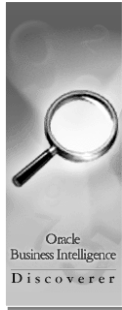


Discoverer for AQS

Version 10g R2

Bonnie Johnson
US EPA

Oracle Business Intelligence Discoverer



... a tool for retrieving and analyzing data in a database.

AQS uses the web-based version of this software (a downloadable Java applet) deployed within the EPA. This means it is available to all registered AQS at no cost.

Oracle now refers to Discoverer as “Business Intelligence” instead of just “Discoverer”.

Getting the information you need

Example: List all criteria monitors for NC

1. Use an AQS report provided within the AQS application
2. Use Discoverer

3

Why would you want to use Discoverer?

Here's a simple example.

1. AQS Reports (aka Retrievals)

The screenshot shows the AQS application window with the 'Reports' dialog box open. The dialog has a 'Criteria Set' tab selected, showing a list of reports. The 'Owner' is set to 'BONNE' and 'JOHNSON'. The 'Report Code' field is empty. The 'Report Selection Mode' has 'Monitor Selection(detail)' selected. The 'Generate' button is at the bottom right of the dialog.

Rep_Report_Code	Report_Name
G75	CR PIA MONITORS
G76	CR PIA REPORTING ORG
G71	CR PIA SINGLE CHECKS
G72	CR SITE CHANGES
AMP435	DAILY SUMMARY REPORT
AMP430	DATA COMPLETENESS REPORT
AMP502	EXTRACT PIA DATA
AMP501	EXTRACT RAW DATA
AMP503	EXTRACT SAMPLE BLANK DATA
AMP500	EXTRACT SITE/MONITOR DATA
AMP230	FREQUENCY DISTRIBUTION REPORT
AMP440	MAXIMUM VALUES REPORT
AMP390	MONITOR DESCRIPTION REPORT
AMP220D	MONITOR NETWORK REPORT
AMP255	PIA QUALITY INDICATOR SUMMARY
AMP250	PIA RAW DATA REPORT
AMP240	PIA REPORTING ORG SUMMARY

Choices in list: 32
Record: 1/1
... List of Valu...
<OSC>

4

You could use one of the retrievals in the AQS application.

1. AQS Reports: sample of result – selection criteria

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MONITOR NETWORK REPORT

User ID: BOS

Report Request ID: 487104 Report Code: AMP2200 Dec. 5, 2007

GEOGRAPHIC SELECTIONS

Tribal	State	County	Site	Parameter	FOC	City	AQCR	UAR	MSA	CMSA	EPA Region	Method	Duration	Begin Date	End Date
37															

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
CRITERIA			

SELECTED OPTIONS		SORT ORDER	
Option Type	Option Value	Order	Column
MERGE PDF FILES	YES	1	STATE_CODE
		2	COUNTY_CODE
		3	SITE_ID
		4	EPA_REGION
		5	PARAMETER_CODE
		6	FOC

Selection Criteria Page 1

5

Results of such a retrieval give you a pdf with 1 page of the criteria use to run the report.

1. AQS Reports: sample of result

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MONITOR NETWORK REPORT

Dec. 5, 2007

Site ID: 37-001-0002

State: North Carolina

Region: ATLANTA

Street Address: 827 S GRAHAM & HOPEDALE RD

Urbanized Area: BURLINGTON, NC

Poll: 88101 PM2.5 - Local Conditions

Probe Ht. (m): 2.0

Meas Scale: NEIGHBORHOOD

POC: 1

Monitoring Objective	Sampling Begin Date	Req Samp Freq	Regulation Compliances			Road Description			Monitor Types		
			Regulation	Crit. Met?	Date Met	Dist (m)	Street Num	Traffic Cnt	Monitor Type	Action Taken	Action Reason
POPULATION EXPOSURE	19990101	3	SC	Y	19990101				SLAMS		
			QC	Y	19990101						
			RM	Y	19990101						

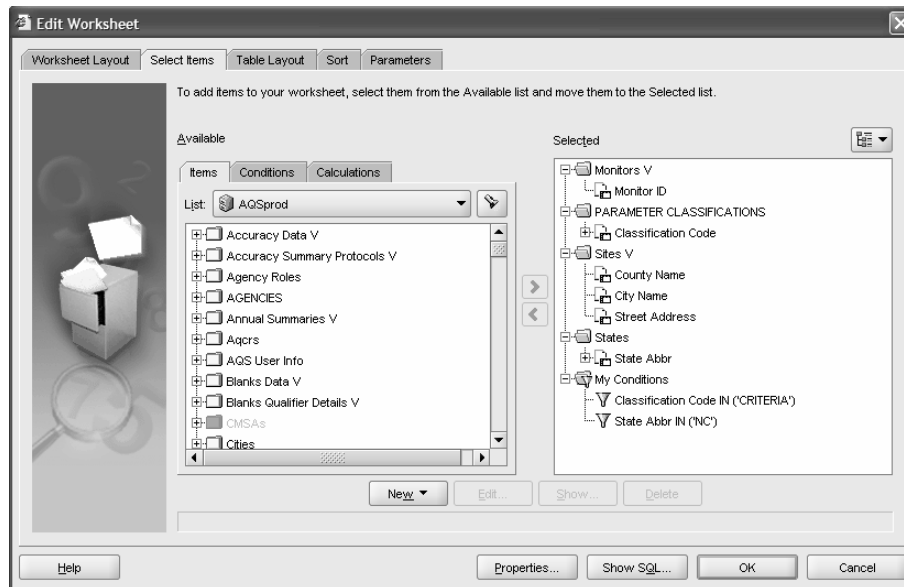
Page 1 of 119

Page 1 of 119

6

This retrieval gives you one monitor per page. This may be what you want, or maybe you'd rather have a simpler list.

2. Discoverer



7

Use Discoverer to pick out just the fields/items you're interested in.

2. Discoverer: sample of result

Workbook 5 - OracleBI Discoverer - Microsoft Internet Explorer provided by EPA - version 6

File Edit View Format Tools Help

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Page Items: State Abbr: NC Classification Code: CRITERIA

	County Name	Monitor ID	City Name	Street Address
1	Alamance	37-001-0001-42602-2	Burlington	1136 E.WEBB AVE.BURLINGTON,N.C.
2	Alamance	37-001-0001-42602-1	Burlington	1136 E.WEBB AVE.BURLINGTON,N.C.
3	Alamance	37-001-1001-11101-1	Graham	CITY HALL 201 S MAIN ST
4	Alamance	37-001-1001-42602-2	Graham	CITY HALL 201 S MAIN ST
5	Alamance	37-001-1001-42602-1	Graham	CITY HALL 201 S MAIN ST
6	Alamance	37-001-1001-42401-1	Graham	CITY HALL 201 S MAIN ST
7	Alamance	37-001-0001-42401-1	Burlington	1136 E.WEBB AVE.BURLINGTON,N.C.
8	Alamance	37-001-0001-11101-1	Burlington	1136 E.WEBB AVE.BURLINGTON,N.C.
9	Alamance	37-001-0002-88101-1	Burlington	827 S GRAHAM & HOPEDALE RD
10	Alamance	37-001-0002-81102-1	Burlington	827 S GRAHAM & HOPEDALE RD
11	Alexander	37-003-0003-11101-1	Not in a city	324 MINNIGAN LANE, TAYLORSVILLE
12	Alexander	37-003-0003-42401-1	Not in a city	324 MINNIGAN LANE, TAYLORSVILLE
13	Alexander	37-003-0003-44201-1	Not in a city	324 MINNIGAN LANE, TAYLORSVILLE
14	Alexander	37-003-0003-81102-1	Not in a city	324 MINNIGAN LANE, TAYLORSVILLE
15	Alexander	37-003-0001-42602-1	Taylorsville	MAIN AVE DRIVE TAYLORSVILLE
16	Alexander	37-003-0001-11101-2	Taylorsville	MAIN AVE DRIVE TAYLORSVILLE
17	Alexander	37-003-0001-11101-1	Taylorsville	MAIN AVE DRIVE TAYLORSVILLE
18	Alexander	37-003-0001-42602-2	Taylorsville	MAIN AVE DRIVE TAYLORSVILLE
19	Alexander	37-003-0001-42401-1	Taylorsville	MAIN AVE DRIVE TAYLORSVILLE
20	Alexander	37-003-0004-44201-1	Not in a city	106 WAGGIN' TRAIL, TAYLORSVILLE
21	Alleghany	37-005-0001-11101-1	Not in a city	NO SITE ADDRESS
22	Ashe	37-009-0001-11101-1	Not in a city	FIRE DEPT WEST JEFFERSON

8

Get your result in table format.

