March 15, 2004

Release Notes for MDC v4.2.46

EPA is releasing this version of MDC to provide a more accurate QA Status Evaluation (in MDC Hourly) for linearity checks and RATAs, which does not rely on RTs 697, 698 or 699 to determine test deadline extensions or test exemptions due to non-QA operating quarters, linearity exemptions due to low span values, or grace period extensions. This version also checks the linearity status of both ranges of dual range analyzer components (e.g., NOXA, SO2A etc) to make sure required tests were performed.

Table 1 below describes the specific changes to the QA Status Evaluation in MDC Hourly. Table 2 describes other changes and bug fixes in MDC and MDC Hourly. For tips on using this version of MDC Hourly, see the latest version of the "Getting Started in MDC Hourly" document (available at http://www.epa.gov/airmarkets/monitoring/mdc/index.html#mdc).

Detailed RATA and Linearity status checking information can be obtained by reviewing the redline/strikeout RATA and Linearity Status Determination (specification) documents that follow Table 2 below. It may also be helpful to view the Linearity and RATA flow charts in conjunction with the specification documents. To view a copy of the flow charts, open MDC v4.2.46 and then choose the "MDC Hourly" option on the main menu. Once MDC Hourly loads, go to the "Help" option on the MDC Hourly main menu and select the "Contents" option. Click on the "Index" tab, type in "flow chart" in box 1, and click the "Display" button. This will bring up the "Check QA Status Screen" page of the Help file. Scroll down the page to the links for either the "Linearity Status" or the "RATA Status" flow chart. (The flow charts are Adobe Acrobat (.pdf) files, so you will need the free Adobe Acrobat Reader to view them. Note that this new format allows you to zoom as needed to be able to read the small print.)

IMPORTANT NOTE: MDC v4.2.46 includes two new MDC evaluation checks. **NBP-33C** checks the validity of dual range analyzer component types (e.g., NOXA or SO2A) by looking for complete span records for both low and high scale. (If you have a single range analyzer and are using the default high range option, the component type of the analyzer should be identified as NOXL or SO2L not as SO2A or NOXA.) **LIN-10C** checks that the span scale in RT 601/602 is not blank for dual range analyzer components. A preliminary analysis of current data indicates that quite a few sources have been reporting incorrectly and will receive one or both of these errors. Please be sure to evaluate your 2004 Q1 EDR files with this new version of MDC prior to submitting to EPA.

Table 1: MDC Hourly QA Status Evaluation Changes

#	Area of Change	Change Description
1	Identifying non-QA Operating Quarters	Instead of looking for RT 697 (Type of Extension = 1) or RT 698 (Basis for Exemption = 1) to determine applicable non-QA operating quarters, MDC Hourly now relies on actual quarterly operating hours that are imported or entered into a new table in MDC. During the MDC import, the quarterly (or Ozone Season) operating hours reported in RT 301 (or 307) will be stored. This information can be accessed on a new "Op Hours" tab on the Monitoring data entry screen. (Note that the Operating hour values do not need to be populated if linearity and RATA tests are performed on the standard quarterly or semiannual/annual schedule with no extensions or exemptions.)
2	Identifying low span exemptions	Instead of looking for RT 698 claim for NOX/SO2 span less than or equal to 30 ppm (Basis for Exemption 4), MDC Hourly now checks the active RT 530 span value for the appropriate parameter.
3	Use of Grace Period	Instead of looking for a RT 699 grace period claim, MDC Hourly automatically assumes a grace period after the expiration of any linearity or RATA. Also, it relies on the "Reason for Test" in the RT 602 or RT 611 to determine whether a test is a grace period test. It is important that this code be used appropriately.
4	Dual Range Analyzers	For dual range component types (NOXA, SO2A, CO2A etc.) added second loop to the logic to ensure that the linearity status of both ranges is checked. If either range is OOC, the overall status is OOC.
5	RT 698 Exemption Type 2	Fixed logic to look for and apply RT 698 for Exemption Type 2 (Analyzer Range Not Used).
6	RT 556 events	Changed Linearity QA Status check to allow the date/hour of completion of a linearity test to be equal to the RT 556 event date/hour, provided there is not another linearity for that component prior to the "Date and Hour That Last Test Is Successfully Completed" in RT 556. This change principally affects span adjustments.
7	Initial Certification with Conditional Data Validation	Added logic for initial certifications (i.e., for a new unit or a newly affected unit, not for recertifications) to allow the applicable 90 or 180 days to complete certification tests when using conditional data validation. Note that the appropriate RTs 556 must be submitted for this logic to be applied and the operating days information must be completed in MDC (on the "Op Hours" tab under Monitoring).
8	Initial Certification that spans quarters	Added logic to determine when the standard QA test schedule begins for initial certifications that spanned quarters. For example, if the initial certification linearity was performed in Q1 but the last initial certification test was completed in Q2, the requirement for quarterly linearities does not start until Q3 (i.e., no linearity is required in Q2). This logic requires RT 556 to be submitted for initial certification even though conditional data validation was not used. Also, the "Date and Hour That Last Test Is Successfully Completed" must be reported accurately in the RT 556.

Table 2: MDC Changes and Bug Fixes

Module	Function	Spec/RT	Problem/Change Description
MDC General	Data Entry	RT 699	Fixed problem with component information being included in the export and the exemption/extension list for a RATA grace period exemption (even though it was not displayed on the data entry form) if the component was selected prior to choosing the RATA test type.
	Data Entry/ Import	RT 301/307	Added new functionality to import quarterly or ozone season operating hours from RT 301 or 307. Information can be viewed/edited from new tab (Op Hours) on monitoring data entry screen. (This information is used by the MDC Hourly QA Status Evaluation.)
	MP and QA Evaluation	QEXP-2F	Added NOXL and SO2L to valid component types for RT 698, basis for exemption 2. Modified the message to refer to the correct component types when evaluated.
		ARP-14	Modified check to appropriately evaluate multiple CO2 records where the start date for CO2 was different from the start date for NOXR.
		NBP-33C	**NEW**: Added a check to ensure that if a single range is defined for NOx or SO2 in RT 530 that the component type is not incorrectly reported in RT 510 as NOXA or SO2A.
		LIN-10A and LIN-10C	**NEW**: Modified LIN-10A and added LIN-10C so that an error is generated if span scale is left blank for a dual range component.
		RATA-31	The calculations in the check were changed to round to whole numbers to be consistent with the way that load values are entered for RT 610, 611 and 536.
		RATA-14	Changed qualification for the low emitter/alternative specification (Per Appendix B, Section 2.3.1.3(e) and (f)) to be based on the Reference Method values instead of the CEM values.
	Reports	Test Evaluation and Detail	For flow RATA using conditional method for rectangular ducts, this report showed the calculated result as being "Invalid" even though there were no errors. Modified to accommodate rectangular ducts method.
MDC Hourly	Calculations		Added work-around to correct internal Visual Basic calculation bug. (Appeared to round down instead of up from 0.x5.)
	Reports		Enabled report to show all hours of a particular error on the Hourly Data Evaluation Report.
			When either the Hourly Data or QA Status evaluation report was run, the report was not displayed on the screen but was minimized on the Windows bar. Fixed so that the report displays on the Screen.

Linearity Test Status Determination for the Current EDR HOURLY DATA Record

1. If System ID is blank,

   status = "System ID Blank," and exit.

   Locate System ID in SYSTEMS where the Last Date System Reported Data is blank or is on or after the first day of the Quarter in the current EDR HOURLY DATA record.

   If not found,

   Status = "No Active System in MDC" and exit.

   If Component ID is blank,

   If parameter_monitored_by_monitoring_system is equal to "NOX" and component_type_code is blank,

   status = "Cannot Determine Component," and exit.

   otherwise

   status = "Component ID Blank," and exit.

   Locate System ID/Component ID in SYSLINK (MDC).

   If not found,

   status = "Component Not in MDC" and exit.

2. Locate System ID in SYSTEMS (MDC).

   If the incoming system parameter is blank,

   set the incoming system parameter to the parameter_monitored_by_monitoring_system.

   If parameter_monitored_by_monitoring_system is not equal to "NOX," "CO2," or "O2,"

   status = "Invalid System Parameter" and exit.

   If the incoming system parameter is not blank,

   If parameter_monitored_by_monitoring_system is not equal to the incoming system parameter,

   status = "Invalid System Parameter," and exit.

3. Locate Component ID in COMPONEN (MDC).

   Set the outgoing component type to the component_type_code,

If component_type_code does not begin with the incoming component type prefix, or if the component type prefix is equal "O2D" and the component_type_code is not equal to "O2WD,"

status = "Invalid Component Type" and exit.

Note: The incoming system parameter and the incoming component type prefix is based on the record type of the hourly data and the formula code.

