

# TECH TIP

## FILTERING UNIFIER REPORT DATA

# ORACLE PRIMAVERA UNIFIER

This Tech Tip will outline various methods for filtering reporting output data.

Filtering methods include:

1. During run time of an UDR
2. Modifying Data View SQL
3. In the RTF design template of a Custom Report
4. During run time of a Custom Report

### 1. During run time of an UDR

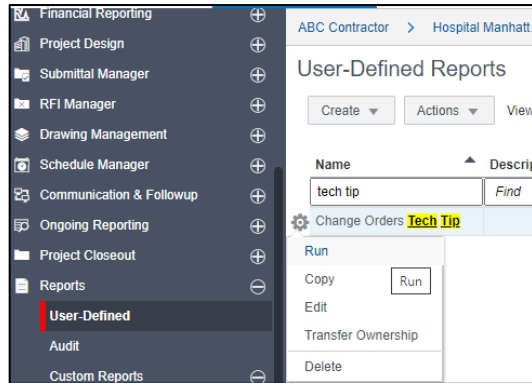
This project-level UDR lists the Change Orders for a project. If an additional UDR requirement was to return records specific to a Vendor, the UDR set up needs to be modified. As UDRs are an user-mode module, this can be completed by the user without assistance of an Unifier administrator or any Data View SQL knowledge (unless the UDR uses a Data View as its data source which is covered in method 2).

Change Orders Tech Tip							
Project Name: Hospital Manhattan Expansion Project Number: P-0023							02/01/2021
Project Number	Project Name	Record No.	Change Order #	Title	Vendor ID	Vendor Name	Amount
P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Order 1	ACMEGC	ACME General Contractors	987,413.00
P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	ACMEGC	ACME General Contractors	10,000.00
P-0023	Hospital Manhattan Expansion	CON-000002-002	2	CO2	CPM	CPM Consultants	0.00
P-0023	Hospital Manhattan Expansion	CON-000002-001	1	CO1	CPM	CPM Consultants	10,000.00

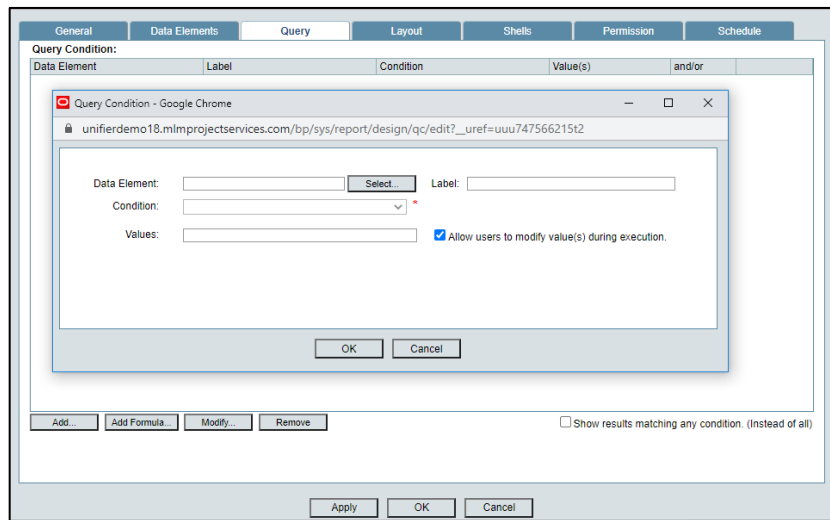
Count: 4

# FILTERING UNIFIER REPORT DATA

Locate the UDR from Reports > User-Defined within the shell's Navigation Pane. With the UDR selected, click on the row menu (Cog icon) and select Edit from the menu pulldown to open the Edit Report window.



The filter condition is set up in the Query tab. Multiple conditions can be added though be aware of the check box 'Show results matching any condition. (Instead of all)'. This determines whether the need is for any condition to be satisfied or all of them. In this example the single filter will be on Vendor. Click the Add button in the Query tab to open the Query Condition window.



