DRAFT
ECMPS
Check Specifications

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Table of Contents

Capacity	3
Component and Associated Data	8
Control	52
Default and WAF	65
Formula	115
Fuel	142
Fuel Flow	154
Load	166
Location	265
MATS Supplemental Method	190
Method	201
Monitoring Plan	307
Program	320
Qualification	330
Qualification LEE	370
Span	373
System	413

Check Category:

Capacity

Check Code: CAPAC-1

Check Name: Unit Capacity Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitCapacity record:

If BeginDate and EndDate are valid,

If the EndDate is not null and the BeginDate is after the EndDate,

set Unit Capacity Dates Consistent to false and return result A.

Otherwise,

set Unit Capacity Dates Consistent to true.

Otherwise,

set Unit Capacity Dates Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Capacity Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Capacity Evaluation

Check Code: CAPAC-2

Check Name: Unit Capacity End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitCapacityData record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Capacity Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Capacity Evaluation

Check Code: CAPAC-3

Check Name: Unit Capacity Maximum Heat Input Capacity Valid

Related Former Checks:

Applicability: LME Check

Specifications:

For the UnitCapacityData record:

If the MaximumHourlyHeatInputCapacity is null,

return result A.

Else i f the MaximumHourlyHeatInputCapacity is less than or equal to 1 ,

return result B.

Else i f the MaximumHourlyHeatInputCapacity is greater than or equal to 20,000 ,

return result C .

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You defined an invalid [fieldname] for [key]. This value must be greater than zero and less than 20,000.	Critical Error Level 1
C	You defined an invalid [fieldname] for [key]. This value must be greater than zero and less than 20,000.	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Capacity Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Capacity Evaluation
	Condition: Current Unit Capacity Active *Equals* true

Check Code: CAPAC-4

Check Name: Unit Capacity Record Active

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitCapacityData record with consistent Dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Unit Capacity Active to false.

Otherwise,

set Unit Capacity Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Unit Capacity Evaluation Begin Date to the Evaluation Begin Date.

Otherwise,

set the Unit Capacity Evaluation Begin Date to the BeginDate.

If the EndDate is null or is after the Evaluation End Date,

set the Unit Capacity Evaluation End Date to the Evaluation End Date.

Otherwise,

set the Unit Capacity Evaluation End Date to the EndDate.

Usage:

1 Monitoring Plan Evaluation Report ------ Unit Capacity Evaluation

Check Code: CAPAC-5

Check Name: Unit Capacity Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitCapacityData record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1930 or later than Maximum Future Date,

return result B.

If either the Commence Operation Date or Commercial Operation Date of the unit is not null, and the BeginDate is prior to the earlier of the Commence Operation Date or Commercial Operation Date,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1
C	You reported a BeginDate of [date], which is earlier than the date reported as the commence operation (CO) or commence commercial operation (CCO) date. If the CO date was reported as the capacity begin date but you have only reported the CCO date to CAMD, use the CCO date as the BeginDate to eliminate this error.	Non-Critical Error

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Capacity Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Capacity Evaluation

Check Code: CAPAC-6

Check Name: Duplicate UnitCapacity Records

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitCapacity record with a valid Begin Date:

Locate another UnitCapacity record for the unit with a BeginDate that is equal to the BeginDate in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null,

Locate another UnitCapacity record for the unit with a n EndDate that is equal to the EndDate in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Capacity Evaluation

Check Category:

Component and Associated Data

Check Code: COMPON-3

Check Name: System Component Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Component Evaluation
2	Monitoring Plan Evaluation Report --------- System Component Evaluation

Check Code: COMPON-4

Check Name: System Component Begin Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Component Evaluation
2	Monitoring Plan Evaluation Report --------- System Component Evaluation

Check Code: COMPON-5

Check Name: System Component End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Component Evaluation
2	Monitoring Plan Evaluation Report --------- System Component Evaluation

Check Code: COMPON-6

Check Name: System Component End Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Component Evaluation
2	Monitoring Plan Evaluation Report --------- System Component Evaluation

Check Code: COMPON-7

Check Name: System Component Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If the EndDate is valid and not null, and the EndHour is null,

set System Component Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set System Component Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set System Component Dates and Hours Consistent to false, return result C.

Otherwise,

set System Component Dates and Hours Consistent to true.

Otherwise,

set System Component Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Component Evaluation
2	Monitoring Plan Evaluation Report --------- System Component Evaluation

Check Code: COMPON-8

Check Name: Component ID Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Component record:

If the ComponentID is null,

return result A.

If the ComponentID does not consist of 3 alphanumeric characters:

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	The ComponentID [ID] has an invalid format. A ComponentID must contain three alphanumeric characters.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation
	Condition: Current Component Active *Equals* true

Check Code: COMPON-10

Check Name: Component Serial Number Valid

Related Former Checks: NBP-20

Applicability: General Check

Specifications:

For a Component record with a valid ComponentTypeCode:

If the SerialNumber is null, and the ComponentTypeCode is not equal to "BGFF", "BOFF", "TANK", "DAHS", "DL", "PLC", or "FLC" ,

return result A.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation
	Condition: Current Component Active *Equals* true

Check Code: COMPON-11

Check Name: Component Manufacturer Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Component record with a valid ComponentTypeCode:

If the Manufacturer is null, and the ComponentTypeCode is not equal to "BGFF", "BOFF", or "TANK",

return result A.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation
	Condition: Current Component Active *Equals* true

Check Code: COMPON-12

Check Name: Component Type Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Component record:

If the ComponentTypeCode is null,

return result A.

Otherwise,

Locate ComponentTypeCode in the Component Type Code Lookup Table.

If not found,

return result B.

If found,

Locate a Used Identifier record for the location where the Table Code is equal to "C" and the Identifier is equal to the Component ID in the Component record.

If found,

If the ComponentTypeCode is not equal to the Type or Parameter Code in the retrieved record,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You have changed the ComponentTypeCode for [key] from its previously reported value. You should only do this to correct invalid data. If you are installing a component with a different component type, you should add a new component.	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation
	Condition: Current Component Active *Equals* true

Check Code: COMPON-13

Check Name: Component Sample Acquisition Method Code Valid

Related Former Checks: NBP-19

Applicability: General Check

Specifications:

For a Component record with a valid ComponentTypeCode and BasisCode:

If the SampleAcquisitionMethodCode is null,

Locate a record in Component Type and Basis to Sample Acquisition Method cross check table for the ComponentTypeCode and the BasisCode and SampleAcquisitionMethodCode in the current Monitor Component record.

If not found,

return result A.

Otherwise,

Locate SampleAcquisitionMethodCode in the Sample Acquisition Method Code Lookup Table.

If not found,

return result B.

Otherwise,

If the ComponentTypeCode is equal to "SO2", "NOX", "CO2", "O2", "PRB", "HG" , "HCL", "HF" , or "PM",

set GenericComponentType to "CONC".

If the ComponentTypeCode is equal to "OFFM", "GFFM", "BOFF", "BGFF", "DP", "TEMP", "PRES", "FLC", "GCH" , "MS" , or "CALR",

set GenericComponentType to "FUELFLOW".

Otherwise,

set GenericComponentType to ComponentTypeCode.

If the BasisCode is equal to "B" or the ComponentTypeCode is equal to "FLOW" , "PRB" or " PM ",

Locate a record in Component Type and Basis to Sample Acquisition Method cross check table for the GenericComponentType and the SampleAcquisitionMethodCode in the Component record.

If not found,

return result C.

Otherwise,

Locate a record in Component Type and Basis to Sample Acquisition Method cross check table for the GenericComponentType and the BasisCode and SampleAcquisitionMethodCode in the Component record.

If not found,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You reported a Sample Acquisition Method Code of [value] for [key], which is not appropriate for the component type and basis.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation
	Condition: Current Component Active *Equals* true

Check Code: COMPON-14

Check Name: Component Basis Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Component record with a valid ComponentTypeCode:

If the ComponentTypeCode is equal to "NOX", "SO2", "CO2", "O2", "FLOW", "HG" , "HCL", "HF", or " STRAIN",

If the BasisCode is null,

return result A.

If the BasisCode is not equal to "W", "D", or "B",

return result B.

If ComponentTypeCode is equal to "FLOW" and BasisCode is not equal to "W",

return result B.

If ComponentTypeCode is equal to "STRAIN", and BasisCode is not equal to " D ",

return result B.

If the BasisCode is equal to "B" and the ComponentTypeCode is not equal to "O2",

return result B.

If the BasisCode is not equal to "B",

Locate a Used Identifier record for the location where the Table Code is equal to "C" and the Identifier is equal to the Component ID in the Component record.

If found and the Formula or Basis Code is not null,

If the BasisCode is not equal to the Formula or Basis Code in the retrieved record,

return result C.

Otherwise,

If the BasisCode is not null,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You have changed the moisture basis for [key] from its previously reported value. You should only do this to correct invalid data. If you are installing a component with a different moisture basis, you should add a new component.	Informational Message
D	You reported an invalid BasisCode for [key]. A BasisCode is not appropriate for a [component type] component.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation
	Condition: Current Component Active *Equals* true

Check Code: COMPON-16

Check Name: Analyzer Range Code Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If the AnalyzerRangeCode is null,

return result A.

Else i f the AnalyzerRangeCode is not in the Analyzer Range Code Lookup Table,

return result B.

Else i f the ComponentTypeCode of the associated Component record is equal to " HG ", and AnalyzerRangeCode is not equal to "H",

return result C .

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	For [Key] you reported a [ReportedField] of [ReportedValue] which is invalid for a [ConstraintField] of [ConstraintValue].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation
	Condition: Current Analyzer Range Active *Equals* true

Check Code: COMPON-18

Check Name: Analyzer Range Begin Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Check Code: COMPON-19

Check Name: Analyzer Range Begin Hour Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Check Code: COMPON-20

Check Name: Analyzer Range End Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Check Code: COMPON-21

Check Name: Analyzer Range End Hour Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Check Code: COMPON-22

Check Name: Analyzer Range Dates and Hours Consistent

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If the EndDate is valid and not null, and the EndHour is null,

set Analyzer Range Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Analyzer Range Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Analyzer Range Dates and Hours Consistent to false, return result C.

Otherwise,

set Analyzer Range Dates and Hours Consistent to true.

Otherwise,

set Analyzer Range Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Check Code: COMPON-26

Check Name: Component Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a Component record:

Locate all System Component records for the component with an EndDate that is null or an EndDate that is on or after the BeginDate, a BeginDate that is on or before the Evaluation End Date, and an End Date that is null or is on or after the Evaluation Begin Date:

If not found,

set Current Component Active to false.

Locate any System Component record for the component.

If not found,

return result A.

If found,

set Current Component Active to true.

If the BeginDate/Begin Hour is later than the EndDate/EndHour in any retrieved record,

set Component Dates and Hours Consistent to false.

Otherwise,

set Component Dates and Hours Consistent to true.

If the earliest BeginDate of the retrieved records is on or after the Evaluation Begin Date,

set Component Evaluation Begin Date to the BeginDate.

set Component Evaluation Begin Hour to the BeginHour.

Otherwise,

set Component Evaluation Begin Date to the Evaluation Begin Date.

set Component Evaluation Begin Hour to 0.

If the End Date of any of the retrieved records is null,

set Component Evaluation End Date to the Evaluation End Date.

set Component Evaluation End Hour to 23.

Otherwise,

If the latest EndDate in the retrieved records is on or before the Evaluation End Date,

set Component Evaluation End Date to the EndDate.

set Component Evaluation End Hour to the EndHour.

Otherwise,

set Component Evaluation End Date to the Evaluation End Date.

set Component Evaluation End Hour to 23.

Results:

Result	Description	Severity
A	The component for [key] has not been linked to any system.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Component Evaluation

Check Code: COMPON-30

Check Name: Required Analyzer Range Reported for Component

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Component record with a ComponentTypeCode equal to "SO2", "NOX", "CO2", "O2" , "HG" , and consistent dates:

Locate all Component Analyzer Range records for the component with a BeginDate and BeginHour that is on or before the Component Evaluation End Date and End Hour and an EndDate that is null or and EndDate and EndHour that is on or after the Component Evaluation Begin Date and Begin Hour.

If not found

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved analyzer range records do not span the entire component evaluation period,

return result B.

Results:

Result	Description	Severity
A	You have not reported an analyzer range record that was active during the evaluation period for [key].	Critical Error Level 1
B	You have not reported an active analyzer range record for [key] to span the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Component Evaluation

Condition: Current Component Active *Equals* true

Check Code: COMPON-33

Check Name: System and Component Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For a valid System Component record with consistent dates and an associated Monitoring System record with consistent dates:

If the BeginDate in the current Monitoring System record is after the BeginDate in the current SystemComponent record

return result A.

If the BeginDate in the current Monitoring System record is equal to the BeginDate in the current SystemComponent record, and the BeginHour in the current Monitoring System record is after the BeginHour in the current SystemComponent record,

return result A.

If the EndDate in the current Monitoring System record is not null, and the EndDate in the current SystemComponent record is null,

return result A.

If the EndDate in the current Monitoring System record is prior to the EndDate in the current SystemComponent record,

return result A.

If the EndDate in the current Monitoring System record is equal to the EndDate in the current SystemComponent record, and the EndHour in the current Monitoring System record is prior to the EndHour in the current SystemComponent record,

return result A.

Results:

Result	Description	Severity
A	The Start and End Date/Hour for [key] is inconsistent with the Start and End Date/Hour for the associated monitoring system.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --------- System Component Evaluation *Condition:* Current System Component Active *Equals* true

Check Code: COMPON-34

Check Name: Required Second Component Reported for Dual Range Analyzer

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record with an AnalyzerRangeCode equal to "H" or "L" and a DualRangeIndicator equal to 1:

If the AnalyzerRangeCode is equal to "H",

Locate an AnalyzerRange record for the location with a ComponentTypeCode equal to the ComponentTypeCode in the current Component record, an Analyzer Range Code equal to "L", a DualRangeIndicator equal to 1, a BeginDate and BeginHour that is on or before the Analyzer Range Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Analyzer Range Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found,

If none of the retrieved records has a Component Serial Number (minus the string "HI" or "HIGH") equal to the Component Serial Number of the current record (minus the string "LO" or "LOW"),

return result B.

If the BeginDate, BeginHour, EndDate, and EndHour of the matching record is not equal to the BeginDate, BeginHour, EndDate, and EndHour of the current record,

return result C.

If the AnalyzerRangeCode is equal to "L",

Locate an AnalyzerRange record for the location with a ComponentTypeCode equal to the ComponentTypeCode in the current Component record, an Analyzer Range Code equal to "H", a DualRangeIndicator equal to 1, a BeginDate and BeginHour that is on or before the Analyzer Range Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Analyzer Range Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found,

If none of the retrieved records has a Component Serial Number (minus the string "HI" or "HIGH") equal to the Component Serial Number of the current record (minus the string "LO" or "LOW"),

return result B.

If the BeginDate, BeginHour, EndDate, and EndHour of the matching record is not equal to the BeginDate, BeginHour, EndDate, and EndHour of the current record,

return result C.

Results:

Result	Description	Severity
A	You reported [key] as the [range] range of a dual-range analyzer, but you did not report another dual-range [component] component that was active during	Critical Error Level 1

	the evaluation period with the alternate analyzer range.	
B	You reported [key] as the [range] range of a dual-range analyzer, but you did not report a [component] component with the same (or similar) serial number as the alternate-range analyzer.	Critical Error Level 1
C	You reported [key] as the [range] range of a dual-range analyzer, but you did not report the same start and end dates/hour in the alternate-range analyzer range record.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Condition: Current Analyzer Range Active *Equals* true

Check Code: COMPON-37

Check Name: Dual Range Indicator Consistent with Analyzer Range Code

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record:

If DualRangeIndicator is null,

return result A.

Else If ***CurrentComponent*** .ComponentTypeCode is equal to "HG",

If DualRangeIndicator is not equal to 0 ,

return result C.

Else If AnalyzerRangeCode equal to "A" and the DualRangeIndicator is not equal to 1,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You have not reported a dual range indicator of "1" for [key], even though the analyzer range code indicates that this component is a dual-range analyzer.	Critical Error Level 1
C	For [key] you reported a [value] which is not valid for [condition].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation
2	Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation
	Condition: Current Analyzer Range Active *Equals* true

Check Code: COMPON-38

Check Name: Analyzer Range Active Status

Related Former Checks:

Applicability: CEM Check

Specifications:

For an Analyzer Range record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current Analyzer Range Active to false.

Otherwise,

set Current Analyzer Range Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Analyzer Range Evaluation Begin Date to the Evaluation Begin Date.

set the Analyzer Range Evaluation Begin Hour to 0.

Otherwise,

set the Analyzer Range Evaluation Begin Date to the BeginDate.

set the Analyzer Range Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Analyzer Range Evaluation End Date to the Evaluation End Date.

set the Analyzer Range Evaluation End Hour to 23.

Otherwise,

set the Analyzer Range Evaluation End Date to the EndDate.

set the Analyzer Range Evaluation End Hour to the EndHour.

Usage:

1 Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Check Code: COMPON-39

Check Name: System Component Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If System Component Dates and Hour Consistent is equal to true,

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current System Component Active to false.

Otherwise,

set Current System Component Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the System Component Evaluation Begin Date to the Evaluation Begin Date.

set the System Component Evaluation Begin Hour to 0.

Otherwise,

set the System Component Evaluation Begin Date to the BeginDate.

set the System Component Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the System Component Evaluation End Date to the Evaluation End Date.

set the System Component Evaluation End Hour to 23.

Otherwise,

set the System Component Evaluation End Date to the EndDate.

set the System Component Evaluation End Hour to the EndHour.

Otherwise,

set Current System Component Active to false.

Usage:

1 Monitoring Plan Evaluation Report --------- System Component Evaluation

Check Code: COMPON-44

Check Name: Required Formula Reported for System and Component

Related Former Checks: ARP-5, NBP-28

Applicability: General Check

Specifications:

For a valid System Component record with consistent dates and a valid SystemTypeCode in the associated Monitor System record:

If the associated SystemTypeCode is equal to "CO2",

Locate the earliest Method record for the location with a ParameterCode equal to "CO2", a BeginDate and BeginHour on or before the System Component Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Component Evaluation Begin Date and Begin Hour.

If the associated SystemTypeCode is equal to "CO2" and a Method record was retrieved above,

If the ComponentTypeCode in the System Component record is equal to "CO2",

Locate all records in the Formula Parameter and Component Type and Basis to Formula Code cross check table where the ParameterCode is equal to "CO2" or "HI", and the ComponentTypeAndBasis equal to the associated concatenated ComponentTypeCode + BasisCode in the System Component record.

If found,

Locate all Formula records for the location with a ParameterCode + FormulaCode equal to the ParameterCode + FormulaCode in any of the retrieved cross check records, a BeginDate and BeginHour on or before the earlier of the System Component Evaluation End Date and End Hour and the EndDate and EndHour in the method record, and an EndDate that is null or and EndDate and EndHour that is on or after the later of the System Component Evaluation Begin Date and Begin Hour and the BeginDate and BeginHour of the method record.

If not found,

set Parameter Code/Formula Code(s) to Missing Formula for Component.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the evaluation period (in the above locate statement),

set Parameter Code(s)/Formula Code(s) to Incomplete Formula for Component.

If the ComponentTypeCode in the System Component record is equal to "O2",

Locate all records in the Formula Parameter and Component Type and Basis to Formula Code cross check table where the ParameterCode is equal to "CO2C" or "HI", and the ComponentTypeAndBasis equal to the associated concatenated ComponentTypeCode + BasisCode in the System Component record.

If found,

Locate all Formula records for the location with a ParameterCode + FormulaCode equal to the ParameterCode + FormulaCode in any of the retrieved cross check records, a BeginDate and BeginHour on or before the earlier of the System Component Evaluation End Date and End Hour and the EndDate and EndHour in the method record, and an EndDate that is null or and EndDate and EndHour that is on or after the later of the System Component Evaluation Begin Date and Begin Hour and the BeginDate and BeginHour of the method record.

If not found,

set Parameter Code/Formula Code(s) to Missing Formula for Component.

If found,

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the evaluation period (in the above locate statement),

set Parameter Code(s)/Formula Code(s) to Incomplete Formula for Component.

If the ParameterCode of any of the retrieved records is equal to "CO2C",

Locate all records in the Formula Parameter and Component Type and Basis to Formula Code cross check table where the ParameterCode is equal to "CO2" and the ComponentTypeAndBasis equal to the associated concatenated ComponentTypeCode + BasisCode in the System Component record.

If found,

Locate all Formula records for the location with a ParameterCode equal to "CO2", a FormulaCode equal to the FormulaCode in any of the retrieved cross check records, a BeginDate and BeginHour on or before the earlier of the System Component Evaluation End Date and End Hour and the EndDate and EndHour in the method record, and an EndDate that is null or and EndDate and EndHour that is on or after the later of the System Component Evaluation Begin Date and Begin Hour and the BeginDate and BeginHour of the method record.

If not found,

set Parameter Code/Formula Code(s) to Missing Formula for Component.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the evaluation period (in the above locate statement),

add Parameter Code/Formula Code(s) to Incomplete Formula for Component.

Otherwise,

Locate the record in the System Type to Formula Parameter cross check table where the SystemTypeCode is equal to the SystemTypeCode associated with the current System Component record.

For each cross check record found,

If Optional in the cross check record is not null,

Locate the earliest Method record for the location with a ParameterCode and MethodCode that equa l the ParameterCode and MethodCode in the Optional field of the retrieved cross-check record, a BeginDate and BeginHour on or before the System Component Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Component Evaluation Begin Date and Begin Hour.

If Optional in the cross check record is null, or a Method record was retrieved above,

Locate all records in the Formula Parameter and Component Type and Basis to Formula Code cross check table where the ParameterCode is equal to the ParameterCode in the cross check record and the ComponentTypeAndBasis equal to the associated concatenated ComponentTypeCode (+ BasisCode, if not null) in the System Component record.

If found,

If Optional in the System Type to Formula Parameter cross check table is not null:

Locate all Formula records for the location with a ParameterCode equal to the ParameterCode in the cross check table, a FormulaCode equal to the FormulaCode in any of the retrieved cross check records, a BeginDate and BeginHour on or before the earlier of the System Component Evaluation End Date and End Hour and the EndDate and EndHour in the method record (if not null), and an EndDate that is null or and EndDate and EndHour that is on or before the later of the

System Component Evaluation Begin Date and Begin Hour and the BeginDate and BeginHour of the method record.

If not found,

add Parameter Code/Formula Code(s) to Missing Formula for Component.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the evaluation period (in the above locate statement),

add Parameter Code/Formula Code(s) to Incomplete Formula for Component.

Otherwise,

Locate all Formula records for the location with a ParameterCode equal to the ParameterCode in the cross check table, a FormulaCode equal to the FormulaCode in any of the retrieved cross check records, a BeginDate and BeginHour on or before the System Component Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Component Evaluation Begin Date and Begin Hour.

If not found,

add Parameter Code/Formula Code(s) to Missing Formula for Component.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the entire system component evaluation period,

add Parameter Code/Formula Code(s) to Incomplete Formula for Component.

If Missing Formula for Component is not null, and Incomplete Formula for Component is null,

return result A.

If Incomplete Formula for Component is not null, and Missing Formula for Component is null,

return result B.

If both Missing Formula for Component and Incomplete Formula for Component are not null,

return result C.

Results:

Result	Description	Severity
A	You did not report [missing formulas] formula record(s) that was/were active during the evaluation period to compute emission values. These formulas are required when using a [system type] system with a [component type] [basis] component.	Critical Error Level 1
B	You did not report [incomplete formulas] formula record(s) to compute emission values that are active for the entire evaluation period. These formulas are required when using a [system type] system with a [component type] [basis] component.	Critical Error Level 2
C	You did not report [missing formulas] formula record(s) that was/were active during the evaluation period to compute emission values. Also, you did not report [incomplete formulas] formula record(s) to compute emission values that are active for the entire evaluation period. These formulas are required when using a [system type] system with a [component type] [basis] component.	Critical Error Level 2

Usage:

1 Monitoring Plan Evaluation Report --------- System Component Evaluation

Condition: Current System Component Active *Equals* true

Check Code: COMPON-45

Check Name: Required High-Scale Span Reported for Component

Related Former Checks: NBP-33

Applicability: CEM Check

Specifications:

For an Analyzer Range record with an AnalyzerRangeCode equal to "H" or "A" and consistent dates:

If ComponentTypeCode in the associated Component record is not equal to "HF" or "HCL",

Locate a Span record for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the associated Component record, the SpanScaleCode is equal to "H", the BeginDate and BeginHour is on or before the Analyzer Range Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Analyzer Range Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved span records do not span the entire analyzer range evaluation period,

return result B.

Results:

Result	Description	Severity
A	You reported [key], but you did not report a [scale] [span parameter] span record that was active during the evaluation period, which is required when you report an analyzer range record with a range code of [range].	Critical Error Level 1
B	You reported [key], but you did not report [scale] [span parameter] span records to span the entire evaluation period for the analyzer.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Condition: Current Analyzer Range Active *Equals* true

Check Code: COMPON-46

Check Name: System Type Consistent with Component Type

Related Former Checks: NBP-17

Applicability: General Check

Specifications:

For a System Component record:

If the associated System record is not valid,

Set System Component Record Valid to false.

Otherwise,

Set System Component Record Valid to true.

If the associated ComponentTypeCode is not equal to "DAHS", "PLC", or "DL", and an EndDate that is null or is on or after 1/1/2001,

Locate the System Type to Component Type cross check table record where the ComponentTypeCode is equal to the ComponentTypeCode in the current System Component record and the SystemTypeCode is equal to the SystemTypeCode in the current Monitoring System record.

If not found,

Locate the System Type to Optional Component Type cross check table record where the Optional ComponentTypeCode is equal to the ComponentTypeCode in the current System Component record and the SystemTypeCode is equal to the SystemTypeCode in the current Monitoring System record.

If not found,

Locate the ComponentTypeCode in the current System Component record in the Component Type Code lookup table.

If found,

set System Component Record Valid to false, and return result A.

Results:

Result	Description	Severity
A	You have linked an inappropriate [component type] component to the [system type] system for [key].	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- System Component Evaluation

Condition: Current System Component Active *Equals* true

Check Code: COMPON-47

Check Name: Overlapping Analyzer Range Reported for Component

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Component record with a ComponentTypeCode equal to "SO2", "NOX", "CO2", "O2 ", "HG", "HCL", or "H F ", and consistent dates:

Locate all Component Analyzer Range records for the component with a BeginDate and BeginHour that is on or after the BeginDate and BeginHour in the current record and is on or before the Component Evaluation End Date and End Hour and an EndDate that is null or and EndDate and EndHour that is on or after the Component Evaluation Begin Date and Begin Hour.

If more than one are found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved analyzer range records overlap during the component evaluation period,

return result A.

Results:

Result	Description	Severity
A	You have reported more than one active analyzer range record for [key] during the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Component Evaluation *Condition:* Current Component Active *Equals* true

Check Code: COMPON-48

Check Name: Component and Analyzer Range Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For an Analyzer Range record with consistent dates in both the Analyzer Range and associated Component record:

If the Component Evaluation Begin Date and Begin Hour is after the Analyzer Range Evaluation Begin Date and Begin Hour,

return result A.

If the Component Evaluation End Date is not null, and the Analyzer Range Evaluation End Date is null,

return result A.

If the Component Evaluation End Date and End Hour is prior to the Analyzer Range Evaluation End Date and End Hour,

return result A.