2. Discoverer: Sample of result exported to spreadsheet

Microsoft Excel - VNC criteria monitors.xls

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

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You can even export your Discoverer table to Excel and then manipulate the data within Excel.

What you need for using Discoverer

- AQS userid and password
- Java-enabled Web browser
 - ◆ MS IE 5.5, 6.0 and higher
 - ◆ Netscape 7.1, 7.2
 - ◆ Mozilla 1.5 and higher
- JRE (or JInitiator)
- Admin privileges to install a Java Virtual Machine on your client PC (100-150 MB)
- About 50 MB available disk space for Oracle Jar Cache
- url: <http://www.epa.gov/ttn/airs/airsaqs>
or go directly to
<https://iasint.rtpnc.epa.gov/discoverer/plus>

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Note: As of this date (11/15/06), MS IE 7 is not recommended.

Starting Discoverer Plus

<https://iasint.rtpnc.epa.gov/discoverer/plus>

ORACLE Discoverer Plus Business Intelligence

Connect Directly

Connect to OracleBI Discoverer

To connect to OracleBI Discoverer, click on a connection name or enter your connection details directly.

Choose Connection

Details	Connection	Description	Update	Delete
Show aqaprod				
Show aqqa-testing				
Show EIMS_PUBLIC		EIMS Public Connection		
Show gulowner-aqaprod				

Connect Directly

Enter your connection details below to connect directly to OracleBI Discoverer.

* Indicates required field.

Connect To: OracleBI Discoverer

* User Name:

* Password:

* Database:

End User Layer:

Locale: Locale retrieved from browser

Go

Copyright (c)2000, 2005 Oracle Corporation. All rights reserved.

Help

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You can always just type in the URL or use links from the aqs ttn page – AQS Web Discoverer - on the sidebar.

If you're behind the EPA firewall, you can use http instead of https.

Create a Connection, Apply & Connect

Create Connection
Use this page to enter the details of the connection that you wish to create. Choose a name that is easy to remember, followed by an optional description and locale. Enter the account details for this connection before proceeding. [Cancel](#) [Apply](#) [Apply and Connect](#)

Connection Details
* Indicates required field.

Connect To:

* Name:

Description:

Locale:

Account Details

* User Name:

* Password:

* Database:

☒ TIP You will be prompted to select an End User Layer and/or an Applications Responsibility if more than one exists.

[Cancel](#) [Apply](#) [Apply and Connect](#)

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About OracleBI Discoverer Version 19.1.2.2
Oracle Technology Network

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Private Connection Details are stored in cookies, so if someone else uses your PC and the same browser, they will see your connection (but they'd still have to know your password to login.)

Enter Password

The screenshot shows a web browser window titled "Enter Password - Microsoft Internet Explorer provided by EPA - version 6". The address bar displays a URL from the EPA's Discoverer application. The main content area is titled "ORACLE Discoverer Plus Business Intelligence" and "Enter Password". It contains a message explaining that a password is required for a private connection. Below this, a list of connection details is shown: Connection Name (Discoverer Online Training), Connection Description (Example of a connection), User Name (BOS), Database (aqprod), End User Layer (EUL_OWNER), Connect To (OracleBI Discoverer), and Locale (Locale retrieved from browser). A "Password" input field is present, with a black arrow pointing to it from the left. A "Go" button is located to the right of the password field. At the bottom, there is a "Help" link and a copyright notice for Oracle Corporation, 2000-2005.

Enter Password - Microsoft Internet Explorer provided by EPA - version 6

File Edit View Favorites Tools Help

Address https://asint.lbnrc.epa.gov/discoverer/app/connection?event=connectSWPKey&connectorKey=us_a1871&clientIdType=plus Go Links

ORACLE Discoverer Plus
Business Intelligence

Connect >

Enter Password

The item you are requesting requires you to enter a password. This could occur because this is a private connection or because the public connection password was invalid. Please enter the correct password now to continue.

Connection Name: Discoverer Online Training
Connection Description: Example of a connection
User Name: BOS
Database: aqprod
End User Layer: EUL_OWNER
Connect To: OracleBI Discoverer
Locale: Locale retrieved from browser

Password Go

Help

Copyright (c)2000, 2005 Oracle Corporation. All rights reserved.
[About OracleBI Discoverer Version 10.1.2.2](#)
[Oracle Technology Network](#)

Done Trusted sites

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You always have to provide your password and it's not displayed on the screen.

First time set up

Depending on the software already installed on the client machine, you might have to download and install a Java Virtual Machine (JVM) (e.g. Java Plug-in).

If you have to download and install a JVM, the Security Warning dialog is displayed.



The steps to download and install this JVM are posted at:

<http://www.epa.gov/ttn/airs/airsaqs/aqsweb/aqswebsetup.htm>

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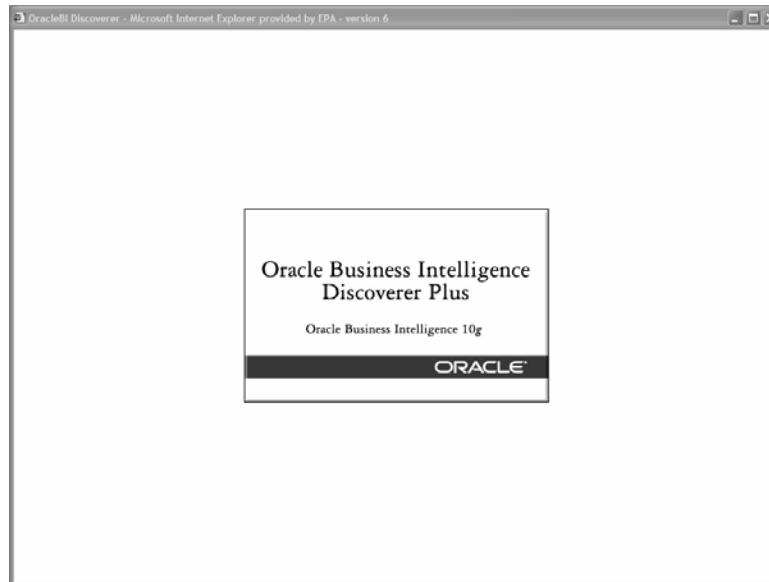
Hint: If the JVM installation process fails, close down extraneous processes on the client machine, then re-try.

If you can get connection working using JRE then the relatively manual process of updating the certificate is eliminated.