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For Data Element (this identifies the filtering DE) click the Select button. This opens the Data Source window. Scroll down to locate the Vendor ID DE. Once selected click OK.

Column	Name	Type
currencyrate	Rate in Project Currency	Double
ucoReasonPD	Reason	String
ucoReceivedClosedDA	Received and Closed Value	Double
uuu_record_last_update_date	Record Last Update Date	Timestamp
record_no	Record No.	String
ucoReviewDecisionDP	Review Decision	String
uconRevisedContctAmtCA	Revised Contract Amount	Double
ucoScheduleImpactDaysIA	Schedule Impact (Days)	Integer
ugenScopeOfWorkMTL4000	Scope of Work	String
send_date	Send Date	Timestamp
ugenStatePD	State/Province	String
status	Status	String
title	Title	String
ugenTodayDateDOP	Today	Timestamp
currencyid	Transaction Currency	String
uveVendorIDTB16	Vendor ID	String
uveVendorNameTB50	Vendor Name	String
uveWomanOwnedCB	Woman-owned Business	String
ugenZipCodeTXT16	Zip/Postal Code	String

The Label can be changed if needed. Change the Condition to 'equals' so the user needs to enter the correct Vendor ID at run time. The other options are 'contains', 'does not contain', 'does not equal', 'is empty' 'is not empty'. Values can be left blank. This would be if a default Vendor ID is set. The important setting is 'Allow users to modify value(s) during execution' checkbox. Leave this checked.

Click OK to return to the Query tab.

Data Element: Change Orders / Vendor ID  Label: Change Orders / Vendor ID

Condition: equals

Values:

☒ Allow users to modify value(s) during execution.

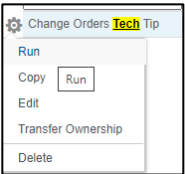
The filter condition is included. Click OK to return to the User-Defined Reports Log window.

Data Element	Label	Condition	Value(s)	and/or
Change Orders / Vendor ID	Change Orders / Vendor ID	equals		and

☐ Show results matching any condition. (Instead of all)

# FILTERING UNIFIER REPORT DATA

To run the UDR select Run from the Row Menu.



There is a new Report Query section in the Run window. Included is the query condition added. The user has the ability to add in an appropriate Vendor ID. Once entered, click the Run Report button. If the field is left blank all records are returned.

A screenshot of the 'Change Orders Tech Tip' Run window. The 'Query and Format' section is expanded, showing options for Report Format (HTML, CSV, Excel, PDF, XML) with PDF selected. Below this is a 'Record count for UDR' dropdown set to 'Select'. The 'Time Zone' is set to '(UTC-08:00) Pacific Time (US & Cana)'. In the 'Report Query Parameters' section, the 'Change Orders / Vendor ID' field contains 'equals' and 'ACMEGC', with a tooltip indicating 'Enter 4000 or fewer characters.' Below this are sections for 'Report Location', 'Workspaces', and 'Notes'. At the bottom are 'Reset', 'Cancel', and 'Run Report' buttons.

The UDR output now shows only the Vendor-specific records.

Change Orders Tech Tip							
Project Name: Hospital Manhattan Expansion				02/01/2021			
Project Number: P-0023							
Project Number	Project Name	Record No.	Change Order #	Title	Vendor ID	Vendor Name	Amount
P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Order 1	ACMEGC	ACME General Contractors	987,413.00
P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	ACMEGC	ACME General Contractors	10,000.00
Count: 2							

# FILTERING UNIFIER REPORT DATA

## 2. Modifying Data View SQL

In this example the Data View contains a simple SQL statement that references key fields from the Change Orders BP. The SQL statement includes the project\_id field which is a pre-requisite for shell-level Custom Reports. Aliases are used for each field to make it easier to identify the field. Example – 'AS Project\_No. 'The Data View result set lists all Change Order records.

In this example the SQL statement is modified so the rows returned will be specific to a Vendor.