Results:

Result	Description	Severity
A	The BeginDate/Hour and EndDate/Hour for [key] is inconsistent with the BeginDate/Hour and EndDate/Hour for the associated component.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Condition: Current Analyzer Range Active *Equals* true

Check Code: COMPON-51

Check Name: Required Low-Scale Span Reported for Component

Related Former Checks: NBP-33

Applicability: CEM Check

Specifications:

For an Analyzer Range record with an AnalyzerRangeCode equal to "L" or "A" and consistent dates:

If ComponentTypeCode in the associated Component record is not equal to "HCL" or "HF"

Locate a Span record for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the associated Component record, the SpanScaleCode is equal to "L", the BeginDate and BeginHour is on or before the Analyzer Range Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Analyzer Range Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved span records do not span the entire analyzer range evaluation period,

return result B.

Results:

Result	Description	Severity
A	You reported [key], but you did not report a [scale] [span parameter] span record that was active during the evaluation period, which is required when you report an analyzer range record with a range code of [range].	Critical Error Level 1
B	You reported [key], but you did not report [scale] [span parameter] span records to span the entire evaluation period for the analyzer.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- Component Analyzer Range Evaluation

Condition: Current Analyzer Range Active *Equals* true

Check Code: COMPON-52

Check Name: Required FLOW Span Reported for Component

Related Former Checks: NBP-33

Applicability: CEM Check

Specifications:

For a Component record with a ComponentTypeCode equal to "FLOW" and consistent dates:

Locate a Span record for the location where the ComponentTypeCode is equal to "FLOW", the BeginDate and BeginHour is on or before the Component Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Component Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved span records do not span the entire component evaluation period,

return result B.

Results:

Result	Description	Severity
A	You reported [key], but you did not report a FLOW span record that was active during the evaluation period, which is required when you report a FLOW component.	Critical Error Level 1
B	You reported [key], but you did not report FLOW span records to span the entire evaluation period for the component.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Component Evaluation

Condition: Current Component Active *Equals* true

Check Code: COMPON-53

Check Name: Duplicate Component Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Component record :

Locate another Component record for the location with a ComponentID that is equal to the ComponentID in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation

Check Code: COMPON-54

Check Name: Duplicate Analyzer Range Records

Related Former Checks:

Applicability: General Check

Specifications:

For an Analyzer Range record:

Locate another Analyzer Range record for the location with a ComponentID equal to the Component ID in the current record and a BeginDate/BeginHour that is equal to the BeginDate/BeginHour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null,

Locate another Analyzer Range record for the location with a ComponentID equal to the Component ID in the current record and an EndDate/EndHour that is equal to the EndDate/EndHour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Analyzer Range Evaluation

Check Code: COMPON-55

Check Name: System Component Record Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record:

If the ComponentID is null,

return result A.

Locate another System Component record for the location with a MonitoringSystemID equal to the MonitoringSystemID in the current record , a ComponentID equal to the ComponentID in the current record , and a BeginDate/BeginHour that is equal to the BeginDate/BeginHour in the current record.

If found,

return result B .

If not found, and the EndDate in the current record is not null,

Locate another System Component record for the location with a MonitoringSystemID equal to the MonitoringSystemID in the current record , a ComponentID equal to the ComponentID in the current record , and an End Date/ End Hour that is equal to the End Date/ End Hour in the current record.

If found,

return result B .

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Component Evaluation

Check Code: COMPON-56

Check Name: Required Default Reported for System and Component

Related Former Checks:

Applicability: General Check

Specifications:

For a valid System Component record with consistent dates:

If the associated SystemTypeCode is equal to "CO2" and the associated ComponentTypeCode is equal to "O2",

Set Missing Default for System and Parameter to "CO2X Default for Purpose MD and Fuel NFS".

Locate all Default records for the location with a ParameterCode equal to "CO2X", a DefaultPurposeCode equal to "MD", a FuelCode equal to "NFS", a BeginDate and BeginHour on or before the System Component Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or before the System Component Evaluation Begin Date and Begin Hour.

If not found, or the BeginDate/BeginHour and EndDate/EndHour of the retrieved default records do not span the entire system component evaluation period,

Locate all Span records for the location with a ComponentTypeCode equal to "CO2", a SpanScaleCode equal to "H", a BeginDate and BeginHour on or before the System Component Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or before the System Component Evaluation Begin Date and Begin Hour.

If no Span and no Default records are found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved span and default records do not span the entire system component evaluation period,

return result B.

Results:

Result	Description	Severity
A	You did not report [type] record that was active during the evaluation period. This default is required when using a [system type] system with a [component type] component.	Critical Error Level 1
B	You did not report [type] record(s) that were active for the entire evaluation period. This default is required when using a [system type] system with a [component type] component.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- System Component Evaluation

Condition: Current System Component Active *Equals* true

Check Code: COMPON-80

Check Name: Overlapping System Component Records

Related Former Checks:

Applicability: General Check

Specifications:

For a System Component record with consistent dates:

Locate another System Component record for the system with a ComponentID equal to the ComponentID in the current record and a BeginDate/BeginHour that is on or after the BeginDate/BeginHour in the current record and is on or before the System Component Evaluation End Date/Hour, and a EndDate/EndHour that is null or is on or after the System Component Evaluation Begin Date/Hour.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported two Monitor System Component records for [key] with overlapping start and end times during the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --------- System Component Evaluation *Condition:* Current System Component Active *Equals* true

Check Code: COMPON-81

Check Name: Hg Converter Indicator Valid

Related Former Checks:

Applicability:

Specifications:

For the Component record with a valid ComponentTypeCode:

If the ComponentTypeCode is equal to "HG",

If the HgConverterIndicator is null,

return result A.

If the HgConverterIndicator is not equal to "1" or "0",

return result B.

Otherwise,

If the HgConverterIndicator is not null,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	For [key] you reported a [value] which is not valid for [fieldname].	Critical Error Level 1
C	You reported a value for [fieldname], which is not appropriate for [condition].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Component Evaluation
2	Monitoring Plan Evaluation Report ------ Component Evaluation

Check Category:

Control

Check Code: CONTROL-1

Check Name: Control Parameter Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitControlData record:

If the ParameterCode is null,

return result A.

Otherwise,

Locate ParameterCode in the Control Code lookup table.

If not found,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Control Evaluation
	Condition: Current Control Active *Equals* true

Check Code: CONTROL-2

Check Name: Control Code Valid

Related Former Checks: NBP-66

Applicability: General Check

Specifications:

For the UnitControlData record:

If the ControlCode is null,

return result A.

Otherwise,

Locate the ParameterCode and ControlCode in the Control Code lookup table.

If not found,

Locate the ControlCode in the Control Code lookup table.

If not found,

return result B.

If found, and the ParameterCode is valid,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Fatal
C	For [key] you have provided a value for [fieldname] that is not appropriate for this parameter.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Control Evaluation
	Condition: Current Control Active *Equals* true

Check Code: CONTROL-4

Check Name: Control Optimization Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitControlData record:

If OptimizationDate is not null,

If the InstallDate is valid and the OptimizationDate is prior to the Install Date, or if the RetireDate is valid and non-null and the OptimizationDate is after the RetireDate,

return result A.

Results:

Result	Description	Severity
A	You reported an OptimizationDate of [Date] that is either before the InstallationDate or after the RetireDate for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Control Evaluation
	Condition: Current Control Active *Equals* true

Check Code: CONTROL-5

Check Name: Control Install Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitControlData record:

Set Control Install Date Valid to true.

If InstallDate is null,

If OriginalCode is not equal to 1,

set Control Install Date Valid to false, and return result A.

Otherwise,

If InstallDate is earlier than 01/01/1930 or later than Maximum Future Date,

set Control Install Date Valid to false, and return result B.

If either the Commence Operation Date or Commercial Operation Date of the unit is not null, and the InstallDate is prior to the earlier of the Commence Operation Date or Commercial Operation Date,

set Control Install Date Valid to false, and return result C.

If OriginalCode is equal to 1,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1
C	You reported an InstallDate of [date], which is earlier than the date reported as the commence operation (CO) or commence commercial operation (CCO) date. If the control was installed and operational as part of the original unit design, report "1" in the OriginalCode field and leave the InstallDate field blank. If the control was installed between the CO and CCO dates and you have only reported the CCO date, use the CCO date as the InstallDate to eliminate this error.	Non-Critical Error
D	You reported an InstallDate for [key], but you have indicated that the control equipment was part of the original unit.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Control Evaluation

Check Code: CONTROL-6

Check Name: Control Retire Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitControlData record:

If RetireDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Control Evaluation

Check Code: CONTROL-8

Check Name: Control Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitControlData record with consistent Dates:

If InstallDate is after Evaluation End Date or RetireDate is before Evaluation Begin Date,

set Control Active to false.

Otherwise,

set Control Active to true.

If the InstallDate is prior to the Evaluation Begin Date,

set the Control Evaluation Begin Date to the Evaluation Begin Date.

Otherwise,

set the Control Evaluation Begin Date to the BeginDate.

If the RetireDate is null or is after the Evaluation End Date,

set the Control Evaluation End Date to the Evaluation End Date.

Otherwise,

set the Control Evaluation End Date to the RetireDate.

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Control Evaluation

Check Code: CONTROL-9

Check Name: Control Install Date Consistent with Retire Date

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitControl record:

If InstallDate is valid and RetireDate is valid,

If the RetireDate is not null and the InstallDate is after the RetireDate,

set Control Install Date Consistent with Retire Date to false and return result A.

Otherwise,

set Control Install Date Consistent with Retire Date to true.

Otherwise,

set Control Install Date Consistent with Retire Date to false.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Control Evaluation

Check Code: CONTROL-11

Check Name: Control Code Consistent with Unit Type

Related Former Checks: NBP-64

Applicability: General Check

Specifications:

For a UnitControl record with valid ParameterCode and ControlCode:

Locate a record in the Control to Unit Type cross check table where the ControlCode is equal to the ControlCode in the current record.

If found,

Locate all UnitType records for the unit where the BeginDate is on or before the Control Evaluation End Date and the EndDate is null or is on or before the Control Evaluation Start Date.

For each UnitType record found,

Locate a record in the Control to Unit Type cross check table where the ControlCode is equal to the ControlCode in the current record and the UnitTypeCode is equal to the UnitTypeCode in the retrieved UnitType record.

If not found,

Set Invalid Unit Type for Control to the UnitTypeCode.

return result A.

Results:

Result	Description	Severity
A	The ControlCode [code] for the unit is not appropriate for the UnitTypeCode [type].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Control Evaluation *Condition:* Current Control Active *Equals* true

Check Code: CONTROL-13

Check Name: Overlapping Controls

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitControl record with valid ParameterCode and ControlCode and consistent dates:

Locate another UnitControl record for the unit with the same ParameterCode and ControlCode, and an InstallDate that is on or after the InstallDate in the current record and is on or before the Control Evaluation End Date, and a RetireDate that is null or is on or after the Control Evaluation Begin Date.

If found,

return result A.

Results:

Result	Description	Severity
A	Concurrently active records have been reported for control parameter [parameter] control type [control type].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Control Evaluation
	Condition: Current Control Active *Equals* true

Check Code: CONTROL-14

Check Name: SO2 and PART Controls for Consistent with Fuels

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitControl record with a ParameterCode equal to 'SO2' or 'PART':

Locate all Fuel records for the location where the associated FuelGroup is equal to "GAS', the BeginDate is on or before the Control Evaluation End Date, and the EndDate is null or is on or after the Control Evaluation Start Date.

If found,

Locate all UnitFuel records for the unit where the associated FuelGroup is not equal to "GAS', the BeginDate is on or before the Control Evaluation End Date, and the EndDate is null or is on or after the Control Evaluation Start Date.

If not found,

return result A.

Results:

Result	Description	Severity
A	There should be no SO2 or PART controls if the Unit burns only gas. You have defined a [control parameter] control for [key].	Non-Critical Error

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Control Evaluation
	Condition: Current Control Active *Equals* true

Check Code: CONTROL-15

Check Name: Duplicate Unit Control Records

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitControl record:

Locate another UnitControl record for the unit with a ParameterCode equal to the ParameterCode in the current record and a ControlCode equal to the ControlCode in the current record and InstallDate that is equal to the InstallDate in the current record.

If found,

return result A.

If not found, and the RetireDate in the current record is not null,

Locate another UnitControl record for the unit with a ParameterCode equal to the ParameterCode in the current record and a ControlCode equal to the ControlCode in the current record and RetireDate that is equal to the RetireDate in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Control Evaluation

Check Code: CONTROL-16

Check Name: Control Equipment Dual Range Analyzer Check

Related Former Checks:

Applicability: CEM Check

Specifications:

For the current UnitControl record,

If the ControlCode is equal to 'SCR' or 'SNCR'

Find active Component records for the Unit location where the ComponentTypeCode is equal to "NOX"

if not found or the records do not span the entire control evaluation period, find active Component records for all Common stack/pipe locations for the Unit where the ComponentTypeCode is equal to "NOX"

if not found or the records do not span the entire control evaluation period, find active Component records for any Multiple stack/pipe locations for the Unit where the ComponentTypeCode is equal to "NOX"

If Component records are found, find the Analyzer Range records for the Component record with a DualRangeIndicator equal to 1,

If not found or the records do not span the entire control evaluation period, find active span records with a SpanScaleCode equal to "H",

If not found or the records do not span the entire control evaluation period, or the DefaultHighRange is null,

Return Result A

Else, if the ControlCode is equal to "DA", "DL", "MO", "SB", "WL", or "WLS",

Find active Component records for the Unit location where the ComponentTypeCode is equal to "SO2"

if not found or the records do not span the entire control evaluation period, find active Component records for all Common stack/pipe locations for the Unit where the ComponentTypeCode is equal to "SO2"

if not found or the records do not span the entire control evaluation period, find active Component records for any Multiple stack/pipe locations for the Unit where the ComponentTypeCode is equal to "SO2"

If Component records are found, find the Analyzer Range records for the Component record with a DualRangeIndicator equal to 1,

If not found or the records do not span the entire control evaluation period, find a span record with a SpanScaleCode equal to "H",

If not found or the records do not span the entire control evaluation period, or the DefaultHighRange is null,

Return Result A

Results:

Result	Description	Severity
A	You did not report an expected dual range monitor or default high range value for [key], given the active [Control Code] for the unit. Ignore this message if the monitoring location is uncontrolled (uncontrolled bypass or common stack with uncontrolled unit).	Informational Message

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Control Evaluation

Check Category:

Default and WAF

Check Code: DEFAULT-37

Check Name: Default Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a Default record with consistent Dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Default Active to false.

Otherwise,

set Default Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Default Evaluation Begin Date to the Evaluation Begin Date.

set the Default Evaluation Begin Hour to 0.

Otherwise,

set the Default Evaluation Begin Date to the BeginDate.

set the Default Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Default Evaluation End Date to the Evaluation End Date.

set the Default Evaluation End Hour to 23.

Otherwise,

set the Default Evaluation End Date to the EndDate.

set the Default Evaluation End Hour to the EndHour.

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Check Code: DEFAULT-38

Check Name: Default Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Default record:

If the EndDate is valid and not null, and the EndHour is null,

set Default Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Default Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Default Dates and Hours Consistent to false, return result C.

Otherwise,

set Default Dates and Hours Consistent to true.

Otherwise,

set Default Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Check Code: DEFAULT-39

Check Name: Default Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Default record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Check Code: DEFAULT-40

Check Name: Default Begin Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Default record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Check Code: DEFAULT-41

Check Name: Default End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Check Code: DEFAULT-42

Check Name: Default End Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Default record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Check Code: DEFAULT-47

Check Name: Default Parameter Code Valid

Related Former Checks: ARP-55A, B

Applicability: General Check

Specifications:

For the Default record:

If the ParameterCode is null,

return result A.

Otherwise,

Locate a record in the List of Default Parameter Codes (Parameter to Category Cross Check Table) where the ParameterCode is equal to the ParameterCode in the current Default record and the CategoryCode is equal to "DEFAULT".

If not found,

return result B.

If found,

If the Location Type is equal to "CP",

If the ParameterCode begins with "H2O", "SO", "CO", "O2", "NO", or is equal to "FLOX", "MNHI", or "MNNX",

return result C.

If the Location Type is equal to "MP",

If the ParameterCode begins with "H2O", "SO", "CO", "O2", or is equal to "NOXR", "FLOX", "MNHI", or "MNNX",

return result C.

If the Location Type is equal to "CS" or "MS",

If the Parameter Code is equal to "CO2R", "NOXR", "MNGF", or "MNOF",

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	The default record for [key] is not valid for a [location type].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation

Condition: Current Default Active *Equals* true

Check Code: DEFAULT-48

Check Name: Default Operating Condition Code Valid

Related Former Checks: ARP-69C

Applicability: General Check

Specifications:

For a Monitoring Default record with a valid ParameterCode:

If the Default OperatingConditionCode is null,

return result A.

Otherwise,

If the OperatingConditionCode is not equal to "A", "C", "U", "B", or "P",

return result B.

Otherwise,

If the OperatingConditionCode is equal to "B" or "P", and the ParameterCode is not equal to "NOXR",

return result C.

If the OperatingConditionCode is equal to "C", and the ParameterCode is not equal to "SO2X", "SORX", "NORX", "NOCX", or "NOXR",

return result C.

If the OperatingConditionCode is equal to "B", "P", or "C", the ParameterCode is equal to "NOXR", and the DefaultSourceCode is equal to "DEF",

return result D.

If the OperatingConditionCode is equal to " U ", the ParameterCode is equal to "NOXR",

return result E.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	The OperatingConditionCode [value] reported for [key] is not appropriate for the associated parameter.	Critical Error Level 1
D	The OperatingConditionCode [value] reported for [key] is not appropriate for the DefaultSourceCode "DEF". If you use a generic Part75 NOXR default, it must be used for all hours.	Critical Error Level 1
E	The OperatingConditionCode U reported for [key] is not appropriate for parameter NOXR. If you are reporting this record to indicate that you are using a generic Part 75 LME default value for all hours, you should report an OperatingConditionCode of A. If you normally use a unit-and-fuel specific NOXR default during controlled hours, and you are reporting this record to indicate that you are using a generic Part 75 LME default value during hours when controls are not operating, you should report a ParameterCode of NORX and a DefaultPurposeCode of MD.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-49

Check Name: Default Value Valid

Related Former Checks: ARP-8D, ARP-27B, NBP-47, ARP-58

Applicability: General Check

Specifications:

For a Monitoring Default record with a valid ParameterCode:

If the Default Value is null,

return result A.

If the Default Value is less than or equal to 0,

return result B.

Otherwise,

Locate the ParameterCode and DefaultUnitsOfMeasureCode in the Parameter Units of Measure lookup table.

If found, and the DefaultValue is not equal to the DefaultValue rounded to the value specified by Decimal_Hrly in the lookup table record,

return result G.

Otherwise,

If the DefaultPurposeCode is equal to "DC",

Locate all Unit Type records linked to the location where the BeginDate is null or is on or before the Default Evaluation End Date and the EndDate is null or is on or after the Default Evaluation Begin Date.

If the Unit Type in any the retrieved records is equal to "CC", "CT", "ICE", "OT", or "IGC",

set Boiler Type to "TURBINE".

Otherwise,

set Boiler Type to "BOILER".

If the ParameterCode is equal to "CO2N" and the Boiler Type is equal to "TURBINE", and the DefaultValue is not equal to 1,

return result C.

If the ParameterCode is equal to "CO2N" and the Boiler Type is equal to "BOILER", and the DefaultValue is not equal to 5,

return result C.

If the ParameterCode is equal to "O2X" and the Boiler Type is equal to "TURBINE", and the DefaultValue is not equal to 19,

return result C.

If the ParameterCode is equal to "O2X" and the Boiler Type is equal to "BOILER", and the DefaultValue is not equal to 14,

return result C.

Otherwise,

If the ParameterCode is equal to "H2O" and the DefaultSourceCode is equal to "DEF",

Locate the FuelCode in the Fuel Code to Minimum and Maximum Moisture Default Cross Check Table.

If found,

If the Default Value is less than the Minimum Value in the cross check table or is greater than the Maximum Value in the cross check table,

return result D.

Else if the ParameterCode is equal to "H2ON" and the DefaultSourceCode is equal to "DEF",

If the DefaultValue is not equal to 3.0,

return result F.

Else if the ParameterCode is equal to "H2OX" and the DefaultSourceCode is equal to "DEF",

If the DefaultValue is not equal to 15.0,

return result F.

Otherwise,

If the Minimum Default Value and the Maximum Default Value are not null,

If ParameterCode is equal to "NOCX" or "NORX", and the DefaultPurposeCode is equal to "MD",

Locate a Monitor Method record for the location where the ParameterCode begins with "NOX", the MethodCode is equal to "CEM", the BeginDate and BeginHour is on or before the Default Evaluation End Date /End Hour and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date /Begin Hour .

If found,

If ParameterCode is equal to "NORX" and OperatingConditionCode is equal to "C",

If the Default Value is less than 0.05 or is greater than the Maximum Default Value,

return result E.

Otherwise,

If the Default Value is less than the Minimum Default Value or is greater than the Maximum Default Value,

return result E.

If DefaultPurposeCode and the DefaultSourceCode combination is not equal to "LM" and "DEF",

If the Default Value is less than the Minimum Default Value or is greater than the Maximum Default Value,

return result E.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	The value [value] in the field [fieldname] for [key] is not within the range of	Critical Error Level 1

	valid values. This value must be greater than zero.	
C	The default value [value] reported for [key] is not valid for the unit type.	Critical Error Level 1
D	The default value [value] reported for [key] is not within the valid range of values for the fuel code [fuel].	Critical Error Level 1
E	The default value [value] reported for [key] is not within the valid range of values for the parameter.	Critical Error Level 2
F	The default value reported for [key] is not a valid Part75 default value for the parameter.	Critical Error Level 1
G	The default value reported for [key] exceeds the maximum allowable precision.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-50

Check Name: Default Units of Measure Code Valid

Related Former Checks: NBP-48

Applicability: General Check

Specifications:

For a Monitoring Default record with a valid ParameterCode:

If the UnitsOfMeasure is null,

return result A.

Otherwise,

Locate a record in the Parameter Units of Measure lookup table where the ParameterCode is equal to the Parameter Code and the UnitsOfMeasure is equal to the UnitsOfMeasure in the current default record.

If found,

set Maximum Default Value to the Max Value in the lookup table record.

If ParameterCode is equal to "SO2R",

set Minimum Default Value to 0.0001.

Otherwise,

set Minimum Default Value to the Min Value in the lookup table record.

If not found,

Locate the UnitsOfMeasure in the Units of Measure Code Lookup Table.

If not found,

return result B.

If found,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Fatal
C	The units of measure [value] reported for [key] is not appropriate for the associated parameter.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-51

Check Name: Default Purpose Code Valid

Related Former Checks: ARP-69D

Applicability: General Check

Specifications:

For the Monitoring Default record with a valid ParameterCode:

If the DefaultPurposeCode is null,

set Default Purpose Code Valid to false, and return result A.

Otherwise,

Locate a record in Default Parameter to Purpose cross check table for the ParameterCode and the DefaultPurposeCode in the current Monitoring Default record.

If found,

set Default Purpose Code Valid to true.

If not found,

set Default Purpose Code Valid to false.

Locate DefaultPurposeCode in the DefaultPurposeCode Lookup Table.

If not found,

return result B.

Otherwise,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	The DefaultPurposeCode for [key] is not appropriate for the associated parameter.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-52

Check Name: Default Source Code Valid

Related Former Checks: NBP-49

Applicability: General Check

Specifications:

For the Monitoring Default record with a valid ParameterCode:

If the DefaultSourceCode is null,

set Default Source Code Valid to false, and return result A.

Otherwise,

Locate a record in Default Parameter to Source of Value cross check table for the ParameterCode and the DefaultSourceCode in the current Monitoring Default record.

If found,

set Default Source Code Valid to true.

If not found,

set Default Source Code Valid to false.

Locate DefaultSourceCode in the DefaultSourceCode Lookup Table.

If not found,

return result B.

Otherwise,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	The DefaultSourceCode [value] reported for [key] is not appropriate for the associated parameter.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-53

Check Name: Default Fuel Code Valid

Related Former Checks: ARP-27A, ARP-69A, ARP-69F, ARP-42

Applicability: General Check

Specifications:

For a Monitoring Default record with a valid ParameterCode:

Set Default Fuel Code Valid to true.

If the FuelCode is null,

set Default Fuel Code Valid to false, and return result A.

Otherwise,

Locate FuelCode in the FuelCode Lookup Table.

If not found,

set Default Fuel Code Valid to false, and return result B.

Otherwise,

Set Default Unit Fuel to the Unit Fuel in the FuelCode lookup table record.

If the ParameterCode is equal to "SO2R", "CO2R", or "NOXR", and the DefaultPurposeCode is not equal to "F23",

If the FuelGroup in the FuelCode lookup table record is not equal to "GAS", "OIL" or

"MIX",

set Default Fuel Code Valid to false, and return result C.

If the ParameterCode is equal to "SO2R", the DefaultPurposeCode is equal to "F23", and the DefaultSourceCode is not equal to "APP",

If the FuelCode is not equal to "NNG", "PNG", or "OGS",

set Default Fuel Code Valid to false, and return result C.

If the ParameterCode begins with "O2" or is equal to "CO2N", "CO2X", "H2ON", or "H2OX",

If the FuelCode is not equal to "NFS",

set Default Fuel Code Valid to false, and return result C.

If the ParameterCode is equal to "H2O", and the DefaultSourceCode is not equal to "APP",

If the FuelCode is not equal to "NNG", "PNG", "CRF", or "W", or the FuelGroup in the FuelCode lookup table record is not equal to "COAL",

set Default Fuel Code Valid to false, and return result C.

If the ParameterCode is equal to "MNGF",

If the FuelGroup in the FuelCode lookup table record is not equal to "GAS" or MIX",

set Default Fuel Code Valid to false, and return result C.

If the ParameterCode is equal to "MNOF",

If the FuelGroup in the FuelCode lookup table record is not equal to "OIL" or MIX",

set Default Fuel Code Valid to false, and return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	The fuel code [value] reported for [key] is not appropriate for the associated parameter and purpose.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-54

Check Name: Generic LME Default Emission Rate Valid

Related Former Checks: ARP-28

Applicability: LME Check

Specifications:

For a Monitoring Default record with a valid ParameterCode , Default Purpose Code Valid equal to true, DefaultSourceCode equal to "DEF" , and a valid FuelCode that is not equal to "NFS":

If the ParameterCode is equal to "NOXR" and DefaultPurposeCode is equal to "LM", OR the ParameterCode is equal to "NORX" and DefaultPurposeCode is equal to "MD",

Set NOX LME to true.

If DefaultPurposeCode is equal to "MD",

Locate another Monitor Default record for the location where the ParameterCode is equal to "NOXR", the DefaultPurposeCode is equal to "LM", the BeginDate is null or is on or before the Default Evaluation End Date , and the

EndDate is null or is on or after the Default Evaluation Start Date

If not found,

set NOX LME to false.

If NOX LME is true,

S et Boiler Type to null.

Locate all Unit Type records linked to the location where the BeginDate is null or is on or before the Default Evaluation End Date and the EndDate is null or is on or after the Default Evaluation Start Date.

If the Unit Type in all the retrieved records is equal to "CC", "CT", "ICE", "OT", or "IGC"

set Boiler Type to "TURBINE".

If the Unit Type in all the retrieved records is equal to "CFB", "DB", "OB", "T", "PFB", or "BFB"

set Boiler Type to "BOILER".

If Boiler Type is null,

return result A.

Otherwise,

Locate the Default Parameter Code, Boiler Type, and Fuel Type to Default Value cross check table record where the ParameterCode (and Boiler Type) is equal to the concatenation of "NOXR-" and the Boiler Type, and where the FuelCode is equal to the FuelCode in the current default record.

If the cross check record is not found,

return result A.

Otherwise,

If the DefaultValue in the current default record is valid, but is not equal to the DefaultValue in the cross check record,

return result B.