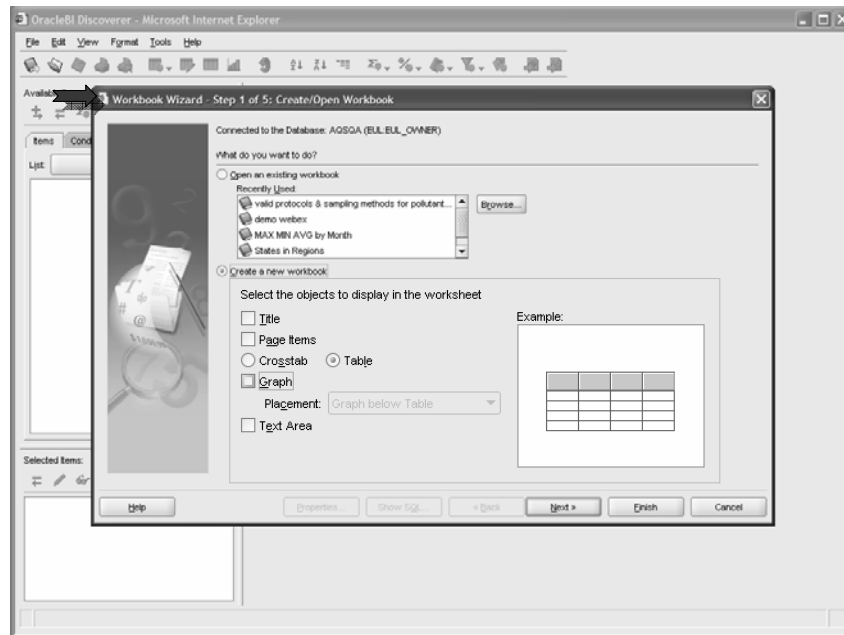
You may need to adjust your Internet Options (under Tools) to allow Browsing to "Enable Install On Demand" and "Use JRE 1.5.0_09 for <applet>".

There's more in-depth set up info on the AQS TTN web page.

BI Discoverer starts



Workbook Wizard starts Step 1

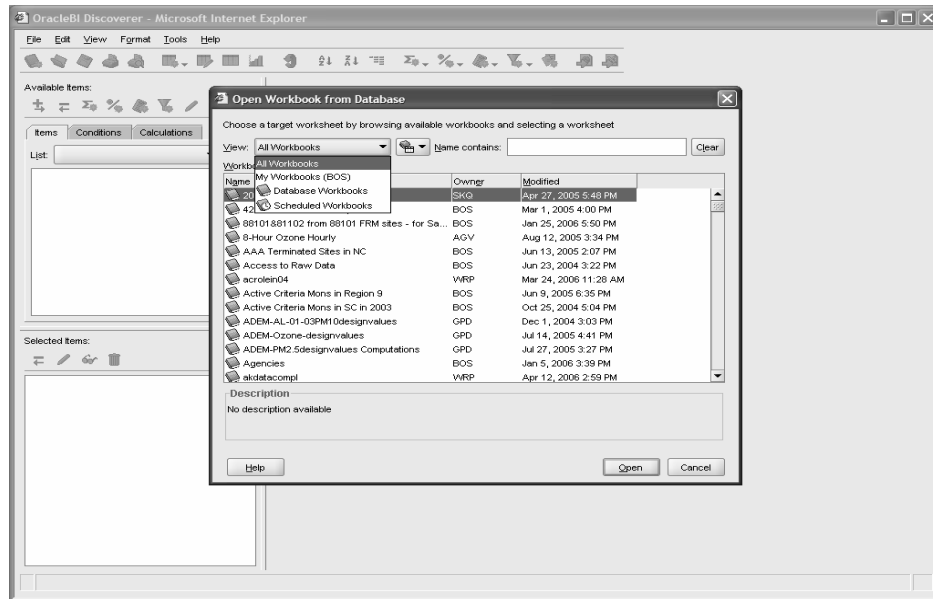


16

Once the Workbook Wizard starts, you know you have successfully connected.

Now you choose whether to open an existing workbook or create a new one.

Open an Existing Workbook

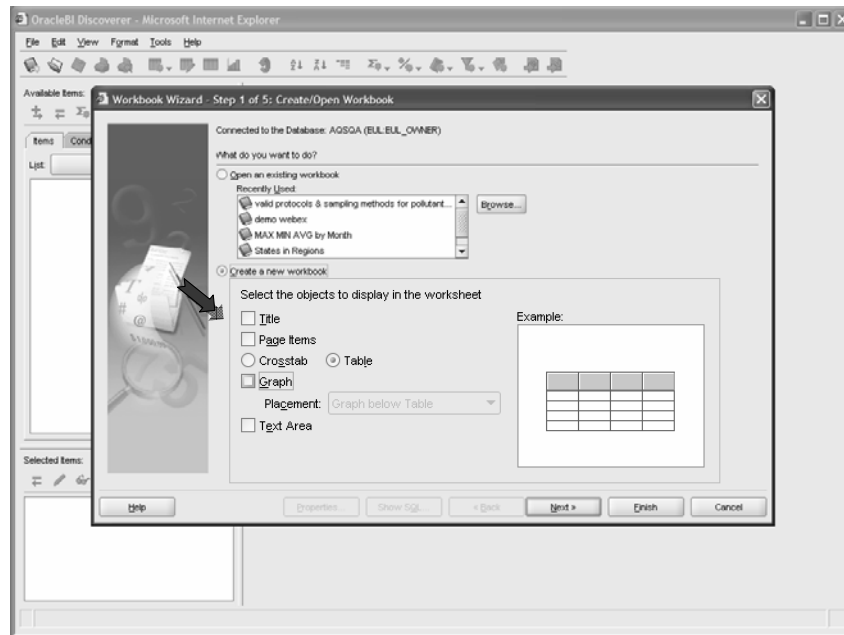


17

You can see a list of all workbooks available to your userid, All Workbooks, My Workbooks

Nice feature: you can now see who created the workbook and when it was last modified.

Create a new workbook



18

Once the Workbook Wizard starts, you know you have successfully connected.
Only 5 steps in the Workbook Wizard now (instead of 10).

The simplest workflow is to use the essential steps:

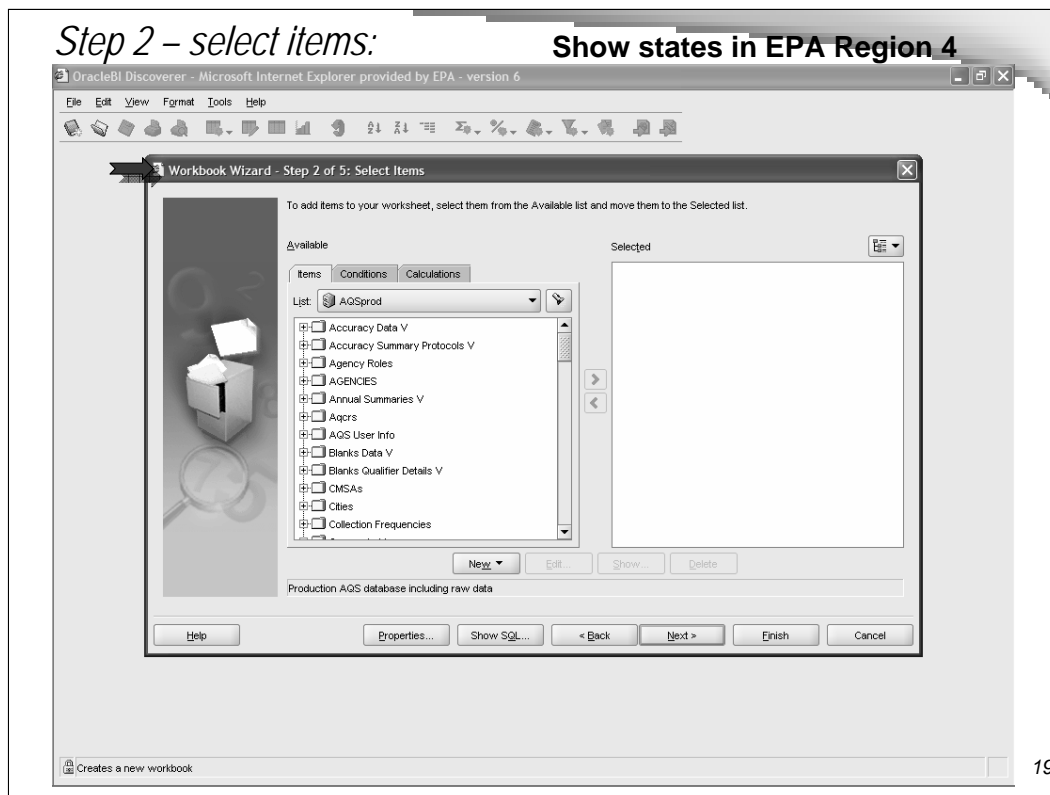
- 1- Choose a worksheet type
- 2- Choose the items
- 3- Arrange the layout of the data
- 4- Define conditions
- 5- Finish

If creating a new workbook, then use the check boxes and radio buttons for the options that can be displayed.