4. ~~If Component_Type_Code begins with "SO2" or "NOX,"~~

~~Locate System ID/Component ID in EXT_EXEM~~

~~where the Extension_Exemption_Type = "QAEX" and the Type_of_Test_Extended_or_Exempted = "L" and the Basis_for_Exemption = "4" and the Extension_Exemption_Year = XYEAR and the Extension_Exemption_Quarter is equal to the Quarter in the current EDR HOURLY DATA record.~~

~~If found,~~

~~status = "IC-Exempt" and exit.~~

If the Component_Type_Code is equal to "SO2" or "SO2H,"

Locate the Span record
where the Parameter_of_Span_Value is equal to "SO2," the Span_Scale is equal to "H", the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = "IC-Exempt" and exit.

If the Component_Type_Code is equal to "SO2L,"

Locate the Span record
where the Parameter_of_Span_Value is equal to "SO2," the Span_Scale is equal to "L," the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = "IC-Exempt" and exit.

If the Component_Type_Code is equal to "SO2A," and this is the first pass,

Locate the Span record
where the Parameter_of_Span_Value is equal to "SO2," the Span_Scale is equal to "H," the

Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = "IC-Exempt," and exit.

If the Component_Type_Code is equal to "SO2A," and this is the second pass,

Locate the Span record
where the Parameter_of_Span_Value is equal to "SO2," the Span_Scale is equal to "L," the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = the stored status for the high-scale range of the component, and exit.

If the Component_Type_Code is equal to "NOX" or "NOXH,"

Locate the Span record
where the Parameter_of_Span_Value is equal to "NOX," the Span_Scale is equal to "H," the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = "IC-Exempt" and exit.

If the Component_Type_Code is equal to "NOXL,"

Locate the Span record
where the Parameter_of_Span_Value is equal to "NOX," the Span_Scale is equal to "L," the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = "IC-Exempt" and exit.

If the Component_Type_Code is equal to "NOXA," and this is the first pass,

Locate the Span record
where the Parameter_of_Span_Value is equal to "NOX," the Span_Scale is equal to "H," the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY

DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = "IC-Exempt," and exit.

If the Component_Type_Code is equal to "NOXA," and this is the second pass,

Locate the Span record
where the Parameter_of_Span_Value is equal to "NOX," the Span_Scale is equal to "L," the Span_Effective_Date/Hour is on or before the Date/Hour in the current EDR HOURLY DATA record, and the Span_Ineffective_Date/Hour is blank or on or after the Date/Hour in the current EDR HOURLY DATA record,

If found, and the Span Value is less than or equal to 30,

status = the stored status for the high-scale range of the component, and exit.

5. If the Component_Type_Code ends in "A," and this is the first pass,

Locate the most recent TESTSUM record

for the System ID/Component ID
where the Test_Type = "LINE," the Span_Scale is equal to "H," and the Test_End_Date/Test_End_Time is prior to the Date/Hour in the current EDR HOURLY DATA record.

If the Component_Type_Code ends in "A," and this is the second pass,

Locate the most recent TESTSUM record

for the System ID/Component ID
where the Test_Type = "LINE", the Span_Scale is equal to "L," and the Test_End_Date/Test_End_Time is prior to the Date/Hour in the current EDR HOURLY DATA record.

Otherwise,

Locate the most recent TESTSUM record

for the System ID/Component ID
where the Test_Type = "LINE" and the Test_End_Date/Test_End_Time is prior to the Date/Hour in the current EDR HOURLY DATA record.

If found,

Locate the most recent SYSEVENT record
for the System ID~~/Component ID~~

where either the Component ID is equal to the incoming Component ID or the Event Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17, and the Event_Start_Date/Event_Start_Hour is ~~on or~~ after the Test_End_Date/Test_End_Time in the above record and either prior to the Date/Hour in the current EDR HOURLY DATA record or equal to both the Date/Hour in the current EDR HOURLY DATA record and the Conditional_Data_Start_Date/Hour and is on or after January 1, 1993.

If found,

If the Event_Code is equal to 170, and the Component_Type_Code ends in "A,"

If this is the first pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code , the Span_Scale is equal to "H," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable prior SYSEVENT record. Go to next step.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE", the Span_Scale is equal to "H", and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

Set a flag to indicate that that the program was "Unable to Determine Scale of Span Value Change," but continue looking for an applicable prior SYSEVENT record below.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

Set a flag to indicate that that the program was "Unable to Determine Scale of Span Value Change," but continue looking for an applicable prior SYSEVENT record below.

If this is the second pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code , the Span_Scale is equal to "L," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable prior SYSEVENT record. Go to next step.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE", the Span_Scale is equal to "L," and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

Continue looking for an applicable prior SYSEVENT record below.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

Continue looking for an applicable prior SYSEVENT record below.

Otherwise,

This is an applicable prior SYSEVENT record. Go to next step.

If the applicable prior SYSEVENT record was not found above,

~~Locate the most recent SYSEVENT record for the System ID
where the Event Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17 and the Event_Start_Date/Event_Start_Hour is on or after the Test_End_Date/Test_End_Time in the above record and prior to the Date/Hour in the current EDR HOURLY DATA record and is on or after January 1, 1993.~~

Locate the most recent SYSEVENT record for the System ID
where either the Component ID is equal to the incoming Component ID or the Event

Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17, and the Event_Start_Date/Event_Start_Hour is equal to the Test_End_Date/Test_End_Hour in the above record and either prior to the Date/Hour in the current EDR HOURLY DATA record or equal to both the Date/Hour in the current EDR HOURLY DATA record and the Conditional_Data_Start_Date/Hour and is on or after January 1, 1993.

If found,

If the Test_Completion_Date/Hour is blank or is after the Test_End_Date/Hour in the above TESTSUM record,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE", and the Test_End_Date/Test_End_Hour is after the Event_Start_Date/Hour.

If found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank or is on or after the Test_End_Date/Hour in the record just found,

If the Event_Code is equal to 170, and the Component_Type_Code ends in "A,"

If this is the first pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code, the Span_Scale is equal to "H," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable prior SYSEVENT record. Go to next step.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record for the System ID/Component ID where the Test_Type = "LINE", the Span_Scale is equal to "H," and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable prior SYSEVENT record. Go to next

step.

If not found,

Set a flag to indicate that that the program was "Unable to Determine Scale of Span Value Change," and go to step 7.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

Set a flag to indicate that that the program was "Unable to Determine Scale of Span Value Change," and go to step 7.

If this is the second pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code , the Span_Scale is equal to "L," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable prior SYSEVENT record. Go to next step.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE," the Span_Scale is equal to "L," and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

If the flag to indicate that the program was "Unable to Determine Scale of Span Value Change" was set in the first pass,

status = "Unable to Determine Scale of Span Value Change," and exit.

Otherwise,

Go to step 7.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

If the flag to indicate that the program was "Unable to Determine Scale of Span Value Change" was set in the first pass,

status = "Unable to Determine Scale of Span Value Change," and exit.

Otherwise,

Go to step 7.

Otherwise,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

Locate the most recent SYSEVENT record
for the System ID~~/Component ID~~
where either the Component ID is equal to the incoming Component ID or the Event Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17, and the Event_Start_Date/Event_Start_Hour is either prior to the Date/Hour in the current EDR HOURLY DATA record or equal to both the Date/Hour in the current EDR HOURLY DATA record and the Conditional_Data_Start_Date/Hour and is on or after January 1, 1993.

If found,

If the Event_Code is equal to 170, and the Component_Type_Code ends in "A,"

If this is the first pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code , the Span_Scale is equal to "H," the Span_Effective_Date is equal to the Event_Start_Date.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is

not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE," the Span_Scale is equal to "H," and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

Go to step 7.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

Go to step 7.

If this is the second pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code , the Span_Scale is equal to "L," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable prior SYSEVENT record. Go to next step.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE," the Span_Scale is equal to "L," and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

Go to step 7.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

Go to step 7.

Otherwise,

This is an applicable prior SYSEVENT record. Go to next step.

~~If not found,~~

~~Locate the most recent SYSEVENT record for the System ID where the Event Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17 and the Event_Start_Date/Event_Start_Hour is prior to the Date/Hour in the current EDR HOURLY DATA record and is on or after January 1, 1993.~~

6. If ~~the~~ an applicable prior SYSEVENT record is found,

   If the Conditional_Data_Start_Date or the Conditional_Data_Start_Hour is blank, or if the Date/Hour in the EDR HOURLY DATA record is prior to the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,

   status = "OOC-<event>" where the <event> is the Label field in the TABLES database where FIELD_NAME = "EVENT_CODE" and value is equal to the Event_Code in the SYSEVENT record, and exit.

   If the Date/Hour in the EDR HOURLY DATA record is on or after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour, go to step 8.

7. If ~~the~~ an applicable prior SYSEVENT record is not found,

   If the prior linearity TESTSUM record was found in step 5, go to step 10.

   If the prior linearity TESTSUM record was not found in step 5, ~~go to step 18.~~

   status = "OOC-No Prior Check and No RT 556," and exit.

8. Locate the first TESTSUM record
   for the System ID/Component ID
   where the Test_Type = "LINE" and the Test_End_Date/Test_End_Time is on or after the Conditional_Date_Start_Date/Conditional_Data_Start_Hour in the SYSEVENT record.

   If found, and the Calculated Test Result is equal to "I" or " ,"

status = "OOC-Recertification Test Invalid" and exit.