Otherwise,

If the DefaultPurposeCode is equal to "LM",

Locate the Default Parameter Code, Boiler Type, and Fuel Type to Default Value cross check table record where the ParameterCode (and Boiler Type) is equal to the ParameterCode in the current default record and the FuelCode is equal to the FuelCode in the current default record.

If the cross check record is not found,

return result A.

Otherwise,

If the DefaultValue in the current default record is greater than 0, but is not equal to the DefaultValue in the cross check record,

return result B.

Results:

Result	Description	Severity
A	You have reported a parameter for [key] that is not appropriate for the unit type and/or fuel burned at the location.	Critical Error Level 1
B	The default value [value] reported for [key] is not appropriate for the unit type and/or fuel burned at the location.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Default Evaluation *Condition:* Current Default Active *Equals* true

Check Code: DEFAULT-56

Check Name: NOXR LME Default Consistent with Controls and Unit Type

Related Former Checks: ARP-69E, ARP-77A, LME-EXP4

Applicability: LME Check

Specifications:

For a Monitoring Default record with a valid ParameterCode equal to "NOXR", a DefaultPurposeCode equal to "LM", a DefaultSourceCode not equal to "DEF", and consistent dates:

If the OperatingConditionCode is equal to "A",

Locate a Unit Control record for the location where the ParameterCode is equal to "NOX", the ControlCode is equal to "DLNB", "H2O", "NH3", "SCR", "SNCR", or "STM"; the InstallDate is null or is before the Default Evaluation End Date; and the RetireDate is null or after the Default Evaluation Begin Date.

If found,

return result A.

If the OperatingConditionCode is equal to "B" or "P",

Locate all Unit Type records for this location where the UnitTypeCode is not equal to "CC", "CT", "ICE", "IGC", or "OT";

the BeginDate is null or is before the Default Evaluation End Date; and the EndDate is null or after the Default Evaluation Begin Date.

If found,

return result B.

If the OperatingConditionCode is equal to "C",

Locate all Unit Control records for the location where the ParameterCode is equal to "NOX", the InstallDate is null or is before the Default Evaluation End Date; and the RetireDate is null or after the Default Evaluation Begin Date.

If not found,

return result C.

If found, and the control records do not span the entire default evaluation period,

return result D.

Results:

Result	Description	Severity
A	You reported a default record for indicating the use of a unit-and-fuel specific NOXR default value during any hour, but units with add-on NOx controls or Dry low-NOx technology can only use a unit-and-fuel specific NOXR default value during controlled hours.	Critical Error Level 1
B	You reported a default record for indicating the use of separate unit-and-fuel specific NOXR default values during base and peak load hours, but only combustion turbines can use separate unit-and-fuel specific NOXR default values during base and peak load hours.	Critical Error Level 1
C	You reported a default record for indicating the use of a unit-and-fuel specific NOXR default value during a controlled or uncontrolled hour, but you have not reported an active NOx control in your monitoring plan.	Critical Error Level 1

D	You reported a default record for indicating the use of a unit-and-fuel specific NOXR default value during a controlled or uncontrolled hour, but you have not reported NOx control records that span the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Default Evaluation *Condition:* Current Default Active *Equals* true

Check Code: DEFAULT-58

Check Name: Default Fuel Type Consistent with Unit Fuel

Related Former Checks: ARP-50

Applicability: General Check

Specifications:

For Monitoring Default record with a valid ParameterCode and consistent dates:

If Default Fuel Code Valid is equal to true, and the FuelCode is not equal to "NFS" or "MIX",

Locate all Unit Fuel records linked to the location where the FuelCode is equal to the Default Unit Fuel, the BeginDate is on or before the Default Evaluation End Date, and the EndDate is null or is on or after the Default Evaluation Begin Date.

If not found,

return result A.

If found, and the Begin and End Dates in the retrieved records do not span the entire default evaluation period,

return result B.

Results:

Result	Description	Severity
A	The Fuel Code [Fuel Code] for [key] is inconsistent with the active fuels for the associated unit.	Critical Error Level 1
B	The Fuel Code [Fuel Code] for [key] is inconsistent with the active fuels for the associated unit for part of the evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Default Evaluation

Condition: Current Default Active *Equals* true

Check Code: DEFAULT-73

Check Name: NOXR LME Defaults Consistent

Related Former Checks: ARP-77B, C, D

Applicability: LME Check

Specifications:

For a Monitoring Default record with a valid ParameterCode equal to "NOXR" and a DefaultPurposeCode equal to "LM", and consistent dates:

If the OperatingConditionCode is equal to "A" or "C",

Locate a Monitoring Default record for the location where the ParameterCode is equal to "NOXR", the DefaultPurposeCode is equal to "LM", the FuelCode is equal to the FuelCode in the current record; the OperatingConditionCode is not equal to the OperatingConditionCode in the current record; BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If found,

return result A.

If the OperatingConditionCode is equal to "B",

Locate a Monitoring Default record for the location where the ParameterCode is equal to "NOXR", the DefaultPurposeCode is equal to "LM", the DefaultSourceCode is not equal to "DEF", the FuelCode is equal to the FuelCode in the current record; the OperatingConditionCode is equal to "P"; BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If not found,

return result B .

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire default evaluation period,

return result C .

If the OperatingConditionCode is equal to "P",

Locate a Monitoring Default record for the location where the ParameterCode is equal to "NOXR", the DefaultPurposeCode is equal to "LM", the DefaultSourceCode is not equal to "DEF", the FuelCode is equal to the FuelCode in the current record; the OperatingConditionCode is equal to "B"; BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If not found,

return result D .

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire default evaluation period,

return result E .

Results:

Result	Description	Severity
A	You have reported a default value for [key], but you have also defined a	Critical Error Level 1

	concurrent NOXR default value for the same fuel.	
B	You have reported a default record for [key], but you have not reported a NOXR default value for this fuel for use during peak load hours that was active during the evaluation period.	Critical Error Level 1
C	You have reported a default record for [key], but you have not reported a NOXR default value for this fuel for use during peak load hours for the entire evaluation period.	Critical Error Level 1
D	You have reported a default record for [key], but you have not reported a NOXR default value for the fuel for use during base load hours that was active during the evaluation period.	Critical Error Level 1
E	You have reported a default record for [key], but you have not reported a NOXR default value for this fuel for use during base load hours for the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Default Evaluation

Condition: Current Default Active *Equals* true

Check Code: DEFAULT-74

Check Name: Overlapping Default Records

Related Former Checks: ARP-69B

Applicability: General Check

Specifications:

For a Monitoring Default record with a valid ParameterCode:

If Default Purpose Code Valid is equal to true,

Locate another Monitoring Default record for the location where the ParameterCode, DefaultPurposeCode, FuelCode, and OperatingConditionCode is equal to the ParameterCode, DefaultPurposeCode, FuelCode, and OperatingConditionCode in the current default record, the BeginDate and BeginHour is on or after the BeginDate and BeginHour in the current record and is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported more than one concurrently active [parameter] default records for purpose [purpose], fuel [fuel], and operating condition [condition].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Default Evaluation *Condition:* Current Default Active *Equals* true

Check Code: DEFAULT-75

Check Name: Default Value Consistent with Maximum Value

Related Former Checks: ARP-75A/C

Applicability: General Check

Specifications:

For a Monitoring Default record with a valid ParameterCode

If Default Value Valid is equal to true,

If the ParameterCode is equal to "CO2N",

Locate all Span records for the location where the ComponentTypeCode is equal to "CO2", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the MPCValue or MECValue in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "MEC or MPC for CO2", and return result A.

If the ParameterCode is equal to "O2N",

Locate all Span records for the location where the ComponentTypeCode is equal to "O2", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the MPCValue or MECValue in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "MEC or MPC for O2", and return result A.

If the ParameterCode is equal to "SO2X",

Locate all Span records for the location where the ComponentTypeCode is equal to "SO2", the SpanScaleCode is equal to "H", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the MPCValue in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "MPC for SO2", and return result A.

If the ParameterCode is equal to "NOCX",

Locate all Span records for the location where the ComponentTypeCode is equal to "NOX", the SpanScaleCode is equal to "H", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the MPCValue in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "MPC for NOX", and return result A.

If the ParameterCode is equal to "FLOX",

Locate all Span records for the location where the ComponentTypeCode is equal to "FLOW", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the MPFValue in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "MPF", and return result A.

If the ParameterCode is equal to "MNNX",

Locate all Monitor Default records for the location where the ParameterCode is equal to "NORX", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the DefaultValue in any of the retrieved records is greater than zero and less than the Default Value in the current record,

set Related Maximum to "Maximum NOx Emission Rate", and return result A.

If the ParameterCode is equal to "MNGF" or "MNOF"

Locate all System FuelFlow records for the location where the associated FuelCode and the UnitsOfMeasure are equal to the FuelCode and UnitsOfMeasure in the current default record, the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the MaximumFuelFlowRate in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "Maximum Fuel Flow Rate", and return result A.

If the ParameterCode is equal to "H2ON",

Locate all Monitor Default records for the location where the ParameterCode is equal to "H2OX", the BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If the DefaultValue in any of the retrieved records is greater than zero and less than the Default Value in the current record,

set Related Maximum to "Maximum Percent H2O", and return result A.

If the ParameterCode is equal to "MNHI",

Locate all Unit Capacity records linked to the location (or any unit linked to the location) where the BeginDate is on or before the Default Evaluation End Date, and the EndDate is null or is on or after the Default Evaluation Begin Date.

If the MaximumHourlyHeatInputCapacity in any of the retrieved records is greater than zero and less than the Default Value,

set Related Maximum to "Maximum Hourly Heat Input", and return result A.

Results:

Result	Description	Severity
A	You have reported a default value for [key] which is greater than the [maximum] for the location (and fuel).	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-78

Check Name: Rectangular Duct WAF Duct Width at Test Location Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the Duct Width is null,

return result A.

Otherwise,

If the DuctWidth is equal to or less than zero,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* true

Check Code: DEFAULT-79

Check Name: Rectangular Duct WAF Duct Depth at Test Location Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the Duct Depth is null,

return result A.

Otherwise,

If the DuctDepth is equal to or less than zero,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-80

Check Name: Rectangular Duct WAF Value Valid

Related Former Checks: ARP-80

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the WAFValue is null,

return result A.

If WAFValue is greater than 0 and less than 1,

If the WAFMethodCode is equal to "FT" or "AT" and the WAFValue is less than 0.9400,

return result B.

If the WAFMethodCode is equal to "DF" and the WAFValue is less than 0.9500,

return result C.

Othewise,

return result D.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You have reported a WAFValue for [key] that is below the minimum expectec value of .9400 when using method "FT" or "AT". Please re-check your measurements and calculations to ensure that your WAF is correct.	Informational Message
C	You have reported a WAFValue for [key] that is below the minimum expectec value of .9500 when using method "DF". Please re-check your measurements and calculations to ensure that your WAF is correct.	Informational Message
D	The [fieldname] for [key] is not within the range of valid values. This value must be greater than 0 and less than 1.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-81

Check Name: Rectangular Duct WAF Method of Determination Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the WAFMethodCode is null,

return result A.

Otherwise,

Locate the WAFMethodCode in the WAF Method Code lookup table.

If not found,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-82

Check Name: Rectangular Duct WAF Effective Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If WAFEffectiveDate is null,

return result A.

If WAFEffectiveDate is earlier than 01/01/2004 or later than the current date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation

Check Code: DEFAULT-83

Check Name: Rectangular Duct WAF Effective Hour Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If WAFEffectiveHour is null,

return result A.

If WAFEffectiveHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation

Check Code: DEFAULT-84

Check Name: Rectangular Duct WAF End Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If EndDate is not null, and is earlier than 01/01/2004 or later than the current date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation

Check Code: DEFAULT-85

Check Name: Rectangular Duct WAF End Hour Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation

Check Code: DEFAULT-86

Check Name: Rectangular Duct WAF Determination Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If WAFDeterminationDate is null,

return result A.

Otherwise,

If WAFDeterminationDate is earlier than 01/01/2004 or later than the current date,

return result B.

If WAFEffectiveDate is valid,

If the year of the WAFEffectiveDate is before the year of the WAFDeterminationDate,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1
C	You reported [datefield2] that is prior to the year of the [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-87

Check Name: Rectangular Duct WAF Number of WAF Test Runs Valid

Related Former Checks: ARP-81A

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the NumberOfWAFTestRuns is null,

return result A.

Otherwise,

If the NumberOfWAFTestRuns is not between 1 and 99,

return result B.

If the WAFMethodCode is equal to "FT" or "AT", and the Number of WAFTestRuns is less than 3,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
C	You have reported less than 3 test runs for [key], which is not valid when using method "FT" or "AT" to determine the WAF.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-88

Check Name: Rectangular Duct WAF Number of Method 1 Traverse Points in WAF Test Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the NumberOfTraversePointsWAF is null,

return result A.

Otherwise,

If the NumberOfTraversePointsWAF is not between 12 and 99,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-89

Check Name: Rectangular Duct WAF Number of Test Ports in WAF Test Valid

Related Former Checks: ARP-81B

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the NumberOfTestPorts is null,

return result A.

Otherwise,

If the NumberOfTestPorts is not between 1 and 99,

return result B.

If the WAFMethodCode is equal to "FT" or "AT", and the NumberOfTestPorts is less than 4,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
C	You have reported less than 4 as the Number of Test Ports for [key], which is not valid when using method "FT" or "AT" to determine the WAF.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-90

Check Name: Rectangular Duct WAF Number of Method 1 Traverse Points in Reference Flow RATA Test Valic

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

If the NumberOfTraversePointsRef is null,

return result A.

Otherwise,

If the NumberOfTraversePointsRef is not between 12 and 99,

return result B.

If the NumberOfTraversePointsWAF is valid and is not equal to the NumberOfTraversePointsRef,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
C	The Number of Traverse Points in the Reference Flow RATA is not equal to the Number of Method 1 Traverse Points in WAF Test for [key]. When you determine the rectangular duct WAF, you must use the same number of Method 1 traverse points as were used in conducting the Reference Flow RATA.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-91

Check Name: WAF Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the RectangularDuctWAF record:

If the EndDate is valid and not null, and the EndHour is null,

set WAF Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set WAF Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set WAF Dates and Hours Consistent to false, return result C.

Otherwise,

set WAF Dates and Hours Consistent to true.

Otherwise,

set WAF Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation
2	Monitoring Plan Evaluation Report ------ WAF Evaluation

Check Code: DEFAULT-92

Check Name: WAF Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a RectangularDuctWAF record with consistent Dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set WAF Active to false.

Otherwise,

set WAF Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the WAF Evaluation Begin Date to the Evaluation Begin Date.

set the WAF Evaluation Begin Hour to 0.

Otherwise,

set the WAF Evaluation Begin Date to the BeginDate.

set the WAF Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the WAF Evaluation End Date to the Evaluation End Date.

set the WAF Evaluation End Hour to 23.

Otherwise,

set the WAF Evaluation End Date to the EndDate.

set the WAF Evaluation End Hour to the EndHour.

Usage:

1	Monitoring Plan Evaluation Report ------ WAF Evaluation

Check Code: DEFAULT-93

Check Name: Flow System reported for WAF Record

Related Former Checks: ARP-79

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

Locate a MonitoringSystem record for the location where the SystemTypeCode is equal to "FLOW", the BeginDate/Hour is on or before the WAF Evaluation End Date and End Hour, and the EndDate is null or the EndDate/EndHour is on or after the WAF Evaluation Start Date and Start Hour.

If not found,

return result A.

Results:

Result	Description	Severity
A	You have reported [key], which indicates that a rectangular duct WAF is being applied to the stack flow values recorded by a CEM. However, you have not reported an active FLOW monitoring system at this location.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ WAF Evaluation
	Condition: Current WAF Active*Equals* True

Check Code: DEFAULT-95

Check Name: Duplicate Default Records

Related Former Checks:

Applicability: General Check

Specifications:

For a default record:

Locate another Default record for the location with a ParameterCode that is equal to the ParameterCode in the current record and a DefaultPurposeCode equal to the DefaultPurposeCode in the current record and a FuelCode equal to the FuelCode in the current record and an OperatingConditionCode equal to the OperatingConditionCode in the current record and a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another Default record for the location with a ParameterCode that is equal to the ParameterCode in the current record and a DefaultPurposeCode equal to the DefaultPurposeCode in the current record and a FuelCode equal to the FuelCode in the current record and an OperatingConditionCode equal to the OperatingConditionCode in the current record and an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation

Check Code: DEFAULT-96

Check Name: Duplicate WAF Records

Related Former Checks:

Applicability: General Check

Specifications:

For a RectangularDuctWAFData record:

Locate another RectangularDuctWAFData record for the location with a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another RectangularDuctWAFData record for the location with an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Rectangular Duct WAF Evaluation

Check Code: DEFAULT-97

Check Name: WAF Record Consistent with Stack Shape

Related Former Checks:

Applicability: CEM Check

Specifications:

For the RectangularDuctWAF record:

Locate a LocationAttribute record for the location where the ShapeCode is equal to "RECT", the BeginDate is on or before the WAF Evaluation End Date, and the EndDate is null or the EndDate is on or after the WAF Evaluation Start Date.

If not found,

return result A.

Results:

Result	Description	Severity
A	You have reported [key], which indicates that a rectangular duct WAF is being applied to the stack flow values recorded by a CEM. However, the active LocationAttribute record for the location does not indicate that the stack has a rectangular shape.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ WAF Evaluation

Condition: Current WAF Active*Equals* true

Check Code: DEFAULT-98

Check Name: Default Group ID Valid

Related Former Checks:

Applicability: LME Check

Specifications:

For the Default record with a valid ParameterCode:

If GroupID is not null,

If ParameterCode is not equal to "NOXR", or DefaultPurposeCode is not equal to "LM",

return result B.

Results:

Result	Description	Severity
A	You did not report a GroupID for [key]. If this location does not belong to an identical group of units, you do not need to report the default Hg concentration in a default record.	Critical Error Level 1
B	You reported a GroupID for [key], which is not appropriate for this parameter and purpose.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Evaluation Report ------ Default Evaluation
	Condition: Current Default Active *Equals* true

Check Code: DEFAULT-99

Check Name: Required Missing Data Default for NOXR LME Default

Related Former Checks:

Applicability: LME Check

Specifications:

For a Monitoring Default record with a valid ParameterCode equal to "NO XR", a DefaultPurposeCode equal to "LM", a DefaultSourceCode not equal to "DEF", and consistent dates:

Locate a Monitoring Default record for the location where the ParameterCode is equal to "NOR X ", the DefaultPurposeCode is equal to "M D ", the FuelCode is equal to the FuelCode in the current record; BeginDate and BeginHour is on or before the Default Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Default Evaluation Begin Date and Begin Hour.

If not found,

return result A .

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire default evaluation period,

return result B .

Results:

Result	Description	Severity
A	You have reported a unit-and-fuel specific default record for [key], but you have not reported a generic maximum NOx emission rate default value for the fuel for use during missing data hours.	Critical Error Level 1
B	You have reported a unit-and-fuel specific default record for [key], but you have not reported a generic maximum NOx emission rate default value for the fuel for use during missing data hours that was active during the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Default Evaluation *Condition:* Current Default Active *Equals* true

Check Category:

Formula

Check Code: FORMULA-1

Check Name: Formula Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Formula record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Code: FORMULA-2

Check Name: Formula Begin Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Formula record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Code: FORMULA-3

Check Name: Formula End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Formula record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Code: FORMULA-4

Check Name: Formula End Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Formula record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Code: FORMULA-5

Check Name: Formula Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Formula record:

If the EndDate is valid and not null, and the EndHour is null,

set Formula Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Formula Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Formula Dates and Hours Consistent to false, return result C.

Otherwise,

set Formula Dates and Hours Consistent to true.

Otherwise,

set Formula Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Code: FORMULA-6

Check Name: Formula Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a Formula record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current Formula Active to false.

Otherwise,

set Current Formula Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Formula Evaluation Begin Date to the Evaluation Begin Date.

Set the Formula Evaluation Begin Hour to 0.

Otherwise,

set the Formula Evaluation Begin Date to the BeginDate.

Set the Formula Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Formula Evaluation End Date to the Evaluation End Date.

Set the Formula Evaluation End Hour to 23.

Otherwise,

set the Formula Evaluation End Date to the EndDate.

Set the Formula Evaluation End Hour to the EndHour.

Usage:

1 Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Code: FORMULA-7

Check Name: Formula ID Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Formula record:

If the FormulaID is null,

return result A.

If the FormulaID does not consist of 3 alphanumeric characters:

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	The FormulaID [ID] has an invalid format. A FormulaID must contain three alphanumeric characters.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation
	Condition: Current Formula Active *Equals* true

Check Code: FORMULA-8

Check Name: Formula Parameter Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Formula record:

If the ParameterCode is null,

return result A.

Otherwise,

Locate a record in the List of Formula Parameter Codes (Parameter to Category Cross Check Table) where the ParameterCode is equal to the ParameterCode in the current Formula record and the CategoryCode is equal to "FORMULA".

If not found,

return result B.

If found,

Locate a Used Identifier record for the location where the Table Code is equal to "F" and the Identifier is equal to the Formula ID in the Formula record.

If found,

If the ParameterCode is not equal to the Type or Parameter Code in the retrieved record,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You have changed the ParameterCode for [key] from its previously reported value. You should only do this to correct invalid data. If you are using a different equation to calculate emissions, you should add a new formula.	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation
	Condition: Current Formula Active *Equals* true

Check Code: FORMULA-9

Check Name: Formula Code Valid

Related Former Checks: ARP-6, NBP-30

Applicability: General Check

Specifications:

For the Formula record with a valid ParameterCode:

S et O2 Component Required to false.

Set Moisture Method Required to false.

Set Formula Code Valid to true.

If the FormulaCode is null,

If the FormulaText is null,

return result A.

Otherwise,

Locate the FormulaCode in the Formula Code Lookup Table.

If not found,

set Formula Code Valid to false, and return result B.

If found,

If the Moisture Indicator in the lookup table is equal to 1,

set Moisture Method Required to true.

Locate a record in the Formula Parameter and Component Type and Basis to Formula Code cross check table where the ParameterCode and FormulaCode are equal to the ParameterCode and FormulaCode in the Formula record.

If not found,

set Formula Code Valid to false, and return result C.

If found,

If Component Type and Basis begins with "O2",

set O2 Component Required to true.

Locate a Used Identifier record for the location where the Table Code is equal to "F" and the Identifier is equal to the Formula ID in the Formula record.

If found and the Formula or Basis Code is not null,

If the FormulaCode is not equal to the Formula or Basis Code in the retrieved record,

return result D.

Results:

Result	Description	Severity

A	You did not report a formula code or formula text for [key]. If using a standard formula, you should report the formula code for that formula; otherwise, you must provide a formula text for the formula.	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Fatal
C	You have reported a [value] formula which is inappropriate for the ParameterCode [parameter] for [key].	Critical Error Level 1
D	You have changed the FormulaCode for [key] from its previously reported value. You should only do this to correct invalid data. If you are using a different equation to perform emissions calculations, you should add a new formula.	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation
2	Monitoring Plan Evaluation Report ------ Formula Evaluation
	Condition: Current Formula Active *Equals* true

Check Code: FORMULA-11

Check Name: Heat Input Apportionment/Summary Formula Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Formula record with a ParameterCode equal to "HI" and a FormulaCode equal to "F-21A", "F-21B", "F-21C', "F-21D", or "F-25":

Locate a Monitoring Method records for the location where the ParameterCode is equal to "HI", the MethodCode contains "CALC", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the End Date is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found,

If FormulaCode is equal to "F-25" and Location Type is not equal to "CS", or if FormulaCode begins with "F-21" and the Location Type is not equal to "US", "UP", or "UB",

return result B.

Otherwise,

If the FormulaCode is equal to "F-21A",

Locate a Monitor Load record for the location where the Units of Measure is equal to "KLBHR" or "MMBTUHR", the BeginDate is on or before the Formula Evaluation End Date, and the EndDate is null or on or after the Formula Evaluation Begin Date.

If found,

return result C.

If the FormulaCode is equal to "F-21B",

Locate a Monitor Load record for the location where the Units of Measure is equal to "MW", the BeginDate is on or before the Formula Evaluation End Date, and the EndDate is null or on or after the Formula Evaluation Begin Date.

If found,

return result C.

If the FormulaCode is equal to "F-21D",

Locate a Unit Stack Configuration where the unit location is the location in the Formula record, the associated StackPipeID begins with "CP", the BeginDate is on or before the Formula Evaluation End Date, and the EndDate is null or is on or after the Formula Evaluation Begin Date.

If not found,

return result D.

If found,

Locate a Monitoring Method record where the location is any of the stack/pipe locations in the ret rieve d Unit Stack Configuration records, the ParameterCode is equal to "HI", the MethodCode is equal to "AD",

the BeginDate is on or before the Formula Evaluation End Date, and the EndDate is null or on or after the Formula Evaluation Begin Date.

If not found,

return result D.

Results:

Result	Description	Severity
A	You have reported [key], but you have not reported a [method] method record, which is required for a [parameter] [code] formula, during the evaluation period.	Critical Error Level 1
B	You have reported a [parameter] [code] formula for [key], which is inappropriate for a [Location Type].	Critical Error Level 1
C	You reported [key], which is an [Code] heat input apportionment formula, but this formula code is not consistent with the units of measure in the active load record for the unit.	Critical Error Level 1
D	You reported [key], which indicates that you apportion heat input from a common pipe with an uncertified fuel flowmeter, but the unit is not linked to a common pipe that is using an Appendix D methodology to determine heat input.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Formula Evaluation

Condition: Current Formula Active *Equals* true

Check Code: FORMULA-12

Check Name: Formula Parameter and Code Consistent with Method and Fuel

Related Former Checks:

Applicability: General Check

Specifications:

For ***CurrentFormula*** where ***FormulaParameterValid*** and ***FormulaCodeValid*** are equal to true :

Locate records in the ***FormulaToRequiredMethodCrosscheck*** where FormulaCode is equal to ***CurrentFormula*** .FormulaCode.

If found,

Locate records in ***MethodRecords*** (for the location) where:

1) ParameterCode and MethodCode match the MethodParameter and MethodCode in one of the located crosscheck records, and

2) BeginDate/Hour is on or before the ***FormulaEvaluationEndDate / FormulaEvaluationEndHour*** , and

3) EndDate is null or EndDate/Hour is on or after the ***FormulaEvaluationBeginDate / FormulaEvaluationBeginHour*** .

If not found,

Set ***AppropriateMethodForFormula*** to the list of MethodParameter/MethodCode in the located crosscheck records.

Return result A.

Otherwise

Locate records in the ***FormulaToRequiredUnitFuelCrosscheck*** where FormulaCode is equal to ***CurrentFormula*** .FormulaCode.

If found,

Locate records in ***LocationFuelRecords*** (for the locations) where:

1) FuelCode matches the UnitFuelCode in one of the located crosscheck records, and

2) BeginDate is on or before the ***FormulaEvaluationEndDate*** , and

3) EndDate is null or is on or after the ***FormulaEvaluationBeginDate*** .

If not found,

Return result B.

Results:

Result	Description	Severity
A	You have reported [key], but you have not reported a [method] method record, which is required for a [parameter] [code] formula, during the evaluation period.	Critical Error Level 1
B	You have reported [key], but the unit is not burning coal, which is required when using this formula.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Formula Evaluation *Condition:* Current Formula Active *Equals* true

Check Code: FORMULA-13

Check Name: Formula Parameter and Code Consistent with System or Fuel

Related Former Checks: ARP-7, ARP-86

Applicability: General Check

Specifications:

For a Formula record with a valid ParameterCode and a valid FormulaCode:

If the FormulaCode is equal to "D-12", "D-15A", or "G-4A",

Locate all Monitor System records for the location where the SystemTypeCode is equal to "OILM", "OILV", or "GAS", SystemDesignationCode is equal to "P", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If less than two are found, or if the BeginDate/BeginHour and EndDate/EndHour of any pair of system records do not overlap during the evaluation period, AND the location is a unit,

Locate all Monitor System records for the location and all common pipe locations linked to the location where the SystemTypeCode is equal to "OILM", "OILV", or "GAS", SystemDesignationCode is equal to "P", the BeginDate and BeginHour (or intersection between the BeginDate and BeginHour of the System and the associated Unit Stack Configuration records) is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null (or EndDate of the System and the associated UnitStackConfiguration record are both null) or EndDate and EndHour (or intersection between the EndDate and EndHour of the System and the associated Unit Stack Configuration record) is on or after the Formula Evaluation Begin Date and Begin Hour.