For the simplest workbook, uncheck Title, Page Items, Graph, and Text Area. (You can change the defaults for Title and Text Area but not for Page Items, Crosstab, Table, and Graph.)

“Page Detail” worksheets consume a lot of memory. A “Table” is the most efficient type of worksheet.

To demonstrate the steps, we’ll create a workbook that shows the states assigned to EPA Region 4.



This step is probably the one you'll spend the most time using.

Step 2 window has 5 areas:

- 1) Selection box with heading "Available" that has 3 tabs (items, conditions, & calculations)

Under the Items tab, you choose from the list of available business areas. You can click to highlight a folder or items and use the move button (>) to select, or drag and drop folders/items in the Selected box, or right click on a folder or item and choose "add" from the pop-up menu.
- 2) Box with the heading "Selected" – where you put your choices. Here you can also highlight and move items back or right click and choose "remove" from the pop-up menu.
- 3) Views drop-down – right above the Selected box. You can choose to include the folder names with the items
- 4) 4 additional buttons: New, Edit, Show, Delete

New: to create new conditions, calculations, percentages, and totals

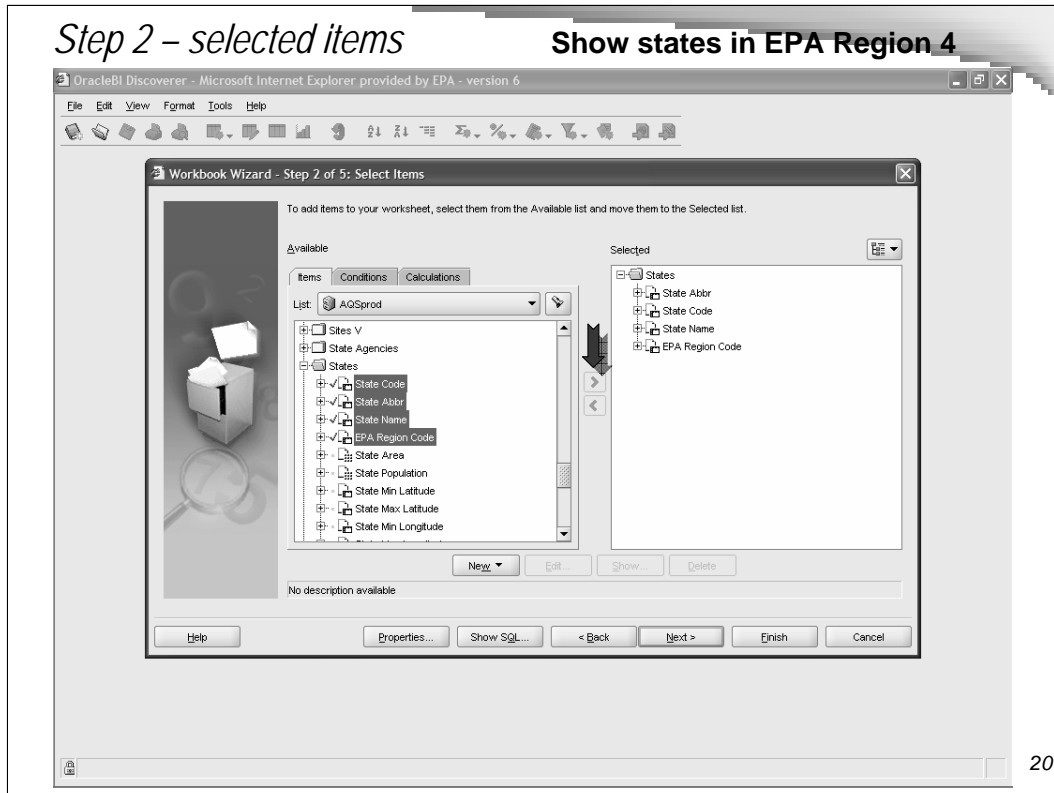
Edit: use to edit existing conditions, calculations, percentages, and totals

Show: to show details about predefined conditions

Delete: to delete a user-defined condition, calculation, percentage, or total
- 5) Find button – flashlight: Opens a Find dialog box. You can use it to find the folder(s) an item is stored in the business area.

Step 2 – selected items

Show states in EPA Region 4



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Selected items will have the check mark beside them in the “available” box.

Item Types:

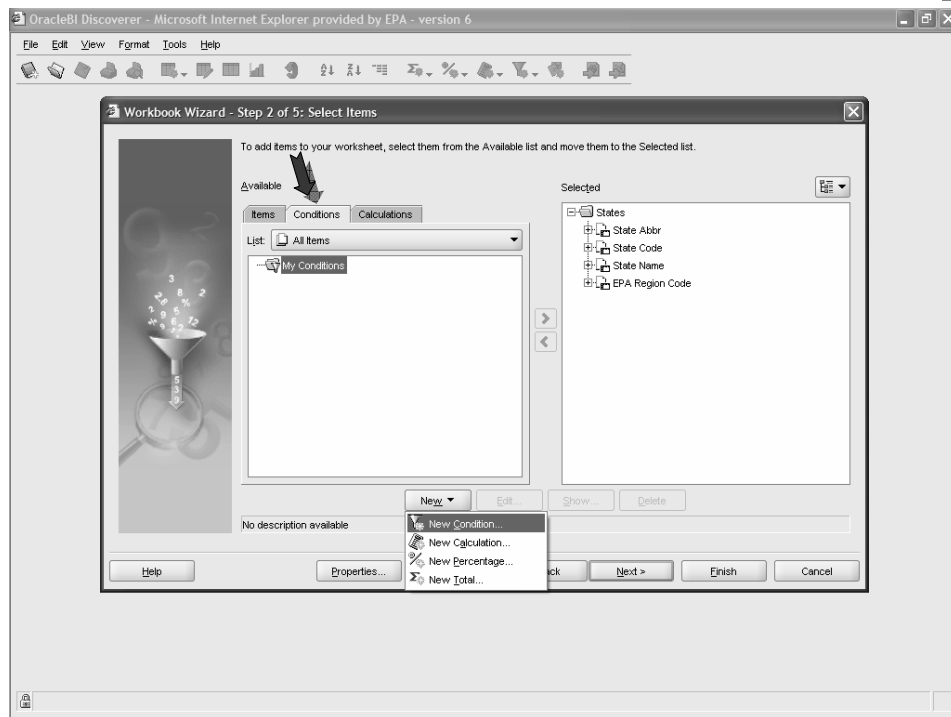
Strings and dates

Numbers

Predefined conditions

Conditions

Show states in EPA Region 4

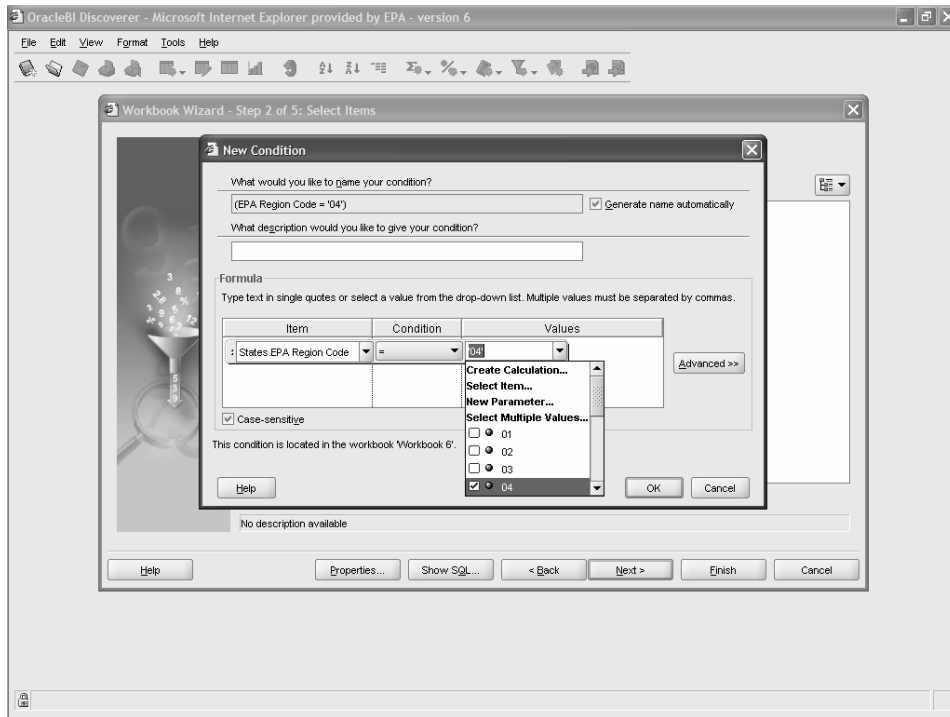


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Still in Step 2, you define conditions for your worksheet. Be careful what you ask for. For example, if you ask for raw data without limiting your request by a time period and geographical area and pollutant, you'll be asking for much more information than you likely want. If you're expecting a lot of data to be returned and you're not sure that you know how you need to format your results, add a condition that will significantly reduce the number of rows that will be returned while you work on creating your query. Then, when you have it like you want it, you can change or eliminate that condition.

New Condition

Show states in EPA Region 4

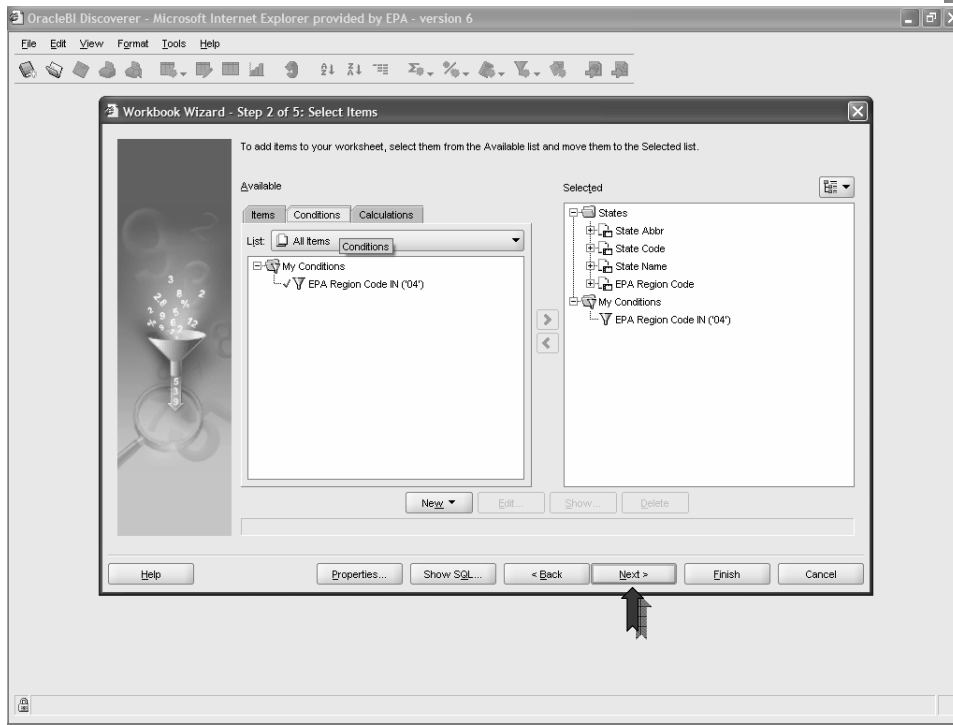


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Many items in the business area have a list of values you can select from.

Conditions

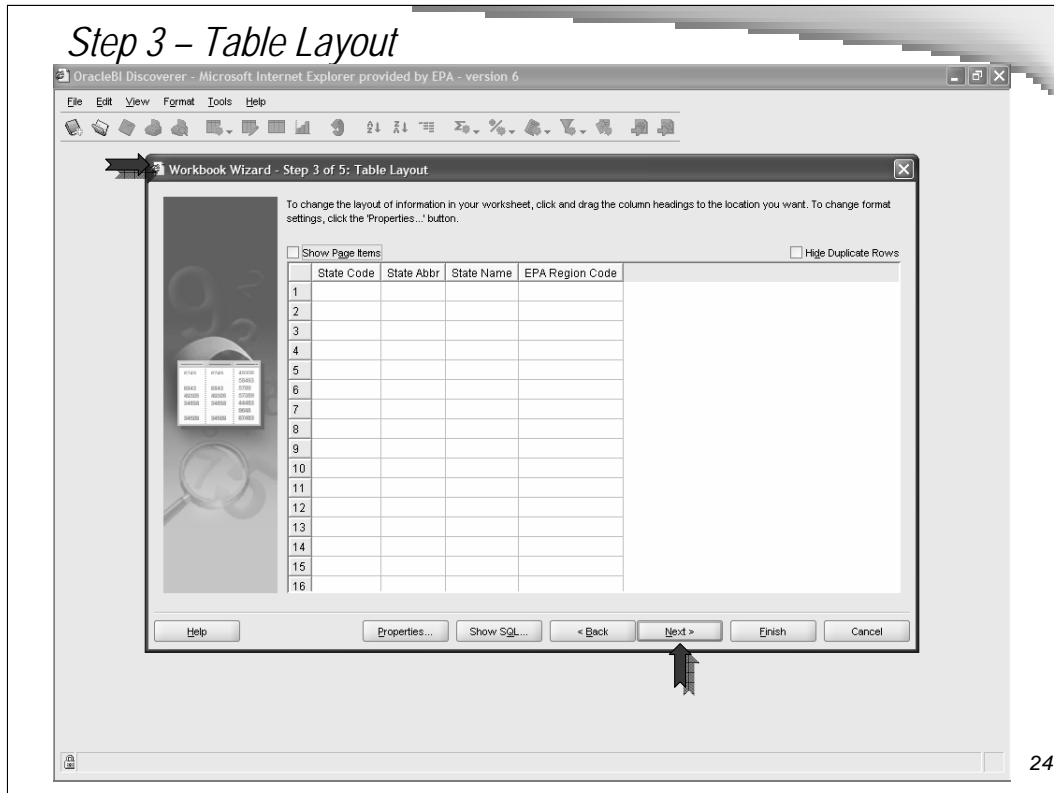
Show states in EPA Region 4



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Notice that your condition displays under the Selected items.