If found, and the Calculated Test Result is equal to "F,"

status = "OOC-Recertification Test Failed" and exit.

If found, and the Calculated Test Result is equal to "A,"

status = "OOC-Recertification Test Aborted" and exit.

9. ~~If the Date/Hour in the EDR Hourly Data record is less than 168 operating hours (between 0 and 167 hours) after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,~~

If the maximum number of operating hours between the Date/Hour in the EDR Hourly Data record and the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is less than 168,

If the Event Code in the SYSEVENT record is equal to 170 and the Component_Type_Code ends in "A," and this is the first pass,

store "IC-Conditional" as the status for the high-scale range of the component, and go back to step 4 for the second pass.

Otherwise,

status = "IC-Conditional" and exit.

If the minimum number of operating hours between the Date/Hour in the EDR Hourly Data record and the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is less than 168,

status = "Undetermined-Conditional Data" and exit.

~~If the Date/Hour in the EDR Hourly Data record is 168 operating hours or more after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,~~

If the Event Code in the SYSEVENT record is equal to 125,

If this is an ARP-only unit/stack, or if the system parameter is equal to "SO2,"

If the Date/Hour in the EDR_Hourly_Data record is within 90 operating days AND 180 calendar days of the Begin Operation Date for the unit/stack,

status = "IC-Conditional" and exit.

If the Date/Hour in the EDR_Hourly_Data record is possibly within 90 operating days AND 180 calendar days of the ARP Program Start Date for the unit/stack,

status = "Undetermined-Initial Certification" and exit.

Otherwise,

status = "OOC-Conditional Period Expired" and exit.

Otherwise,

If the Date/Hour in the EDR_Hourly_Data record is within 90 calendar days of the Begin Operation Date for the unit/stack,

status = "IC-Conditional" and exit.

If the System Parameter is equal to "NOXC" and the Date/Hour in the EDR_Hourly_Data record is within 90 calendar days of the SUBH/OTC-SUBH Program Start Date for the unit/stack,

status = "Undetermined-Initial Certification" and exit.

If the System Parameter is not equal to "NOXC" and the Date/Hour in the EDR_Hourly_Data record is within 90 calendar days of either the ARP Program Start Date or the SUBH/OTC-SUBH Program Start Date for the unit/stack,

status = "Undetermined-Initial Certification" and exit.

Otherwise,

status = "OOC-Conditional Period Expired" and exit.

Otherwise,

status = "OOC-Conditional Period Expired" and exit.

~~Note: If Conditional_Data_Start_Date/Hour is hour operating hour 1, and Date/Hour is operating hour 168 or less, then status is "IC-Conditional;" if Conditional_Data_Start_Date/Hour is hour operating hour 1, and Date/Hour is operating hour 169 or more, then status is "OOC-Conditional." An operating hour is any hour for the unit with a UOT greater than 0 in the EDR HOURLY DATA file.~~

Note: An operating hour in the current quarter is any hour for the unit with a UOT greater than 0 in the EDR HOURLY DATA file. Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine hours of operation for quarters subsequent to the Conditional Data Start Date/Hour and prior to the current quarter. To determine the minimum number of operating hours in the quarter during which the Conditional Data Start Date/Hour occurred, subtract the number of calendar hours in the quarter prior to the Conditional Data Start Date/Hour from the number of operating hours in the quarter, and use this value if greater than zero. To determine the maximum number of operating hours in the quarter during which the Conditional Data Start Date/Hour occurred, use the lesser of the number of operating hours in the quarter and the number of calendar hours in the quarter on or after the Conditional Data Start Date/Hour. For ozone-season-only reporters (see step 11), use ozone hours instead of operating hours. To determine the minimum number of ozone hours in the quarter during which the Conditional Data Start Date/Hour occurred, subtract the number of calendar hours in the quarter prior to the Conditional Data

Start Date/Hour from the number of ozone hours in the quarter (for quarter 3), or subtract the number of calendar hours beginning on May 1 and prior to the Conditional Data Start Date/Hour from the number of ozone hours in the quarter (for quarter 2) and use this value if greater than zero. To determine the maximum number of ozone hours in the quarter during which the Conditional Data Start Date/Hour occurred, use the lesser of the number of ozone hours in the quarter and the number of calendar hours in the quarter on or after the Conditional Data Start Date/Hour.

Note: An ARP-only unit is a unit where there is a ARP Program record with a Program Begin Date on or before the current hour, and where there is no SUBH or OTC-SUBH Program records with a Program Begin Date on or before the current hour. A stack is an ARP-only stack if all units associated with the stack are ARP-only units. For any program, the program start date for a stack is the earliest program start date for all units associated with the stack.

Note: For units, the Begin Operation Date is the Date_of_Initial_Unit_Operation in the UNITINFO record; for stacks, the Begin Operation Date is the earliest Date_of_Initial_Unit_Operation for all units associated with the stack. Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine the number of operating days for quarters during and subsequent to the Begin Operating Date and prior to the current quarter.

Note: Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine the number of operating days for quarters during and subsequent to the Program Begin Date and prior to the current quarter. To determine the number of operating days in the quarter during which the Program Begin Date occurred, subtract the number of calendar days in the quarter prior to the Program Begin Date from the number of operating days in the quarter, and use this value if greater than zero.

Note: If a QTR_HOUR (or EDR_FILE_CONTENT) record cannot be found, set status to "Operating Hours Record Not in MDC (Year/Qtr)" instead of "OOC-Conditional Period Expired."

10. If the Calculated_Test_Result in the TESTSUM record is not equal to "P" or "1,"

Locate the most recent SYSEVENT record for the System ID~~/Component ID~~
where the Component ID is equal to the incoming Component ID or the Event Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17, and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the TESTSUM record and is on or after January 1, 1993.

If the SYSEVENT record is found, and the Conditional_Data_Start_Date and the Conditional_Data_Start_Hour is not blank, and if the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is after the Test_End_Date/Test_End_Time in the TESTSUM record and on or prior to the Date/Hour in the EDR HOURLY DATA record,

If the Event_Code is equal to 170, and the Component_Type_Code ends in "A,"

If this is the first pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the

Component_Type_Code , the Span_Scale is equal to "H," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable SYSEVENT record. Go to step 8.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE," the Span_Scale is equal to "H," and the Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable SYSEVENT record. Go to step 8.

If not found,

Set a flag to indicate that that the program was "Unable to Determine Scale of Span Value Change," but continue below.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

Set a flag to indicate that that the program was "Unable to Determine Scale of Span Value Change," but continue below.

If this is the second pass,

Locate the Span record where the Parameter_of_Span_Value corresponds to the Component_Type_Code , the Span_Scale is equal to "L," the Span_Effective_Date is equal to the Event_Start_Date.

If found,.

This is an applicable SYSEVENT record. Go to step 8.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is not blank,

Locate the first TESTSUM record
for the System ID/Component ID
where the Test_Type = "LINE," the Span_Scale is equal to "L," and the

Test_End_Date/Test_End_Hour is on or before the Test_Completion_Date/Hour and on or after the Date/Hour in the current EDR HOURLY DATA record.

If found,

This is an applicable SYSEVENT record. Go to step 8.

If not found,

If the flag to indicate that the program was "Unable to Determine Scale of Span Value Change" was set in the first pass,

status = "Unable to Determine Scale of Span Value Change," and exit.

Otherwise,

Continue below.

If not found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank,

If the flag to indicate that the program was "Unable to Determine Scale of Span Value Change" was set in the first pass,

status = "Unable to Determine Scale of Span Value Change," and exit.

Otherwise,

Continue below.

Otherwise,

This is an applicable SYSEVENT record.. Go to step 8.

~~Otherwise,~~

~~Locate the most recent SYSEVENT record for the System ID where the Event Code is equal to 120, 125, 130, or 200, and the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17 and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the TESTSUM record and is on or after January 1, 1993.~~

~~If the SYSEVENT record is found, and the Conditional_Data_Start_Date and the Conditional_Data_Start_Hour is not blank, and if the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is after the Test_End_Date/Test_End_Time in the TESTSUM record and on or prior to the Date/Hour in the EDR HOURLY DATA record~~

~~go to step 8.~~

~~Otherwise,~~

If an applicable SYSEVENT record was not found above,

If the Calculated_Test_Result in the TESTSUM record is equal to blank or "I,"

status = "OOC-Test Invalid" and exit.

If the Calculated_Test_Result in the TESTSUM record is equal to "F,"

status = "OOC-Test Failed" and exit.

If the Calculated_Test_Result in the TESTSUM record is equal to "A,"

status = "OOC-Test Aborted" and exit.

11. If the Calculated_Test_Result in the TESTSUM record is equal to "P" or "1," and the Reason_for_Test in the TESTSUM record contains a "G,"

~~Locate System ID/Component ID in EXT_EXEM where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "L" and the Last_Test_End_Date/Last_Test_End_Hour is the same as the Test_End_Date/Test_End_Time in the TESTSUM record.~~

~~If found,~~

If the unit is a stack (i.e., UNITID begins with "CS" or "MS"),

Locate the most recent PROGRAM record for each Unit ID on or before the Date in the current EDR HOURLY DATA record.