If less than two are found, or if the BeginDate/BeginHour and EndDate/EndHour of any pair of system records do not overlap during the evaluation period,

If at least one system record is found,

Locate a Fuel Record for the location where the FuelGroup is equal to "GAS" or "OIL", the IndicatorCode is equal to "I" or "E", BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

If the Formula Code is equal to "D-15A",

Locate a Formula record for the location where the Formula Code is equal to "F-21A " , "F-21B", or "F-21D" , the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found, or if the BeginDate/BeginHour of any retrieved formula record does not overlap any of the retrieved system records during the evaluation period,

Set the Appropriate System or Component for Formula to "oil or gas", and return result A.

Otherwise,

Set the Appropriate System or Component for Formula to "oil or gas", and return result A.

Otherwise,

Set the Appropriate System or Component for Formula to "oil or gas", and return result A.

If the FormulaCode is equal to "E-2",

Locate all Monitor System records for the location where the SystemTypeCode is equal to "NOXE", the FuelCode is not equal to "MIX", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If less than two are found, or if the BeginDate/BeginHour and EndDate/EndHour of any pair of system records do not overlap during the evaluation period,

Set the Appropriate System or Component for Formula to "NOXE", and return result A.

If the FormulaCode is equal to "D-3",

Locate a Monitoring System record for the location where the SystemType is equal to "OILV", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

Set the Appropriate System or Component for Formula to "OILV", and return result B.

If the FormulaCode is equal to "N-GAS",

Locate a Monitoring System record for the location where the SystemType is equal to "GAS", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via the System Component table) to at least two concurrently active Component records with a ComponentTypeCode equal to "GFFM" or "BGFF".

If not found,

Set the Appropriate System or Component for Formula to "GAS", and return result C.

If the FormulaCode is equal to "N-OIL",

Locate a Monitoring System record for the location where the SystemType is equal to "OILM" or "OILV", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via the System Component table) to at least two concurrently active Component records with a ComponentTypeCode equal to "OFFM" or "BOFF".

If not found,

Set the Appropriate System or Component for Formula to "OILM or OILV", and return result C.

If the FormulaCode is equal to "X-FL" or "T-FL",

Locate a Monitoring System record for the location where the SystemType is equal to "FLOW", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via the System Component table) to at least two concurrently active Component records with a ComponentTypeCode equal to "FLOW".

If not found,

Set the Appropriate System or Component for Formula to "FLOW", and return result C.

If the ParameterCode is equal to "H2O",

Locate a Monitoring System record for the location where the SystemType is equal to "H2O", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

Set the Appropriate System or Component for Formula to "H2O", and return result B.

Otherwise,

Locate all records in the Formula Parameter and Component Type and Basis to Formula Code cross check table where the ParameterCode and FormulaCode are equal to the ParameterCode and FormulaCode in the Formula record and the ComponentTypeAndBasis is not null.

If found,

If the ParameterCode is equal to "NOXR",

For each of the retrieved cross-check records where ComponentTypeAndBasis does not equal "O2B",

If the ComponentTypeAndBasis begins with "O2",

Locate a Monitoring System record for the location where the SystemType is equal to "NOX", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via the System Component table) to Component records with a concatenated ComponentTypeCode + BasisCode equal to the ComponentTypeAndBasis in the cross-check record or "O2B",

If not found,

Set the Appropriate System or Component for Formula to "NOX", and return result B.

Otherwise,

Locate a Monitoring System record for the location where the SystemType is equal to "NOX", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via the System Component table) to Component records with a concatenated ComponentTypeCode + BasisCode equal to the ComponentTypeAndBasis in the retrieved cross-check records.

If not found,

Set the Appropriate System or Component for Formula to "NOX", and return result B.

If the ParameterCode is equal to "SO2R",

For each of the retrieved cross-check records,

If the ComponentTypeAndBasis begins with "O2",

Locate a Monitoring System record for the location where the SystemType is equal to "SO2R", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via the System Component table) to Component records with a concatenated ComponentTypeCode + BasisCode equal to the ComponentTypeAndBasis in the cross-check record or "O2B",

If not found,

Set the Appropriate System or Component for Formula to "SO2R", and return result B.

Otherwise,

Locate a Monitoring System record for the location where the SystemType is equal to "SO2R", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour, and the Monitoring System record is linked during the formula evaluation period (via

the System Component table) to Component records with a concatenated ComponentTypeCode + BasisCode equal to the ComponentTypeAndBasis in the retrieved cross-check records.

If not found,

Set the Appropriate System or Component for Formula to "SO2R", and return result B.

Otherwise,

Locate a System Component record for the location where the concatenated ComponentTypeCode + BasisCode is equal to the ComponentTypeAndBasis in any of the retrieved cross-check records, the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

If the ComponentTypeAndBasis in any of the retreived cross-check records is equal to "GFFM" or "BGFF",

Locate a Fuel Record for the location where the FuelGroup is equal to "GAS", the IndicatorCode is equal to "I" or "E", BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If found,

exit this check with no result.

If the ComponentTypeAndBasis in any of the retreived cross-check records is equal to "OFFM" or "BOFF",

Locate a Fuel Record for the location where the FuelGroup is equal to "OIL", the IndicatorCode is equal to "I" or "E", BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If found,

exit this check with no result.

Set the Appropriate System or Component for Formula to the list of ComponentTypeAndBasis values in the retrieved cross-check records, and return result D.

Results:

Result	Description	Severity
A	You reported [key], which is a [parameter] summation formula for multiple fuels, but you did not report two [system type] systems during the evaluation period.	Critical Error Level 1
B	You reported [key], but you did not report a [system type] monitoring system that is appropriate for a [parameter] [code] formula.	Critical Error Level 2
C	You reported a [parameter] formula for [key], but you have not reported a [system type] system containing more than one component to measure flow.	Critical Error Level 1
D	You reported [key], but you did not report a component with a component type code and basis code that is appropriate for the formula. A [parameter] [code] formula requires a [component and basis] component.	Critical Error Level 2

Usage:

1	Monitoring Plan Evaluation Report ------ Formula Evaluation

Condition: Current Formula Active *Equals* true

Check Code: FORMULA-14

Check Name: Formula Code Consistent with Fuel

Related Former Checks: NBP-32

Applicability: General Check

Specifications:

For a Formula record with a ParameterCode equal to "SO2" and a FormulaCode equal to "F-23" or "D-5",

If FormulaCode is equal to "D-5",

Locate a Unit Fuel record linked to the location where the FuelCode is equal to "PNG" or "NNG", the BeginDate is on or before the Formula Evaluation End Date, and the EndDate is null or on or after the Formula Evaluation Begin Date.

If not found,

return result A.

If FormulaCode is equal to "F-23",

Locate a Unit Fuel record linked to the location where the associated FuelGroup is equal to "GAS" or "OIL", the BeginDate is on or before the Formula Evaluation End Date, and the EndDate is null or on or after the Formula Evaluation Begin Date.

If not found,

return result A.

Results:

Result	Description	Severity
A	You reported [key], but you did not burn natural gas at the unit, which is required when using a [Code] formula.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Formula Evaluation *Condition:* Current Formula Active *Equals* true

Check Code: FORMULA-15

Check Name: Required H2O Method Reported for Formula

Related Former Checks: ARP-46

Applicability: General Check

Specifications:

For a Monitor Formula record with a valid ParameterCode and a valid FormulaCode:

Set Moisture Default Required to false.

If Moisture Method Required equal to true:

Locate all Monitoring Method records for the location with a ParameterCode equal to "H2O", a BeginDate and BeginHour on or before the Formula Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found,

If the MethodCode in any of the retrieved records is equal to "MMS", "MWD", or "MTB",

set Moisture Default Required to true.

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved method records do not span the entire formula evaluation period,

return result B.

Results:

Result	Description	Severity
A	You have reported a [code] formula for [key] that requires moisture correction, but you have not defined a methodology that was active during the evaluation period for determining H2O.	Critical Error Level 1
B	You have reported a [code] formula for [key] which requires moisture correction, but you have not reported H2O method records that span the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Formula Evaluation *Condition:* Current Formula Active *Equals* true

Check Code: FORMULA-16

Check Name: Required Formula Reported for F-Factor Formula

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitor Formula record with a ParameterCode equal to "FD", "FC", or "FW", and a valid FormulaCode:

Locate all records in the Formula Code to F-Factor Parameter cross-check table where the ParameterCode is equal to the ParameterCode in the formula record.

Locate all Monitor Formula records for the location where the FormulaCode is equal to the FormulaCode in any of the retrieved cross-check records, a BeginDate and BeginHour that is on or before the Formula Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the entire formula evaluation period,

return result B.

Results:

Result	Description	Severity
A	You have reported an F-factor formula [Formula ID], but no corresponding formulas that were active during the evaluation period that require the use of an F-factor.	Critical Error Level 1
B	You have reported an F-factor formula [Formula ID], but the corresponding formulas that use the F-factor do not span the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Formula Evaluation

Condition: Current Formula Active *Equals* true

Check Code: FORMULA-17

Check Name: Required Defaults Reported for Formula

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor Formula record with a ParameterCode equal to "HI" and a valid FormulaCode:

Set Missing Default for Formula to null.

Set Incomplete Default for Formula to null.

If O2 Component Required is equal to true.

Locate a MonitorDefault record for the location where the ParameterCode is equal to "O2N", the BeginDate and BeginHour is on or before the Formula Evaluation End Date and End Hour, and the End Date is null or the EndDate and EndHour is on or after the Formula Evaluation Begin Date and Begin Hour.

If not found,

append "O2N" to Missing Default for Formula.

If found, and the retrieved records do not span the entire formula evaluation periods,

append "O2N" to Incomplete Default for Formula.

If Missing Default for Formula is not null, and Incomplete Default for Formula is null,

return result A.

If Missing Default for Formula is null, and Incomplete Default for Formula is not null,

return result B.

If Missing Default for Formula is not null, and Incomplete Default for Formula is not null,

return result C.

Results:

Result	Description	Severity
A	You did not report [missing] default record(s) that was/were active during the evaluation period for this location. These defaults are required when using formula code [code] to calculate HI during missing data situations.	Critical Error Level 1
B	You did not report [incomplete] default record(s) for this location for the entire evaluation period. These defaults are required when using formula code [code] to calculate HI during missing data situations.	Critical Error Level 1
C	You did not report [missing] default record(s) that was/were active during the evaluation period for this location. Also, you did not report [incomplete] default record(s) that are active for the entire evaluation period. These defaults are required when using formula code [code] to calculate HI during missing data situations.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Formula Evaluation *Condition:* Current Formula Active *Equals* true

Check Code: FORMULA-18

Check Name: Duplicate Formula Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Formula record:

Locate another Formula record for the location with a FormulaID that is equal to the FormulaID in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Formula Evaluation

Check Code: FORMULA-19

Check Name: MATS Apportionment/Summary Formula Validation

Related Former Checks:

Applicability: General Check

Specifications:

For a ***CurrentFormula*** record with a ParameterCode equal to " HGRE " , "HCLRE", "HFRE", "SO2RE", " HGRH " , "HCLRH", "HFRH", or "SO2RH",

If ***CurrentFormula*** . FormulaCode is equal to "MS-1 " ,

Locate records in ***MethodRecords*** where:

1) ParameterCode is equal to ***CurrentFormula*** .ParameterCode.

2) MethodCode is equal to "CALC".

3) BeginDateHour is on or before ***FormulaEvaluationEndDate/Hour*** .

4) EndDateHour is null or is on or after ***FormulaEvaluationBeginDate/Hour*** .

If not found,

return result A.

/* Ensure the location is a unit linked to one or more stacks */

Else if ***LocationType*** is NOT equal to "US",

return result B.

/* Ensure the unit is only linked to MS and not to CS */

Else

Locate a record in ***UnitStackConfigurationRecords*** where :

1) unit location is the location of ***CurrentFormula*** .

2) StackPipeID does not begin with " MS " .

3) BeginDate is on or before ***FormulaEvaluationEndDate*** .

4) EndDate is null or is on or after ***FormulaEvaluationBeginDate*** .

If found,

return result B.

Results:

Result	Description	Severity
A	The reported Formula Code of "MS-1" is must be associated with a unit level MATS reporting method of "CALC".	Critical Error Level 1
B	The reported Formula Code of "MS-1" is only appropriate for multiple stack configurations.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Formula Evaluation

Check Category:

Fuel

Check Code: FUEL-39

Check Name: Fuel Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitFuelData record with consistent Dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Fuel Active to false.

Otherwise,

set Fuel Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Fuel Evaluation Begin Date to the Evaluation Begin Date.

Otherwise,

set the Fuel Evaluation Begin Date to the BeginDate.

If the EndDate is null or is after the Evaluation End Date,

set the Fuel Evaluation End Date to the Evaluation End Date.

Otherwise,

set the Fuel Evaluation End Date to the EndDate.

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation

Check Code: FUEL-40

Check Name: Unit Fuel Demonstration GCV Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record with a DemGCV that is not null:

Locate record in the Fuel Demonstration Method lookup table where the DEM_PARAMETER is equal to 'GCV' and the Dem_Method is equal to the DemGCV in the current UnitFuelData record.

If not found,

return result A.

If found, and the Fuel Group is not null,

If the Fuel Group is not equal to "GAS" or "OIL",

return result B.

Results:

Result	Description	Severity
A	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
B	You have provided the demonstration method for GCV monthly fuel sampling or %S daily or annual fuel sampling for [key] but this information is not appropriate for this fuel.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-41

Check Name: Unit Fuel Demonstration SO2 Valid

Related Former Checks: ARP-32A

Applicability: General Check

Specifications:

For the UnitFuelData record with a DemSO2 that is not null:

Locate record in the Fuel Demonstration Method lookup table where the DEM_PARAMETER is equal to 'SULFUR' and the Dem_Method is equal to the DemSO2 in the current UnitFuelData record.

If not found,

return result A.

If found, and the Fuel Group is not null,

If the Fuel Group is not equal to "GAS" or "OIL",

return result B.

Results:

Result	Description	Severity
A	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
B	You have provided the demonstration method for GCV monthly fuel sampling or %S daily or annual fuel sampling for [key] but this information is not appropriate for this fuel.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-42

Check Name: Unit Fuel Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1930 or later than Maximum Future Date,

return result B.

If either the Commence Operation Date or Commercial Operation Date of the unit is not null, and the BeginDate is prior to the earlier of the Commence Operation Date or Commercial Operation Date,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1
C	You reported a BeginDate of [date], which is earlier than the date reported as the commence operation (CO) or commence commercial operation (CCO) date. If the fuel began to be used between the CO and CCO dates and you have only reported the CCO date, use the CCO date as the BeginDate to eliminate this error.	Non-Critical Error

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation

Check Code: FUEL-43

Check Name: Unit Fuel End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation

Check Code: FUEL-44

Check Name: Fuel Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record:

If the BeginDate is valid and the EndDate is valid,

If EndDate is not null, and the BeginDate is after the EndDate,

set Fuel Dates Consistent to false, and return result A.

Otherwise,

set Fuel Dates Consistent to true.

Otherwise,

set Fuel Dates Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation

Check Code: FUEL-45

Check Name: Unit Fuel Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record:

If the FuelCode is null,

return result A.

Otherwise,

Locate FuelCode in the Fuel Code Lookup Table.

If found,

set Fuel Group to the Fuel Group in the retrieved record.

If not found,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-46

Check Name: Fuel Consistent with Unit Type

Related Former Checks:

Applicability: General Check

Specifications:

For a Fuel record with a FuelCode equal to "C":

Locate all Unit Type records for the unit where the UnitTypeCode is equal to "CT", "CC", "ICE", or "OT", the BeginDate is on or before the Fuel Evaluation End Date, and the EndDate is null or is on or after the Fuel Evaluation Start Date.

If found,

return result A.

Results:

Result	Description	Severity
A	The fuel type for [key] is not appropriate for this type of unit.	Non-Critical Error

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-48

Check Name: Fuel Demonstration Methods Consistent with Method

Related Former Checks: ARP-32B

Applicability: General Check

Specifications:

For the Unit Fuel record with a valid non-null DemGCV or a valid non-null DemSO2:

Locate a MonitoringMethod record where the location is the unit in the fuel record, the MethodCode begins with "AD", a BeginDate that is on or before the Fuel Evaluation End Date, and an EndDate that is null or is on or after the Fuel Evaluation Start Date.

If not found,

Locate all UnitStackConfiguration records where the unit location is unit in the Unit Fuel record, the associated StackPipeID begins with "CP" or "MP", the BeginDate is on or before the Fuel Evaluation End Date, and the EndDate is null or is on or after the Fuel Evaluation Start Date.

If no UnitStackConfiguration records are found,

return result A.

Otherwise,

Locate MonitoringMethod records where the location is any stack/pipe location in the retrieved Unit Stack Configuration records, the MethodCode begins with "AD", the BeginDate is on or before the Fuel Evaluation End Date, and the EndDate is null or is on or after the Fuel Evaluation Start Date.

If no records are found,

return result A.

Results:

Result	Description	Severity
A	You have provided the demonstration method for GCV monthly fuel sampling or for %S daily or annual fuel sampling for [key], but you did not indicate the use of Appendix D for this unit.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-49

Check Name: Unit Fuel Ozone Season Indicator Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record:

If the OzoneSeasonIndicator is equal to "1" and the IndicatorCode is not equal to "S",

return result A.

Results:

Result	Description	Severity
A	The ozone season indicator only applies to secondary fuels, but you have reported this indicator for a non-secondary fuel for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-51

Check Name: Unit Fuel Primary/Secondary Indicator Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the UnitFuelData record:

If the IndicatorCode is null,

return result A.

Otherwise,

Locate IndicatorCode in the Fuel Indicator Code Lookup Table.

If not found,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Fuel Evaluation
	Condition: Current Fuel Active *Equals* true

Check Code: FUEL-52

Check Name: Duplicate Unit Fuel Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Unit Fuel record:

Locate another Fuel record for the location with a FuelCode equal to the FuelCode in the current record and BeginDate that is equal to the BeginDate in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null,

Locate another UnitFuel record for the unit with a FuelCode equal to the FuelCode in the current record and EndDate that is equal to the EndDate in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Fuel Evaluation

Check Category:

Fuel Flow

Check Code: FUELFLW-2

Check Name: Fuel Flow Maximum Fuel Flow Rate Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If the MaximumFuelFlowRate is null,

return result A.

Otherwise,

If the MaximumFuelFlowRate is not greater than zero,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation
	Condition: Current Fuel Flow Active *Equals* true

Check Code: FUELFLW-3

Check Name: Fuel Flow Begin Date Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Check Code: FUELFLW-4

Check Name: Fuel Flow Begin Hour Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Check Code: FUELFLW-5

Check Name: Fuel Flow End Date Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Check Code: FUELFLW-6

Check Name: Fuel Flow End Hour Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Check Code: FUELFLW-7

Check Name: Fuel Flow Dates and Hours Consistent

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If the EndDate is valid and not null, and the EndHour is null,

set System FuelFlow Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set System FuelFlow Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set System FuelFlow Dates and Hours Consistent to false, return result C.

Otherwise,

set System FuelFlow Dates and Hours Consistent to true.

Otherwise,

set System FuelFlow Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Check Code: FUELFLW-8

Check Name: Fuel Flow Maximum Fuel Flow Rate Source Code Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If the MaximumFuelFlowRateSourceCode is null,

return result A.

Otherwise,

Locate the MaximumFuelFlowRateSourceCode in the Fuel Flow Maximum Rate Source Code Lookup Table.

If not found,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation
	Condition: Current Fuel Flow Active *Equals* true

Check Code: FUELFLW-10

Check Name: Fuel Flow Units of Measure Code Valid

Related Former Checks: NBP-67

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record:

If the UnitsOfMeasureCode is null,

return result A.

Otherwise,

Locate the MonitoringSystemFuelFlowData UnitsOfMeasureCode in the Parameter Units of Measure Lookup Table where the ParameterCode is equal to the System Parameter Code and the UnitsOfMeasure is equal to the UnitsOfMeasure in the MonitoringSystemFuelFlowData record.

If not found,

Locate the UnitsOfMeasure in the Units of Measure Code Lookup Table.

If not found,

return result B.

If found,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Fatal
C	You defined a Units of Measure of [value] that is inappropriate for the system type for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation
2	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation
	Condition: Current Fuel Flow Active *Equals* true

Check Code: FUELFLW-11

Check Name: Fuel Flow Active Status

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a MonitoringSystemFuelFlowData record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current Fuel Flow Active to false.

Otherwise,

set Current Fuel Flow Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Fuel Flow Evaluation Begin Date to the Evaluation Begin Date.

set the Fuel Flow Evaluation Begin Hour to 0.

Otherwise,

set the Fuel Flow Evaluation Begin Date to the BeginDate.

set the Fuel Flow Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Fuel Flow Evaluation End Date to the Evaluation End Date.

set the Fuel Flow Evaluation End Hour to 23.

Otherwise,

set the Fuel Flow Evaluation End Date to the EndDate.

set the Fuel Flow Evaluation End Hour to the EndHour.

Usage:

1	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Check Code: FUELFLW-17

Check Name: Overlapping Fuel Flow Records

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For a SystemFuelFlow record with consistent dates:

Locate another SystemFuelFlow record for the system with a BeginDate/BeginHour that is on or after the BeginDate/BeginHour in the current record and is on or before the Fuel Flow Evaluation End Date/Hour, and an EndDate/EndHour that is null or is on or after the Fuel Flow Evaluation Start Date/Hour.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported more than one associated fuel flow record for System ID [System ID] with overlapping start and end times during the evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation

Condition: Current Fuel Flow Active *Equals* true

Check Code: FUELFLW-18

Check Name: System and FuelFlow Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For a MonitoringSystemFuelFlowData record with consistent dates and an associated Monitoring System record with consistent dates:

If the BeginDate in the current Monitoring System record is after the BeginDate in the current SystemFuelFlow record

return result A.

If the BeginDate in the current Monitoring System record is equal to the BeginDate in the current SystemFuelFlow record, and the BeginHour in the current Monitoring System record is after the BeginHour in the current SystemFuelFlow record,

return result A.

If the EndDate in the current Monitoring System record is not null, and the EndDate in the current SystemFuelFlow record is null,

return result A.

If the EndDate in the current Monitoring System record is prior to the EndDate in the current SystemFuelFlow record,

return result A.

If the EndDate in the current Monitoring System record is equal to the EndDate in the current SystemFuelFlow record, and the EndHour in the current Monitoring System record is prior to the EndHour in the current SystemFuelFlow record,

return result A.

Results:

Result	Description	Severity
A	The Start and End Date/Hour for [key] is inconsistent with the Start and End Date/Hour for the associated monitoring system.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --------- System FuelFlow Evaluation *Condition:* Current Fuel Flow Active *Equals* true

Check Code: FUELFLW-19

Check Name: Duplicate System Fuel Flow Records

Related Former Checks:

Applicability: General Check

Specifications:

For a System Fuel Flow record:

Locate another System Fuel Flow record for the system with a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another System Fuel Flow record for the system with an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System FuelFlow Evaluation

Check Category:

Load

Check Code: LOAD-1

Check Name: Load Analysis Date Valid

Related Former Checks: ARP-31A/B

Applicability: General Check

Specifications:

For a MonitoringLoadData Record:

If Load Levels Required is equal to false,

If the LoadAnalysisDate is not null,

return result A.

Otherwise,

If LoadAnalysisDate is null,

If the fourth quarter after the ***Current Location*** .CommenceCommercialOperationDate begins before the current system date,

return result B.

Otherwise,

return result E.

Otherwise,

If LoadAnalysisDate is prior to 1/1/1993,

return result C.

If the LoadAnalysisDate is later than the BeginDate,

If the BeginDate is on or after 1/1/2001,

return result D.

Results:

Result	Description	Severity
A	You have provided extraneous data in [fieldname] in the Monitor Load record for [key]. This information is generally not required for a location without CEMs or for a peaking unit or a stack serving only peaking units.	Non-Critical Error
B	For [key] you have not provided required data in [fieldname] for a non-peaking unit.	Critical Error Level 1
C	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1
D	You reported [datefield2] which is prior to [datefield1] for [key].	Informational Message
E	For [key] you have not provided required data in [fieldname] for a non-peaking unit. You must provide this information as soon as you have conducted a load analysis.	Informational Message

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation

Condition: Current Load Active *Equals* true

Check Code: LOAD-2

Check Name: Load Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation

Check Code: LOAD-3

Check Name: Load Begin Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation

Check Code: LOAD-4

Check Name: Load End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation

Check Code: LOAD-5

Check Name: Load End Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation

Check Code: LOAD-6

Check Name: Load Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData record:

If the EndDate is valid and not null, and the EndHour is null,

set Load Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Load Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Load Dates and Hours Consistent to false, return result C.

Otherwise,

set Load Dates and Hours Consistent to true.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation

Check Code: LOAD-7

Check Name: Load Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a MonitoringLoadData record with consistent Dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Load Active to false.

Otherwise,

set Load Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Load Evaluation Begin Date to the Evaluation Begin Date.

set the Load Evaluation Begin Hour to 0.

Otherwise,

set the Load Evaluation Begin Date to the BeginDate.

set the Load Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Load Evaluation End Date to the Evaluation End Date.

set the Load Evaluation End Hour to 23.

Otherwise,

set the Load Evaluation End Date to the EndDate.

set the Load Evaluation End Hour to the EndHour.

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation

Check Code: LOAD-8

Check Name: Maximum Load Value Valid

Related Former Checks: ARP-70A

Applicability: General Check

Specifications:

For a MonitoringLoadData Record:

If the Non Load Based Indicator is equal to 1,

If the MaximumLoadValue is not null,

return result A.

Otherwise,

If the MaximumLoadValue is null,

return result B.

Otherwise,

If the MaximumLoadValue is less than or equal to zero,

return result C.

Results:

Result	Description	Severity
A	You have indicated that this unit/stack is a non-load-based unit/stack, but you have reported maximum hourly load information. Non-load-based units and stacks should not report maximum hourly load.	Critical Error Level 1
B	You have indicated that this unit/stack is a load-based unit/stack, but you have not reported maximum hourly load information. Load-based units and stacks must report maximum hourly load.	Critical Error Level 1
C	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation
	Condition: Current Load Active *Equals* true

Check Code: LOAD-9

Check Name: Load Upper Operation Boundary Valid

Related Former Checks: ARP-30

Applicability: General Check

Specifications:

For the MonitoringLoadData Record:

If Range of Operation Required is equal to true,

If the UpperOperationBoundary is null,

return result A.

Otherwise,

If the UpperOperationBoundary is not greater than zero,

return result B.

If the UpperOperationBoundary is greater than the MaximumLoadValue and MaximumLoadValue is greater than 0,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1
C	The Upper Boundary Range provided for [key] exceeds the maximum hourly gross load in Monitor Load record data.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation *Condition:* Current Load Active *Equals* true

Check Code: LOAD-10

Check Name: Load Lower Operation Boundary Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData Record:

If Range of Operation Required is equal to true,

If the LowerOperationBoundary is null,

return result A.

