple execution of a profile with the saved exclusions.

When a search profile is edited, the exclusions that are saved with the search profile are reflected on the **ORPS OR SEARCH CRITERIA** page. Changes made to the exclusions at this point will affect the current selections, but will not alter the exclusions stored in the search profile unless you save the changes in a search profile with the same name. (In essence, you are overwriting the original search profile.)

From DB As Of/To DB As Of

The selections within the **FROM DB AS OF** and **TO DB AS OF** sections allow you to filter your search of the database to include records as they existed within specific date and time ranges. The database filtering that is accomplished through the **DB AS OF** sections is based on a special record time stamp recorded at each change to a report. Because this time stamp records the date and time of every change to a record, it is possible to duplicate a search of the database that was performed at a previous date and time, even if subsequent changes have occurred to the records included in the selection. The default date and time search range is from **Earliest entry** to **Now**, meaning there are no date or time bounds on the search — you are searching the entire database.

NOTE



Complete time stamp information is only available from the point in time that data was transferred from the database on the HP 3000 to the ORPS GUI. When the data was transferred, each record was given a time stamp equal to the date and time (if available) that the record was last modified on the HP. Time stamp information for earlier changes is not available.

The function of each item within the **FROM DB AS OF/TO DB AS OF** sections is explained in the following table.

From DB as of	Function
Earliest entry	Starts the search at the beginning of the database.
Last Login	Starts the search from the date and time you last logged in.
Saved criteria from	Starts the search from the date saved in the selected search criteria.
Date edit box	Starts the search at the date and time specified in the associated edit box. In order for an entry in the Date edit box to be recognized, the radio button associated with the Date edit box must be selected.

To DB as of	Function
Now	Ends the search at the current date and time.
Last Login	Ends the search at the date and time you last logged in.
Saved criteria to	Ends the search at the date and time saved in the selected search criteria.
Date edit box	Ends the search at the date and time specified in the associated edit box. In order for an entry in the Date edit box to be recognized, the radio button associated with the Date edit box must be selected.

Details of the date and time search range are saved with the search profile. In order to effectively utilize the date and time search ranges, you need to understand how the radio buttons within the **DB AS OF** sections affect the saved search profile.

Remember that the default selections within the **DB AS OF** sections are from **Earliest entry** to **Now**. If you display the saved search profile with these default selections marked, the display will indicate that the selection goes through the current date and time. To select records using the date and time saved with the search profile instead, you must mark the **Saved criteria from** and **Saved criteria to** radio buttons. Once these radio buttons are marked, the displayed search profile will reflect that the search goes through the date and time saved with the search profile.

As an example, consider the following criteria for a profile named "Test." (See **Figure 11**.) With the defaults from **Earliest entry** to **Now** selected, the **last modified through DB as of** date and time are the current date and time.

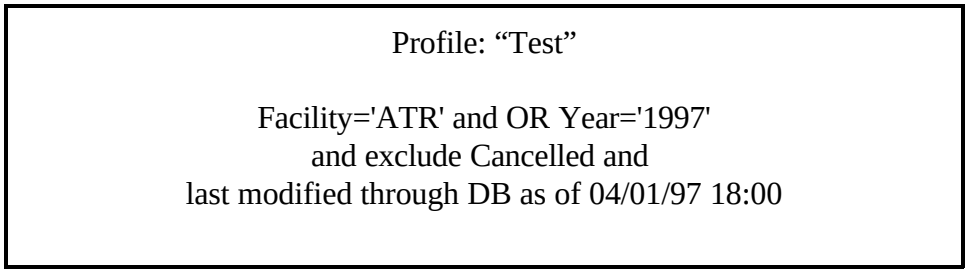


Figure 11 - Profile display with **Earliest entry** to **Now** selected.

This search profile results in a selection of 8 OR(s) with 9 occurrence(s).

If the radio buttons are changed to **Saved criteria from** and **Saved criteria to,** the **last modified through DB as of** date and time change to the date and time saved with the search profile. (See **Figure 12**.)