The SQL includes a WHERE clause which joins the shell details table (us\_p) with the Change Orders table (ucox) by project\_id. This allows Project Number (ugenProjectNumber) and Project Name (ugenProjectName) to be included in the result set where these fields reside in the shell details table. In addition to joining tables where fields from different tables can be included, the WHERE clause can also include filtering conditions.

```
SELECT
a.id,
a.project_id,
b.ugenProjectNumber      AS Project_No,
b.ugenProjectName        AS Project_Name,
a.record_no,
a.ucoCONumberIA          AS ChangeOrder_No,
a.title,
...
a.uveVendorIDTB16        AS Vendor_ID,
a.uveVendorNameTB50      AS Vendor_Name,
a.amount
FROM unifier_ucox a, unifier_us_p b
WHERE a.project_id = b.pid
```

This is the current output of the Data View.

project_id	project_no	project_name	record_no	change title	sta co co	vendor_id	vendor_name	amount
1160	P-0023	Hospital Manhattan Expansion	CON-000002-002	2	CO2	Qu Cc 98 CPM	CPM Consultants	0
1160	P-0023	Hospital Manhattan Expansion	CON-000002-001	1	CO1	Qu Cc 98 CPM	CPM Consultants	10000
1160	P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	Qu Cc 98 ACMEGC	ACME General Cont	10000
1160	P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Orde	NT Cc 98 ACMEGC	ACME General Cont	987413
1189	P-0049	XCEL Hardened FLEX Building	CON-000002-001	1	Existing Conc	NT Cc Cc JME	JME Construction	3000
1188	P-0048	WCNO Post-Fukushima Modificat	CON-000001-001	2	Excavation of	NT Cc Ex STDPAV	Standard Paving an	6500
1186	P-0046	PFES 001	CON-000001-003	4	Potential Cha	Pos Cc Cc JME	JME Construction	0
1186	P-0046	PFES 001	CON-000001-002	3	PC Create fro	Aw Cc Cc JME	JME Construction	0
1186	P-0046	PFES 001	CON-000001-001	2	PC auto frm	S NT Cc Cc JME	JME Construction	6000000
1143	P-0010	235300-01 Building Shell	CON-000001-001	1	Additional Sit	Ap Cc A MECH	Mechanical Contract	0

A second line is added to the WHERE clause which will filter the result set to return records with the Vendor that has a Vendor ID of 'ACMEGC'.

```
WHERE a.project_id = b.pid
AND a.uveVendorIDTB16 = 'ACMEGC'
```

# FILTERING UNIFIER REPORT DATA

Open the Data View in Draft Mode and the additional line is added to the SQL statement. Click OK and publish the Data View.

The data view result set now shows only Change Orders records associated with the Vendor ID 'ACMEGC'.

project_id	project_no	project_name	record_no	change	title	st	co	cc	vendor_id	vendor_name	amount
1160	P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	Q	C	C	9& ACMEGC	ACME General Cont	10000
1160	P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Order	N	C	C	9& ACMEGC	ACME General Cont	987413

Note – this Data View can be used in an UDR to return the same Vendor-specific records.

### 3. In the RTF Design Template of a Custom Report

This method uses the same Data View within the Custom Report. The difference here is that the filter condition is set within the RTF design template.

# FILTERING UNIFIER REPORT DATA

Below is the XML generated from the Custom Report's Sample Data tab. These tag names are the aliases in the SQL statement. The VENDOR\_ID tag name will be used for filtering in the RTF.