Step 3 – Table Layout



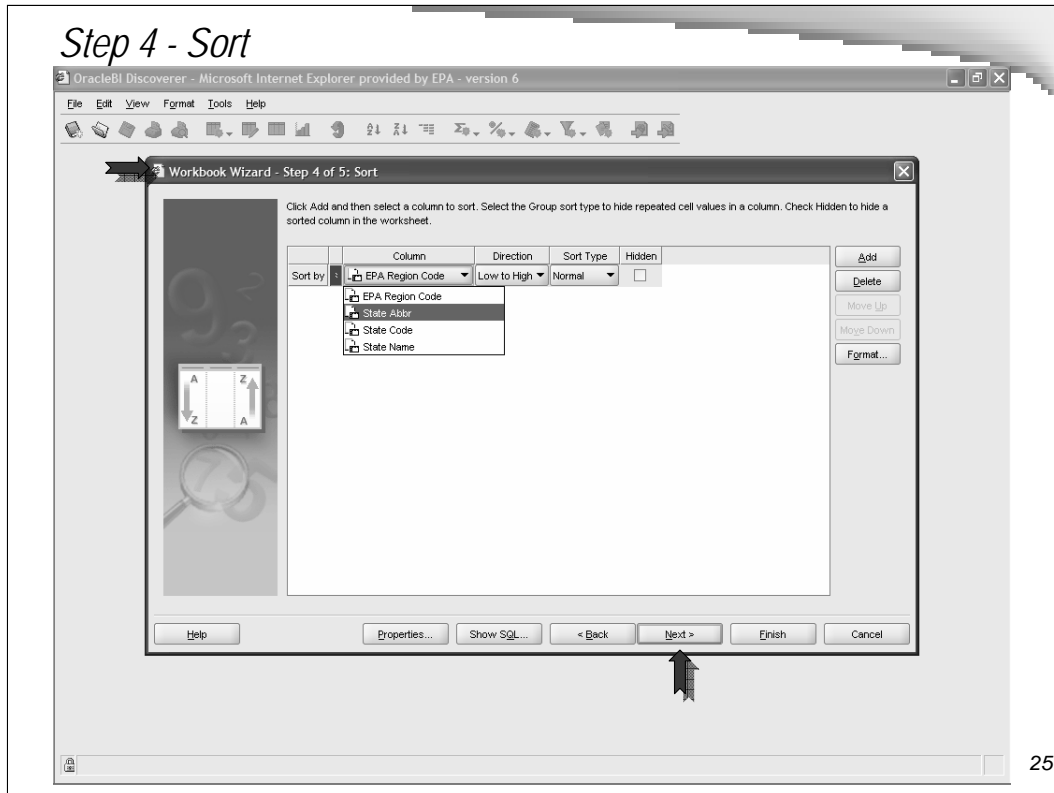
Step 3:

By default, Discoverer will display items in the order you selected them. Here you can change that order and it's easier than before. If you have a large number of columns, you don't have to drag it over as far as you can, then scroll over and drag it again.

You also get the chance to make 2 other choices: Page Items and Hide Duplicate Rows

There are times when you want to hide duplicate rows. For example, if you request an item from a table that includes a date/time, but you're not interested in the date/time – it just happens to be the table that has the other info you want – then you would check the "hide duplicate rows" box.

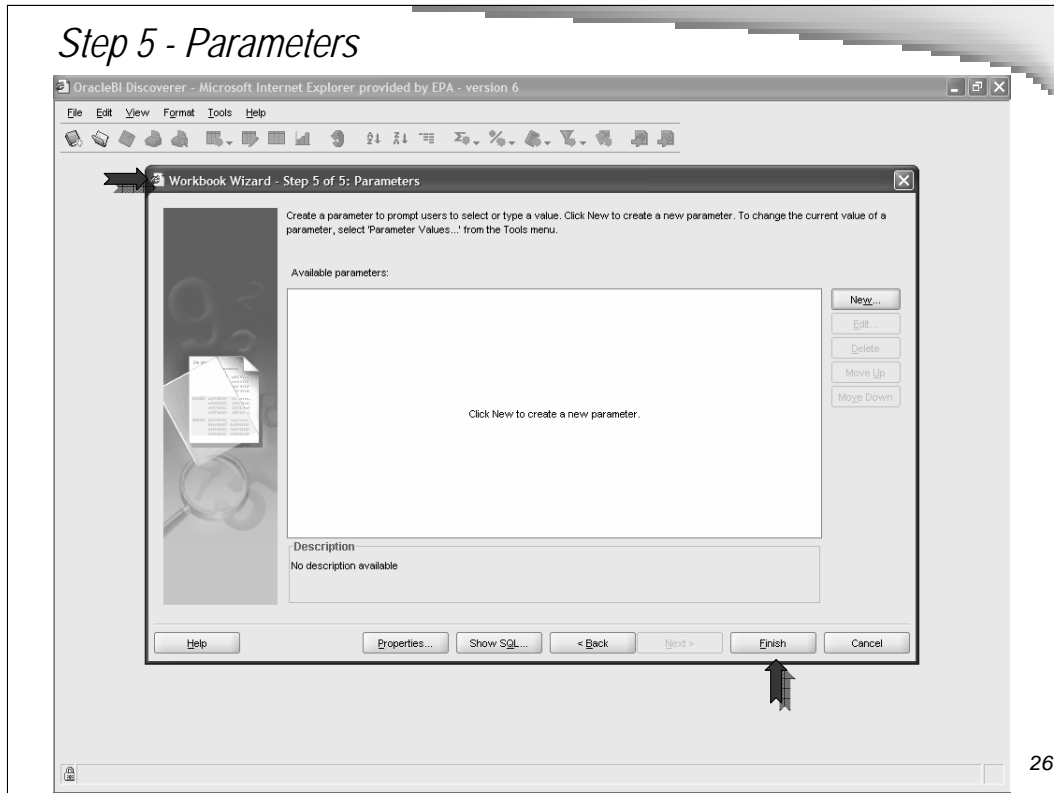
Step 4 - Sort



Step 4: No sort by default. When you click to Add a sort, Discoverer suggests the first item (alphabetically) and you just change that to the one you want.

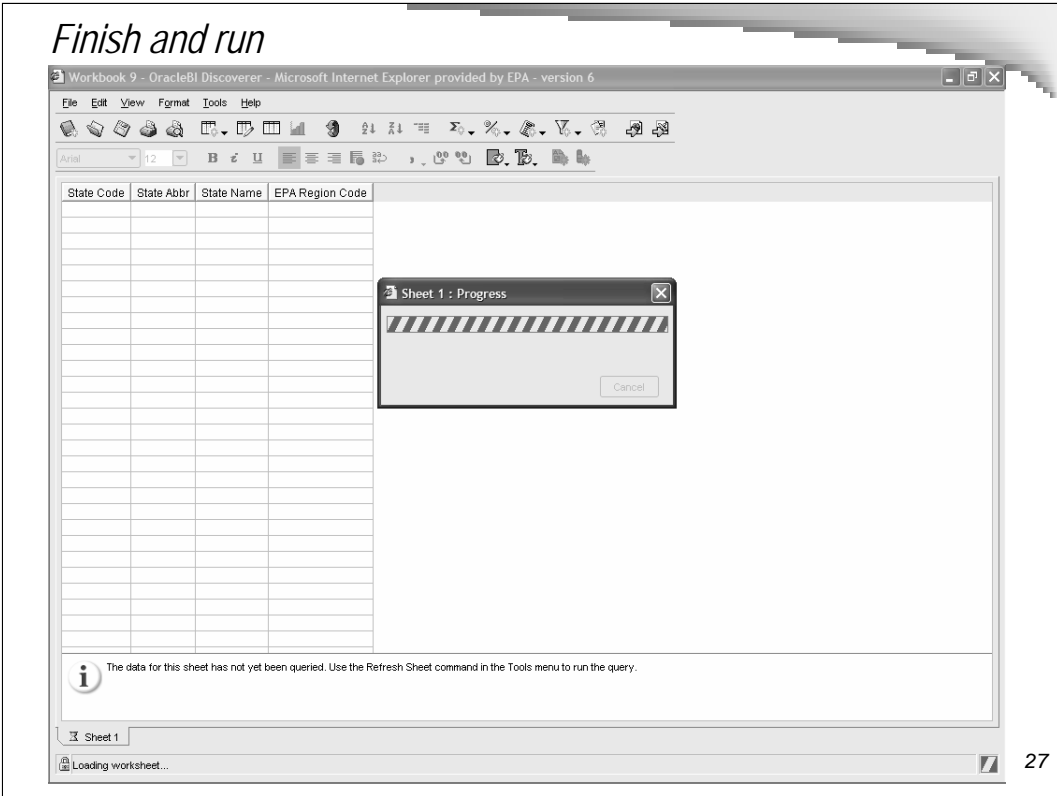
Group Sort versus Regular Sort: Group sort makes it easier to see breaks in the data, but may not be helpful if you're exporting to spreadsheet since there could be blank cells.