If not found or if the Reporting_Frequency_for_Unit is not equal to "OS" for any UnitID,

The stack is not an ozone-season-only reporter. The Test Expiration Date is the last day of the quarter of the Test_End_Date. Go to step 14.

If the unit is a unit (i.e., UNITID does not begin with "CS" or "MS"),

Locate the most recent PROGRAM record where the Program_Start_Date is on or before the Date in the current EDR HOURLY DATA record.

If not found or if the Reporting_Frequency_for_Unit is not equal to "OS,"

The unit is not an ozone-season-only reporter. The Test Expiration Date is the last

day of the quarter of the Test_End_Date. Go to step 14.

12. If the Test_End_Date in the TESTSUM record is between October 1 and April 30, and the unit/stack is an ozone-season-only reporter (see step 11),

~~If the unit is a stack (i.e., UNITID begins with "CS" or "MS"),~~

~~Locate the most recent PROGRAM record for each Unit ID on or before the Date in the current EDR HOURLY DATA record.~~

~~If, for every Unit ID, the Reporting_Frequency_for_Unit is equal to "OS,"~~

~~Test Expiration Date is the June 30th following the Test_End_Date. Go to step 14.~~

~~If the unit is a unit (i.e., UNITID does not begin with "CS" or "MS"),~~

~~Locate the most recent PROGRAM record where the Program_Start_Date is on or before the Date in the current EDR HOURLY DATA record.~~

~~If found, and the Reporting_Frequency_for_Unit is equal to "OS,"~~

Test Expiration Date is the June 30th following the Test_End_Date.
Go to step 14.

13. If the Test_End_Date in the TESTSUM record is not between Oct 1 and April 30, or if ~~the PROGRAM record is not found, or if the Reporting_Frequency_for_Unit is not equal to "OS,"~~the unit/stack is not an ozone-season-only reporter (see step 11),

Test Expiration Date is the last day of the quarter following the quarter of the Test_End_Date. Go to next step.

14. If the Date/Hour in the current EDR HOURLY DATA record is on or before the Test Expiration Date,

If the Component_Type_Code ends in "A," and this is the first pass,

store "IC" as the status for the high-scale range of the component, and go back to step 4 for the second pass.

If the Component_Type_Code ends in "A," and this is the second pass,

status = the stored status for the high-scale range of the component, and exit.

Otherwise,

status = "IC" and exit.

15. If the Date/Hour in the current EDR HOURLY DATA record is after the Test Expiration Date,

If the unit/stack is not an ozone-season-only reporter (see step 11),

Locate the most recent SYSEVENT record for the System ID
where the Required_Test_Code is equal to 2, 4, 8, 9, 10, 12, or 17 and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the TESTSUM record and is on or after January 1, 1993.

If found, and the Event Code is equal to 125, the Conditional Data Start Date is blank, and the Test Completion Date is not blank and is after the Test_End_Date,

The adjusted Test Expiration Date is the last day of the quarter following the quarter of the Test_Completion_Date.

If the Date/Hour in the current EDR HOURLY DATA record is on or before the Adjusted Test Expiration Date,

If the Component_Type_Code ends in "A," and this is the first pass,

store "IC" as the status for the high-scale range of the component, and go back to step 4 for the second pass.

If the Component_Type_Code ends in "A," and this is the second pass,

status = the stored status for the high-scale range of the component, and exit.

Otherwise,

status = "IC" and exit.

~~Locate the System ID/Component ID in EXT_EXEM~~
~~where the Extension_Exemption_Type = "QAEX" and the Type_of_Test_Extended_or_Exempted = "L" and the Basis_for_Exemption = "1" and the Extension_Exemption_Year/Extension_Exemption_Quarter is equal to the quarter immediately following the quarter of the Test_End_Date in the TESTSUM record.~~

~~If found,~~

Locate the QTR_HOUR record for the unit/stack
where the EDR_Year/EDR_Qtr is equal to the quarter immediately following the quarter of the Test_End_Date in the TESTSUM record.

If not found,

Set a flag to indicate that the operating record cannot be found.

If found, and the Operating Hours is less than 168,

Add one quarter to the (Adjusted) Test Expiration Date.

Continue this process for 2 more quarters, but stop when you are unable to apply an extension for any quarter.

Otherwise,

If the Component_Type_Code ends with "H," or ends with "A" and this is the first pass,

Locate the System ID/Component ID in EXT_EXEM where the Extension_Exemption_Type = "QAEX," the Type_of_Test_Extended_or_Exempted = "L," the Basis_for_Exemption is equal to "2," the Span_Scale is blank or equal to "H," and the Extension_Exemption_Year/Extension_Exemption_Quarter is equal to the quarter immediately following the quarter of the Test_End_Date in the TESTSUM record.

If the Component_Type_Code ends with "L," or ends with "A" and this is the second pass and the stored status for the high-scale range of the component is not equal to "IC-Extension,"

Locate the System ID/Component ID in EXT_EXEM where the Extension_Exemption_Type = "QAEX," the Type_of_Test_Extended_or_Exempted = "L," the Basis_for_Exemption is equal to "2," the Span_Scale is equal to "L," and the Extension_Exemption_Year/Extension_Exemption_Quarter is equal to the quarter immediately following the quarter of the Test_End_Date in the TESTSUM record.

If the EXT_EXEM record is found,

Add one quarter to the (Adjusted) Test Expiration Date.

Continue this process for 2 more quarters, but stop when you are unable to apply an extension for any quarter.

If the Date/Hour in the current EDR HOURLY DATA record is on or before the adjusted Test Expiration Date,

If the Component_Type_Code ends with "A," and this is the first pass,

Store "IC-Extension" as the status for the high-scale range of the component, and go back to step 4 for the second pass.

Otherwise,

status = "IC-Extension" and exit.

Note: For the Audit Tool, locate the operating hours in the EDR_FILE_CONTENT record. For ozone-season-only reporters (see step 11), use ozone hours instead of operating hours.

16. If the Date/Hour in the EDR HOURLY DATA record is more than 168 operating hours after the Test Expiration Date, ~~or if the Date/Hour in the EDR HOURLY DATA record is between July 1 and September 30 and the unit/stack is an ozone-season reporter (see step 12 for criteria),~~

    If an operating record could not be found in step 15,

        status = "Operating Hours Record Not in MDC (Year/Qtr)," and exit.

    Otherwise,

        status = "OOC-Expired" and exit.

    If unit/stack is an ozone-season-only reporter (see step 11),

        If the Test_End_Date is prior to year immediately prior to the current year, or the if number of ozone-season operating hours in the prior ozone season (i.e., the second and third quarters of the prior year) is greater than or equal to 336,

            If an operating record could not be found in step 15,

                status = "Operating Hours Record Not in MDC (Year/Qtr)," and exit.

            Otherwise,

                status = "OOC-Expired" and exit.

    Note: Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine hours of operation for quarters subsequent to the (Adjusted) Test Expiration Date and prior to the current quarter. For ozone-season-only reporters (see step 11), use ozone hours instead of operating hours. Also use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine the number of ozone-season operating hours in the prior ozone season.

17. If the Date/Hour in the EDR HOURLY DATA record is less than or equal to 168 operating hours after the (Adjusted) Test Expiration Date,

    ~~Locate System ID/Component ID in EXT_EXEM where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "L" and the Grace_Period_Start_Date is after the (Adjusted) Test Expiration Date and is on or before the Date in the EDR HOURLY DATA record.~~

    ~~If found,~~

        If the Component_Type_Code ends with "A," and this is the first pass,

            Store "IC-Grace" as the status for the high-scale range of the component, and go back to step 4 for the second pass.

If the Component_Type_Code ends with "A", and this is the second pass, and the status for the high-scale range of the component is not equal to "IC,"

status = the stored status for the high-scale range of the component, and exit.

Otherwise,

status = "IC-Grace" and exit.

~~If not found,~~

~~status = "OOC-Grace" and exit.~~

~~18. Locate a TESTSUM record for the System ID/Component ID where the Test_Type = "LINE" and the Test_End_Date/Test_End_Time is on or after the Date/Hour in the EDR HOURLY DATA record.~~

~~If found, go to step 20.~~

~~19. If the TESTSUM record is not found,~~

~~Locate System ID/Component ID in EXT_EXEM where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "L" and the Grace_Period_Start_Date is on or before the Date in the EDR HOURLY DATA record.~~

~~If found,~~

~~status = "OOC-No Prior Check" and exit.~~

~~If not found,~~

~~Locate System ID/Component ID in EXT_EXEM where the Extension_Exemption_Type = "QAEX" and the Type_of_Test_Extended_or_Exempted = "L" and the Extension_Exemption_Year/Extension_Exemption_Quarter is on or before the Date in the current EDR HOURLY DATA record.~~

~~If found,~~

~~status = "OOC-No Prior Check" and exit.~~

~~If not found, go to next step.~~

~~20. Count the number of records in the EDR HOURLY DATA for the System ID/Component ID file where the UOT is greater than 0~~

beginning with the first hour in the file and ending with the current emission hour.