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <DATA_DS>
3   <uuu_p_reportByF></uuu_p_reportByF>
4   <uuu_p_timeZoneF></uuu_p_timeZoneF>
5   <uuu_p_diffMinutesF>0</uuu_p_diffMinutesF>
6   <uuu_p_sysTimeZoneID></uuu_p_sysTimeZoneID>
7   <uuu_p_searchConditionF></uuu_p_searchConditionF>
8   <uuu_p_urlF></uuu_p_urlF>
9   <uuu_p_sessionIdF></uuu_p_sessionIdF>
10  <uuu_p_companyRegistryF></uuu_p_companyRegistryF>
11  <uuu_p_localeF></uuu_p_localeF>
12  <uuu_p_dateTimeFormatF></uuu_p_dateTimeFormatF>
13  <DS>
14    <ID>7</ID>
15    <PROJECT_ID>1160</PROJECT_ID>
16    <PROJECT_NO>P-0023</PROJECT_NO>
17    <PROJECT_NAME>Hospital Manhattan Expansion</PROJECT_NAME>
18    <RECORD_NO>CON-000001-001</RECORD_NO>
19    <CHANGEORDER_NO>1</CHANGEORDER_NO>
20    <TITLE>Change Order 1</TITLE>
21    <STATUS>NTP Acknowledged</STATUS>
22    <CONTRACT_REC>CON-000001</CONTRACT_REC>
23    <CONTRACT_NO>9876-001</CONTRACT_NO>
24    <VENDOR_ID>ACMEGC</VENDOR_ID>
25    <VENDOR_NAME>ACME General Contractors</VENDOR_NAME>
26    <AMOUNT>987413.0</AMOUNT>
27  </DS>
28  <DS>
29    <ID>8</ID>
30    <PROJECT_ID>1160</PROJECT_ID>
```

The RTF design has a simple record looping method using the 'for-each' (placeholder F) and 'end for-each' (placeholder E) XML tags .

File Layout References Mailings Review View ACROBAT BI Publisher Design Layout Tell me what you want to do...

File XML Schema Table Pivot Chart Table/Form Conditional Format Conditional Region PDF Excel2000 DOCX HTML RTF Excel PowerPoint Preview Field Browser Validate Template Check Accessibility Translation Tools Options Help About Options

1 2 3 4 5 6 7 8 9

CHANGE ORDERS TECH TIP

Project No	Project Name	Change Order Record No	CO #	Change Order Title	Vendor ID	Vendor Name	Amount
F:PROJNO	PROJECT_NAME	RECORD_NO	CO	TITLE	VENDOR_ID	VENDOR_NAME	E
						Total:	\$0

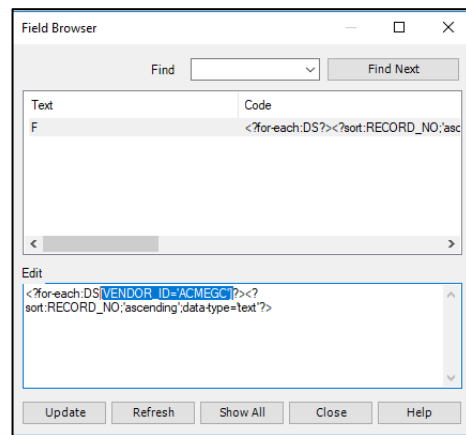
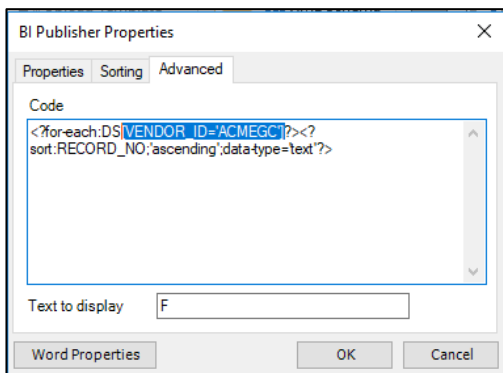
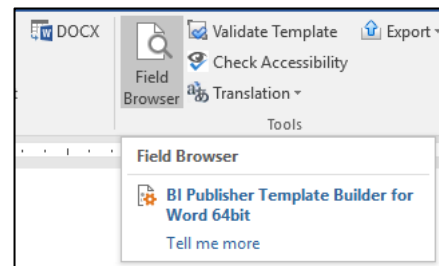
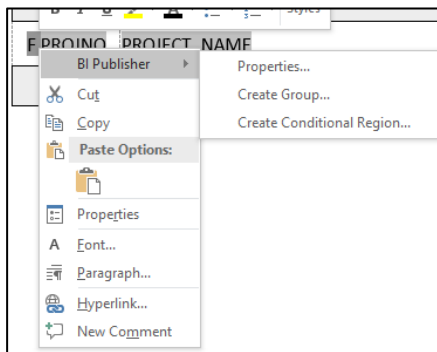
The PDF preview lists all Change Order records for the selected sample shell.

# FILTERING UNIFIER REPORT DATA

CHANGE ORDERS TECH TIP							
Project No	Project Name	Change Order Record No	CO #	Change Order Title	Vendor ID	Vendor Name	Amount
P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Order 1	ACMEGC	ACME General Contractors	\$987,413
P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	ACMEGC	ACME General Contractors	\$10,000
P-0023	Hospital Manhattan Expansion	CON-000002-001	1	CO1	CPM	CPM Consultants	\$10,000
P-0023	Hospital Manhattan Expansion	CON-000002-002	2	CO2	CPM	CPM Consultants	\$0
						Total:	\$1,007,413

The filter condition is set in the for-each tag (placeholder F).

Highlight the F placeholder in the 1<sup>st</sup> column data row cell. Either right click and select Properties from BI Publisher menu item or click Field Browser from the BI Publisher ribbon. The following filter code [VENDOR\_ID='ACMEGC'] is included directly after the DS record name. Only output DS records that have a Vendor ID 'ACMEGC'.