Otherwise,

If the LowerOperationBoundary is less than zero,

return result B.

If the LowerOperationBoundary is greater than or equal to the UpperOperationBoundary and UpperOperationBoundary is greater than 0,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1
C	The Lower Boundary Range provided for [key] exceeds the Upper Boundary Range in Monitor Load record data.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation *Condition:* Current Load Active *Equals* true

Check Code: LOAD-11

Check Name: Load Normal Level Code Valid

Related Former Checks: ARP-31A/B

Applicability: General Check

Specifications:

For a MonitoringLoadData Record:

If Load Levels Required is equal to false,

If the NormalLevelCode is not null,

return result A.

Otherwise,

If NormalLevelCode is null,

If the current system date is more than 180 days after the earliest CommenceCommercialOperationDate in the ***Current Location*** record,

return result B.

Otherwise,

return result D.

Otherwise,

If the NormalLevelCode is not equal to "H", "L", or "M",

return result C.

Results:

Result	Description	Severity
A	You have provided extraneous data in [fieldname] in the Monitor Load record for [key]. This information is generally not required for a location without CEMs or for a peaking unit or a stack serving only peaking units.	Non-Critical Error
B	For [key] you have not provided required data in [fieldname] for a non-peaking unit.	Critical Error Level 1
C	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
D	For [key] you have not provided required data in [fieldname] for a non-peaking unit. You must provide this information as soon as you have conducted a load analysis (or prior to the completion of any certification RATA).	Informational Message

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation *Condition:* Current Load Active *Equals* true

Check Code: LOAD-12

Check Name: Load Second Level Code Valid

Related Former Checks: ARP-31A/B

Applicability: General Check

Specifications:

For a MonitoringLoadData Record:

If Load Levels Required is equal to false,

If the SecondLevelCode is not null,

return result A.

Otherwise,

If SecondLevelCode is null,

If NormalLevelCode is not null

return result B.

Otherwise,

If the SecondLevelCode is not equal to "H", "L", or "M",

return result C.

Otherwise,

If SecondLevelCode is equal to the NormalLevelCode,

return result D.

Results:

Result	Description	Severity
A	You have provided extraneous data in [fieldname] in the Monitor Load record for [key]. This information is generally not required for a location without CEMs or for a peaking unit or a stack serving only peaking units.	Non-Critical Error
B	For [key] you have not provided required data in [fieldname] for a non-peaking unit.	Critical Error Level 1
C	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
D	You reported the same value [value] for both the NormalLevelCode and SecondLevelCode for [key]. The NormalLevelCode and the SecondLevelCode cannot be the same.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation *Condition:* Current Load Active *Equals* true

Check Code: LOAD-13

Check Name: Maximum Load Units of Measure Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a MonitoringLoadData record:

Set Maximum Load Units of Measure Valid to true.

If the Non Load Based Indicator is 1,

If the MaximumLoadUnitsOfMeasureCode is not null,

set Maximum Load Units of Measure Valid to false, and return result A.

Otherwise,

If the MaximumLoadUnitsOfMeasureCode is null,

set Maximum Load Units of Measure Valid to false, and return result B.

Otherwise,

Locate the MaximumLoadUnitsOfMeasureCode in the Parameter Units of Measure Lookup Table where the ParameterCode is equal to "LOAD" and the UnitsOfMeasure is equal to the MaximumLoadUnitsOfMeasure.

If not found,

set Maximum Load Units of Measure Valid to false, and return result C.

Results:

Result	Description	Severity
A	You have reported a Maximum Load Units of Measure value for [key]. However, this value should only be reported for load based locations.	Critical Error Level 1
B	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
C	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Evaluation Report ------ Load Evaluation
	Condition: Current Load Active *Equals* true

Check Code: LOAD-17

Check Name: Overlapping Loads

Related Former Checks: ARP-29B

Applicability: General Check

Specifications:

For a MonitoringLoadData record with consistent dates:

Locate another MonitoringLoad record for the location with a BeginDate/BeginHour that is on or after the BeginDate/BeginHour in the current record and is on or before the Load Evaluation End Date/EndHour, and an EndDate/EndHour that is null or is on or after the Load Evaluation Begin Date/BeginHour.

If found,

return result A.

Results:

Result	Description	Severity
A	You have submitted overlapping active Load records for [key] defining the Range of Operation for a CEMS unit/stack. There may only be one active Load record at any time within the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation
	Condition: Current Load Active *Equals* true

Check Code: LOAD-19

Check Name: Load Units of Measure Consistent Across Linked Locations

Related Former Checks: NBP-5

Applicability: General Check

Specifications:

For a Load record with a valid maximum load Units of Measure:

If the Location Type does not begin with "U", the Location Non Load Based Indicator is not equal to 1,

Locate all Mp UnitStackConfiguration records where the stack location is the location in the Load record, the BeginDate is on or before the Load Evaluation End Date and the EndDate is null or is on or after the Load Evaluation Start Date.

For each Mp UnitStackConfiguration record found,

Locate all Load records where the location is the unit location in the Mp UnitStackConfiguration record, the BeginDate/Hour is on or before the Load Evaluation End Date and End Hour and the EndDate is null or the EndDate/Hour is on or after the Load Evaluation Start Date and Start Hour.

For any record found:

If the MaximumLoadUnitsOf Measure for the unit is not null, and is not equal to MaximumLoadUnitsOfMeasure for the stack or pipe,

return result A.

Results:

Result	Description	Severity
A	You reported the units of measure for maximum load for this stack or pipe as [value], but the units of measure for maximum load(s) for the associated unit (s) were not reported with the same units of measure. The maximum load for stacks or pipes and associated units must be reported with the same units of measure.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation *Condition:* Current Load Active *Equals* true

Check Code: LOAD-20

Check Name: Determine Load Requirement

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitor Load record:

Set Range of Operation Required and Load Levels Required to false.

Locate a Monitoring System record for the location where the SystemTypeCode is equal to "SO2", "SO2R", "NOX", "NOXC", "CO2", "O2", "FLOW", "HG", "HCL", or "HF" the BeginDate/Hour is on or before the Load Evaluation End Date and End Hour, and the EndDate is null or the EndDate/Hour is on or after the Load Evaluation Start Date and Start Hour.

If found,

set Range of Operation Required to true.

If Location Type begins with "U",

Locate all MonitorQualification records where the location is the location in the Monitor Load record QualificationTypeCode is equal to "PK" or "SK", the BeginDate is on or before the Load Evaluation End Date and the EndDate is null or is on or after the Load Evaluation Start Date.

If not found, or if the Begin and End Dates of the retrieved records do not span the entire evaluation period,

set Load Levels Required to true.

Otherwise,

Locate all UnitStackConfiguration records where the stack location is the location in the Load record, the BeginDate is on or before the Load Evaluation End Date and the EndDate is null or is on or after the Load Evaluation Start Date.

For each UnitStackConfiguration record found,

Locate all MonitorQualification records where the location is the unit location in the UnitStackConfiguration record, the QualificationTypeCode is equal to "PK" or "SK", the BeginDate is on or before the Load Evaluation End Date and the EndDate is null or is on or after the Load Evaluation Start Date.

If not found for any unit, or if the Begin and End Dates of the retrieved records for any unit do not span the entire evaluation period,

set Load Levels Required to true.

If not found,

Locate a QA Supp record for the location where the TestTypeCode is equal to "FF2LTST", the last day of the Quarter/Year is on or before the Load Evaluation End Date and End Hour, and the first day of the Quarter/Year is on or after the Load Evaluation Start Date and Start Hour.

If found,

set Range of Operation Required to true.

Usage:

1	Monitoring Plan Evaluation Report ------ Load Evaluation

Condition: Current Load Active *Equals* true

Check Code: LOAD-21

Check Name: Second Normal Indicator Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a MonitoringLoadData Record:

If Load Levels Required is equal to false,

If the SecondLevelIndicator is not null,

return result A.

Otherwise,

If the SecondLevelIndicator is null,

If SecondLevelCode is not null,

return result B.

Results:

Result	Description	Severity
A	You have provided extraneous data in [fieldname] in the Monitor Load record for [key]. This information is generally not required for a location without CEMs or for a peaking unit or a stack serving only peaking units.	Non-Critical Error
B	For [key] you have not provided required data in [fieldname] for a non-peaking unit.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Load Evaluation

Condition: Current Load Active *Equals* true

Check Code: LOAD-22

Check Name: Duplicate Load Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Load record:

Locate another Load record for the location with a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another Load record for the location with an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation

Check Code: LOAD-23

Check Name: Load Analysis Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a MonitoringLoadData Record:

If the LoadAnalysisDate is not null,

If LoadAnalysisDate is prior to 1/1/1993,

return result A.

If the BeginDate is not null and the LoadAnalysisDate is later than the BeginDate,

return result B.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1
B	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation

Check Code: LOAD-24

Check Name: Load Upper Operation Boundary Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData Record:

If the UpperOperationBoundary is not null,

If the UpperOperationBoundary is not greater than zero,

return result A.

If the UpperOperationBoundary is greater than the MaximumLoadValue and MaximumLoadValue is greater than 0,

return result B.

Results:

Result	Description	Severity
A	You defined an invalid [fieldname] for [key]. This value must be greater than zero and less than 20,000.	Critical Error Level 1
B	The Upper Boundary Range provided for [key] exceeds the maximum hourly gross load in Monitor Load record data.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation

Check Code: LOAD-25

Check Name: Load Lower Operation Boundary Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the MonitoringLoadData Record:

If the LowerOperationBoundary is not null,

If the LowerOperationBoundary is less than zero,

return result A.

If the LowerOperationBoundary is greater than or equal to the UpperOperationBoundary and UpperOperationBoundary is greater than 0,

return result B.

Results:

Result	Description	Severity
A	You defined an invalid [fieldname] for [key]. This value must be greater than zero and less than 20,000.	Critical Error Level 1
B	The Lower Boundary Range provided for [key] exceeds the Upper Boundary Range in Monitor Load record data.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation

Check Code: LOAD-26

Check Name: Load Level Codes Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a MonitoringLoad record with either a NormalLevelCode or SecondLevelCode that is not null:

If both NormalLevelCode and SecondLevelCode are not null and SecondLevelCode is equal to the NormalLevelCode,

return result A.

If SecondNormalIndicator is null,

return result B.

Results:

Result	Description	Severity
A	You reported the same value [value] for both the NormalLevelCode and SecondLevelCode for [key]. The NormalLevelCode and the SecondLevelCode cannot be the same.	Critical Error Level 1
B	You did not provide [fieldname], which is required for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation

Check Category:

MATS Supplemental Method

Check Code: MATSMTH-1

Check Name: Begin Date

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentBeginDateValid*** to false.

If ***MatsSupplemental ComplianceMethodRecord*** . BeginDate is null,

return result A.

Else if ***MatsSupplemental ComplianceMethodRecord*** . BeginDate is earlier than ***MatsEvaluationBeginDate*** ,

return result B.

Else if ***Mats Supplemental ComplianceMethodRecord*** . BeginDate is later than ***MaximumFutureDate*** , return

result C .

Else

Set ***CurrentBeginDateValid*** to true.

Results:

Result	Description	Severity
A	The Supplemental MATS Compliance Method Begin Date is blank.	Fatal
B	The Supplemental MATS Compliance Method Begin Date is prior to the beginning of the program.	Critical Error Level 1
C	The Supplemental MATS Compliance Method Begin Date is later the the maximum allowable date.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-2

Check Name: Begin Hour

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentBeginDateAndHour*** to null.

Set ***CurrentBeginDateAndHourValid*** to false.

If ***Mats Supplemental ComplianceMethodRecord*** . Begin Hour is null,

return result A.

Else i f ***Mats Supplemental ComplianceMethodRecord*** . Begin Hour is less than 0 or greater than 23 , return

result B.

Else if ***CurrentBeginDateValid***

Set ***CurrentBeginDateAndHour*** to ***MatsSupplemental ComplianceMethodRecord*** ..BeginDate/ Begin Hour

Set ***CurrentBeginDateAndHourValid*** to true.

Results:

Result	Description	Severity
A	The Supplemental MATS Compliance Method Begin Hour is blank.	Fatal
B	The Supplemental MATS Compliance Method Begin Hour is not between 0 and 23.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-3

Check Name: End Date

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentEndDateValid*** to false.

If ***Mats Supplemental ComplianceMethodRecord*** .End Date is not null,

If ***MatsSupplemental ComplianceMethodRecord*** .End Date is earlier than ***MatsEvaluationBeginDate,***

return result A.

Else if ***MatsSupplemental ComplianceMethodRecord*** .End Date is later than ***MaximumFutureDate,***

return result B.

Else

Set ***CurrentEndDateValid*** to true.

Else

Set ***CurrentEndDateValid*** to true.

Results:

Result	Description	Severity
A	You have reported a Supplemental MATS Compliance Method End Date that is prior to the beginning of MATS .	Critical Error Level 1
B	You have reported a Supplemental MATS Compliance Method End Date that is invalid.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-4

Check Name: End Hour

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentEndDateAndHour*** to null.

Set ***CurrentEndDateAndHourValid*** to false.

If ***Mats Supplemental ComplianceMethodRecord*** .EndHour is not null,

If ***MatsSupplemental ComplianceMethodRecord*** .EndDate is null,

return result A.

Else if ***MatsSupplemental ComplianceMethodRecord*** .EndHour is less than 0 or greater than 23 ,

return result B .

Else if ***CurrentEndDateValid***

Set ***CurrentEndDateAndHour*** to ***MatsSupplemental ComplianceMethodRecord*** .EndDate/EndHour.

Set ***CurrentEndHourValid*** to true.

Else

If ***MatsSupplemental ComplianceMethodRecord*** .EndDate is not null,

return result C.

Else if ***CurrentEndDateValid***

Set ***CurrentEndDateAndHour*** to null.

Set ***CurrentEndDateAndHourValid*** to true.

Results:

Result	Description	Severity
A	The Supplemental MATS Compliance Method End Date is blank.	Critical Error Level 1
B	The Supplemental MATS Compliance Method End Hour is not between 0 and 23.	Critical Error Level 1
C	You have reported a Supplemental MATS Compliance Method End Date that is invalid.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-5

Check Name: Consistent Dates and Hours

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentDatesAndHoursConsistent*** to false.

If the ***CurrentBeginDateAndHourValid*** and ***CurrentEndDateAndHourValid*** ,

If the ***CurrentEndDateAndHour*** is not null, and the ***CurrentBeginDateAndHour*** is after the ***CurrentEndDateAndHour*** ,

return result A .

Otherwise,

S et ***CurrentDatesAndHoursConsistent*** to true.

Results:

Result	Description	Severity
A	The Supplemental MATS Compliance Method Begin Date/Hour is not on or before the End Date/Hour.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-6

Check Name: Parameter Code

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentParameterValid*** to false.

If the ***Mats Supplemental ComplianceMethodRecord*** .SupplementalMatsParameterCode is null,

return result A.

Else

If ***MatsSupplemental ComplianceMethodRecord*** .SupplementalMatsParameterCode is not in ***MatsMethodParameterCodeLookup*** ,

return result B.

Else

Set ***CurrentParameterValid*** to true.

Results:

Result	Description	Severity
A	The Supplemental MATS Compliance Method Parameter Code is blank.	Fatal
B	You have not reported a valid Supplemental MATS Compliance Method Parameter Code.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-7

Check Name: Method Code

Related Former Checks:

Applicability:

Specifications:

Set ***CurrentMethodValid*** to false.

If the ***MatsSupplemental ComplianceMethodRecord*** .SupplementalMatsComplianceMethodCode is null,

return result A.

Else

If ***MatsSupplemental ComplianceMethodRecord*** .SupplementalMatsComplianceMethodCode is not in ***MatsMethodCodeLookup*** ,

return result B.

Else

Set ***CurrentMethodValid*** to true.

Results:

Result	Description	Severity
A	The Supplemental MATS Compliance Method Code is blank.	Fatal
B	You have not reported a valid Supplemental MATS Compliance Method Code.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-8

Check Name: Parameter and Method Cross Check

Related Former Checks:

Applicability:

Specifications:

If ***CurrentParameterValid and CurrentMethodValid***,

Locate a ***MatsSupplementalComplianceParameterToMethodCrossCheck*** record where:

1) ParameterCode is equal to ***MatsSupplemental ComplianceMethodRecord*** .SupplementalMatsParameterCode, and

2) MethodCode is equal to ***MatsSupplemental ComplianceMethodRecord*** .SupplementalMatsComplianceMethodCode.

If not found,

return result A .

Results:

Result	Description	Severity
A	You have not reported a valid Supplemental MATS Compliance Method.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Supplemental MATS Method Data
2	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-9

Check Name: Hg Spans Evaluation Range

Related Former Checks:

Applicability:

Specifications:

Locate records in ***MatsCombinedMethodRecordsByLocation*** where:

1) ParameterGroup is equal to "HG", and

2) BeginDate is on or before ***EvaluationEndDate*** , and

3) EndDate is null, or is on or after ***MatsEvaluationBeginDate*** , and

If found and the BeginDate/Hours and EndDate/Hours for the located records do not span the period from hour 23 on ***MatsEvaluationBeginDate*** through hour 0 on ***EvaluationEndDate*** ,

return result B.

Results:

Result	Description	Severity
A	You have not reported a valid Method or Supplemental MATS Compliance Method for [ParameterGroup].	Critical Error Level 1
B	You have not reported a valid Method or Supplemental MATS Compliance Method for [ParameterGroup] for the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-10

Check Name: HCl Spans Evaluation Range

Related Former Checks:

Applicability:

Specifications:

Locate records in ***MatsCombinedMethodRecordsByLocation*** where:

1) ParameterGroup is equal to "HCL", and

2) BeginDate is on or before ***EvaluationEndDate*** , and

3) EndDate is null, or is on or after ***MatsEvaluationBeginDate*** , and

If found and the BeginDate/Hours and EndDate/Hours for the located records do not span the period from hour 23 on ***MatsEvaluationBeginDate*** through hour 0 on ***EvaluationEndDate*** ,

return result B.

Results:

Result	Description	Severity
A	You have not reported a valid Method or Supplemental MATS Compliance Method for [ParameterGroup].	Critical Error Level 1
B	You have not reported a valid Method or Supplemental MATS Compliance Method for [ParameterGroup] for the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Code: MATSMTH-11

Check Name: HF Spans Evaluation Range

Related Former Checks:

Applicability:

Specifications:

Locate records in ***MatsCombinedMethodRecordsByLocation*** where:

1) ParameterGroup is equal to "HF", and

2) BeginDate is on or before ***EvaluationEndDate*** , and

3) EndDate is null, or is on or after ***MatsEvaluationBeginDate*** , and

If found and the BeginDate/Hours and EndDate/Hours for the located records do not span the period from hour 23 on ***MatsEvaluationBeginDate*** through hour 0 on ***EvaluationEndDate*** ,

return result B.

Results:

Result	Description	Severity
A	You have not reported a valid Method or Supplemental MATS Compliance Method for [ParameterGroup].	Critical Error Level 1
B	You have not reported a valid Method or Supplemental MATS Compliance Method for [ParameterGroup] for the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ MATS Supplemental Method Evaluation

Check Category:

Method

Check Code: METHOD-1

Check Name: Method Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Method record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation

Check Code: METHOD-2

Check Name: Method Begin Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Method record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation

Check Code: METHOD-3

Check Name: Method End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Method record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation

Check Code: METHOD-4

Check Name: Method End Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Method record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation

Check Code: METHOD-5

Check Name: Method Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Method record:

If the EndDate is valid and not null , and the EndHour is null,

set Method Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Method Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Method Dates and Hours Consistent to false, return result C.

Otherwise,

set Method Dates and Hours Consistent to true.

Otherwise,

set Method Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation

Check Code: METHOD-6

Check Name: Method Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor Method record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current Method Active to false.

Otherwise,

set Current Method Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Method Evaluation Begin Date to the Evaluation Begin Date.

Set the Method Evaluation Begin Hour to 0.

Otherwise,

set the Method Evaluation Begin Date to the BeginDate.

Set the Method Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Method Evaluation End Date to the Evaluation End Date.

Set the Method Evaluation End Hour to 23.

Otherwise,

set the Method Evaluation End Date to the EndDate.

Set the Method Evaluation End Hour to the EndHour.

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Check Code: METHOD-7

Check Name: Method Parameter Code Valid

Related Former Checks: ARP-12 (old)

Applicability: General Check

Specifications:

For the Monitoring Method record:

Set Method Parameter Valid to true.

If the Method ParameterCode is null,

set Method Parameter Valid to false, and return result A.

If the ParameterCode is equal to "H2O" "OP", "NOX", "NOXR", "NOXM", "HGRE", "HGRH", "HCLRE", "HCLRH", "HFRE", "HFRH", "SO2RE" or "SO2RH" , and the Location Type is equal to "CP" or "MP",

set Method Parameter Valid to false, and return result B.

Otherwise,

Locate a record in the List of Method Parameter Codes (Parameter to Category Cross Check Table) where the ParameterCode is equal to the ParameterCode in the current Method record and the CategoryCode is equal to "METHOD".

If not found,

set Method Parameter Valid to false, and return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You have reported a methodology for [key], which is inappropriate for a [Location Type].	Critical Error Level 1
C	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation
	Condition: Current Method Active *Equals* true

Check Code: METHOD-8

Check Name: Method Method Code Valid

Related Former Checks: NBP-59, old ARP-13, ARP-78A

Applicability: General Check

Specifications:

For the Monitoring Method record:

Set Method Method Code Valid to true

Set Method Substitute Data Code Valid to true

If the Method Code is null,

set Method Method Code Valid to false , and return result A.

If the Method Code is not in the Method Code Lookup Table,

set Method Method Code Valid and Method Substitute Data Code Valid to false, and return result B.

If the Method Code is equal to "EXP", and the Parameter Code is equal to "HI"

If the Location Type does not begin with "U",

set Method Method Code Valid and Method Substitute Data Code Valid to false, and return result C.

If the Method Code is equal to "CEMNOXR", and the Parameter Code is equal to "NOX",

If the EndDate is null or is on or after the ***ECMPS MP Begin Date*** ,

return result D.

Otherwise,

Locate a record in the Parameter to Method Cross Check table where the ParameterCode is equal to the ParameterCode in the current Method record and the MethodCode is equal to the MethodCode in the current Method record.

If found,

If the Location Type is equal to "CS", and the MethodCode begins with "AD", or is equal to "EXP", "AE", "FSA", "LTFF", "MHHI" , or "LME" ,

set Method Method Code Valid to false, and return result C.

If the Location Type is equal to "MS", and the MethodCode begins with "AD" or is equal to "EXP", "AE", "FSA", "LTFF", "MHHI", "CALC" , or "LME" ,

set Method Method Code Valid to false, and return result C.

If the Location Type is equal to "CP", and the MethodCode contains "CEM" or "CALC" or is equal to "EXP", "LME", "MHHI", "NOXR", "AE", "F23", or "ST",

set Method Method Code Valid to false, and return result C.

If the Location Type is equal to "MP", and the MethodCode contains "CEM" or "CALC" or is equal to "EXP", "LME", "MHHI", "LTFF" "F23", or "ST",

set Method Method Code Valid to false, and return result C.

If Location Type is equal to "U", and the MethodCode contains "CALC",

set Method Method Code Valid and Method Substitute Data Code Valid to false, and return result C.

If not found,

set Method Method Code Valid and Method Substitute Data Code Valid to false, and return result E.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Fatal
C	You have reported a methodology for [key], which is inappropriate for a [Location Type].	Critical Error Level 1
D	You have reported a methodology for [key], which has previously been a valid methodology, but is no longer allowed.	Critical Error Level 1
E	You have reported a monitoring methodology [value], which is not appropriate for the parameter [parameter].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation
	Condition: Current Method Active *Equals* true

Check Code: METHOD-9

Check Name: Method Substitute Data Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Method record with a valid MethodCode:

Set Method Substitute Data Code Valid to true.

If ParameterCode is equal to "HGRE", "HGRH", "HCLRE", "HCLRH", "HFRE", "HFRH", "SO2RE", or "SO2RH",

If the SubstituteDataCode i s not null,

set Method Substitute Data Code Valid to false, and return result C.

else

If the SubstituteDataCode is null,

Locate a record in the Method to Substitute Data Code cross check table for the MethodCode in the current MonitoringMethod record.

If found,

set Method Substitute Data Code Valid to false, and return result A.

Otherwise,

If the SubstituteDataCode is not in the Substitute Data Code Lookup table,

set Method Substitute Data Code Valid to false, and return result B.

Otherwise,

Locate all records in the Method to Substitute Data Code cross check table for the MethodCode and SubstituteDataCode in the current MonitoringMethod record.

If not found,

set Method Substitute Data Code Valid to false, and return result C.

If more than one record is found, or one record is found and the ParameterCode in the cross check record is not null,

If the ParameterCode in the current MonitoringMethod record is valid,

If the ParameterCode in the current MonitoringMethod record is not equal to the ParameterCode in any of the retrieved cross check records,

set Method Substitute Data Code Valid to false, and return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

C	You reported substitute data code [value], which is not appropriate for the monitoring methodology for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation
	Condition: Current Method Active *Equals* true

Check Code: METHOD-10

Check Name: Method Bypass Approach Code Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Monitoring Method record:

Set Method Bypass Approach Code Valid to true.

If the BypassApproachCode is not null,

Locate BypassApproachCode in the Bypass Approach Code Lookup Table.

If not found,

set Method Bypass Approach Code Valid to false, and return result A.

If found,

If the Method Parameter Code is valid and is not equal "SO2 ", "NOX" or "NOXR", or the Method Method Code is valid and is not equal to "AMS" , " N O X R", "CEM", or "CEMF23",

set Method Bypass Approach Code , Valid to false, and return result B

Results:

Result	Description	Severity
A	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a bypass methodology for [key]. A bypass methodology does not apply to this parameter.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
2	Monitoring Plan Evaluation Report ------ Method Evaluation
	Condition: Current Method Active *Equals* true

Check Code: METHOD-11

Check Name: Overlapping Methods

Related Former Checks: NBP-58, ARP-76 (LME)

Applicability: General Check

Specifications:

For a Monitoring Method record with a valid ParameterCode and consistent dates:

Locate another Monitoring Method record for the location with a ParameterCode equal to the ParameterCode in the current record and a BeginDate/BeginHour that is on or after the BeginDate/BeginHour in the current record and is on or before the Method Evaluation End Date/Hour, and a EndDate/EndHour that is null or is on or after the Method Evaluation Begin Date/Hour.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported two monitoring methodologies for [parameter] with overlapping start and end times during the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* True

Check Code: METHOD-12

Check Name: HI Methods Valid for Linked Locations

Related Former Checks: ARP-78B

Applicability: General Check

Specifications:

For a Monitoring Method record with a ParameterCode equal to "HI" or "HIT", a valid MethodCode, and consistent dates:

If the MethodCode contains "CALC" or the Location Type does not begin with "U",

Locate all Unit Stack Configuration records for the location where the BeginDate is on or before the Method Evaluation End Date and the EndDate is null or is on or after the Method Evaluation Begin Date.

If the MethodCode is equal to "LTFF",

For each Unit Stack Configuration record,

Locate all Monitoring Method records where the location is the unit location in the Unit Stack Configuration record, the ParameterCode is equal to "HIT", the MethodCode contains "CALC", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for all units, or if found for any unit, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved method records do not span the entire intersection between the method evaluation period and the BeginDate and EndDate of the Unit Stack Configuration record,

return result A.

If the Location Type is equal to "CP" or "MP", and the MethodCode is equal to "AD",

For each Unit Stack Configuration record,

Locate all Monitoring Method records where the location is the unit location in the Unit Stack Configuration record, the ParameterCode is equal to "HI", the MethodCode contains "CALC", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for all units or if found for any unit, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved method records do not span the entire intersection between the method evaluation period and the BeginDate and EndDate of the Unit Stack Configuration record,

return result B.