If the number of hours is less than or equal to 168,

status = "IC-Undetermined" and exit.

If the number of hours is more than 168,

status = "OOC-No Check" and exit.

21. If the Reason_for_Test in the TESTSUM record is not equal to "C,"

status = "OOC-No Prior Check" and exit.

22. If the Reason_for_Test in the TESTSUM record is equal to "C," but the Calculated_Test_Result is not equal to "P" or "1,"

status = "OOC-Initial Certification" and exit.

23. If the Reason_for_Test in the TESTSUM record is equal to "C," and the Calculated_Test_Result is equal to "P" or "1,"

Count the number of records in the EDR HOURLY DATA
for the System ID/Component ID file
where the UOT is greater than 0
beginning with the first hour in the file and ending with the current emission hour.

If the number of hours is less than or equal to 168,

status = "IC-Initial Certification" and exit.

If the number of hours is more than 168,

status = "OOC-Initial Certification" and exit.

RATA Status Determination for the Current EDR HOURLY DATA Record

1. If the incoming System Parameter is blank,

   status = "Cannot Verify System because Component ID Blank or Invalid" and exit.

   Note: The incoming system parameter will be blank, if the program cannot determine a valid active system that contained the diluent component used to measure heat input.

   If System ID is blank,

   status = "System ID Blank" and exit.

2. Locate SystemID in SYSTEMS where the Last Date System Reported Data is blank or is on or after the first day of the Quarter in the current EDR HOURLY DATA record.

   If not found,

   Status = "No Active System in MDC" and exit.

   If found and the parameter_monitored_by_monitoring_system is not equal to the incoming system parameter,

   status = "Invalid System Parameter" and exit.

   Note: The incoming system parameter is based on the record type of the hourly data.

3. If System Parameter is equal to "SO2,"

   Locate System ID in EXT_EXEM
   where the Extension_Exemption_Type = "RAEX," and the Test_Extension_Type is equal to 3 or 4, and the Extension_Exemption_Year = XYEAR and the Extension_Exemption_Quarter is equal to the Quarter in the current EDR HOURLY DATA record.

   If found,

   status = "IC-Exempt" and exit.

4. Locate the most recent TESTSUM record for the SystemID
   where the Test_Type = "RATA" and the Test_End_Date/Test_End_Time is prior to the Date/Hour in the current EDR HOURLY DATA record.

5. If a prior RATA record is found,

   If the Calculated_Test_Result is not equal to "P" or "1," or if this a Peaking Unit or Bypass Stack or a Unit or Stack that has a Single-Load Flow RATA Requirement (incoming parameter),

   This RATA is the applicable prior RATA. Go to step 12.

   Otherwise, go to next step.

If a prior RATA record is not found,

There is no applicable prior RATA. Go to step 12.

6. If the Program_Code_When_Test_Evaluated in the TESTSUM record is equal to "NBP,"

This RATA is the applicable prior RATA. Go to step 12.

Note: This step does not appear on the flowchart.

7. If the System Parameter is equal to “FLOW” and there are three levels in the Load_Levels_Used field of the current RATA record,

This RATA is the applicable prior RATA. Go to step 12.

8. If the Program_Code_When_Test_Evaluated in the TESTSUM record contains "ARP" or "SUBH,"

Locate a LOAD record
where Rectype = 536 and the Load_Analysis_Date is on or before the Test_End_Date in the current RATA record and the Load_Deactivation_Date is blank or is on or after the Test_End_Date in the current RATA record.

If the LOAD record is found,

If the System Parameter is equal to "FLOW" and there is more than one level in the Load_Levels_Used field of the current RATA record,

If the Load_Levels_Most_Frequently_Used in the LOAD record is not equal to "L,H," "L,M," "M,H," "M,L," "H,M," or "H,L,"

status = "RT 536 Missing or Invalid," and exit.

If the System Parameter is not equal to “FLOW” or there is only one level in the Load_Levels_Used field of the current RATA record,

If the Indicator_for_Normal_Load_Level is not equal to "H," "L," "M" and the Second_Normal_Load_Level is not equal to "H,""L," "M," or blank,

status = "RT 536 Missing or Invalid", and exit.

If the LOAD record is not found, and the Test_End_Date in the current RATA record is on or after April 1, 2000,

status = "RT 536 Missing or Invalid," and exit.

If the LOAD record is not found, and the Test_End_Date in the current RATA record is before April 1, 2000,

This RATA is the applicable prior RATA. Go to step 12.

9. If the System Parameter is equal to "FLOW" and there are two levels in the Load_Levels_Used field of the current RATA record,

If each of the levels in the Load_Levels_Used field of the current RATA record is found in the Load_Levels_Most_Frequently_Used in the LOAD record,

This RATA is the applicable prior RATA. Go to step 12.

Otherwise, go to next step.

If there is one level in the Load_Levels_Used field of the current RATA record,

If the level in the Load_Levels_Used field of the current RATA record is equal to the Indicator_for_Normal_Load_Level or Second_Normal_Load field in the LOAD record,

This RATA is the applicable prior RATA. Go to step 12.

Otherwise, go to next step.

10. Locate the SystemID in EXT_EXEM
where the Extension_Exemption_Type = "RAEX" and the Test_Extension_Type is equal to 9 and the Last_Test_End_Date is equal to the Test_End_Date in the current RATA record.

If found,

This RATA is the applicable prior RATA. Go to step 12.

If not found,

There is no applicable prior RATA. Go to next step.

11. Go to next step.

12. If there is an applicable prior RATA,

Calculate the outgoing BAF as follows:

If there is only one load level in the Load_Levels_Used field in the applicable prior RATA record,

Compare the Reported_Bias_Adjustment_Factor to the Calculated_Bias_Adjustment Factor.

If the system parameter is equal to "FLOW" and the Program_Code_When_Test_Evaluated contains "ARP" or "SUBH,"

If the difference is less than or equal to .005,

set the outgoing BAF as the Reported_Bias_Adjustment_Factor.

Otherwise,

set the outgoing BAF as the Calculated_Bias_Adjustment_Factor.

Otherwise,

If the difference is less than or equal to .002,

set the outgoing BAF as the Reported_Bias_Adjustment_Factor.

Otherwise,

set the outgoing BAF as the Calculated_Bias_Adjustment_Factor.

If there is more than one load level in the Load_Levels_Used field in the applicable prior RATA record,

Compare the Multiple_Load_Bias_Adjustment_Factor to the Calculated_Bias_Adjustment_Factor.

If the system parameter is equal to "FLOW" and the Program_Code_When_Test_Evaluated contains "ARP" or "SUBH,"

If the difference is less than or equal to .005,

set the outgoing BAF as the Multiple_Load_Bias_Adjustment_Factor.

Otherwise,

set the outgoing BAF as the Calculated_Bias_Adjustment_Factor.

Otherwise,

If the difference is less than or equal to .002,

set the outgoing BAF as the Multiple_Load_Bias_Adjustment_Factor.

Otherwise,

set the outgoing BAF as the Calculated_Bias_Adjustment_Factor.

Locate the most recent SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 15, or 16 and the Event_Start_Date/Event_Start_Hour is ~~on or~~ after the Test_End_Date/Test_End_Time in

the applicable prior RATA record and either prior to the Date/Hour in the current EDR HOURLY DATA record or equal to both the Date/Hour in the current EDR HOURLY DATA record and the Conditional_Data_Start_Date/Hour and is on or after January 1, 1993.

If found,

This is an applicable prior SYSEVENT record. Go to next step.

If not found,

Locate the most recent SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 15, or 16, and the Conditional_Data_Valid_Date is not blank, and the Event_Start_Date/Event_Start_Hour is equal to the Test_End_Date/Test_End_Hour in the applicable prior RATA record and either prior to the Date/Hour in the current EDR HOURLY DATA record or equal to both the Date/Hour in the current EDR HOURLY DATA record and the Conditional_Data_Start_Date/Hour and is on or after January 1, 1993.

If found, and the Test_Completion_Date/Hour is blank or is after the Test_End_Date/Hour in the above TESTSUM record,

Locate the first TESTSUM record
for the System ID
where the Test_Type = "RATA", and the Test_End_Date/Test_End_Hour is after the Event_Start_Date/Hour.

If found, and the Test_Completion_Date/Hour in the SYSEVENT record is blank or is on or after the Test_End_Date/Hour in the record just found,

This is an applicable prior SYSEVENT record. Go to next step.

If an applicable prior RATA record is not found,

If a prior RATA was found in step 4,

status = "Prior RATA Not Performed at Normal Operating Levels," and exit.

Otherwise,

Locate the most recent SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 15, or 16 and the Event_Start_Date/Event_Start_Hour is either prior to the Date/Hour in the current EDR HOURLY DATA record or equal to both the Date/Hour in the current EDR HOURLY DATA record and the Conditional_Data_Start_Date/Hour and is on or after January 1, 1993.

If found,

This is an applicable prior SYSEVENT record.