Click OK or Update depending on method used. The PDF preview now only shows records with a Vendor ID of 'ACMEGC'. The overall Total still shows the Total for all records. The Total placeholder XML tag must also be modified with the conditional filter.



# FILTERING UNIFIER REPORT DATA

1611084717446... 661611085974147... x

1 / 1 107%

CHANGE ORDERS TECH TIP

Project No	Project Name	Change Order Record No	CO #	Change Order Title	Vendor ID	Vendor Name	Amount
P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Order 1	ACMEGC	ACME General Contractors	\$987,413
P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	ACMEGC	ACME General Contractors	\$10,000
Total:							\$1,007,413

Highlight the Total placeholder and display the XML using the Field Browser method. Since the current XML is the total sum of all records the conditional code must be applied at the parent level. [../VENDOR\_ID='ACMEGC'] is included.

Field Browser

Find  Find Next

Text	Code
\$0	<?sum(AMOUNT)?>

< >

Edit

<?sum(AMOUNT,../VENDOR\_ID='ACMEGC')?>

Update Refresh Show All Close Help

The PDF preview now has the Total summing correctly. Total for records with the specific Vendor ID.

CHANGE ORDERS TECH TIP

Project No	Project Name	Change Order Record No	CO #	Change Order Title	Vendor ID	Vendor Name	Amount
P-0023	Hospital Manhattan Expansion	CON-000001-001	1	Change Order 1	ACMEGC	ACME General Contractors	\$987,413
P-0023	Hospital Manhattan Expansion	CON-000001-002	2	CO-0002	ACMEGC	ACME General Contractors	\$10,000
Total:							\$997,413

## 4. During run time of a Custom Report

The Custom Report has three Source Type options by which a query condition can be set up.

- 4.1. Data Definition
- 4.2. View
- 4.3. Ad Hoc

Click Add in the Custom Report's Query tab to open the Add Query window.

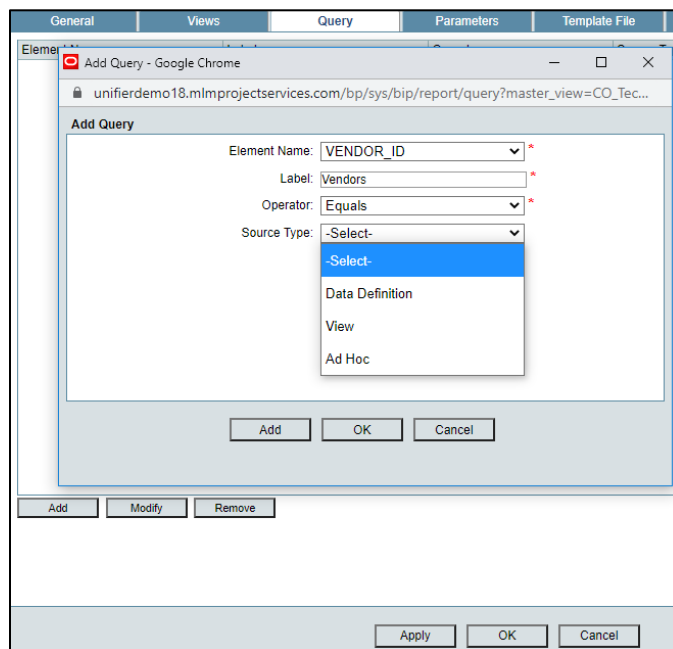
# FILTERING UNIFIER REPORT DATA

Element Name pulldown lists the available Data Elements from the Custom Report's Data View source. As with the previous filter methods, the Vendor ID will be the search criteria field.

The Operator pulldown has two options 'Like' and 'Equals'. 'Like' allows the user to enter a number of characters (pattern) to perform a pattern search against the selected Element Name. Only records where the pattern matches are returned. This example uses 'Equals' where the user must enter an exact match of the Element Name values. Selecting the 'Like' Operator would disable the Source Type. This becomes redundant as the user enters a character pattern rather than selecting from a list.

Each one of the Source Type pulldown options provides the user (at run time) with a list to select from.

The Query tab supports multiple query conditions.



The following four sub sections outlines setting up each Source Type query condition.