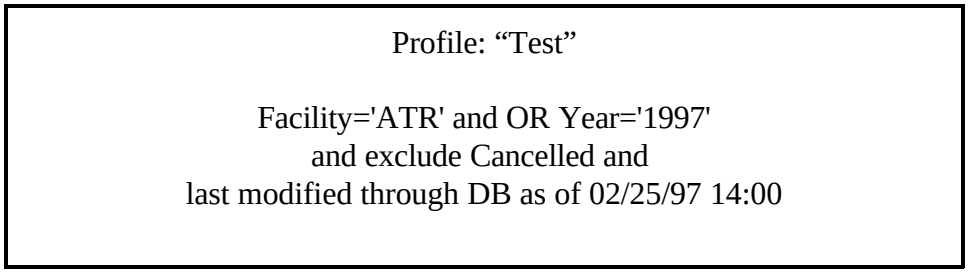


Figure 12 - Profile display with **Saved criteria from** and **Saved criteria to** selected.

This search profile results in a selection of 4 OR(s) with 4 occurrence(s).

Although the default selections within the **DB AS OF** sections are from **Earliest entry** to **Now**, when the **NEW** or **EDIT** command buttons are chosen, the selected radio buttons change to **Saved criteria from** and **Saved criteria to.** For a new search profile, the default date and time saved with the profile is from the earliest entry to the current date and time (the equivalent of **Now**). If you are editing a search profile, the original date and time saved with the search profile will be displayed and are in effect.

Exercise 15

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a search profile containing 1996 and 1997 occurrence reports where construction activities resulted in a near-miss.

2. Save the search profile as **Const 96-97 Near Miss** and with a **FROM DB AS OF** setting of earliest entry and a **TO DB AS OF** setting of 03/01/97 12:00. How many occurrences are recovered with this saved profile?

3. Display the criteria for the search profile and verify inclusion of the date/time filter information. Change the date/time filter settings to start at the beginning of the database and end at the current date and time. Display the criteria for the search profile to verify the selection.

4. Prepare field office and OR type distribution or graphic reports for the search profile with the date/time filter settings that are saved with the profile. Prepare additional distribution or graphic reports with settings that start at the beginning of the database and end at the current date and time.

Exercise 16

As you work, write down the steps you take. These notes will act as a reminder when you take similar actions in the future.

1. Create a search profile containing occurrence reports from 1994 that resulted in loss of radioactive materials or spread of contamination and cited management problems as the root cause.

2. Save the profile as **01D 1994 Management Problems** with no exclusions. How many occurrences are recovered with this saved profile?

3. How many occurrences are recovered if UCNI is excluded?
   How many occurrences are recovered if Cancelled is excluded?
   How many occurrences are recovered if USEC is excluded?
   How many occurrences are recovered if UCNI and CANCELLED are excluded?
   How many occurrences are recovered if UCNI and USEC are excluded?
   How many occurrences are recovered if CANCELLED and USEC are excluded?
   How many occurrences are recovered if CANCELLED and USEC and UCNI are excluded?

Exercise Solutions

Exercise 1

1. Create a new search profile that contains occurrence reports where fires/explosions were caused by procedure problems and resulted in a Degradation of Safety Status or Vital System/Components.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **14 AND 14 AND (15 OR 16 OR 17)** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. Select **01B-Fires/Explosions** from the first **NATURE OF OCCURRENCE** selection box.
   f. Select **01C-Safety Status Degradation** from the second **NATURE OF OCCURRENCE** selection box. Scroll down the box to **01E-Vital System/Component Degradation** and add this item to the selection by doing a *[CTRL] + [CLICK]*.
   g. Select **2-PROCEDURE PROBLEM** from the **DIRECT CAUSE**, **CONTRIBUTING CAUSE**, and **ROOT CAUSE** selection boxes.
   h. Click on the **FINISH** command button.

2. Create a user-defined report that displays the Occurrence Narrative, Direct Cause, Contributing Cause(s), Root Cause, and Similar ORs.
   a. Select **User Defined** from the **REPORTS** selection box on the **ORPS OR SEARCH & REPORTS** page.
   b. Click on the **PREPARE** command button.
   c. Check the **OCCURRENCE NARRATIVE**, **DIRECT CAUSE**, **CONTRIBUTING CAUSE**, **ROOT CAUSE**, and **SIMILAR ORs** check boxes.
   d. Click on the **PREPARE** command button.