13. If ~~the~~ an applicable prior SYSEVENT record is found,

If the Conditional_Data_Start_Date or the Conditional_Data_Start_Hour is blank, or if the Date/Hour in the EDR HOURLY DATA record is prior to the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,

status = "OOC-<event>" where the <event> is the Label field in the TABLES database where FIELD_NAME = "EVENT_CODE" and value is equal to the Event_Code in the SYSEVENT record, and exit.

If the Date/Hour in the EDR HOURLY DATA record is on or after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,

go to step 15.

14. If ~~the~~ an applicable prior SYSEVENT record is not found,

If an applicable prior RATA record is found, go to step 17.

If an applicable prior RATA record is not found, ~~go to step 39.~~

status = "OOC-No Prior RATA and RT 556," and exit.

15. Locate the first TESTSUM record for the SystemID where the Test_Type = "RATA" and the Test_End_Date/Test_End_Time is on or after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour in the SYSEVENT record.

If found, and the Calculated Test Result is equal to "I" or " ,"

status = "OOC-Recertification RATA Invalid" and exit.

If found, and the Calculated Test Result is equal to "F,"

status = "OOC-Recertification RATA Failed" and exit.

If found, and the Calculated Test Result is equal to "A,"

status = "OOC-Recertification RATA Aborted" and exit.

16. ~~If the Date/Hour in the EDR Hourly Data record is less than 720 operating hours (between 0 and 719 hours) after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,~~

If the maximum number of operating hours between the Date/Hour in the EDR Hourly Data record and the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is less than 720,

status = "IC-Conditional" and exit.

~~Note: If status = "IC-Conditional", there is no prior RATA, and the Event Code is equal to "125" or "305", set the outgoing BAF as 1. Also, if status = "IC-Conditional", and there is a prior RATA record with a Calculated_Test_Result equal to "F" or "A", set the outgoing BAF to 1.~~

If the minimum number of operating hours between the Date/Hour in the EDR Hourly Data record and the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is less than 720,

status = "Undetermined-Conditional Data" and exit.

~~If the Date/Hour in the EDR Hourly Data record is 720 operating hours or more after the Conditional_Data_Start_Date/Conditional_Data_Start_Hour,~~

If the Event Code in the SYSEVENT record is equal to 125 or 305,

If this is an ARP-only unit/stack, or if the system parameter is equal to "SO2,"

If the Date/Hour in the EDR_Hourly_Data record is within 90 operating days AND 180 calendar days of the Begin Operation Date for the unit/stack,

status = "IC-Conditional" and exit.

If the Date/Hour in the EDR_Hourly_Data record is possibly within 90 operating days AND 180 calendar days of the ARP Program Start Date for the unit/stack,

status = "Undetermined-Initial Certification" and exit.

Otherwise,

status = "OOC-Conditional Period Expired" and exit.

Otherwise,

If the Date/Hour in the EDR_Hourly_Data record is within 90 calendar days of the Begin Operation Date for the unit/stack,

status = "IC-Conditional" and exit.

If the System Parameter is equal to "NOXC" and the Date/Hour in the EDR_Hourly_Data record is within 90 calendar days of the SUBH/OTC-SUBH Program Start Date for the unit/stack,

status = "Undetermined-Initial Certification" and exit.

If the System Parameter is not equal to "NOXC" and the Date/Hour in the EDR_Hourly_Data record is within 90 calendar days of either the ARP Program Start Date or the SUBH/OTC-SUBH Program Start Date for the unit/stack,

status = "Undetermined-Initial Certification" and exit.

Otherwise,

status = "OOC-Conditional Period Expired" and exit.

Otherwise,

status = "OOC-Conditional Period Expired" and exit.

~~Note: If Conditional_Data_Start_Date/Hour is hour operating hour 1, and Date/Hour is operating hour 168 or less, then status is "IC-Conditional;" if Conditional_Data_Start_Date/Hour is hour operating hour 1, and Date/Hour is operating hour 169 or more, then status is "OOC-Conditional." An operating hour is any hour for the unit with a UOT greater than 0 in the EDR HOURLY DATA file.~~

Note: If status = "IC-Conditional" or "IC-Undetermined," there is no prior RATA, and the Event Code is equal to "125" or "305," set the outgoing BAF as 1. Also, if status = "IC-Conditional" or "IC-Undetermined," and there is a prior RATA record with a Calculated_Test_Result equal to "F" or "A," set the outgoing BAF to 1.

Note: An operating hour in the current quarter is any hour for the unit with a UOT greater than 0 in the EDR HOURLY DATA file. Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine hours of operation for quarters subsequent to the Conditional Data Start Date/Hour and prior to the current quarter. To determine the minimum number of operating hours in the quarter during which the Conditional Data Start Date/Hour occurred, subtract the number of calendar hours in the quarter prior to the Conditional Data Start Date/Hour from the number of operating hours in the quarter, and use this value if greater than zero. To determine the maximum number of operating hours in the quarter during which the Conditional Data Start Date/Hour occurred, use the lesser of the number of operating hours in the quarter and the number of calendar hours in the quarter on or after the Conditional Data Start Date/Hour. For ozone-season-only reporters (see step 36), use ozone hours instead of operating hours. To determine the minimum number of ozone hours in the quarter during which the Conditional Data Start Date/Hour occurred, subtract the number of calendar hours in the quarter prior to the Conditional Data Start Date/Hour from the number of ozone hours in the quarter (for quarter 3), or subtract the number of calendar hours beginning on May 1 and prior to the Conditional Data Start Date/Hour from the number of ozone hours in the quarter (for quarter 2) and use this value if greater than zero. To determine the maximum number of ozone hours in the quarter during which the Conditional Data Start Date/Hour occurred, use the lesser of the number of ozone hours in the quarter and the number of calendar hours in the quarter on or after the Conditional Data Start Date/Hour.

Note: An ARP-only unit is a unit where there is a ARP Program record with a Program Begin Date on or before the current hour, and where there is no SUBH or OTC-SUBH Program records with a Program Begin Date on or before the current hour. A stack is an ARP-only stack if all units associated with the stack are ARP-only units. For any program, the program start date for a stack is the earliest program start date for all units associated with the stack.

Note: For units, the Begin Operation Date is the Date_of_Initial_Unit_Operation in the UNITINFO record; for stacks, the Begin Operation Date is the earliest Date_of_Initial_Unit_Operation for all units associated with the stack. Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine the

number of operating days for quarters during and subsequent to the Begin Operating Date and prior to the current quarter.

Note: Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine the number of operating days for quarters during and subsequent to the Program Begin Date and prior to the current quarter. To determine the number of operating days in the quarter during which the Program Begin Date occurred, subtract the number of calendar days in the quarter prior to the Program Begin Date from the number of operating days in the quarter, and use this value if greater than zero.

Note: If a QTR_HOUR (or EDR_FILE_CONTENT) record cannot be found, set status to "Operating Hours Record Not in MDC (Year/Qtr)" instead of "OOC-Conditional Period Expired."

17. If the System Parameter is not equal to "NOX" or the incoming Diluent System ID is blank,

    Set the outgoing RATA date as the Test_End_Date in the applicable prior RATA record as a string in the format MM/DD/YYYY. Go to next step.

If the System Parameter is equal to "NOX" and the incoming Diluent System ID is not blank,

Locate any TESTSUM record for the Diluent System ID
where the Test_Type = "RATA" and the Calculated_Test_Result is not equal to "P" or "1," and the Test_End_Date/Test_End_Time is after the Test_End_Date/Test_End_Time of the applicable prior RATA and is prior to the Date/Hour in the current EDR HOURLY DATA record.

If any diluent RATA record is found,

Set the outgoing RATA date as the Test_End_Date in the diluent RATA record as a string in the format MM/DD/YYYY.

If the Calculated_Test_Result of the Diluent RATA is equal to "I" or blank,

status = "OOC-Diluent RATA Invalid" and exit.

If the Calculated_Test_Result of the Diluent RATA is equal to "F,"

status = "OOC-Diluent RATA Failed" and exit.

If the Calculated_Test_Result of the Diluent RATA is equal to "A,"

status = "OOC-Diluent RATA Aborted" and exit.

If not found,

Set the outgoing RATA date as the Test_End_Date in the applicable prior RATA record as a string in the format MM/DD/YYYY. Go to next step.

18. If the Calculated_Test_Result in the applicable prior RATA record is not equal to "P" or "1,"

Locate the most recent SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 15, or 16 and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and is on or after January 1, 1993.

If the SYSEVENT record is found, and the Conditional_Data_Start_Date and the Conditional_Data_Start_Hour is not blank, and if the Conditional_Data_Start_Date/Conditional_Data_Start_Hour is after the Test_End_Date/Test_End_Time in the applicable prior RATA record and on or prior to the Date/Hour in the EDR HOURLY DATA record

go to step 15.

Otherwise,

If the Calculated_Test_Result in the applicable prior RATA record is equal to blank or "I,"

status = "OOC-RATA Invalid" and exit.

If the Calculated_Test_Result in the applicable prior RATA record is equal to "F,"

status = "OOC-RATA Failed" and exit.