## 4.1 Data Definition

This option uses an existing Data Definition (pulldown type) as the data source. At run time the user selects from the Data definition list. A Vendors PD Data Definition has been created listing Vendors. The Value holds the Vendor ID for each row entry, and it is this column the records will be matched against. The Label values (Vendor Name) are what are displayed in the list. In working practice, the Data Definition would be in use (source for a Data Element) and therefore providing a valid entries.

# FILTERING UNIFIER REPORT DATA

General			
Data Set			
Data Set Values: 5 Item(s)			
Row	Value	Label	Status
1	ACMEGC	ACME General Contractors	Active
2	CPM	CPM Consultants	Active
3	JME	JME Construction	Active
4	MECH	Mechanical Contractors	Active
5	STDPAV	Standard Paving and Concrete, Inc.	Active

The Vendors PD is selected. Selection Type 'Single' or 'Multiple' allows the user to either select only one item in the pulldown list or select multiple. This example will use 'Single'. Click OK to return to the Query tab window.

Add Query

Element Name:
VENDOR\_ID

Label:
Vendors

Operator:
Equals

Source Type:
Data Definition

Select Definition:
Vendors PD

Selection Type:
☒ Single
☐ Multiple

Add
OK
Cancel

The query condition with Data Definition source type is now set up.

General	Views	Query	Parameters	Template File	Save
Element Name	Label	Operator	Source Type		
VENDOR_ID	Vendors	Equals	Data Definition		

## 4.2 View

This option allows a Data View to be used as the data source. At run time the user can select from the Data View result set. It is the most flexible of all options as the Data View SQL can be specific in what data is returned. In this example, the user will be only selecting from Vendors referenced in Change Order records.

<div> Prefix: unifier__ </div> <div> Name: Vendors </div> <div> Label: Vendors </div> <div> Description: DV for CO Tech Tip </div> <div> SQL Definition: <pre>select distinct a.uveVendorIDTB16 AS Vendor_ID, a.uveVendorNameTB50 AS Vendor_Name FROM unifier_ucox a</pre> </div>	<div> unifier__Vendors log - Current View: All </div> <div> 5 Item(s) Pag </div> <table border="1"> <thead> <tr> <th>vendor_id</th> <th>vendor_name</th> </tr> </thead> <tbody> <tr> <td>STDPAV</td> <td>Standard Paving and Concrete, Inc.</td> </tr> <tr> <td>MECH</td> <td>Mechanical Contractors</td> </tr> <tr> <td>JME</td> <td>JME Construction</td> </tr> <tr> <td>CPM</td> <td>CPM Consultants</td> </tr> <tr> <td>ACMEGC</td> <td>ACME General Contractors</td> </tr> </tbody> </table>	vendor_id	vendor_name	STDPAV	Standard Paving and Concrete, Inc.	MECH	Mechanical Contractors	JME	JME Construction	CPM	CPM Consultants	ACMEGC	ACME General Contractors
vendor_id	vendor_name												
STDPAV	Standard Paving and Concrete, Inc.												
MECH	Mechanical Contractors												
JME	JME Construction												
CPM	CPM Consultants												
ACMEGC	ACME General Contractors												