Exercise 1
(Continued)

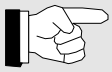
3. Save the search profile as **Fires - Procedures**.
   a. Click on the **BACK** tool bar button located at the top of the browser window.
   b. Repeat step 3a to return to the **ORPS OR SEARCH & REPORTS** page.

Do not select the **ORPS Home** or **Search & Reports** hyperlink at the bottom of the page. Your search profile is a temporary file (i.e., the file has not been saved) and may only be available from a previous page not a newly created **SEARCH & REPORTS** page.

   c. Type **Fires - Procedures** in the **SAVE AS** edit box.
   d. Click on the **SAVE** command button.

Exercise 2

1. Create a new search profile that contains all notification reports for April 13-19, 1997, plus all update, update/final, and final reports for April 13-19, 1997 where the discovery date is within the current year.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **25 AND 25 AND (8 OR 8 AND 27 AND 27)** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. In the first **CURRENT REPORT** section, check the **=** and **>** check boxes, select **1997** from the **YEAR** selection box, **04** from the **MONTH** selection box, and **13** from the **DAY** selection box.
   f. In the second **CURRENT REPORT** section, check the **=** and **<** check boxes, select **1997** from the **YEAR** selection box, **04** from the **MONTH** selection box, and **19** from the **DAY** selection box.
   g. Select **N-Notification** from the first **OR TYPE** selection box.
   h. Select **F-Final** from the second **OR TYPE** selection box. Add **X-Update/Final** and **U-Update** to the selection by doing a *[CTRL]+[CLICK]*.
   i. In the first **DISCOVERY** section, check the **=** and **>** check boxes, select **1997** from the **YEAR** selection box, and **01** from the **MONTH** selection box.
   j. In the second **DISCOVERY** section, check the **=** and **<** check boxes, select **1997** from the **YEAR** selection box, and **04** from the **MONTH** selection box.
   k. Click on the **FINISH** command button.

NOTE 

For the specific selections used here, ranges could also be specified using single date selection boxes.

Exercise 2

(Continued)

2. Create a generic lag report from discovery date to notification date. Which report has the largest lag?
   a. Select **Generic Lag** from the **REPORTS** selection box on the **ORPS OR SEARCH & REPORTS** home page.
   b. Click on the **PREPARE** command button.
   c. Click on the **NOTIFICATION** radio button in the **TO** column. (Note that the default selection in the **FROM** column is the **DISCOVERY** radio button.)
   d. Click on the **PREPARE** command button.
   e. Look for the occurrence report with the longest lag.

Exercise 3

1. Create a new search profile that contains occurrence reports for Category "A" Reactors, except the Advanced Test Reactor (ATR), that were caused by training deficiencies.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **11 AND NOT 5 AND (15 OR 16 OR 17)** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. Select **12-Category A Reactors** from the **FACILITY FUNCTION** selection box.
   f. Select **ATR-Advanced Test Reactor** from the **FACILITY** selection box.
   g. Select **5-TRAINING DEFICIENCY** from the **DIRECT CAUSE**, **CONTRIBUTING CAUSE**, and **ROOT CAUSE** selection boxes.
   h. Click on the **FINISH** command button.

2. Prepare a graphics report showing a distribution by facility.
   a. Select **Graphics** from the **REPORTS** selection box.
   b. Click on the **PREPARE** command button.
   c. Check the **FACILITY** check box.
   d. Click on the **PREPARE** command button.

Exercise 4

1. Create a new search profile that contains 1996 and 1997 occurrence reports for Lockheed Martin Energy Systems, Inc., excluding the Y-12 Site, where both the direct and root cause are the same and were cited as equipment/material problems.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **6 AND 4 AND NOT 10 AND 15 AND (15 = 17)** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. Select **1997** from the **OR YEAR** selection box. Add **1996** to the selection by doing a *[CTRL]+[CLICK]*.
   f. Select **LMES-Lockheed Martin Energy Systems, Inc**. from the **CONTRACTOR** selection box.
   g. Select **Y12-Oak Ridge Y-12 Site** from the **SITE/ORGANIZATION** selection box.
   h. Select **1-EQUIPMENT/MATERIAL PROBLEM** from the **DIRECT CAUSE** selection box.
   i. Click on the **FINISH** command button.