If the Calculated_Test_Result in the applicable prior RATA record is equal to "A,"

status = "OOC-RATA Aborted" and exit.

If the Calculated_Test_Result in the applicable prior RATA record is equal to "P" or "1,"

go to next step.

19. If this a Peaking Unit or Bypass Stack or a Unit or Stack that has a Single-Load Flow RATA Requirement (incoming parameter), go to step 32.

Otherwise, go to next step.

20 If the System Parameter is equal to "FLOW," go to next step.

If the System Parameter is not equal to "FLOW," go to step 32.

21. If the Load_Levels_Used field in the applicable prior RATA record contains three levels,

go to step 32.

If the Load_Levels_Used field in the applicable prior RATA record does not contain three levels,

If this a Unit or Stack that has a Two-Load Flow RATA Requirement (incoming parameter),

go to step 24.

Otherwise,

go to next step.

22. If the Reason_for_Test in the TESTSUM record is equal to "C,"

status = "OOC-Incomplete Certification" and exit.

If the Reason_for_Test in the TESTSUM record is not equal to "C," go to next step.

23. Locate the most recent TESTSUM record for the SystemID
where the Test_Type = "RATA" and the Load_Levels_Used field contains three load load levels and the Test_End_Date/Test_End_Time is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record.

If the prior TESTSUM record is found,

Locate any SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 1, 3, or 6 and the Event_Start_Date/Event_Start_Hour is after the Test_End_Date/Test_End_Time in the prior TESTSUM record and prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and is on or after January 1, 1993.

If found,

status="OOC-Incomplete Recertification" and exit.

If not found,

go to next step.

If the prior TESTSUM record is not found,

Locate any SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 1, 3, or 6 and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and is on or after January 1, 1993.

If found,

status = "OOC-Incomplete Recertification" and exit.

If not found,

go to next step.

24. If the Load_Levels_Used field in the applicable prior RATA record contains two levels,

go to step 32.

If the Load_Levels_Used field in the applicable prior RATA record contains one level,

go to next step.

25. Locate the most recent TESTSUM record for the SystemID
where the Test_Type = "RATA" and the Load_Levels_Used field contains more than one load level and the Test_End_Date/Test_End_Time is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record.

Go to step 28.

28. If the applicable prior multiload RATA is found,

Locate any SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 7 and the Event_Start_Date/Event_Start_Hour is after the Test_End_Date/Test_End_Time in the applicable prior multiload RATA record and prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and is on or after January 1, 1993.

If found,

status = "OOC-Incomplete Recertification" and exit.

If not found, go to next step.

If the applicable prior multiload RATA is not found,

Locate any SYSEVENT record for the SystemID
where the Required_Test_Code is equal to 7 and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and is on or after January 1, 1993.

If found,

status = "OOC-Incomplete Recertification" and exit.

If not found,

go to next step.

29. Locate System ID in EXT_EXEM
where the Extension_Exemption_Type = "SLFC" and the Flow_RATA_Load_Level contains any of the levels in the Load_Levels_Used field in the current RATA record and the Historical_Load_Data_Collection_End_Date is within 21 days prior to the Test_Start_Date in

the applicable prior RATA record or is equal to the last day of.the quarter preceding the quarter of the Test_Start_Date in the applicable prior RATA.

If found,

go to step 32.

If not found,

go to next step.

30. If a prior multiload RATA was found in step 25,

If the end of the quarter of the Test End Date of the prior multiload RATA is one year or less than one year prior to the Date in the EDR HOURLY DATA record,

This is the applicable prior multiload RATA.

Otherwise,

Locate the most recent TESTSUM record for the SystemID
where the Test_Type = "RATA" and the Load_Levels_Used field contains one load level and the Test_End_Date/Test_End_Time is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and after the Test End Date in the prior multiload RATA.

If found,

Locate System ID in EXT_EXEM
where the Extension_Exemption_Type = "SLFC" and the Flow_RATA_Load_Level contains the level in the Load_Levels_Used field in the RATA record found above and the Historical_Load_Data_Collection_End_Date is within 21 days prior to the Test_Start_Date in the RATA record found above or is equal to the last day of.the quarter preceding the quarter of the Test_Start_Date in the RATA record found above.

If found,

The RATA found above is considered to be applicable prior multiload RATA.

Otherwise,

The prior multiload RATA found in step 25 is the applicable prior multiload RATA.

If not found,

The prior multiload RATA found in step 25 is the applicable prior multiload RATA.

If a prior multiload RATA was not found in step 25,

Locate the most recent TESTSUM record for the SystemID
where the Test_Type = "RATA" and the Load_Levels_Used field contains one load level and the Test_End_Date/Test_End_Time is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record.

If found,

Locate System ID in EXT_EXEM
where the Extension_Exemption_Type = "SLFC" and the Flow_RATA_Load_Level contains the level in the Load_Levels_Used field in the RATA record found above and the Historical_Load_Data_Collection_End_Date is within 21 days prior to the Test_Start_Date in the RATA record found above or is equal to the last day of.the quarter preceding the quarter of the Test_Start_Date in the RATA record found above.

If found,

The RATA found above is considered to be applicable prior multiload RATA.

Otherwise,

There is no applicable prior multiload RATA.

If not found,

There is no applicable prior multiload RATA.

If there is an applicable prior multiload RATA, and the Calculated_Test_Result of the applicable prior multiload RATA is equal to "P" or "1,"

If the Calculated_Bias_Adjustment_Factor is greater than or equal to 1, or the Test_End_Date in the prior multiload RATA record is before April 1, 2000 and the Frequently_Used_Load_Levels_When_Test_Evaluated is blank,

Test Expiration Date is the one year following last day of the quarter of the Test_End_Date in the applicable prior multiload RATA record. Go to next step.

If the Calculated_Bias_Adjustment_Factor is equal to 0,

If the Frequently_Used_Load_Levels_When_Test_Evaluated is blank,

status = "RT 536 for Prior Multiload RATA Missing or Invalid"

Otherwise,

status = "Prior Multiload RATA Not Performed at Normal Op. Levels," and exit.

Otherwise,

status = "OOC-Incomplete QA RATA" and exit.

31. ~~Locate the SystemID in EXT_EXEM where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "R" and the Last_Test_End_Date/Last_Test_End_Hour is the same as the Test_End_Date/Test_End_Time in the applicable prior multiload RATA record.~~

~~If found,~~

~~If the Grace_Period_Start_Date is in a quarter that is three quarters prior to the quarter of the Test_End_Date in the applicable prior multiload RATA record,~~

~~Subtract four quarters from the Test Expiration Date.~~

~~If the Grace_Period_Start_Date is in a quarter that is two quarters prior to the quarter of the Test_End_Date in the applicable prior multiload RATA record,~~

~~Subtract three quarters from the Test Expiration Date.~~

~~If the Grace_Period_Start_Date is in a quarter that is one quarter prior to the quarter of the Test_End_Date in the applicable prior multiload RATA record,~~

~~Subtract two quarters from the Test Expiration Date.~~

~~If the Grace_Period_Start_Date is in the same quarter as the Test_End_Date in the applicable prior multiload RATA record,~~

~~If the Reason_for_Test in the applicable prior multiload RATA record contains a "G,"~~

Subtract one quarter from the Test Expiration Date.

~~Otherwise,~~

~~Subtract five quarters from the Test Expiration Date.~~

Go to step 34.

32. If the Indicator_of_Primary_Backup_Monitoring_System in the SYSTEMS record is equal to "B,"

Test Expiration Date is two years after the last day of the quarter of the Test_End_Date in the applicable prior RATA record. Go to step 34.

If the Program_Code_When_Test_Evaluated in the applicable prior RATA record is equal to "NBP,"

Test Expiration Date is the one year after the last day of the quarter of the Test_End_Date.in the applicable prior RATA record. Go to step 34.

If the RATA_Frequency in the applicable prior RATA record is "4,"

Test Expiration Date is one year after the last day of the quarter of the Test_End_Date.in the applicable prior RATA record. Go to next step.

Otherwise,

Test Expiration Date is last day of the quarter six months after the Test_End_Date in the current RATA record. Go to step 34.

33. ~~Locate the SystemID in EXT_EXEM where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "R" and the Last_Test_End_Date/Last_Test_End_Hour is the same as the Test_End_Date/Test_End_Time in the applicable prior RATA record.~~

~~If found,~~

~~If the Grace_Period_Start_Date is in a quarter that is three quarters prior to the quarter of the Test_End_Date in the applicable prior RATA record,~~

~~Subtract four quarters from the Test Expiration Date.~~

~~If the Grace_Period_Start_Date is in a quarter that is two quarters prior to the quarter of the Test_End_Date in the applicable prior RATA record,~~

~~Subtract three quarters from the Test Expiration Date.~~

~~If the Grace_Period_Start_Date is in a quarter that is one quarter prior to the quarter of the Test_End_Date in the applicable prior RATA record,~~

~~Subtract two quarters from the Test Expiration Date.~~

~~If the Grace_Period_Start_Date is in the same quarter as the Test_End_Date in the applicable prior RATA record,~~

If the Reason_for_Test in the applicable prior RATA record contains a "G,"

Subtract one quarter from the Test Expiration Date.