If the Location Type is equal to "CS" or "MS", and the MethodCode is equal to "CEM" or "AMS",

For each Unit Stack Configuration record,

Locate all Monitoring Method records where the location is the unit location in the Unit Stack Configuration record, the ParameterCode is equal to "HI", the MethodCode contains "CALC", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for at least one unit, or if found for any unit, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved method records do not span the entire intersection between the method evaluation period and the BeginDate and EndDate of the Unit Stack Configuration record,

return result C.

If the Location Type is equal to "CS", and the MethodCode is equal to "CALC",

For each Unit Stack Configuration record,

Locate all Monitoring Method records where the location is the unit location in the Unit Stack Configuration record, the ParameterCode is equal to "HI", the MethodCode begins with "AD" or is equal to "CEM" , "AMS", or "CALC", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for all units, or if found for any unit, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved method records do not span the entire intersection between the method evaluation period and the BeginDate and EndDate of the Unit Stack Configuration record,

return result D.

If the Location Type begins with "U", and the MethodCode contains "CALC",

Set Method Found to false.

For any Unit Stack Configuration record with an associated StackPipeID beginning with "CS",

Locate all Monitoring Method records where the location is the stack/pipe location in the Unit Stack Configuration record, the ParameterCode is equal to "HI", the MethodCode is equal to "CEM" or "AMS", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If found,

If the Non Load Based Indicator for the unit is equal to true,

return result E.

Otherwise,

set Method Found to true.

If Method Found is false,

For any Unit Stack Configuration record with an associated StackPipeID beginning with "CP", Locate all

Monitoring Method records where the location is the stack/pipe location in the Unit Stack Configuration record, the ParameterCode is equal to "HI" or "HIT", the MethodCode begins with "AD" or is equal to "LTFF", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If found,

If the Non Load Based Indicator for the unit is equal to true,

return result E.

Otherwise,

set Method Found to true.

If Method Found is false, or the BeginDate/BeginHour and EndDate/EndHour of all of the method records retrieved above do not span the method evaluation period,

Set Method Found to null.

For each Unit Stack Configuration record with an associated StackPipeID beginning with "MS":

Locate a Monitoring Location Attribute record where the location is the stack/pipe location in the Unit

Stack Configuration record, the BypassIndicator is equal to 1, the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

If not found,

Locate all Monitoring Method records where the location is the stack/pipe location in the Unit Stack Configuration record, the ParameterCode is equal to "HI", the MethodCode is equal to "CEM" or "AMS", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If found,

If Method Found is equal to false, or the BeginDate/BeginHour and EndDate/EndHour of all of the method records retrieved above do not span the entire intersection between the method evaluation period and the BeginDate and EndDate of the Unit Stack Configuration record,

return result F.

Otherwise,

set Method Found to true.

If not found,

If Method Found is equal to true,

return result F.

Otherwise,

set Method Found to false.

If Method Found is null or is equal to false,

set Method Found to null.

For each Unit Stack Configuration record with an associated StackPipeID beginning with "MP":

Locate all Monitoring Method records where the location is the stack/pipe location in the Unit Stack Configuration record, the ParameterCode is equal to "HI", the MethodCode begins with "AD", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour and the EndDate is null or the EndDate/EndHour is on or after the Method Evaluation Begin Date/Begin Hour.

If found,

If Method Found is equal to false, or the BeginDate/BeginHour and EndDate/EndHour of all of the method records retrieved above do not span the entire intersection between the method evaluation period and hour 23 of the BeginDate and hour 0 of the EndDate of the Unit Stack Configuration record,

return result F.

Otherwise,

set Method Found to true.

If not found,

If Method Found is equal to true,

return result F.

Otherwise,

set Method Found to false.

If Method Found is null or is equal to false,

return result F.

Results:

Result	Description	Severity
A	You have reported a Heat Input methodology of "LTFF" for [location], but you have not reported a Heat Input methodology of "CALC" for all units linked to this pipe for the entire evaluation period.	Critical Error Level 1
B	You have reported an Appendix D Heat Input methodology for [location], but you have not reported a Heat Input methodology of "CALC" for all units linked to this pipe for the entire evaluation period.	Critical Error Level 1
C	You have reported a Heat Input methodology of "CEM" or "AMS" for [location], but you have not reported a Heat Input methodology of "CALC" for at least one unit linked to this stack for the entire evaluation period.	Critical Error Level 1
D	You have reported a Heat Input methodology of "CALC" for [location], but you have not reported an appropriate Heat Input methodology for all units linked to this stack for the entire evaluation period.	Critical Error Level 1
E	You have reported a Heat Input methodology indicating that heat input for [location] is apportioned from heat input measured at a common stack or pipe, but the unit is a non-load-based unit. You cannot apportion heat input for a non-load-based unit.	Critical Error Level 1
F	You have reported a Heat Input methodology of "CALC" for [location], but you have not reported an appropriate Heat Input methodology for the stacks or pipes linked to this unit for the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-14

Check Name: Method Consistent with Program

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Method record with consistent dates:

Matching Program Parameter Cd List = List of lookup Program Parameter Cd from Cross-Check Table "Program Parameter To Method Parameter" where MethodParameterList contains ***Current Method*** .ParameterCd.

Locate a ll ***Location Program Parameter Records*** linked to the location with a ClassCode not equal to "N" , "NA", or "NB"; an UnitMonitorCertBeginDate that is on or before the Method Evaluation End Date and is not null , and a ParameterCd in *Matching Program Parameter Cd List* .

If not found,

return result A.

If found,

If the ParameterCode is equal to "HI" and the MethodCode is equal to "EXP" ,

Locate a Unit Program Record linked to the location with a ProgramCode equal to "ARP", a ClassCode not equal to "NA" or "N", an UnitMonitorCertBeginDate that is on or before the Method Evaluation End Date and is not null, and an EndDate that is null or is on or after the Method Evaluation Begin Date.

If found,

return result A.

Otherwise,

If the EndDate in the current Method record is null,

return result B.

Else

If the Method Evaluation Begin Date is earlier than the earlier of the EmissionsRecordingBeginDate and January 1 of the year of the UnitMonitorCertBeginDate in the retrieved record with the earliest UnitMonitorCertBeginDate,

return result C .

else if the EndDates in all the retrieved records are not null and the latest End Date is prior to the Method Evaluation End Date,

return result G.

else if the BeginDates of the BeginReportPeriodIds and the EndDates of the EndReportPeridoIds for the retrieved Program Parameter Records do not span the Method Evaluation Period,

return result H

else i f the ParameterCode is equal to " C O2" or " C O2M",

From the ***Location Program Parameter Records*** previously located, locate records with RequiredInd equal to 1 .

If not found, or if the Method Evaluation Begin Date is earlier than the earlier of the

EmissionsRecordingBeginDate and January 1 of the year of the UnitMonitorCertBeginDate in the retrieved record with the earliest UnitMonitorCertBeginDate,

Locate all Monitor Plan Reporting Frequency records linked to the location where the ReportingFrequency is equal to " OS "; and the BeginQuarter is on or before the quarter of the Method Evaluation End Date; and the EndQuarter is null or is on or after the quarter of the Method Evaluation Begin Date.

If found,

return result D .

Otherwise,

If the month/day of the Method Evaluation Begin Date is not January 1,

Locate another Method record for the location where the BeginDate is prior to the Method Evaluation Begin Date and the End Date is null or is on or after January 1 of the year of the Method Evaluation Begin Date.

If found,

return result E.

Otherwise,

return result F.

Otherwise,

return result F.

Results:

Result	Description	Severity
A	You reported a monitoring methodology for [key], but this methodology is not appropriate for the active programs associated with this location.	Critical Error Level 1
B	You have indicated that this unit is exempt from reporting heat input.	Informational Message
C	You reported a monitoring methodology for [key], but the BeginDate is not consistent with the dates in the Unit Program records (or Unit Stack Configuration records) associated with this location. If you believe that this error is incorrect, and has been caused by an inaccurate date in the Unit Program record, please contact Craig Hillock at Hillock.Craig@epamail.epa.gov.	Critical Error Level 1
D	You reported a monitoring methodology for [key], but according to the reporting frequency records in this montioring plan, this location was an ozone-season only reporter for all or part of the time that this method record was active. A CO2 monitoring methodology is only appropriate for locations that report on an annual basis.	Critical Error Level 1
E	You reported a monitoring methodology for [key] that does not span the entire reporting year. A CO2 monitoring methodology must be reported for an entire reporting year.	Critical Error Level 2
F	Based on the dates of in this record and in the unit program records associated with this location, the monitoring methodology for [key] should only be reported if you are using this software to report CO2 emissions as part of the Greenhouse Gas Mandatory Reporting Rule. If that is not the case, you should either not report this methodology or should correct the dates in this record to be consistent with the ARP or RGGI unit program records.	Informational Message

G	You reported a monitoring methodology for [key] with an End Date that is not consistent with the End Date in the Unit Program records (or Unit Stack Configuration records) associated with this location. If you believe that this error is incorrect, and has been caused by an inaccurate date in the Unit Program record, please contact Craig Hillock at Hillock.Craig@epamail.epa.gov.	Critical Error Level 1
H	You reported a monitoring methodology for [key] that is not appropriate for the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* true

Check Code: METHOD-15

Check Name: Method Consistent with Fuels

Related Former Checks: ARP-14B, 72B, old ARP-61, ARP-42, ARP-51

Applicability: General Check

Specifications:

For a Monitoring Method record with a valid ParameterCode, a valid MethodCode, and consistent dates:

If the ParameterCode is equal to "OP" and the MethodCode is equal to "EXP",

Locate all Unit Control records linked to the location where the ControlCode is equal to "WL", "WLS", or "WS", the InstallDate is null, and the OriginalCode is equal to 1.

If not found,

Locate all Unit Control records linked to the location where the ControlCode is equal to "WL", "WLS", or "WS", the Install Date is on or before Method Evaluation End Date , and the Retire Date is null or is on or after Method Evaluation Begin Date) .

If not found,

L ocate all Unit Fuel records linked to the location where BeginDate is on or before Method Evaluation End Date and EndDate is null or is on or after Method Evaluation Begin Date.

For each record found,

If FuelCode is not equal to "DSL",

Locate FuelCode in Fuel Code lookup table.

If FuelGroupCode is not equal to "GAS" or "OIL",

return result A.

If FuelGroupCode is equal to "OIL",

Locate a Monitor Qualification record for the location where QualificationTypeCode is equal to "GF", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date,

If not found,

return result A.

If the MethodCode begins with "AD", or "LTF", or is equal to "AE", "PEM", or "LME",

Locate all Unit Fuel records linked to the location where BeginDate is on or before Method Evaluation End Date and EndDate is null or is on or after Method Evaluation Begin Date.

For each record found,

Locate FuelCode in Fuel Code lookup table.

If FuelGroupCode is equal to "COAL" or "OTHER",

set Invalid Method Fuel to "coal or other solid fuels", and return result B.

If MethodCode is equal to "FSA",

Locate all Unit Fuel records linked to the location where the FuelCode is equal to "W" or "OSF", the BeginDate is on or before Method Evaluation End Date and EndDate is null or is on or after Method Evaluation Begin Date.

If found,

set Invalid Method Fuel to "wood or other solid fuel", and return result B.

Results:

Result	Description	Severity
A	You have reported [key], but this methodology is not appropriate unless the unit is only burning gas or diesel, or is a gas-fired unit that is burning only gas or oil.	Critical Error Level 1
B	You have reported [key], but this methodology is not appropriate when the unit is burning [invalid fuel].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* true

Check Code: METHOD-16

Check Name: Substitute Data Code Consistent with Non Load Based Indicator

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Method record with a valid SubstituteDataCode that begins with "NLB",

If the Location Non Load Based Indicator is not equal to 1,

return result A.

Results:

Result	Description	Severity
A	You have reported a substitute data approach of NLB or NLBOP for [key]. This approach is only appropriate for use by non load-based units.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* True

Check Code: METHOD-17

Check Name: Substitute Data Code Consistent with Program and Reporting Frequency

Related Former Checks: ARP-73E

Applicability: General Check

Specifications:

For a Monitor Method record with a valid Substitute Data Code equal to "OZN75" and consistent dates:

Locate all Monitor Plan Reporting Frequency records linked to the location where the ReportingFrequency is equal to "Q"; and the BeginQuarter is on or before the quarter of the Method Evaluation End Date; and the EndQuarter is null or is on or after the quarter of the Method Evaluation Begin Date.

If not found,

return result A.

If found, and the EndQuarter of all the retrieved records are not null, and the latest EndQuarter of the retrieved records is prior to the quarter of the Method Evaluation End Date,

return result B.

Results:

Result	Description	Severity
A	You have reported a substitute data approach of OZN75 for [key]. This approach is only appropriate for use by Subpart H units that report on a year-round basis.	Critical Error Level 1
B	You have reported a substitute data approach of OZN75 for [key]. This approach is only appropriate for use by Subpart H units that report on a year-round basis, but you have not reported the appropriate reporting frequency records that span the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-18

Check Name: Required Unit Control for Bypass Approach

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Method record with a valid BypassApproachCode that is not null and consistent dates:

Locate all Unit Type records linked to this location where the UnitTypeCode is equal to "CC", and the BeginDate is null or is on or before the Method Evaluation End Date and the EndDate is null or on or after the Method Evaluation Begin Date.

If no Unit Type records are found, or there are no Unit Type records with a null End Date, or the latest EndDate of the retrieved record is prior to the Method Evaluation End Date,

If the Method ParameterCode is equal to "NOXR",

Locate all Unit Control records linked to this location where the ParameterCode is equal to "NOX", the BeginDate is null or is on or before the Method Evaluation End Date and the EndDate is null or on or after the Method Evaluation Begin Date.

Otherwise,

Locate all Unit Control records linked to this location where the ParameterCode is equal to the Method ParameterCode, the BeginDate is null or is on or before the Method Evaluation End Date and the EndDate is null or on or after the Method Evaluation Begin Date.

If no Unit Type records are found, and no Unit Control records are found,

return result A.

If the there are no Unit Type or Unit Control records with a null EndDate or the latest EndDate of all the retrieved Unit Type and Unit Control records is prior to the Method Evaluation End Date,

return result B.

Results:

Result	Description	Severity
A	You have reported a Bypass Stack Approach Code for [key], which indicates that emissions normally monitored at this location are sometimes emitted through an unmonitored bypass stack when unit controls are not working. However, this location does not have any unit controls defined that were active during the evaluation period.	Non-Critical Error
B	You have reported a Bypass Stack Approach Code for [key], which indicates that emissions normally monitored at this location are sometimes emitted through an unmonitored bypass stack when unit controls are not working. However, you have not reported unit controls records for this location that span the entire evaluation period.	Non-Critical Error

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-19

Check Name: Bypass Approach Code Consistent with Bypass Stack Indicator

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Method record with a valid BypassApproachCode that is not null, consistent dates, and a Location Type equal to "CS" or "MS":

Locate a Location Attribute record for the location where the BypassIndicator is equal to 1 and the BeginDate is on or before the Monitor Evaluation End Date and the EndDate is null or is on or after the Monitor Evaluation Begin Date.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported a Bypass Stack Approach Code for [key], which indicates that emissions normally monitored at this location are sometimes emitted through an unmonitored bypass stack. However, this location is defined as a bypass stack. A Bypass Stack Approach Code is not appropriate for a monitoring method at a bypass stack.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* True

Check Code: METHOD-20

Check Name: CEM Methods Consistent

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Method record with consistent dates:

If the ParameterCode is equal to "H2O",

Locate all Monitoring Method records for the location where the MethodCode is equal to "CEM" or "AMS", the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, the BeginDate/Hour and EndDate/Hour of all the retrieved records do not span the entire method evaluation period,

return result B.

If the MethodCode is equal to "CEM",

If ParameterCode is equal to "NOX" or "NOXR",

Locate all Monitoring Method records for the location where the MethodCode begins with "PEM" or "LTF"

or is equal to "AE", "LME", or "MHHI", the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If found,

add all ParameterCodes in the retrieved records to the Invalid Parameters for CEM Method, and return result C.

Otherwise,

Locate all Monitoring Method records for the location where the MethodCode begins with "AD", "PEM", or "LTF" or is equal to "AE", "LME", or "MHHI", the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If found,

add all ParameterCodes in the retrieved records to the Invalid Parameters for CEM Method, and return result C.

Results:

Result	Description	Severity
A	You have reported a H2O monitoring methodology for [key], but no corresponding CEM/AMS methodology for this location.	Critical Error Level 1
B	You have reported a H2O monitoring methodology for [key], but you have not reported corresponding CEM/AMS method records that span the entire evaluation period for this location.	Critical Error Level 1

C	You reported a CEM monitoring methodology for [key], but you reported an inappropriate non-CEM methodology for [parameters].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* True

Check Code: METHOD-22

Check Name: Appendix E Method Consistent with HI Method

Related Former Checks:

Applicability: Appendix E Check

Specifications:

For a MonitoringMethod record with a ParameterCode equal to "NOXR" , "CO2", or "SO2", and a valid MonitoringMethodCode equal to "AE" or "AD":

If MonitoringMethodCode is equal to "AD",

Locate all Method records for the location where the ParameterCode is equal to "HI" and the MonitoringMethodCode begins with "AD" , a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and an EndDate and EndHour that is null or is on or after the Method Evaluation End Date and End Hour.

else

Locate all Method records for the location where the ParameterCode is equal to "HI" and the MonitoringMethodCode is equal to "AD" or "CALC", a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and an EndDate and EndHour that is null or is on or after the Method Evaluation End Date and End Hour.

If not found,

return result A.

If found, and the Begin Date/ Begin Hour and EndDate/EndHour of the retrieved records do not span the entire period from the Method Evaluation Begin Date/Begin Hour to the Method Evaluation End Date/End Hour,

return result B.

Results:

Result	Description	Severity
A	You have reported [key], but you have not reported an active corresponding Heat Input Appendix D methodology.	Critical Error Level 1
B	You have reported [key], but you have not reported corresponding Heat Input Appendix D methodology records that span the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* True

Check Code: METHOD-23

Check Name: LME Methods Consistent

Related Former Checks: ARP-59, 60

Applicability: LME Check

Specifications:

For a Monitoring Method record with consistent dates and a valid method code equal to "LME", "MHHI", or "LTFF":

Locate a Monitoring Method record for the facility where the location is the current location; the MethodCode begins with "CEM" or "AD" or is equal to "PEM", "AE", "FSA", or "AMS"; the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour; and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If found,

set Invalid Parameters for LME Method to all the Parameter Codes in the retrieved records, and return result A.

If not found, and the Location Type is equal to "CP".

Locate all Unit Stack Configuration records for the location where the BeginDate is on or before the Method Evaluation End Date and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each Unit Stack Configuration record:

Locate a Monitoring Method record for the facility where the location is the unit in the retrieved Unit Stack Configuration records; the MethodCode begins with "CEM" or "AD" or is equal to "PEM", "AE", "FSA", or "AMS"; the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour; and the EndDate is null or the EndDate and EndHour is on or after the later of the Unit Stack Configuration Begin Date Hour 23 and the Method Evaluation Begin Date and Begin Hour.

If found,

append all the ParameterCodes in the retrieved records to Invalid Parameters for LME Method .

If Invalid Parameters for LME Method is not null,

return result A.

Results:

Result	Description	Severity
A	You reported an LME monitoring methodology for [key], but you reported an inappropriate non-LME methodology for [parameters].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* true

Check Code: METHOD-24

Check Name: Required Methods Reported for NOX/NOXR Method

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor Method record with a ParameterCode equal to "NOX", a MethodCode equal to "NOXR", and consistent dates:

Locate a Monitor Method record for the location with a ParameterCode equal to "NOXR", a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and an EndDate and EndHour that is null or is on or after the Method Evaluation End Date and End Hour.

If not found,

set Missing Method Parameters for NOX/NOXR Method to "NOXR".

Also, Locate a Monitor Method record for the location with a ParameterCode equal to "HI", a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and an EndDate and EndHour that is null or is on or after the Method Evaluation End Date and End Hour.

If not found,

append "HI" to Missing Method Parameters for NOX/NOXR Method.

If either record is not found,

return result A.

Otherwise,

If any NOXR records are found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved NOXR records do not span the entire method evaluation period,

set Missing Method Parameters for NOX/NOXR Method to "NOXR".

If any HI records are found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved HI records do not span the entire method evaluation period,

append "HI" to Missing Method Parameters for NOX/NOXR Method.

If the Missing Method Parameters for NOX/NOXR Method is not null,

return result B.

Results:

Result	Description	Severity
A	You reported [key], which indicates that NOx Mass is calculated using NOx Rate and Heat Input. However, you have not reported a methodology that was active during the evaluation period for [missing] at this location.	Critical Error Level 1
B	You reported [key], which indicates that NOx Mass is calculated using NOx Rate and Heat Input. However, you have not reported a methodology for [missing] at this location that span the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-25

Check Name: Required NFS System Reported for Method

Related Former Checks: ARP-11, ARP-53A, NBP-57

Applicability: General Check

Specifications:

For a Monitoring Method record with a valid ParameterCode, a valid MethodCode, and consistent dates:

If the ParameterCode is equal to "HI", and the MethodCode is equal to "CEM",

Locate all Monitor System records for the location where the SystemTypeCode is equal to "CO2" or "O2", the SystemDesignationCode is equal to "P", the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found, and the Method Evaluation Begin Date is on or after the ***ECMPS MP Begin Date*** ,

set Required System for Method to "CO2 or O2", and return result A.

If not found and the Method Evaluation Begin Date is prior to the ***ECMPS MP Begin Date*** ; or if the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

Locate a Unit Program record linked to the location where the ProgramCode is equal to "ARP", the ClassCode is not equal to "NA", and the UnitMonitorCertBeginDate is prior to the ***ECMPS MP Begin Date*** ,

If found,

If no Monitor System records were found,

set Required System for Method to "CO2 or O2", and return result A.

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved Monitor System records do not span the portion of the method evaluation period on or after the UnitMonitorCertBeginDate hour 0,

set Required System for Method to "CO2 or O2", and return result B.

If not found, and the Method Evaluation End Date is on or after the ***ECMPS MP Begin Date*** ,

If no Monitor System records were found,

set Required System for Method to "CO2 or O2", and return result A.

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved Monitor System records do not span the portion of the method evaluation period on or after ***ECMPS MP Begin Date*** hour 0,

set Required System for Method to "CO2 or O2", and return result B.

If the ParameterCode is not equal to "HI", and the MethodCode contains "CEM" or is equal to "PEM", "MTB", "MMS", or "MWD",

Locate a record in the Parameter and Method to System Type Cross Check table where the ParameterCode is equal to the ParameterCode in the current Method record, the MethodCode is equal to the MethodCode in the current Method record, and the SystemTypeCode is not null,

If one record is found,

Locate all Monitor System records for the location where the SystemTypeCode is equal to the SystemTypeCode in the cross check table, the SystemDesignationCode is equal to "P" or "PB" , the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

set Required System for Method to the SystemTypeCode in the cross check table, and return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

set Required System for Method to the SystemTypeCode in the cross check table, and return result B.

If more than one record is found,

Set Required System for Method to null.

Set Incomplete System for Method to null.

Set primary to null.

For each cross check table record found:

Locate all Monitor System records for the location where the SystemTypeCode is equal to the SystemTypeCode in the cross check table record, the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

append SystemTypeCode in the cross check table to Required System for Method.

If found,

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

append SystemTypeCode in the cross check table to Incomplete System for Method.

Otherwise,

If the SystemDesignationCodes in all the retri e ved records are equal to "P" or "PB" ,

If primary is equal to "FOUND",

set primary to "BOTH".

Otherwise,

set primary to "FOUND".

If Required System for Method is not null, and Incomplete System for Method is null,

return result C.

If Required System for Method is null, and Incomplete System for Method is not null,

return result D.

If Required System for Method is not null, and Incomplete System for Method is not null,

return result E.

If primary is equal to "BOTH",

return result F.

If primary is null,

Locate all Monitor System records for the location where the SystemTypeCode is equal to any of the SystemTypeCodes in the retrieved cross check table records, the SystemDesignationCode is equal to "P" or "PB" , the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found, or if the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

return result G.

Results:

Result	Description	Severity
A	You reported a monitoring methodology for [key], but there is no primary [system] monitoring system that was active during the evaluation period, which is required for this method.	Critical Error Level 1
B	You reported a monitoring methodology for [key], but there is no primary [system] monitoring system that is active for the entire evaluation period.	Critical Error Level 1
C	You reported a monitoring methodology for [key], but there is no [system] monitoring system that was active during the evaluation period, which is required for this method.	Critical Error Level 1
D	You reported a monitoring methodology for [key], but there is no [incomplete] monitoring system that is active for the entire evaluation period.	Critical Error Level 1
E	You reported a monitoring methodology for [key], but there is no [system] monitoring system that was active during the evaluation period, which is required for this method. Also, you did not report a [incomplete] monitoring system that was active for the entire evaluation period.	Critical Error Level 1
F	You reported concurrently active primary HG and ST monitoring systems. If you use the CEMST methodology to measure Hg, you must designate either the HG or the ST system to be the primary system.	Critical Error Level 1
G	You reported a monitoring methodology for [key], but you did not designate an HG or HGK monitoring system to be the primary monitoring system for the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* True

Check Code: METHOD-26

Check Name: Required Flow System Reported for Method

Related Former Checks: ARP-11, NBP-57

Applicability: General Check

Specifications:

For a Monitoring Method record with a valid ParameterCode, a valid MethodCode, and consistent dates:

If the ParameterCode is equal to "SO2", "HI", "CO2", or "NOX", and the MethodCode contains "CEM"; OR the ParameterCode is equal to " HGRE " , "HCLRE", "HFRE", or "SO2RE", and the MethodCode does NOT equal "CALC",

Locate a Monitor System for the location where the SystemTypeCode is equal to "FLOW", the SystemDesignationCode is equal to "P", the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

return result B.

Results:

Result	Description	Severity
A	You reported a monitoring methodology for [key], but there is no primary [system] monitoring system that was active during the evaluation period, which is required for this method.	Critical Error Level 1
B	You reported a monitoring methodology for [key], but there is no primary [system] monitoring system that is active for the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-27

Check Name: Required Formula Reported for Method

Related Former Checks: ARP-2, ARP-3, ARP-4, ARP-25, ARP-48, NBP-27, NBP-25, old NBP-22

Applicability: General Check

Specifications:

For a Monitoring Method record where ***MethodParameterCodeValid*** , ***MethodMethodCodeValid*** , and ***MethodDatesAndHoursConsistent*** equal to true:

Locate a record in ***ParameterAndMethodAndLocationToFormulaCrossCheck*** table where:

1) ParameterCode and MethodCode are equal to the ParameterCode and MethodCode in ***CurrentMethod*** , and

2) LocationTypeList is null or LocationTypeList contains ***LocationType*** .

If found,

If SystemTypeList is null in the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record,

Locate a Monitor Formula for the location where :

1) ParameterCode is equal to ***CurrentMethod*** .ParameterCode,

2) FormulaCode is listed in FormulaList of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record,

3) BeginDate/BeginHour is null or is on or before the ***Method Evaluation End Date/End Hour*** , and

4) EndDate/EndHour is null or is on or after the ***Method Evaluation Begin Date/Begin Hour*** .

If not found,

Set ***MissingFormulaForMethod*** to ***CurrentMethod*** .ParameterCode concatenated with FormulaList of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record.

Return result in NotFoundResult for the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

Set ***MissingFormulaForMethod*** to ***CurrentMethod*** .ParameterCode concatenated with FormulaList of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record.

R eturn result B.