2. Create an **ORPS OR List** report. View the list and determine the site(s) that are represented.
   a. Select **OR List** from the **REPORTS** selection box.
   b. Click on the **PREPARE** command button.

Exercise 4

(Continued)

3. Revise the search profile to exclude the K-25 Site instead of the Y-12 Site.
   a. Click on the **BACK** tool bar button located at the top of the browser window.

Do not select the **ORPS Home** or **Search & Reports** hyperlink at the bottom of the page. Your search profile is a temporary file (i.e., the file has not been saved) and may only be available from a previous page, not from a newly created **SEARCH & REPORTS** page.

   b. Click on the **EDIT** command button.
   c. Select **K-25-Oak Ridge K-25 Site** from the **SITE/ORGANIZATION** selection box.
   d. Click on the **FINISH** command button.

Exercise 5

1. Create a new search profile that contains occurrence reports for the Y-12 Site, excluding construction activities, where the direct cause and the root cause for an occurrence are the same causal factor classification.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **10 AND NOT 12 AND (15 = 17)** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. Select **Y12-Oak Ridge Y-12 Site** from the **SITE/ORGANIZATION** selection box.
   f. Select **01-Construction** from the **ACTIVITY CATEGORY** selection box.
   g. Click on the **FINISH** command button.

2. Create a report showing the distribution by root cause. Which causal factor classification is associated with the highest number of occurrences?
   a. Select **Distributions** from the **REPORTS** selection box on the **ORPS OR SEARCH & REPORTS** home page.
   b. Click on the **PREPARE** command button.
   c. Check the **ROOT CAUSE** check box.
   d. Click on the **PREPARE** command button.

Exercise 5

(Continued)

3. Revise the search profile to contain occurrence reports for the Y-12 Site, excluding construction activities, where both the direct cause and root cause are equal and are cited as a defective or failed part.
   a. Click on the **BACK** tool bar button located at the top of the browser window.
   b. Repeat step 3a to return to the **ORPS OR SEARCH & REPORTS** page.

Do not select the **ORPS Home** or **Search & Reports** hyperlink at the bottom of the page. Your search profile is a temporary file (i.e., the file has not been saved) and may only be available from a previous page, not from a newly created **SEARCH & REPORTS** page.

   c. Click on the **EDIT** command button.
   d. Revise the entry in the **BOOLEAN LOGIC SPECIFICATION** edit box to contain **10 AND NOT 12 AND 15 AND (15 = 17)**.
   e. Click on the **REFINE** command button.
   f. Select **1A-Defective or Failed Part** from the **DIRECT CAUSE** selection box.
   g. Click on the **FINISH** command button.

Exercise 6

1. Create a new search profile that contains Final Occurrence Reports for the Savannah River Operations Office where reports were submitted as prefinals with no interim update reports.

You have no interim update reports when **Initial Update Report** date/time is equal to **Latest Update Report** date/time.

   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **2 AND 8 AND (33 = 34)** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. Select **SR-Savannah River Operations** from the **FIELD OFFICE** selection box.
   f. Select **F-Final** from the **OR TYPE** selection box.
   g. Click on the **FINISH** command button.

2. Create a report showing a distribution on contractor. Which contractor is responsible for the largest number of reports?
   a. Select **Distributions** from the **REPORTS** selection box on the **ORPS OR SEARCH & REPORTS** home page.
   b. Click on the **PREPARE** command button.
   c. Check the **CONTRACTOR** check box.
   d. Click on the **PREPARE** command button.

Exercise 6

(Continued)

3. Revise the search profile to exclude the contractor, Westinghouse Savannah River Company.
   a. Click on the **BACK** tool bar button located at the top of the browser window.
   b. Repeat step 3a to return to the **ORPS OR SEARCH & REPORTS** page.