Step 5 - Parameters



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Step 5 – Parameters. These are NOT the AQS parameter codes you are familiar with. Think of these as prompts you’d like to see to help restrict your data to a smaller set. There are examples of the use of Parameters in some queries that have been shared with all users. One is “Monitor Reporting Status by Screening Group”.



Progress bar

Results

Workbook 9 - OracleBI Discoverer - Microsoft Internet Explorer provided by EPA - version 6

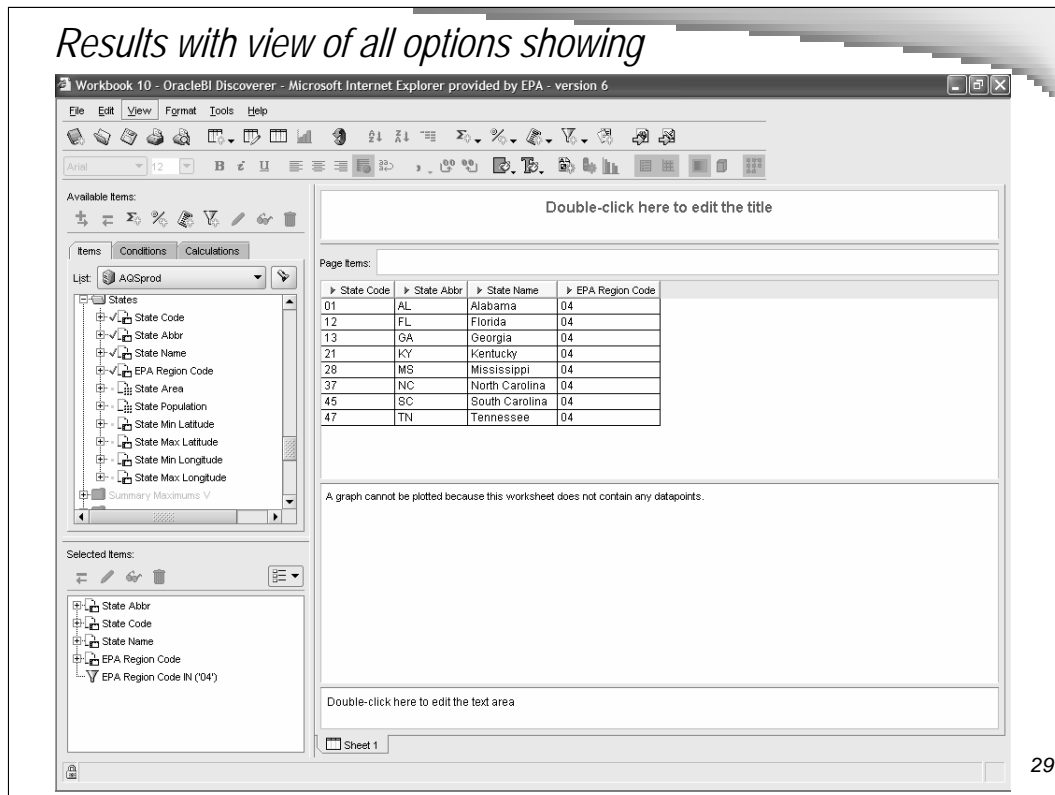
File Edit View Format Tools Help

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State Code	State Abbr	State Name	EPA Region Code
01	AL	Alabama	04
12	FL	Florida	04
13	GA	Georgia	04
21	KY	Kentucky	04
28	MS	Mississippi	04
37	NC	North Carolina	04
45	SC	South Carolina	04
47	TN	Tennessee	04

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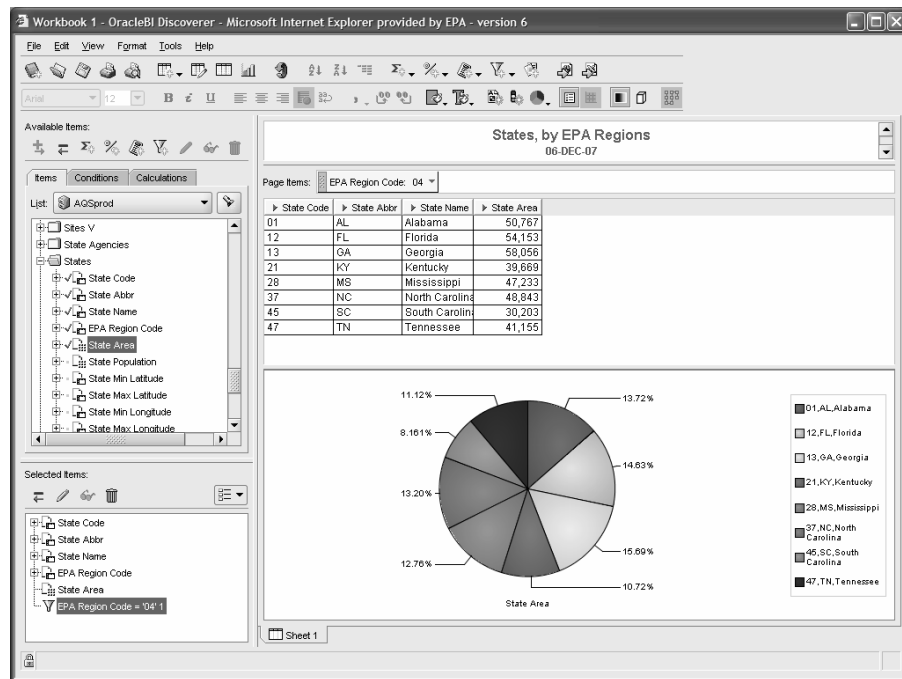
Simplest look at results.



Results shown while all the options are visible.

If you move the Region to a page item and add the State area item, then you can get something like this.

Results modified while viewing



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If you move the Region to a page item and add the State area item, then you can get something like this.

Demo

Inactive monitors:

1. List all criteria monitors for a state that don't have a sampling end date and don't have any data reported in the past 90 days.
2. Modify worksheet to show all monitors for this state grouped by screening group.
3. Modify worksheet again to rate reporting based on how long it's been since data was posted for each monitor.