Else

If EcmpsOnly of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record is equal to "Yes",

Set FormulaRangeBeginDateAndHour to the later of ***Method Evaluation Begin Date/Begin Hour,*** and the ***ECMPS MP Begin Date*** .

Else

Set FormulaRangeBeginDateAndHour to ***Method Evaluation Begin Date/Begin Hour*** .

Locate all Monitor System records for the location where :

1) SystemTypeCode is in SystemTypeList of the located

ParameterAndMethodAndLocationToFormulaCrossCheck record.

2) BeginDate / BeginHour is on or before the ***Method Evaluation End Date/End Hour*** ,

3) EndDate /End Hour is null or is on or after the later of the *FormulaRangeBeginDate* And Hour.

If more than one record is found, and for any two records the FuelCode is different, and the BeginDate and EndDate of the records overlap the period between *FormulaRangeBeginDateAndHour and* ***Method Evaluation End Date*** ,

Locate a Monitor Formula for the location where :

1) ParameterCode is equal to ***CurrentMethod*** .ParameterCode,

2) FormulaCode is in FormulaList of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record,

3) BeginDate/BeginHour is null or is on or before the ***Method Evaluation End Date/End Hour*** , and

4) EndDate/EndHour is null or is on or after the *FormulaRangeBeginDateAndHour* .

If not found,

Set ***MissingFormulaForMethod*** to ***CurrentMethod*** .ParameterCode concatenated with FormulaList of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record.

Return result in NotFoundResult for the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the overlapping period in the Monitor System records that also overlaps the period between *FormulaRangeBeginDateAndHour and* ***Method Evaluation End Date/End Hour*** ,

Set ***MissingFormulaForMethod*** to ***CurrentMethod*** .ParameterCode concatenated with FormulaList of the located ***ParameterAndMethodAndLocationToFormulaCrossCheck*** record.

R eturn result B.

Results:

Result	Description	Severity
A	You have reported [key], but you have not reported a [formula] formula that was active during the evaluation period, which is required when using this monitoring methodology.	Critical Error Level 1
B	You have reported [key], but you have not reported the required [formula] formula to span the entire evaluation period.	Critical Error Level 1
C	You have reported [key], but you have not reported a [formula] formula that was active during the evaluation period, which is required when using this monitoring methodology with fuel flow systems measuring more than one fuel.	Critical Error Level 1
D	You reported [key], but you have not reported a [formula] formula that was active during the evaluation period, which is required when using this monitoring methodology with multiple NOXE systems for different fuels.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* True

Check Code: METHOD-28

Check Name: Required Defaults Reported for Method

Related Former Checks: ARP-47

Applicability: General Check

Specifications:

For a Monitoring Method record with a valid ParameterCode, a valid MethodCode, and consistent dates:

set Missing Default for Method and Incomplete Default for Method to null.

If the ParameterCode is equal to "H2O" and the MethodCode is equal to "MDF",

Locate a Monitor Default for the location where the ParameterCode is equal to "H2O", the DefaultPurposeCode is equal to "PM", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "H2O PM" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "H2O PM" to Incomplete Default for Method.

If the ParameterCode is equal to "SO2" and the MethodCode contains "F23",

Locate a Monitor Default for the location where the ParameterCode is equal to "SO2R", the DefaultPurposeCode is equal to "F23", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "SO2R F23" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "SO2R F23" to Incomplete Default for Method.

If the ParameterCode is equal to "NOXR", and MethodCode begins with "CEM",

Locate a Monitor Default for the location where the ParameterCode is equal to "NORX", the DefaultPurposeCode is equal to "MD", the FuelCode is equal to "NFS", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "NORX MD" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "NORX MD" to Incomplete Default for Method.

If the MethodCode is equal to "SO2R",

Locate a Monitor Default for the location where the ParameterCode is equal to "SORX", the DefaultPurposeCode is equal to "MD", the FuelCode is equal to "NFS", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "SORX MD" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "SORX MD" to Incomplete Default for Method.

If the MethodCode is equal to "PEM",

Locate a Monitor Default for the location where the ParameterCode is equal to "NOCX", the DefaultPurposeCode is equal to "MD", the FuelCode is equal to "NFS", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "NOCX MD" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "NOCX MD" to Incomplete Default for Method.

Locate a Monitor Default for the location where the ParameterCode is equal to "NORX", the DefaultPurposeCode is equal to "MD", the FuelCode is equal to "NFS", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "NORX MD" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "NORX MD" to Incomplete Default for Method.

If the ParameterCode is equal to "HIT" and the MethodCode is equal to "MHHI",

Locate a Monitor Default for the location where the ParameterCode is equal to "MHHI", the DefaultPurposeCode is equal to "LM", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add "MHHI LM" to Missing Default for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

add "MHHI LM" to Incomplete Default for Method.

If Missing Default for Method is not null, and Incomplete Default for Method is null,

return result A.

If Missing Default for Method is null, and Incomplete Default for Method is not null,

return result B.

If Missing Default for Method is not null, and Incomplete Default for Method is not null,

return result C.

If the MethodCode is equal to "AE",

Locate all Unit Fuel records linked to the location where the IndicatorCode is equal to "E", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each Location Fuel record found,

Locate a Monitor Default for the location where the ParameterCode is equal to "NOCX", the DefaultPurposeCode is equal to "MD", the associated UnitFuel is equal to the FuelCode in the fuel record, the BeginDate/BeginHour is on or before the earlier of the Method Evaluation End Date/End Hour and the End Date and End Hour in the fuel record, and the EndDate/EndHour is null or is on or after the later of the Method Evaluation Begin Date/Begin Hour and the Begin Date and Begin Hour in the fuel record.

If not found for any fuel,

add "NOCX MD" to Missing Default for Method.

If, for any fuel, the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection of the method evaluation period and active fuel record period,

add "NOCX MD" to Incomplete Default for Method.

Locate a Monitor Default for the location where the ParameterCode is equal to "NORX", the DefaultPurposeCode is equal to "MD", the associated UnitFuel is equal to the FuelCode in the fuel record, the BeginDate/BeginHour is on or before the earlier of the Method Evaluation End Date/End Hour and the End Date and End Hour in the fuel record, and the EndDate/EndHour is null or is on or after the later of the Method Evaluation Begin Date/Begin Hour and the Begin Date and Begin Hour in the fuel record.

If not found for any fuel,

add "NORX MD" to Missing Default for Method.

If, for any fuel, the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection of the method evaluation period and active fuel record period,

add "NORX MD" to Incomplete Default for Method.

If Missing Default for Method is not null, and Incomplete Default for Method is null,

return result D.

If Missing Default for Method is null, and Incomplete Default for Method is not null,

return result E.

If Missing Default for Method is not null, and Incomplete Default for Method is not null,

return result F.

If the MethodCode is equal to "LME",

S et Missing Default Fuel for Method and Incomplete Default Fuel for Method to null.

Locate all Unit Fuel records linked to the location where the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each Location Fuel record found,

If ParameterCode is equal to "NOXM",

Locate a Monitor Default for the location where the ParameterCode is equal to "NOXR", the DefaultPurposeCode begins with "LM", the associated UnitFuel is equal to the FuelCode in the unit fuel record, an OperatingConditionCode equal to "A", " C ", or "B", and the BeginDate/BeginHour is on or before

the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for any fuel,

add FuelCode in Unit Fuel record to Missing Default Fuel for Method.

add "NOXR LM" to Missing Default for Method.

If, for any fuel, the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection of the method evaluation period and active fuel record period,

add FuelCode in Unit Fuel record to Incomplete Default Fuel for Method.

add "NOXR LM" to Incomplete Default for Method.

If ParameterCode is equal to "CO2M",

Locate a Monitor Default for the location where the ParameterCode is equal to "CO2R", the DefaultPurposeCode begins with "LM", the associated UnitFuel is equal to the FuelCode in the unit fuel record, an OperatingConditionCode equal to "A", and the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for any fuel,

add FuelCode in Unit Fuel record to Missing Default Fuel for Method.

add " CO2 R LM" to Missing Default for Method.

If, for any fuel, the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection of the method evaluation period and active fuel record period,

add FuelCode in Unit Fuel record to Incomplete Default Fuel for Method.

add " CO2 R LM" to Incomplete Default for Method.

If ParameterCode is equal to "SO2M",

Locate a Monitor Default for the location where the ParameterCode is equal to "SO2R", the DefaultPurposeCode begins with "LM", the associated UnitFuel is equal to the FuelCode in the unit fuel record, an OperatingConditionCode equal to "A", and the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found for any fuel,

add FuelCode in Unit Fuel record to Missing Default Fuel for Method.

add " SO2 R LM" to Missing Default for Method.

If, for any fuel, the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection of the method evaluation period and active fuel record period,

add FuelCode in Unit Fuel record to Incomplete Default Fuel for Method.

add " SO2 R LM" to Incomplete Default for Method.

If Missing Default for Method is not null, and Incomplete Default for Method is null,

return result G.

If Missing Default for Method is null, and Incomplete Default for Method is not null,

return result H.

If Missing Default for Method is not null, and Incomplete Default for Method is not null,

return result I.

Results:

Result	Description	Severity
A	You have reported [key], but you have not reported a [default parameter] default record that was active during the evaluation period, which is required when using this monitoring methodology.	Critical Error Level 1
B	You have reported [key], but you have not reported [incomplete default parameter] default records that are active for the entire evaluation period.	Critical Error Level 1
C	You have reported [key], but you have not reported a [default parameter] default record that was active during the evaluation period, which is required when using this monitoring methodology. Also, you have not reported [incomplete default parameter] default records that are active for the entire evaluation period.	Critical Error Level 1
D	You have reported [key], but you have not reported a [default parameter] default record that was active during the evaluation period for every emergency fuel, which is required when using this methodology.	Critical Error Level 1
E	You have reported [key], but you have not reported [incomplete default parameter] default records that are active for the entire evaluation period for every emergency fuel.	Critical Error Level 1
F	You have reported [key], but you have not reported a [default parameter] default record that was active during the evaluation period for every emergency fuel, which is required when using this methodology. Also, you have not reported [incomplete default parameter] default records that are active for the entire evaluation period.	Critical Error Level 1
G	You have reported [key], but you have not reported a valid [default parameter] default record that was active during the evaluation period for [fuels], which is required when using an LME methodology.	Critical Error Level 1
H	You have reported [key], but you have not reported [incomplete default parameter] default records that are active for the entire evaluation period for [incomplete fuels].	Critical Error Level 1
I	You have reported [key], but you have not reported a valid [default parameter] default record that was active during the evaluation period for [fuels], which is required when using an LME methodology. Also, you have not reported [incomplete default parameter] default records for [incomplete fuels] that are active for the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* True

Check Code: METHOD-29

Check Name: Required Defaults Reported for Missing Data Approach

Related Former Checks: ARP-74, 75B/D

Applicability: CEM Check

Specifications:

For a Monitoring Method record with consistent dates:

If the SubstituteDataCode is valid and equal to "FSP75C",

If the MethodCode is equal to "SO2R",

Locate all records in the Method Parameter to Maximum Default Parameter and Component Type lookup table with a Method Parameter Code equal to the ParameterCode in the method record and a Default Parameter Code not equal to "SO2X".

Otherwise,

Locate all records in the Method Parameter to Maximum Default Parameter and Component Type lookup table with a Method Parameter Code equal to the ParameterCode in the method record and a Default Parameter Code not equal to "SORX".

For each retrieved cross check record,

Locate all Monitor Default records for the location where the ParameterCode is equal to the Maximum Default Parameter Code in the retrieved cross check records, a DefaultPurposeCode equal to "MD", FuelCode not equal to "NFS", a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found, or none of the retrieved records has a FuelCode equal to "MIX",

add Maximum Default Parameter Code to Missing Maximum Default.

If found,

If the ComponentTypeCode in the retrieved cross-check record is equal to "NOX" or "SO2",

Locate a Monitor Span record for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the cross-check record, the SpanScaleCode is equal to "H", the MaximumPotentialConcentration is equal to the highest DefaultValue in the retrieved default records, a StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add the ComponentTypeCode in the cross-check record to Invalid Maximum Default.

If the ComponentTypeCode in the retrieved cross-check record is equal to "FLOW",

Locate a Monitor Span record for the location where the ComponentTypeCode is equal to "FLOW", the MaximumPotentialFlow is equal to the highest DefaultValue in the retrieved default records, a StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add "FLOW" to Invalid Maximum Default.

If the ComponentTypeCode in the retrieved cross-check record is null

Locate a Monitor Default record for the location where the ParameterCode is equal to the Default Parameter Code in the retrieved cross check records, a DefaultPurposeCode equal to "MD", FuelCode equal to "NFS", a DefaultValue equal to the highest DefaultValue in the retrieved default records, StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add the Maximum Default Parameter Code in the cross-check record to Invalid Maximum Default.

If the SubstituteDataCode is valid and equal to "FSP75",

If the MethodCode is equal to "SO2R",

Locate all records in the Method Parameter to Maximum Default Parameter and Component Type lookup table with a Method Parameter Code equal to the ParameterCode in the method record and a Default Parameter Code not equal to "SO2X".

Otherwise,

Locate all records in the Method Parameter to Maximum Default Parameter and Component Type lookup table with a Method Parameter Code equal to the ParameterCode in the method record and a Default Parameter Code not equal to "SORX".

For each retrieved cross check record,

Locate all Monitor Default records for the location where the ParameterCode is equal to the Default Parameter Code in the retrieved cross check records, a DefaultPurposeCode equal to "MD", a FuelCode not equal to "NFS" or "MIX", a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If less than two records are found, or if there is only one FuelCode in the retrieved default records,

add Maximum Default Parameter Code to Missing Maximum Default.

Otherwise,

If the ComponentTypeCode in the retrieved cross-check record is equal to "NOX" or "SO2",

Locate a Monitor Span record for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the cross-check record, the SpanScaleCode is equal to "H", the MaximumPotentialConcentration is equal to the highest DefaultValue in the retrieved default records, a StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add the ComponentTypeCode in the cross-check record to Invalid Maximum Default.

If the ComponentTypeCode in the retrieved cross-check record is equal to "FLOW",

Locate a Monitor Span record for the location where the ComponentTypeCode is equal to "FLOW", the MaximumPotentialFlow is equal to the highest DefaultValue in the retrieved default records, a StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add "FLOW" to Invalid Maximum Default.

If the ComponentTypeCode in the retrieved cross-check record is null,

Locate a Monitor Default record for the location where the ParameterCode is equal to the Default Parameter Code in the retrieved cross check records, a DefaultPurposeCode equal to "MD", FuelCode equal to "NFS", a DefaultValue equal to the highest DefaultValue in the retrieved default records, StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add the Maximum Default Parameter Code in the cross-check record to Invalid Maximum Default.

If the MethodCode is valid, and the BypassApproachCode is valid and equal to "BYMAXFS",

If the MethodCode is equal to "SO2R",

Locate the record in the Method Parameter to Maximum Default Parameter and Component Type lookup table with a Method Parameter Code equal to the ParameterCode in the method record and a Default Parameter Code not equal to "SO2X" or "FLOX".

Otherwise,

Locate the record in the Method Parameter to Maximum Default Parameter and Component Type lookup table with a Method Parameter Code equal to the ParameterCode in the method record and a Default Parameter Code not equal to "SORX" or "FLOX".

Locate all Monitor Default records for the location where the ParameterCode is equal to the Default Parameter Code in the retrieved cross check records, a DefaultPurposeCode equal to "MD", a FuelCode not equal to "NFS", a BeginDate and BeginHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If found, and there are either more than one FuelCode in the retrieved records or the FuelCode in the retrieved record(s) is equal to "MIX",

If the ComponentTypeCode in the retrieved cross-check record is equal to "NOX" or "SO2",

Locate a Monitor Span record for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the cross-check record, the SpanScaleCode is equal to "H", the MaximumPotentialConcentration is equal to the highest DefaultValue in the retrieved default records, a StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add the ComponentTypeCode in the cross-check record to Invalid Maximum Default.

If the ComponentTypeCode in the retrieved cross-check record is null,

Locate a Monitor Default record for the location where the ParameterCode is equal to the Default Parameter Code in the retrieved cross check records, a DefaultPurposeCode equal to "MD", FuelCode equal to "NFS", a DefaultValue equal to the highest DefaultValue in the retrieved default records, StartDate and StartHour that is on or before the Method Evaluation End Date and End Hour, and a n EndDate that is null or an EndDate and EndHour that is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

add the Maximum Default Parameter Code in the cross-check record to Invalid Maximum Default.

Otherwise,

add Maximum Default Parameter Code to Missing Maximum Default.

If the Missing Maximum Default is not null, and the Invalid Maximum Default is null,

return result A.

If the Invalid Maximum Default is not null, and the Missing Maximum Default is null,

return result B.

If both the Missing Maximum Default and the Invalid Maximum Default are not null,

return result C.

If the SubstituteDataCode is valid and equal to " MHHI ",

Locate a Monitor Default for the location where the ParameterCode is equal to "MHHI", the DefaultPurposeCode is equal to "LM", the BeginDate/BeginHour is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

return result D.

Results:

Result	Description	Severity
A	You reported a substitute data or bypass approach code in the monitoring methodology record for [key] indicating the use of fuel-specific missing data, but you have not reported the appropriate default records that were active during the evaluation period for [missing default].	Critical Error Level 1
B	You reported a substitute data or bypass approach code in the monitoring methodology record for [key] indicating the use of fuel-specific missing data, but you have not reported a default value for [invalid default] that is equal to the MPC/MPF in the corresponding span record or the MER in the corresponding NFS default record.	Critical Error Level 1
C	You reported a substitute data or bypass approach code in the monitoring methodology record for [key] indicating the use of fuel-specific missing data, but you have not reported the appropriate default records that were active during the evaluation period for [missing default]. Also, you have not reported a default value for [invalid default] that is equal to the MPC/MPF in the corresponding span record or the MER in the corresponding NFS default record.	Critical Error Level 1
D	You reported a SubstituteDataCode of [code] for [key], but you did not report a [param] default record in your monitoring plan that is required for missing data purposes.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* true

Check Code: METHOD-30

Check Name: Required FuelFlow System Reported for Method

Related Former Checks: ARP-11, NBP-57

Applicability: Appendix D Check

Specifications:

For a Monitoring Method record with a ParameterCode equal to "HI" or "HIT", a valid MethodCode, and consistent dates:

If the MethodCode begins with "AD", and the Location Type begins with "U",

Locate all Unit Stack Configuration records where the unit location is the location in the Method record, the associated StackPipeID begins with "CP" or "MP", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

Locate all Unit Fuel records for the unit where the associated FuelGroup is equal to "OIL", the IndicatorCode is equal to "P" or "S", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each Unit Fuel record found,

Locate all records in the Fuel Code Lookup table where the UnitFuel is equal to the FuelCode in the Unit Fuel record.

Locate all Monitor Systems where the location is the unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records, the SystemTypeCode is equal to "OILM" or "OILV", the SystemDesignationCode is equal to "P", the FuelCode is any of the FuelCode in the retrieved Fuel Code Lookup table records, the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add the FuelCode in the Location Fuel Record to the Missing Fuel System for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection between the method evaluation period and the location fuel start date hour 23 and end date hour 0.

add the FuelCode in the Location Fuel Record to the Incomplete Fuel System for Method.

Locate all Unit Fuel records for the unit where the associated FuelGroup is equal to "GAS", the IndicatorCode is equal to "P" or "S", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each record found,

Locate all records in the Fuel Code Lookup table where the UnitFuel is equal to the FuelCode in the Unit Fuel record.

Locate all Monitor Systems where the location is the unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records, the SystemTypeCode is equal to "GAS", the SystemDesignationCode is equal to "P", the FuelCode is any of the FuelCode in the retrieved Fuel Code Lookup table records, the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add the FuelCode in the Location Fuel Record to the Missing Fuel System for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection between the method evaluation period and the location fuel start date hour 23 and end date hour 0.

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add the FuelCode in the Location Fuel Record to the Incomplete Fuel System for Method.

If the MethodCode begins with "LTF", and the Location Type begins with "U",

Locate all Unit Stack Configuration records where the unit location is the location in the Method record, the associated StackPipeID begins with "CP", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

Locate all Unit Fuel records for the unit where the associated FuelGroup is equal to "OIL", the IndicatorCode is equal to "P" or "S", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each Unit Fuel record found,

Locate all records in the Fuel Code Lookup table where the UnitFuel is equal to the FuelCode in the Unit Fuel record.

Locate all Monitor Systems where the location is the unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records, the SystemTypeCode is equal to "LTOL", the SystemDesignationCode is equal to "P", the FuelCode is any of the FuelCode in the retrieved Fuel Code Lookup table records, the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add the FuelCode in the Location Fuel Record to the Missing Fuel System for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection between the method evaluation period and the location fuel start date hour 23 and end date hour 0.

add the FuelCode in the Location Fuel Record to the Incomplete Fuel System for Method.

Locate all Unit Fuel records for the unit where the associated FuelGroup is equal to "GAS", the IndicatorCode is equal to "P" or "S", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each record found,

Locate all records in the Fuel Code Lookup table where the UnitFuel is equal to the FuelCode in the Unit Fuel record.

Locate all Monitor Systems where the location is the unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records, the SystemTypeCode is equal to "LTGS", the SystemDesignationCode is equal to "P", the FuelCode is any of the FuelCode in the retrieved Fuel Code Lookup table records, the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add the FuelCode in the Location Fuel Record to the Missing Fuel System for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection between the method evaluation period and the location fuel start date hour 23 and end date hour 0.

add the FuelCode in the Location Fuel Record to the Incomplete Fuel System for Method.

If Missing Fuel System for Method is not null, and the Incomplete Fuel System for Method is null,

return result A.

else i f Incomplete Fuel System for Method is not null, and the Missing Fuel System for Method is null,

return result B.

else i f both the Missing Fuel System for Method and the Incomplete Fuel System for Method are not null,

return result C.

otherwise,

If the MethodCode begins with "AD",

Locate all Monitor Systems for the location where the SystemTypeCode is equal to "OILM", "OILV", or "GAS", the SystemDesignationCode is equal to "P", the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

return result D.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

return result E.

If the MethodCode begins with "LTF",

Locate all Monitor Systems for the location where the SystemTypeCode is equal to "LTOL" or "LTGS", the SystemDesignationCode is equal to "P", the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

return result D.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire method evaluation period,

return result E.

Results:

Result	Description	Severity
A	You reported a monitoring methodology for [key], but there is no primary FuelFlow system that was active during the evaluation period to measure [missing fuel] at the unit or at a pipe linked to the unit, which is required for this method.	Critical Error Level 1
B	You reported a monitoring methodology for [key], but there is no primary FuelFlow system to measure [incomplete fuel] that is active for the entire evaluation period.	Critical Error Level 1
C	You reported a monitoring methodology for [key], but there is no primary FuelFlow system that was active during the evaluation period to measure [missing fuel] at the unit or at a pipe linked to the unit. Also, there is no primary FuelFlow system to measure [incomplete fuel] that is active for the entire evaluation period.	Critical Error Level 1
D	You reported a monitoring methodology for [key], but there is no primary FuelFlow system that was active during the evaluation period at the location, which is required for this method.	Critical Error Level 1
E	You reported a monitoring methodology for [key], but there is no primary FuelFlow system at the location, which is active for the entire evaluation	Critical Error Level 1

period.

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-31

Check Name: Required Peaking Qualification Reported for Appendix E Method

Related Former Checks: ARP-15

Applicability: Appendix E Check

Specifications:

For a Monitoring Method record with a ParameterCode equal to "NOXR", a MethodCode equal to "AE", and consistent dates:

If Location Type is equal to "MP",

Locate a UnitStackConfiguration record for the stack/pipe location.

Locate Monitor Qualification records where the location is the unit location in the UnitStackConfiguration record, the QualificationTypeCode is equal to "PK" or "SK", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

Otherwise,

Locate Monitor Qualification records for the location in the Method record where the QualificationTypeCode is equal to "PK" or "SK", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

If not found,

return result A.

If found, and the BeginDate and EndDate in the retrieved records do not span the entire method evaluation period,

return result B.

Results:

Result	Description	Severity
A	You reported a method for [key], but there are no Monitor Qualification records that were active during the evaluation period indicating that the unit is a peaking unit. The Appendix E method can only be used for peaking units.	Critical Error Level 2
B	You reported a method for [key], but the Monitor Qualification records do not indicate that the unit was a peaking unit for the entire evaluation period.	Critical Error Level 2

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* True

Check Code: METHOD-32

Check Name: Required Appendix E System Reported for Method

Related Former Checks: ARP-11, NBP-57

Applicability: Appendix E Check

Specifications:

For a Monitoring Method record with a ParameterCode equal to "NOXR", a MethodCode equal to "AE", and consistent dates:

set "NOXE" to NOX System Type.

Locate a Monitor System for the location where the SystemTypeCode is equal to "NOXE", the SystemDesignationCode is equal to "P", the FuelCode is equal to "MIX", the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

Locate all Unit Fuel records linked to the location where the associated FuelGroup is equal to "OIL" or "GAS", the IndicatorCode is equal to "P" or "S", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

For each record found,

Locate all records in the Fuel Code Lookup table where the UnitFuel is equal to the FuelCode in the Unit Fuel record.

Locate a Monitor System for the location where the SystemTypeCode is equal to "NOXE", the SystemDesignationCode is equal to "P", the FuelCode is any of the FuelCode in the Fuel Code Lookup table records retrieved above, the BeginDate/BeginHour is null or is on or before the Method Evaluation End Date/End Hour, and the EndDate/EndHour is null or is on or after the Method Evaluation Begin Date/Begin Hour.

If not found,

add the FuelCode in the Location Fuel Record to the Missing NOX System for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection between the method evaluation period and the location fuel start/end dates.

add the FuelCode in the Location Fuel Record to the Incomplete NOX System for Method.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire intersection between the method evaluation period and the location fuel start/end dates.

add "MIX" to the Incomplete NOX System for Method.

If Missing NOX System for Method is not null, and the Incomplete NOX System for Method is null,

return result A.

If Incomplete NOX System for Method is not null, and the Missing NOX System for Method is null,

return result B.

If both Missing NOX System for Method and the Incomplete NOX System for Method are not null,

return result C.

Results:

Result	Description	Severity

A	You reported a monitoring methodology for [key], but there is no primary [system type] system that was active during the evaluation period to measure [missing fuel], which is required for this method.	Critical Error Level 1
B	You reported a monitoring methodology for [key], but there is no primary [system type] system to measure [incomplete fuel] that is active for the entire evaluation period.	Critical Error Level 1
C	You reported a monitoring methodology for [key], but there is no primary [system type] system that was active during the evaluation period to measure [missing fuel]. Also, there is no primary [system type] system to measure [incomplete fuel] that is active for the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* true

Check Code: METHOD-33

Check Name: Required LME Qualification Reported for LME Method

Related Former Checks:

Applicability: LME Check

Specifications:

For a Monitoring Method record with a valid MethodCode equal to "LME" and consistent dates :

If ParameterCode is equal to "CO2M" or "SO2M",

Locate Monitor Qualification records for the location in the Method record where the QualificationTypeCode is equal to "LMEA", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

If not found,

Set Missing Qualification for Method to "LMEA", and return result A.

If found,

If the EndDate in the Method record is null,

If the BeginDate and EndDate in the retrieved records do not span the period from the Method Evaluation Begin Date to the Method Evaluation End Date,

Set Incomplete Qualification for Method to "LMEA", and return result B.

Otherwise,

If the BeginDate and EndDate in the retrieved records do not span the period from the Method Evaluation Begin Date through December 31 of the year prior to the EndDate in the method record.

Set Incomplete Qualification for Method to "LMEA", and return result B.

Otherwise,

Set Missing Qualification for Method to null.

Set Incomplete Qualification for Method to null.