Do not select the **ORPS Home** or **Search & Reports** hyperlinks at the bottom of the page. Your search profile is a temporary file (i.e., the file has not been saved) and may only be available from a previous page not a newly created **SEARCH & REPORTS** page.

   c. Click on the **EDIT** command button.
   d. Revise the entry in the **BOOLEAN LOGIC SPECIFICATION** edit box to contain **2 AND 8 AND NOT 4 AND (33 = 34)**.
   e. Click on the **REFINE** command button.
   f. Select **WSRC-Westinghouse Savannah River Company** from the **CONTRACTOR** selection box.
   g. Click on the **FINISH** command button.

Exercise 7

1. Locate occurrence reports for the Idaho Operations Office that are awaiting Facility Representative signature.

   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **Field Office** from the **IDENTIFICATION** selection box.
   d. Select **FM Sign-off** from the **CHRONOLOGY** selection box. Add **FR Sign-off** to the selection by doing a *[CTRL]+[CLICK]*.
   e. Click on the **REFINE** command button.
   f. Select **ID- Idaho Operations** from the **FIELD OFFICE** selection box.
   g. Check the **<**, **=**, and **>** check boxes in the **FM SIGN-OFF** section.
   h. Click on any field item (except **NONE**) within **YEAR** selection box in the **FR SIGN-OFF** section.
   i. Click on the **REFINE** command button.

2. Locate occurrence reports for the Idaho Operations Office that are awaiting Program Manager signature.
   a. Select **FR Sign-off** from the **CHRONOLOGY** selection box. Add **PM Sign-off** to the selection by doing a *[CTRL]+[CLICK]*.
   b. Click on the **REFINE** command button.
   c. Check the **<**, **=**, and **>** check boxes in the **FR SIGN-OFF** section.
   d. Click on any field item (except **None**) within the **YEAR** selection box in the **PM SIGN-OFF** selection area.
   e. Click on the **REFINE** command button.

Exercise 8

1. Locate rejected reports for the Albuquerque Operations Office that have not been resubmitted as prefinal.
   a. From the ORPS GUI home page, click on the **Search & Reports** hyperlink.
   b. Click on the NEW command button in the ORPS SEARCH CRITERIA section of the ORPS OR SEARCH & REPORTS page.
   c. Select **Field Office** from the IDENTIFICATION selection box.
   d. Select **Rejected** from the CHRONOLOGY selection box. Add **FM-Signoff** to the selection by doing a *[CTRL]+[CLICK]*.
   e. Click on the REFINE command button.
   f. Select **ALO-Albuquerque Operations** from the FIELD OFFICE selection box.
   g. Check the <, =, and > check boxes in the REJECTED section.
   h. Click on any field item (except **NONE**) within YEAR selection box in the FM SIGN-OFF selection area.
   i. Click on the REFINE command button.

1. *(Alternate solution)*

   a. From the ORPS GUI home page, click on the **Search & Reports** hyperlink.
   b. Click on the NEW command button in the ORPS SEARCH CRITERIA section of the ORPS OR SEARCH & REPORTS page.
   c. Select **Field Office** from the IDENTIFICATION selection box. Add **Reject Count** to this selection by doing a *[CTRL]+[CLICK]*.
   d. Select **FM-Signoff** from the CHRONOLOGY selection box.
   e. Click on the REFINE command button.
   f. Select **ALO-Albuquerque Operations** from the FIELD OFFICE selection box.
   g. Check the = and > check boxes in the REJECT COUNT section and enter **1** into the REJECT COUNT edit box.
   h. Click on any field item (except **NONE**) within the YEAR selection box in the FM SIGN-OFF section.
   i. Click on the REFINE command button.

Exercise 8

(Continued)

2. Locate rejected reports for the Albuquerque Operations Office that have not been resubmitted as prefinal and require action (i.e., have not been resubmitted as an update report).
   a. Add **OR Type** to the selections in the **IDENTIFICATION** selection box by doing a *[CTRL]+[CLICK]*.
   b. Click on the **REFINE** command button.
   c. Select **X-Update/Final** from the **OR TYPE** selection box.
   d. Click on the **FINISH** command button.

2. *(Alternate solution)*

   a. Type **2 AND 24 AND 38 AND NOT 8** into the **BOOLEAN LOGIC SPECIFICATION** edit box.
   b. Click on the **REFINE** command button.
   c. Select **U-Update** from the **OR TYPE** selection box.
   d. Click on the **FINISH** command button.