One possible result

Monitor Reporting Status by Screening Group - OracleBI Discoverer - Microsoft Internet Explorer provided by EPA - version 6

File Edit View Format Tools Help

Monitor Reporting Status
(Only for supposedly active monitors, i.e., those with no recorded Sampling Period End date)
State Code(s) : '37', Sampling Began by : '06-DEC-2007', Last Sampling Date no later than : '06-DEC-2007', Parameter (Pollutant) Classification : 'CRITERIA'
Days since last recorded data : <=45 Desirable, 45-95 Acceptable, >=95 Unacceptable

	> Screening Group Name	> Parameter Desc	> Monitor ID	> Date Sampling Began	> Last Sampling Date	> # Days since last recorded data
1	Eastern Band Cherokee, NC	OZONE	37-099-0005-44201-1	01-APR-1999	31-OCT-2006	401
2		PM2.5 - LOCAL CONDITIONS	37-099-0006-88101-1	01-APR-2000	30-SEP-2007	67
3		PM2.5 - LOCAL CONDITIONS	37-099-0006-88101-2	01-APR-2000	27-SEP-2007	70
4	Forsyth Co, NC	CARBON MONOXIDE	37-067-0022-42101-1	09-JUL-1993	10-SEP-2004	1182
5		CARBON MONOXIDE	37-067-0023-42101-1	14-NOV-1988	30-SEP-2007	67
6		CARBON MONOXIDE	37-067-0029-42101-1	21-NOV-2000	31-DEC-2004	1070
7		NITROGEN DIOXIDE	37-067-0022-42602-1	01-JAN-1984	30-SEP-2007	67
8		OZONE	37-067-0022-44201-1	21-MAY-1993	31-OCT-2007	36
9		OZONE	37-067-0027-44201-1	01-APR-1994	02-NOV-2004	1129
10		OZONE	37-067-0028-44201-1	01-APR-1996	31-OCT-2007	36
11		OZONE	37-067-0030-44201-1	27-APR-2005	31-OCT-2007	36
12		OZONE	37-067-1008-44201-1	01-APR-1988	31-OCT-2007	36
13		PM10 TOTAL 0-10UM STP	37-067-0022-81102-1	18-OCT-1999	30-SEP-2007	67
14		PM10 TOTAL 0-10UM STP	37-067-0023-81102-2	01-OCT-1993	30-SEP-2007	67
15		PM2.5 - LOCAL CONDITIONS	37-067-0022-88101-1	01-JAN-1999	31-OCT-2007	36
16		PM2.5 - LOCAL CONDITIONS	37-067-0022-88101-3	16-JUN-1999	20-SEP-2006	442
17		PM2.5 - LOCAL CONDITIONS	37-067-0030-88101-1	01-AUG-2004	30-OCT-2007	37
18		PM2.5 - LOCAL CONDITIONS	37-067-0030-88101-3	01-AUG-2004	20-SEP-2006	442
19		SULFUR DIOXIDE	37-067-0022-42401-1	01-JAN-1983	31-OCT-2007	36
20	Mecklenburg Co, NC	CARBON MONOXIDE	37-119-0041-42101-1	11-NOV-1999	31-OCT-2007	36
21		CARBON MONOXIDE	37-119-0041-42101-3	27-APR-2005	31-OCT-2007	36
22		NITROGEN DIOXIDE	37-119-0041-42602-1	12-NOV-1999	31-OCT-2007	36

Sheet 1

This example is shared with all users. It demonstrates using formatting headings, group sort, conditions, conditional formatting (stoplight), title –with conditions and date automatically included, and a calculation using the current system date. Users can save shared queries under their own userid and then edit to suit themselves. (May want to just use conditions instead of prompts if always looking at the same state, etc.)

Another way to look at the same results

Monitor Reporting Status by Screening Group - OracleBI Discoverer - Microsoft Internet Explorer provided by EPA - version 6

File Edit View Format Tools Help

ADGAL

Monitor Reporting Status
(Only for supposedly active monitors, i.e., those with no recorded Sampling Period End date)
State Code(s): "37", Sampling Began by: "11-DEC-2007", Last Sampling Date no later than: "11-DEC-2007", Parameter (Pollutant) Classification: "CRITERIA"
Days since last recorded data: ##45 Desirable, 45-95 Acceptable, 96-180 Unacceptable

	> Parameter Desc	> Screening Group Name	> Monitor ID	> Date Sampling Began	> Last Sampling Date	> # Days since last recorded data
1	CARBON MONOXIDE	Forsyth Co, NC	37-067-0022-42101-1	09-JUL-1993	10-SEP-2004	1102
2			37-067-0023-42101-1	14-NOV-1988	31-OCT-2007	41
3			37-067-0029-42101-1	21-NOV-2000	31-DEC-2004	1079
4		Mecklenburg Co, NC	37-119-0041-42101-1	11-NOV-1999	31-OCT-2007	41
5			37-119-0041-42101-3	27-APR-2005	31-OCT-2007	41
6		North Carolina EDAS	37-033-0001-42101-1	15-MAY-2007	30-SEP-2007	72
7			37-051-0007-42101-1	23-OCT-2006	31-OCT-2007	41
8			37-063-0015-42101-1	15-MAY-2007	18-SEP-2007	84
9			37-081-1011-42101-1	01-OCT-2007	31-OCT-2007	41
10			37-159-0021-42101-1	15-MAY-2005	31-OCT-2007	41
11			37-183-0014-42101-1	22-AUG-2006	31-OCT-2007	41
12	NITROGEN DIOXIDE	Forsyth Co, NC	37-067-0022-42802-1	01-JAN-1984	30-SEP-2007	72
13		Mecklenburg Co, NC	37-119-0041-42802-1	12-NOV-1999	31-OCT-2007	41
14	OZONE	Eastern Band Cherokee, NC	37-099-0005-44201-1	01-APR-1999	31-OCT-2006	408
15		Forsyth Co, NC	37-067-0022-44201-1	21-MAY-1993	31-OCT-2007	41
16			37-067-0027-44201-1	01-APR-1994	02-NOV-2004	1134
17			37-067-0028-44201-1	01-APR-1996	31-OCT-2007	41
18			37-067-0030-44201-1	27-APR-2005	31-OCT-2007	41
19			37-067-1008-44201-1	01-APR-1998	31-OCT-2007	41
20		Mecklenburg Co, NC	37-119-0041-44201-1	01-APR-2000	31-OCT-2007	41
21			37-119-1005-44201-1	01-JAN-1980	31-OCT-2007	41
22			37-119-1009-44201-1	15-OCT-1979	31-OCT-2007	41

Sorted by Screening Group Name Sorted by Parameter Desc

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When you're building a query/worksheet, start with something simple and then build on that. If you want to keep the results from your first (and 2nd and 3rd and 4th...), on the top line menu, select Edit, then Duplicate Worksheet. You can also right click on the worksheet name (bottom left) and change the worksheet name from its properties popup. This version sorted by parameter (pollutant) description.

Points Worth Remembering

- AQSprod is the database name
- Your Discoverer userid/password are the same as your AQS application userid/password
- Only registered AQS users can access AQSprod via Discoverer
- Discoverer accesses the live production database (AQSprod – same as the AQS application)

- Your browser must allow downloads of signed Active X controls to install the JRE (Java Runtime Environment) from Sun.
- Version 6 of Java does not work with this version of Discoverer -- or if it does work on your PC, it is very slow. (There are reports of Java 6, release 2 working but not release 3.)
- MS Internet Explorer v 7 is NOT recommended at this time
- If you delete your cookies, you'll have to recreate your Connection
- If you switch PC's, you'll have to recreate your Connection

- The AQS basic business area has the most commonly used tables
- The AQSprod business area includes all the tables in AQS basic plus Raw Data – Current and a few other related tables

- Use the link on the sidebar of the EPA TTN AQS page <http://www.epa.gov/ttn/airs/airsaqs/> to get to AQS Discoverer Web and then save the direct url to your "favorites"
- You can find answers to some of the Frequently Questions from a link on that same page
- There are also links to 2 spreadsheets on <http://www.epa.gov/ttn/airs/airsaqs/aqsdiscovers/> that list the folders and items in each of the 2 business areas for Discoverer
- Many of the reference tables are viewable from <http://www.epa.gov/ttn/airs/airsaqs/manuals/codedescs.htm>

Thanks for participating!

For assistance using Discoverer,

- Try the Online Help (It's pretty good!)
- Check the Discoverer Plus User Guide
- Contact the EPA Helpline (Tom Lewis)
- Call or email EPA NADG staff (Jake Summers, Jon Miller, Way Poteat)
- Oracle Technology Network is a good source for information – free registration – look for Discoverer with Data Warehousing and Business Intelligence
(<http://www.oracle.com/technology/products/discoverer/index.html>)