## FILTERING UNIFIER REPORT DATA

Select the appropriate Data View from the Select View pulldown. The Data Definition option had the Value and Label columns by design. In this case each one is manually selected. Again 'Single' would be selected.

Element Name:  \*

Label:  \*

Operator:  \*

Source Type:

Select View:  \*

Value Column:  \*

Label Column:  \*

Selection Type: ☒ Single ☐ Multiple

Add OK Cancel

The query condition with Data Definition source type is now set up.

General	Views	Query	Parameters	Template File
Element Name	Label	Operator	Source Type	
VENDOR_ID	Vendors	Equals	View	

### 4.3 Ad Hoc

This is the least flexible of all the options. The list is manually entered and generally would be the least used option. Click the Add button to open the Ad-Hoc window.

Element Name:  \*

Label:  \*

Operator:  \*

Source Type:  Add...

Selection Type: ☒ Single ☐ Multiple

Add OK Cancel

Add how many rows are required and enter the Value and Label entries. The window does not provide a re-order row feature so the entries must be entered in the correct order. Click OK when rows are completed.

## FILTERING UNIFIER REPORT DATA

Row	Value	Label
0	ACMEGC	ACME General Contractors
1	CPM	CPM Consultants
2	JME	JME Construction
3	MECH	Mechanical Contractors
4	STDPAV	Standard Paving and Concrete

The query condition with Data Definition source type is now set up.

General	Views	Query	Parameters	Template File
Element Name	Label	Operator	Source Type	
VENDOR_ID	Vendors	Equals	Ad Hoc	

With the query condition in place, the Custom Report can be published and the report run from a shell. The Search Parameters section shows the Vendors query condition. Regardless of source type, the user will see the same pulldown list feature. If the Label 'ACME General Contractors' is selected, then the corresponding Value 'ACME' is matched against Change Order records referencing the same Vendor ID.

Document Manager
Financial Transactions
Change Management
Financial Reporting
Project Design
Submittal Manager
RFI Manager
Drawing Management
Schedule Manager
Communication & Followup
Ongoing Reporting
Project Closeout
Reports
User-Defined
Audit
Custom Reports
CO Filtering Tech Tip

### CO Filtering Tech Tip

Template and Format
Template \*
v1.0
Format
☒ PDF
☐ Excel
☐ RTF

Search Parameters
Vendors
equals
Select
Select
ACME General Contractors
CPM Consultants
JME Construction
Mechanical Contractors
Standard Paving and Concrete, Inc.

Additional Parameters

Run Report

In summary, this Tech Tip provided different options to filter Unifier report data. Options (2) 'Modifying Data View SQL' and (3) 'In the RTF design template of a Custom Report' are primarily for specific reports where the filtered records are the objective of the report. Options (1) 'Modifying Data View SQL' and (4) 'During run time of a Custom Report' provide more flexibility and used for more general reports where the record count is extensive and a number of query conditions can subset that data for specific data selections.