Exercise 9

1. Locate DOE Defense Programs occurrence reports with open corrective actions.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **Program Office** from the **IDENTIFICATION** selection box.
   d. Select **CA Actual Completion** from the **CHRONOLOGY** selection box.
   e. Click on the **REFINE** command button.
   f. Select **DP-Defense Programs** from the **PROGRAM OFFICE** selection box.
   g. Click on any field item (except **NONE**) within **YEAR** selection box in the **CA ACTUAL COMPLETION** section.
   h. Click on the **REFINE** command button.

2. Locate DOE Defense Programs occurrence reports for the Nevada Operations Office with open corrective actions.
   a. Add **Field Office** to the selections in the **IDENTIFICATION** selection box by doing a *[CTRL]+[CLICK]*.
   b. Click on the **REFINE** command button.
   c. Select **NVOO-Nevada Operations Office** from the **FIELD OFFICE** selection box.
   d. Click on the **FINISH** command button.

Exercise 10

1. Edit the search profile titled **Fires-Procedures** to contain Similar Occurrences cited in the reports.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Select **Fires - Procedures** from the **OR SEARCH CRITERIA** selection box.
   c. Select **User Defined** from the **REPORTS** selection box.
   d. Click on the **PREPARE** command button.
   e. Check the **SIMILAR ORS** check box.
   f. Click on the **PREPARE** command button.
   g. Make note of at least one Similar OR number.
   h. Click on the **BACK** tool bar button located at the top of the browser window.
   i. Repeat step 1h to return to the **ORPS OR SEARCH & REPORTS** page.
   j. Click on the **EDIT** command button.
   k. Revise the entry in **BOOLEAN LOGIC SPECIFICATION** to contain **14 and 14 and (15 or 16 or 17) or 1**.
   l. Click on the **REFINE** command button.
   m. Enter the full occurrence report number (as noted in step g. above) in the **OR NUMBER** section.
   n. Click on the **FINISH** command button.

Exercise 11

1. Create a new search profile that contains occurrence reports where vehicular incidents resulted in an occupational injury.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Type **14 AND 14** in the **BOOLEAN LOGIC SPECIFICATION** edit box.
   d. Click on the **REFINE** command button.
   e. Select **03A-Occupational Illness/Injuries** from the first **NATURE OF OCCURRENCE** selection box.
   f. Select **03B-Vehicular Incidents** from the second **NATURE OF OCCURRENCE** selection box.
   g. Click on the **FINISH** command button.

2. Revise the search profile to contain Similar Occurrences cited in the reports.
   a. Select **User Defined** from the **REPORTS** selection box.
   b. Click on the **PREPARE** command button.
   c. Check the **SIMILAR ORS** check box.
   d. Click on the **PREPARE** command button.
   e. Make note of at least one Similar OR number.
   f. Click on the **BACK** tool bar button located at the top of the browser window.
   g. Repeat step 1h to return to the **ORPS OR SEARCH & REPORTS** page.
   h. Click on the **EDIT** command button.
   i. Revise the entry in the **BOOLEAN LOGIC SPECIFICATION** edit box to contain **14 AND 14 OR 1**.
   j. Click on the **REFINE** command button.
   k. Enter the occurrence report number (as noted in step e. above) in the **OR NUMBER** section.
   l. Click on the **FINISH** command button.

Exercise 12

1. Locate records for the Richland Operations Office with the phrase *limiting condition for operation* in the Subject/Title.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **Field Office** from the **IDENTIFICATION** selection box.
   d. Select **OR Title/Subject** from the **NARRATIVE** selection box.
   e. Click on the **REFINE** command button.
   f. Select **RL-Richland Operations** from the **FIELD OFFICE** selection box.
   g. Type **limiting condition for operation** into the **OR TITLE/SUBJECT** edit box.
   h. Click on the **REFINE** command button.

2. Some reports will use the term *limiting condition of operation* instead. Revise the search to locate these records also.

The **<NEAR>** operator only works with words, not with phrases, so **limiting** and **condition** must also be joined with an operator. Normally you would use **<NEAR/1>** to search for adjacent words. However, if multiple instances of the **<NEAR/n>** operator are used in the same query they must be the same.

   a. Type **limiting <ORDER><NEAR/2> condition <ORDER> <NEAR/2> operation** into the **OR TITLE/SUBJECT** edit box.
   b. Click on the **REFINE** command button.