~~Otherwise,~~

~~Subtract five quarters from the Test Expiration Date.~~

Go to next step.

34. Go to next step.

35. If the Date/Hour in the current EDR HOURLY DATA record is on or before the Test Expiration Date,

status = "IC" and exit.

36. If the Date/Hour in the current EDR HOURLY DATA record is after the Test Expiration Date,

Locate the most recent SYSEVENT record for the System ID where the Required_Test_Code is equal to 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 15, or 16 and the Event_Start_Date/Event_Start_Hour is prior to the Test_End_Date/Test_End_Time in the applicable prior RATA record and is on or after January 1, 1993.

If found, and the Event Code is equal to 125 or 305, the Conditional Data Start Date is blank, and the Test Completion Date is not blank and is after the Test_End_Date in the applicable prior RATA record,

If the Indicator_of_Primary_Backup_Monitoring_System in the SYSTEMS record is equal to "B",

The Adjusted Test Expiration Date is two years after the last day of the quarter of the Test_Completion_Date in the SYSEVENT record.

If the Program_Code_When_Test_Evaluated in the applicable prior RATA record is equal to "NBP,"

The Adjusted Test Expiration Date is one year after the last day of the quarter of the Test_Completion_Date in the SYSEVENT record.

If the RATA_Frequency in the applicable prior RATA record is "4,"

The Adjusted Test Expiration Date is one year after the last day of the quarter of the Test_Completion_Date in the SYSEVENT record.

Otherwise,

The Adjusted Test Expiration Date is the last day of the quarter six months after

the Test_Completion_Date in the SYSEVENT record.

If the Date/Hour in the current EDR HOURLY DATA record is on or before the Adjusted Test Expiration Date,

status = "IC" and exit.

If the unit is a stack (i.e., UNITID begins with "CS" or "MS"),

Locate the most recent PROGRAM record for each Unit ID on or before the Date in the current EDR HOURLY DATA record.

If, for every UnitID, the Reporting_Frequency_for_Unit is equal to "OS,"

The unit is an ozone season reporter.

If the unit is a unit (i.e., UNITID does not begin with "CS" or "MS"),

Locate the most recent PROGRAM record where the Program_Start_Date is on or before the Date in the current EDR HOURLY DATA record.

If found, and the Reporting_Frequency_for_Unit is equal to "OS,"

The unit is an ozone season reporter.

~~If the unit is an ozone season reporter,~~

~~Locate the SystemID in EXT_EXEM~~
~~where the Extension_Exemption_Type = "RAEX" and the Test_Extension_Type is equal to 5 and the Extension_Exemption_Year/Extension_Exemption_Quarter is equal to the quarter immediately following the quarter of Test_End_Date in the applicable prior RATA record.~~

If the unit is not an ozone season reporter, ~~and~~

Locate the QTR_HOUR record for the unit/stack
where the EDR_Year/EDR_Qtr is equal to the quarter immediately following the quarter of the Test_End_Date in the applicable prior RATA record.

If not found,

Set a flag to indicate that the operating record could not be found.

If found, and the Operating Hours are less than 168,

Add one quarter to the (Adjusted) Test Expiration Date.

Otherwise,

If the System Parameter is equal to "SO2,"

Locate the SystemID in EXT_EXEM
where the Extension_Exemption_Type = "RAEX" and the
Test_Extension_Type is equal to ~~1,~~ 2~~, or 5~~ and the
Extension_Exemption_Year/Extension_Exemption_Quarter is equal to the quarter immediately following the quarter of Test_End_Date in the applicable prior RATA record.

If ~~the unit is not an ozone season reporter, and the System Parameter is not equal to "SO2,"~~

~~Locate the SystemID in EXT_EXEM~~
~~where the Extension_Exemption_Type = "RAEX" and the~~
~~Test_Extension_Type is equal to 1 or 5 and the~~
~~Extension_Exemption_Year/Extension_Exemption_Quarter is equal to the quarter immediately following the quarter of Test_End_Date in the applicable prior RATA record.~~

If found,

Add one quarter to the (Adjusted) Test Expiration Date.

Continue this process for subsequent quarters (1) up to and including the quarter immediately prior to the quarter of the Date in current EDR HOURLY DATA record, or (2) as soon as the adjusted Test Expiration Date is 2 years after the end of the quarter of the Test_End_Date of the applicable prior RATA record, whichever comes first.

If the Date/Hour in the current EDR HOURLY DATA record is on or before the adjusted Test Expiration Date,

status = "IC-Extension" and exit.

Note: For the Audit Tool, locate the operating hours in the EDR_FILE_CONTENT record.

37. If the Date/Hour in the EDR HOURLY DATA record is more than 720 operating hours after the Test Expiration Date~~, or if the Date/Hour in the EDR HOURLY DATA record is between July 1 and September 30 and the unit/stack is an ozone-season reporter (see step 30 for criteria)~~,

If an operating record could not be found in step 36,

status = "Operating Hours Record Not in MDC (Year/Qtr)," and exit.

If the applicable prior RATA is a single-load FLOW RATA without a single-load flow claim (i.e. EXT_EXEM record not found in step 29),

status = "OOC-Incomplete QA RATA," and exit.

otherwise,

status = "OOC-Expired" and exit.

If unit/stack is an ozone season reporter (see step 36),

If the Test_End_Date of the applicable prior RATA is prior to the year immediately prior to the current year, or the if number of ozone-season operating hours in the prior ozone season (i.e., the second and third quarters of the prior year) is greater than or equal to 336,

If an operating record could not be found in step 36,

status = "Operating Hours Record Not in MDC (Year/Qtr)," and exit.

If the applicable prior RATA is a single-load FLOW RATA without a single-load flow claim (i.e. EXT_EXEM record not found in step 29),

status = "OOC-Incomplete QA RATA," and exit.

otherwise,

status = "OOC-Expired" and exit.

Note: Use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine hours of operation for quarters subsequent to the (adjusted) Test Expiration Date and prior to the current quarter. For ozone season reporters (see step 36), use ozone hours instead of operating hours. Also use the QTR_HOUR (or EDR_FILE_CONTENT) record to determine the number of ozone-season operating hours in the prior ozone season.

38. If the Date/Hour in the EDR HOURLY DATA record is less than or equal to 720 operating hours after the (Adjusted) Test Expiration Date,

~~Locate System ID in EXT_EXEM~~
~~where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "R" and the Grace_Period_Start_Date is after the (Adjusted) Test Expiration Date and is on or before the Date in the EDR HOURLY DATA record.~~

~~If found,~~

status = "IC-Grace" and exit.

~~If not found,~~

~~If the applicable prior RATA is a single-load FLOW RATA without a single-load flow claim (i.e. EXT_EXEM record not found in step 29),~~

status = "OOC-Incomplete QA RATA," and exit.

otherwise,

status = "OOC-Expired" and exit.

39. Locate a TESTSUM record for the SystemID
where the Test_Type = "RATA" and the Test_End_Date/Test_End_Time is on or after the Date/Hour in the EDR HOURLY DATA record.

If found, go to step 42.

40. If the subsequent TESTSUM record is not found,

Locate System ID in EXT_EXEM
where the Extension_Exemption_Type = "QAGP" and the Type_of_Test_Extended_or_Exempted = "R" and the Grace_Period_Start_Date is on or before the Date in the EDR HOURLY DATA record.

If found,

status = "OOC-No Prior Check" and exit.

If not found,

Locate SystemID in EXT_EXEM
where the Extension_Exemption_Type = "RAEX" and the Extension_Exemption_Year/Extension_Exemption_Quarter is on or before the Date in the current EDR HOURLY DATA record.

If found,

status = "OOC-No Prior Check" and exit.

If not found,

go to next step.

41. Count the number of records in the EDR HOURLY DATA for the SystemID
where the UOT is greater than 0
beginning with the first hour in the file and ending with the current emission hour.

If the number of hours is less than or equal to 720,

status = "IC-Undetermined" and exit.

If the number of hours is more than 720,

~~status = "OOC-No Check" and exit.~~

~~42. If the Reason_for_Test in the subsequent TESTSUM record is not equal to "C,"~~

~~status = "OOC-No Prior Check" and exit.~~

~~43. If the Reason_for_Test in the subsequent TESTSUM record is equal to "C," but the Calculated_Test_Result is not equal to "P" or "1,"~~

~~status = "OOC-Initial Certification" and exit.~~

~~44. If the Reason_for_Test in the subsequent TESTSUM record is equal to "C," and the Calculated_Test_Result is equal to "P" or "1,"~~

~~Count the number of records in the EDR HOURLY DATA for the SystemID where the UOT is greater than 0 beginning with the first hour in the file and ending with the current emission hour.~~

~~If the number of hours is less than or equal to 720,~~

~~status = "IC-Initial Certification" and exit.~~

~~If the number of hours is more than 720,~~

~~status = "OOC-Initial Certification" and exit.~~