3. Add the records that use the acronym LCO.
   a. Type **limiting <ORDER><NEAR/2> condition <ORDER> <NEAR/2> operation OR LCO** into the **OR TITLE/SUBJECT** edit box.
   b. Click on the **FINISH** command button.

Exercise 13

1. Locate records that contain the phrase *pressure switch* in the **Description of Cause** and the **Corrective Actions**.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **Cause Narrative** from the **NARRATIVE** selection box. Add **Corrective Actions** to this selection by doing a *[CTRL]+[CLICK*].
   d. Click on the **REFINE** command button.
   e. Type **pressure switch** into the **CAUSE NARRATIVE** and **CORRECTIVE ACTIONS** edit boxes.
   f. Click on the **REFINE** command button.

2. Modify the search to include variations such as *pressure differential switch, pressure activated switch,* etc.
   a. Type **<ORDER><NEAR/2> (pressure,switch)** into the **CAUSE NARRATIVE** and **CORRECTIVE ACTIONS** edit boxes.
   b. Click on the **REFINE** command button.

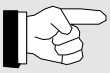
3. Modify the search to exclude those records that contain the exact phrase *pressure switch*.
   a. Type **<ORDER><NEAR/2> (pressure,switch) AND NOT pressure switch** into the **CAUSE NARRATIVE** and **CORRECTIVE ACTIONS** edit boxes.
   b. Click on the **FINISH** command button.

Exercise 14

1. Perform a search to locate the word *SAM* in the Occurrence Narrative.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **Occurrence Narrative** from the **NARRATIVE** selection box.
   d. Click on the **REFINE** command button.
   e. Enter **SAM** into the **OCCURRENCE NARRATIVE** edit box.
   f. Click on the **REFINE** command button.

2. Refine the search to locate records that contain only the acronym *SAM*.
   a. Type **<CASE> "SAM"** into the **OCCURRENCE NARRATIVE** edit box.
   b. Click on the **FINISH** command button.

NOTE



This search will still retrieve one extraneous record. An occurrence report that was input in all capital letters contains the name SAM.

2. *(Alternative solution)*
   a. Enter **<CASE><WORD> SAM** into the **OCCURRENCE NARRATIVE** edit box.
   b. Click on the **FINISH** command button.

Exercise 15

1. Create a search profile containing 1996 and 1997 occurrence reports where construction activities resulted in a near-miss.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **OR Year** from the **IDENTIFICATION** selection box. Scroll down the box to **Activity Category** and **Nature of Occurrence** and add these items to the selection by doing a *[CTRL]+[CLICK]*.
   d. Click on the **REFINE** command button.
   e. Select **1997** from the **OR YEAR** selection box. Add **1996** to the selection by doing a *[CTRL]+[CLICK]*.
   f. Select **01-Construction** from the **ACTIVITY CATEGORY** selection box.
   g. Select **10B-Near Miss Occurrences** from the **NATURE OF OCCURRENCE** selection box.
   h. Click on the **FINISH** command button.

2. Save the search profile as **Const 96-97 Near Miss** and with a **FROM DB AS OF** setting of earliest entry and a **TO DB AS OF** setting of 03/01/97 12:00. How many occurrences are recovered with this saved profile?
   a. Click on the **EARLIEST ENTRY** radio button in the **FROM DB AS OF** section of the control panel.
   b. Click on the date edit box radio button in the **TO DB AS OF** section of the control panel and type **03/01/97 12:00** in the date edit box.
   c. Enter **Const 96-97 Near Miss** in the **SAVE AS** edit box in the **OR SEARCH CRITERIA** section of the control panel.
   d. Click on the **SAVE** command button.
   e. Click on the **COUNT** command button in the **REPORTS** section of the control panel.

Exercise 15

(Continued)

3. Display the criteria for the search profile and verify inclusion of the date/time filter information. Change the date/time filter settings to start at the beginning of the database and end at the current date and time. Display the criteria for the search profile to verify the selection.
   a. Click on the **DISPLAY** command button in the **REPORTS** section of the control panel.
   b. Click on the **NOW** radio button in the **TO DB AS OF** section of the control panel.
   c. Click on the **DISPLAY** command button in the **REPORTS** section of the control panel.

4. Prepare field office and OR type distribution or graphic reports for the search profile with the date/time filter settings that are saved with the profile. Prepare additional distribution or graphic reports with settings that start at the beginning of the database and end at the current date and time.
   a. Click on the **SAVED CRITERIA FROM** radio button in the **FROM DB AS OF** section of the control panel.
   b. Click on the **SAVED CRITERIA TO** radio button in the **TO DB AS OF** section of the control panel.
   c. Select **Distributions** or **Graphics** from the **REPORTS** selection box.
   d. Click on the **PREPARE** command button.
   e. Check the **FIELD OFFICE** and **OR TYPE** check boxes.
   f. Click on the **PREPARE** command button.
   g. Click on the **BACK** tool bar button located at the top of the browser window.
   h. Repeat step 4g to return to the **ORPS OR SEARCH & REPORTS** page.
   i. Click on the **EARLIEST ENTRY** radio button in the **FROM DB AS OF** section of the control panel.
   j. Click on the **NOW** radio button in the **TO DB AS OF** section of the control panel.
   k. Repeat steps 4c through 4f.

Exercise 16

1. Create a search profile containing occurrence reports from 1994 that resulted in loss of radioactive materials or spread of contamination and cited management problems as the root cause.
   a. From the **ORPS GUI** home page, click on the **Search & Reports** hyperlink.
   b. Click on the **NEW** command button in the **ORPS SEARCH CRITERIA** section of the **ORPS OR SEARCH & REPORTS** page.
   c. Select **OR Year** from the **IDENTIFICATION** selection box. Scroll down the box to **Nature of Occurrence** and **Root Cause** and add these items to the selection by doing a *[CTRL]+[CLICK]*.
   d. Click on the **REFINE** command button.
   e. Select **1994** from the **OR YEAR** selection box.
   f. Select **01D-Loss of Control of Radioactive Material/Spread Contamination** from the **NATURE OF OCCURRENCE** selection box.
   g. Select **6-MANAGEMENT PROBLEM** from the **ROOT CAUSE** selection box.
   h. Click on the **FINISH** command button.

2. Save the profile as **01D 1994 Management Problems** with no exclusions. How many occurrences are recovered with this saved profile?
   a. Uncheck the **CANCELLED** check box in the **EXCLUDING** section of the control panel.
   b. Type **01D 1994 Management Problems** into the **SAVE AS** edit box in the **OR SEARCH CRITERIA** section of the control panel.
   c. Click on the **SAVE** command button.
   d. Click on the **COUNT** command button in the **REPORTS** section of the control panel.

3. How many occurrences are recovered if UCNI is excluded?
   a. Check the **UCNI** check box in the **EXCLUDING** section of the control panel.
   b. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

Exercise 16

(Continued)

How many occurrences are recovered if Cancelled is excluded?

c. Uncheck the **UCNI** check box in the **EXCLUDING** section of the control panel and check the **CANCELLED** check box.

d. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

How many occurrences are recovered if USEC is excluded?

e. Uncheck the **CANCELLED** check box in the **EXCLUDING** section of the control panel and check the **USEC** check box.

f. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

How many occurrences are recovered if UCNI and CANCELLED are excluded?

g. Uncheck the **USEC** check box in the **EXCLUDING** section of the control panel and check the **UCNI** and **CANCELLED** check boxes.

h. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

How many occurrences are recovered if UCNI and USEC are excluded?

i. Uncheck the **CANCELLED** check box in the **EXCLUDING** section of the control panel and check the **USEC** check box.

j. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

How many occurrences are recovered if CANCELLED and USEC are excluded?

k. Uncheck the **UCNI** check box in the **EXCLUDING** section of the control panel and check the **CANCELLED** check box.

l. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

Exercise 16

(Continued)

How many occurrences are recovered if CANCELLED and USEC and UCNI are excluded?

m. Check the **UCNI** check box in the **EXCLUDING** section of the control panel.

n. Click on the **COUNT** command button on the **REPORTS** section of the control panel.

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