Locate a Reporting Frequency record for the location where the ReportingFrequencyCode is equal to "Q" and the first day of the BeginQuarter is on or before the Method Evaluation End Date, and the EndQuarter is null or the last day of the EndQuarter is on or after the Method Evaluation Begin Date.

If found,

Locate Monitor Qualification records for the location in the Method record where the QualificationTypeCode is equal to "LMEA", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the later of the Method Evaluation Begin Date and the first day of the BeginQuarter in the reporting frequency record.

If not found,

Set Missing Qualification for Method to "LMEA".

If found,

If the EndDate in the Method record is null,

If the BeginDate and EndDate in the retrieved records do not span the entire period from the later of the

Method Evaluation Begin Date and the first day of the BeginQuarter in the reporting frequency record until the Method Evaluation End Date,

Set Incomplete Qualification for Method to "LMEA".

Otherwise,

If the BeginDate and EndDate in the retrieved records do not span the entire period from the later of the Method Evaluation Begin Date and the first day of the BeginQuarter in the reporting frequency record through December 31 of the year prior to the EndDate in the method record,

Set Incomplete Qualification for Method to "LMEA".

If Reporting Frequency record found,

Locate a Location Program Parameter record for the location where the ParameterCode is equal to 'NOX', the OzoneSeasonInd is equal to 1, the RequiredInd is equal to 1, the ClassCode is equal to "A" or "B", and the UnitMonitorCertBeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

Otherwise, // Require LMES Qualification for OS programs that require and optionally require NOX when the location is not an annual reporter.

Locate a Location Program Parameter record for the location where the ParameterCode is equal to 'NOX', the OzoneSeasonInd is equal to 1, the ClassCode is equal to "A" or "B", and the UnitMonitorCertBeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the Method Evaluation Begin Date.

If Location Program Parameter record found,

Locate Monitor Qualification records for the location in the Method record where the QualificationTypeCode is equal to "LME S ", the BeginDate is on or before the Method Evaluation End Date, and the EndDate is null or is on or after the later of the Method Evaluation Begin Date and the earliest UnitMonitorCertBeginDate in the unit program record.

If not found,

append "LMES" to Missing Qualification for Method.

If found,

Set LMES Begin Date to the the later of the Method Evaluation Begin Date and the earliest UnitMonitorCertBeginDate in the retrived Unit Program records.

If LMES Begin Date is prior to May 1,

Set LMES Begin Date to May 1 of the year of the LMES Begin Date.

If the EndDate in the Method record is null,

If the BeginDate and EndDate in the retrieved records do not span the entire period from the LMES Begin Date to the Method Evaluation End Date,

append "LMES" to Incomplete Qualification for Method.

Otherwise,

If the BeginDate and EndDate in the retrieved records do not span the entire period from the LMES Begin Date to September 30 of the year prior to the EndDate in the method record,

append "LMES" to Incomplete Qualification for Method.

If Missing Qualification for Method is not null, and Incomplete Qualification for Method is null,

return result A.

If Missing Qualification for Method is null, and Incomplete Qualification for Method is not null,

return result B.

If Missing Qualification for Method is not null, and Incomplete Qualification for Method is not null,

return result C.

Results:

Result	Description	Severity
A	You have reported a [param] method record for this unit indicating the use of an LME methodology, but you have not reported a [missing] Monitor Qualification record for the unit that is active during the evaluation period.	Critical Error Level 1
B	You have reported a [param] method record for this unit indicating the use of an LME methodology, but you have not reported an [incomplete] Monitor Qualification record for the unit that spans the entire evaluation period.	Critical Error Level 1
C	You have reported a [param] method record for this unit indicating the use of an LME methodology, but you have not reported an [missing] Monitor Qualification record for the unit that is active during the evaluation period. Also, you have not reported an [incomplete] Monitor Qualification record for the unit that spans the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* True

Check Code: METHOD-34

Check Name: Alternative Monitoring Methodology Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Method record with a valid Method Code:

If MethodCode is equal to "AMS", "PEM", or "SO2R",

return result A.

Results:

Result	Description	Severity
A	You have a reported a monitoring methodology for [key] that requires approval from EPA.	Informational Message

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-35

Check Name: Required Unit Control for MTB Method

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Method record with a valid MethodCode equal to "MTB" and consistent dates:

Locate all Unit Control record linked to this location where the ControlCode is equal to "W L ", "WL S ", or " W S", the InstallDate is null, the RetireDate is null or on or after the Method Evaluation End Date , and the OriginalCode is equal to 1,

If not found,

Locate all Unit Control record linked to this location where the ControlCode is equal to "W L ", "WL S ", or " W S", the InstallDate is on or before the Method Evaluation End Date, and the RetireDate is null or on or after the Method Evaluation Begin Date.

If not found,

return result A.

If found, and the InstallDate and RetireDate of the retrieved Unit Control records do not span the entire period between the Method Evaluation Begin Date and Method Evaluation End Date,

return result B.

Results:

Result	Description	Severity
A	You have reported the use of a moisture lookup table in [key], but you have not reported the use of a wet scrubber in a unit control record that was active during the evaluation period. The use of a moisture lookup table is only appropriate for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams.	Informational Message
B	You have reported the use of a moisture lookup table in [key], but you have not reported the use of a wet scrubber for the entire evaluation period. The use of a moisture lookup table is only appropriate for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams.	Informational Message

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation *Condition:* Current Method Active *Equals* true

Check Code: METHOD-36

Check Name: Duplicate Method Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Method record:

Locate another Monitoring Method record for the location with a ParameterCode equal to the ParameterCode in the current record and a BeginDate/BeginHour that is equal to the BeginDate/BeginHour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null,

Locate another Monitoring Method record for the location with a ParameterCode equal to the ParameterCode in the current record and a n EndDate/EndHour that is equal to the EndDate/EndHour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Method Evaluation

Check Code: METHOD-37

Check Name: H2O Method Substitute Data Code Consistent with Formula

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Method record with a ParameterCode equal to "H2O", a valid MethodCode that is not equal to "MDF", and a valid SubstituteDataCode, and consistent dates:

Set ***Moisture Default Parameter*** to null.

Locate all Monitor Formula records for the location where the FormulaCode is equal to "19-3", "19-3D", "19-4", or "19-8", the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If found,

If SubstituteDataCode is equal to "REV75",

Locate all Monitor Formula records for the location where the FormulaCode is equal to "F-2", "F-14B", "F-16", "F-17", "F-18", "F-26B", "19-5", or "19-9", the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found,

Set ***Moisture Default Parameter*** to "H2ON".

else if SubstituteDataCode is equal to "SPTS",

Set ***Moisture Default Parameter*** to "H2OX".

If not found,

If SubstituteDataCode is equal to "SPTS",

Locate all Monitor Formula records for the location where the FormulaCode is equal to "F-2", "F-14B", "F-16", "F-17", "F-18", "F-26B", "19-5", or "19-9", the BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If found,

return result B.

If not found,

Set ***Moisture Default Parameter*** to "H2OX".

else if SubstituteDataCode is equal to "REV75",

Set ***Moisture Default Parameter*** to "H2ON".

If ***Moisture Default Parameter*** is not null,

Locate a MonitorDefault record for the location where the ParameterCode is equal to ***Moisture Default Parameter*** , the

BeginDate and BeginHour is on or before the Method Evaluation End Date and End Hour, and the End Date is null or the EndDate and EndHour is on or after the Method Evaluation Begin Date and Begin Hour.

If not found,

return result C.

If found, and the retrieved records do not span the entire method evaluation period,

return result D.

Results:

Result	Description	Severity
A	You reported "REV75" as the SubstituteDataCode for [key], but based on your formula records, you should be using the Standard Part 75 missing data procedures.	Critical Error Level 1
B	You reported "SPTS" as the SubstituteDataCode for [key], but based on your formula records, you should be using the Inverse Part 75 missing data procedures.	Critical Error Level 1
C	You reported a SubstituteDataCode of [code] for [key], but you did not report a [param] default record in your monitoring plan that is required for missing data purposes.	Critical Error Level 1
D	You reported a SubstituteDataCode of [code] for [key], but you did not report [param] default records in your monitoring plan, which is required for missing data purposes, that span the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Method Evaluation

Condition: Current Method Active *Equals* true

Check Code: METHOD-39

Check Name: Mutually Exclusive Method Parameters

Related Former Checks:

Applicability:

Specifications:

Set ***OverlappingParameterList*** to null.

If ***MethodDatesAndHoursConsistent*** is true,

Locate ***MethodParameterEquivalentCrosscheck*** records where ParameterCode is equal to ***CurrentMethod*** .ParameterCode.

If found,

For each ***MethodParameterEquivalentCrosscheck*** record found,

Set *EquivalentCd* to the EquivalentCode value for the ***MethodParameterEquivalentCrosscheck*** record.

Locate ***MethodRecords*** for the location where:

a) ParameterCode is equal to *EquivalentCd* .

b) BeginDateHour is on or after the ***CurrentMethod*** .BeginDateHour.

c) BeginDateHour is on or before ***MethodEvaluationEndDate/Hour*** .

d) EndDateHour is null OR is on or after ***MethodEvaluationBeginDate/Hour*** .

If found,

Append *EquivalentCd* to ***OverlappingParameterList*** .

If ***OverlappingParameterList*** is NOT null,

return result A.

Results:

Result	Description	Severity
A	You have reported a monitoring methodology for [parameter], but equivalent parameters for [equivalent] were reported with overlapping start and end times during the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Method Evaluation

Check Category:

Location

Check Code: MONLOC-2

Check Name: Location Type

Related Former Checks:

Applicability: General Check

Specifications:

For the monitoring location:

Set Location Type to "".

Set Location Type Description to "".

If the UnitID of the monitoring location is not null,

Locate all Unit Stack Configuration records where the unit location is the monitoring location, the BeginDate is on or before the Evaluation End Date, and an EndDate that is null or on or after the Evaluation Begin Date.

If there is at least one record with an associated StackPipeID that begins with "CS" or "MS", and at least one record with a StackPipeID that begins with "CP" or "MP",

set Location Type to "UB" and Location Type Description to "unit with associated stacks and pipes".

If there is at least one record with an associated StackPipeID that begins with "CS" or "MS", and no records with a StackPipeID that begins with "CP" or "MP",

set Location Type to "US" and Location Type Description to "unit with associated stacks but no pipes".

If there is at least one record with an associated StackPipeID that begins with "CP" or "MP", and no records with a StackPipeID that begins with "CS" or "MS",

set Location Type to "UP" and Location Type Description to "unit with associated pipes but no stacks".

If there are no records found,

set Location Type to "U" and Location Type Description to "unit without associated stacks or pipes".

If the StackPipeID of the monitoring location begins with "CS",

set Location Type to "CS" and Location Type Description to "common stack".

If the StackPipeID of the monitoring location begins with "CP",

set Location Type to "CP" and Location Type Description to "common pipe".

If the StackPipeID of the monitoring location begins with "MS",

set Location Type to "MS" and Location Type Description to "multiple stack".

If the StackPipeID of the monitoring location begins with "MP",

set Location Type to "MP" and Location Type Description to "multiple pipe".

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Default Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
3	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation

4	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
5	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation
6	Monitoring Plan Evaluation Report --- Location Evaluation

Check Code: MONLOC-3

Check Name: Location Attribute Active Status

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current Location Attribute Active to false.

Otherwise,

set Current Location Attribute Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Attribute Evaluation Begin Date to the Evaluation Begin Date.

Otherwise,

set the Attribute Evaluation Begin Date to the BeginDate.

If the EndDate is null or is after the Evaluation End Date,

set the Attribute Evaluation End Date to the Evaluation End Date.

Otherwise,

set the Attribute Evaluation End Date to the EndDate.

Set Stack Information Required to false.

If Location Type is equal to "CS" or "MS",

set Stack Information Required to true.

Else if Location Type begins with "U",

Locate all Unit Stack Configuration linked to the unit and a common or multiple stack during the Location Attribute Elevauation period

If not found or if does not span Location Attribute Eval period,

set Stack Information Required to true

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation *Condition:* Location Attribute Record Valid*Equals* true

Check Code: MONLOC-5

Check Name: Stack Ground Elevation Valid

Related Former Checks: ARP-16A, B

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If the GroundElevation is not null

If GroundElevation is less than -100 or greater than 15000,

return result A.

Otherwise

If Stack Information Required equals true,

return result B.

Results:

Result	Description	Severity
A	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
B	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation *Condition:* Current Location Attribute Active *Equals* true

Check Code: MONLOC-6

Check Name: Stack Cross Area Flow Valid

Related Former Checks: ARP-17, 19

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If the CrossAreaFlow is not null,

If the Flow System Active Present is false,

return result A.

If the CrossAreaFlow is less than 5 or is greater than 1700,

return result B.

If the CrossAreaFlow is null, and the Post2008 Flow System Present equals true,

return result C.

Results:

Result	Description	Severity
A	You provided the cross-sectional area at the flow monitor location for this location, but there is no flow monitoring system currently used to report data defined.	Non-Critical Error
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
C	You have not reported the required value in the field [fieldname] for [key].	Non-Critical Error

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation
	Condition: Current Location Attribute Active *Equals* true

Check Code: MONLOC-7

Check Name: Stack Cross Area Exit Valid

Related Former Checks: ARP-16A, B

Applicability: CEM Check

Specifications:

Else For a Location Attribute record:

If the CrossAreaStackExit is not null,

If CrossAreaStackExit is less than 5 or greater than 1700,

return result A.

If StackHeight is not null,

Set stackHeightToDiameterRatio = StackHeight / (SQRT(CrossAreaStackExit / pi) * 2)

If stackHeightToDiameterRatio is greater than 85,

return result B.

If stackHeightToDiameterRatio is less than 5,

Locate all Unit Type records for the location where the BeginDate is on or before the Attribute Evaluation Begin Date and the EndDate is null or is on or after the Attribute Evaluation Begin Date.

If found, and any UnitTypeCode is not equal to "CC", "CT", or "OT",

return result B.

Else i f Stack Information Required equals true,

return result C.

Results:

Result	Description	Severity
A	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
B	The ratio of the stack height to the stack diameter for [key] is outside the range of valid values from 5 to 85.	Informational Message
C	You did not provide [fieldname], which is required for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation *Condition:* Current Location Attribute Active *Equals* true

Check Code: MONLOC-8

Check Name: Stack Height Valid

Related Former Checks: ARP-16A, B

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If the StackHeight is not null ,

If is less than 20 or greater than 1600,

return result A.

Otherwise,

If Stack Information Required equals true,

return result B.

Results:

Result	Description	Severity
A	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
B	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation *Condition:* Current Location Attribute Active *Equals* true

Check Code: MONLOC-9

Check Name: Stack Shape Code Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If the ShapeCode is not null, and is not in the list of valid Shape Codes,

return result A.

If the ShapeCode is null, and Flow System Active Present is true,

return result B.

Results:

Result	Description	Severity
A	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
B	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation
	Condition: Current Location Attribute Active *Equals* true

Check Code: MONLOC-10

Check Name: Stack Material Code Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If the MaterialCode is not null, and is not in the list of valid Material Codes,

return result A.

If the MaterialCode is null, and the Flow System Active Present is true,

return result B.

Results:

Result	Description	Severity
A	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
B	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation
	Condition: Current Location Attribute Active *Equals* true

Check Code: MONLOC-11

Check Name: Location Attribute Begin Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation
	Condition: Location Attribute Record Valid*Equals* true

Check Code: MONLOC-12

Check Name: Location Attribute End Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If EndDate is not null and is greater than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation
	Condition: Location Attribute Record Valid*Equals* true

Check Code: MONLOC-13

Check Name: Flow System Active Present

Related Former Checks: ARP-17, 19

Applicability: CEM Check

Specifications:

For the location attribute record:

Set Flow System Active Present to false and Post2008 Flow System Present to false.

If Location Type is not equal to "CP" or "MP",

Locate a MonitorSystem record for the location with a SystemType equal to "FLOW", a BeginDate on or before the Attribute Evaluation End Date, and an EndDate that is null or on or after the Attribute Evaluation Begin Date.

If found,

set Flow System Active Present to true.

If any of the retrieved system records have an EndDate that is null or is on or after the ***ECMPS MP Begin Date*** ,

set Post2008 Flow System Present to true.

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation *Condition:* Current Location Attribute Active *Equals* true

Check Code: MONLOC-14

Check Name: Location Type Consistent with Number of Linked Locations

Related Former Checks: ARP-56

Applicability: General Check

Specifications:

For a monitoring location:

If Location Type that begins with "C",

Locate all MP Unit Stack Configuration records where the stack/pipe location is the monitoring location, the BeginDate is on or before the Location Evaluation End Date and the EndDate null or on or after the Location Evaluation Begin Date.

If less than two records are found,

return result A.

else if Location Type is equal to "CP",

Locate all Monitor Location records for the facility other than the current monitoring location with a LocationName beginning with "CP":

For each location found,

Locate all Facility Unit Stack Configuration records where the stack/pipe location is the retrieved monitoring location , the BeginDate is on or before the Location Evaluation Begin Date and the EndDate null or on or after the Location Evaluation End Date.

If the list of units in the Facility Unit Stack Configuration records for the retrieved location is the exact same list of units in the MP Unit Stack Configurations for the location being evaluated,

return result C.

If Location Type begins with "M",

Locate all MP Unit Stack Configuration records where the stack/pipe location is the monitoring location.

If there is more or less than one retrieved MP Unit Stack Configuration record, or if the BeginDate of the retrieved record is after the Location Evaluation Begin Date or the EndDate of the retrieved record is before the Location Evaluation End Date,

return result B.

Results:

Result	Description	Severity
A	You have identified a common stack or pipe [stack/pipe ID] that is not linked to at least two units for the entire evaluation period.	Critical Error Level 1
B	You have identified a multiple stack or pipe [stack/pipe ID] that is not linked to one and only one unit for the entire evaluation period.	Critical Error Level 1
C	You have defined a common pipe [stack/pipe ID] that is linked to the same group of units as another common pipe. If you have multiple fuel sources that feed the same group of units, you should define multiple fuel flow systems at a single common pipe.	Critical Error Level 2

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation *Condition:* Abort Location Evaluation *Equals* false

Check Code: MONLOC-19

Check Name: Location Stack Pipe ID Valid

Related Former Checks:

Applicability: General Check

Specifications:

If the location is a stack or pipe:

Set Stack Pipe ID Format Valid to true.

If the StackPipeID is null,

set Stack Pipe ID Format Valid to false, and return result A.

If the StackPipeID is less than 3 characters, contains non-alphanumeric characters other than "-", or does not begin with "CS", "MS", "CP", or "MP",

set Stack Pipe ID Format Valid to false, and return result B.

Otherwise,

If StackPipeID contains "-" and is less than 4 characters,

set Stack Pipe ID Format Valid to false, and return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	You reported a Stack/Pipe ID [Stack Pipe ID], which has an invalid format.	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Stack/Pipe Evaluation
2	Monitoring Plan Evaluation Report --- Location Evaluation

Check Code: MONLOC-74

Check Name: Stack Bypass Indicator Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If BypassIndicator is equal to 1,

If Location Type is not equal to either "CS" or "MS",

return result A.

Results:

Result	Description	Severity
A	You reported a value in field [fieldname] for [key], but this value is only valid for a stack.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation
	Condition: Current Location Attribute Active *Equals* true

Check Code: MONLOC-76

Check Name: Location Attribute Dates Consistent

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Location Attribute record:

If the BeginDate and EndDate are valid,

If the EndDate is not null and the BeginDate is after the EndDate,

set Location Dates consistent to false, and return result A.

Otherwise,

set Location Dates consistent to true.

Otherwise,

set Location Dates consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Evaluation Report ------ Location Attribute Evaluation *Condition:* Location Attribute Record Valid*Equals* true

Check Code: MONLOC-77

Check Name: Determine Location Evaluation Period

Related Former Checks:

Applicability: General Check

Specifications:

For the location:

If the Location Type begins with "U",

set Affected Unit to false.

set Location Evaluation Begin Date to null.

set Location Evaluation End Date to 1/1/1993.

Locate all Location Program records for the location with an EndDate that is null or is on or after to the Evaluation Begin Date.

For each record found,

If the ClassCode is not equal to "N", "NA", or "NB",

set Affected Unit to true.

If the EmissionsRecording BeginDate is not null ,

If Location Evaluation Begin Date is null,

set Location Evaluation Begin Date to the EmissionsRecordingBeginDate.

else if the EmissionsRecording BeginDate is prior to the Location Evalu a tion Begin Date,

set Location Evaluation Begin Date to the EmissionsRecordingBeginDate.

else i f the UnitMonitorCertBeginDate is not null ,

if the Location Evalu a tion Begin Date is null,

set Location Evaluation Begin Date to the UnitMonitorCertBeginDate.

else if the UnitMonitorCertBeginDate is prior to the Location Evalu a tion Begin Date

set Location Evaluation Begin Date to the UnitMonitorCertBeginDate.

If the EndDate is null,

set Location Evaluation End Date to null.

else if Location Evaluation End Date is not null and EndDate is after the Location Evaluation End Date,

set Location Evaluation End Date to the EndDate.

I f the Evaluation Begin Date is not null and the Location Evaluation Begin Date is prior to the Evaluation Begin Date,

set Location Evaluation Begin Date to the Evaluation Begin Date.

If the Location Evaluation End Date is equal to 1/1/1993 or the Location Evaluation End Date is null,

set Location Evaluation End Date to the Evaluation End Date.

else if the Evaluation End Date is not null and the Location Evaluation End Date is after the Evaluation End Date,

set Location Evaluation End Date to the Evaluation End Date.

Locate the latest Unit Operating Status record for the unit where the Begin Date is on or prior to the Location Evaluation End Date, and the End Date is null or is on or after the Location Evaluation Begin Date,

If found, and the Op Status Code is equal to " LTCS " ,

set the Location Evaluation End Date to the day before the Begin Date.

Otherwise,

Locate the earliest Unit Program Exemption records for the unit where the Exempt Type is equal to "RUE", the Exemption Begin Date is on or prior to the Location Evaluation End Date, and the Exemption End Date is null .

If found,

set the Location Evaluation End Date to the day before the Exemption Begin Date.

Otherwise,

If the ProgramCode in all the retrieved Location Program records are only equal to "NBP", "OTC", "NHNOX", or "SIPNOX",

Locate the latest Unit Operating Status records for the unit , the Begin Date is on or prior to the Location Evaluation End Date, and the End Date is null or is on or after the Location Evaluation Begin Date,

If found, and the Op Status Code is equal to "RET",

If the Begin Date is between May 1 and September 30,

set the Location Evaluation End Date to September 30 of the year of the Begin Date .

Otherwise,

set the Location Evaluation End Date to the day before the Begin Date.

Otherwise,

If the Stack ActiveDate is null or is prior to the Evaluation Begin Date,

set the Location Evaluation Begin Date to the Evaluation Begin Date,

Otherwise,

set the Location Evaluation Begin Date to the Stack ActiveDate.

Locate all Location Program records for the location with an EndDate that is null or is on or after to the Evaluation Begin Date.

If found, and the earliest UnitMonitorCertBeginDate in the retrieved records is after the Location Evaluation Begin Date,

set Location Evaluation Begin Date to the earliest UnitMonitorCertBeginDate in the retrieved records.

If the Stack RetirementDate is not null and is prior to the Evaluation End Date,

set the Location Evaluation End Date to the Stack RetirementDate.

Otherwise,

set the Location Evaluation End Date to the Evaluation End Date.

If the Location Evaluation Begin Date is on or before than the Location Evaluation End Date,

set Abort Location Evaluation to false,

Otherwise,

set Abort Location Evaluation to true, abort the evaluation of the location, and return result A.

Results:

Result	Description	Severity
A	[Location] does not appear to have been operational during the evaluation period. It will not be evaluated.	Informational Message

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation

Check Code: MONLOC-80

Check Name: Required Location Attribute Reported for Location

Related Former Checks:

Applicability: CEM Check

Specifications:

For the location:

Locate all Location Attribute records for this location where the BeginDate is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If found,

If Location Type is equal to "CP" or "MP",

set Location Attribute Record Valid to false, and return result A.

Otherwise,

Set Location Attribute Record Valid to true.

If the BeginDate and EndDate of all the retrieved records does not span the entire location evaluation period,

Locate a ll MonitorSystem record s for the location with a SystemType equal to "SO2", "SO2R", "NOX", "NOXC", "CO2", "O2", "H2O", "H2OM", or "FLOW" .

If the BeginDate and EndDate of all the retrieved location attribute records does not span the entire intersection between the location evaluation period and the earliest system begin date and the latest system end date,

return result B.

If none are found,

If Location Type is equal to "CS", "MS", "U", or "UP",

return result C.

Else if Location Type equals 'US' or 'UB'

Locate Unit Stack Configuration Records for the unit with a BeginDate on or before the Location Evaluation End Date, and a EndDate that is null or on or after the Location Evaluation Begin Date , and the Stack/Pipe Name begins with 'CS' or 'MS'.

If not found or the records do not span the later of the Location Evaluation Begin Date and January 1st, 2009 through the Location Evaluation End Date,

return result to C

If result is null ,

Locate a MonitorSystem record for the location with a SystemType equal to "SO2", "SO2R", "NOX", "NOXC", "CO2", "O2", "H2O", "H2OM", or "FLOW", a BeginDate on or before the Location Evaluation End Date, and a EndDate that is null or on or after the ***ECMPS MP Begin Date*** .

If found,

return result C.

Results:

Results:

Result	Description	Severity
A	You have reported a monitor location attribute record for [key]. This record should only be reported for stacks, units that are not linked to stacks, or units with CEMS.	Non-Critical Error
B	You have not reported monitor location attribute records that span the entire evaluation period for [key].	Critical Error Level 1
C	You have not reported a monitor location attribute record that was active during the evaluation period for [key].	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --- Location Evaluation

Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-81

Check Name: Stack Pipe Active Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

If the location is a stack or pipe:

If ActiveDate is null,

return result A.

If ActiveDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Stack/Pipe Evaluation
2	Monitoring Plan Evaluation Report --- Location Evaluation

Check Code: MONLOC-82

Check Name: Stack Pipe Retire Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

If the location is a stack or pipe:

If RetireDate is not null and is greater than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Stack/Pipe Evaluation
2	Monitoring Plan Evaluation Report --- Location Evaluation

Check Code: MONLOC-83

Check Name: Stack Pipe Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

If the location is a stack or pipe:

If Stack ActiveDate and Stack RetireDate are both valid,

If the RetireDate is not null and the ActiveDate is after the RetireDate,

return result A.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Stack/Pipe Evaluation
2	Monitoring Plan Evaluation Report --- Location Evaluation

Check Code: MONLOC-85

Check Name: Unit Stack Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Unit Stack Configuration record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Stack Configuration Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Stack Configuration Evaluation
	Condition: Location Type *Begins With* U

Check Code: MONLOC-86

Check Name: Unit Stack End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Unit Stack Configuration record:

If EndDate is not null and is greater than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Stack Configuration Evaluation
2	Monitoring Plan Evaluation Report ------ Unit Stack Configuration Evaluation
	Condition: Location Type *Begins With* U

Check Code: MONLOC-87

Check Name: Unit Stack Configuration Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Unit Stack Configuration record:

If the BeginDate and EndDate are both valid, the EndDate is not null, and the BeginDate is after the EndDate,

return result A.

If the Location Type is equal to "CS", "MS", "CP", "MP",

If the BeginDate and the Stack ActiveDate are valid, and the BeginDate is before the ActiveDate,

return result B.

If the EndDate and the Stack RetireDate are valid, the RetireDate is not null, and the EndDate is null or is after the RetireDate,

return result C.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1
B	You reported [datefield1] as prior to the Stack Active Date for [key].	Critical Error Level 1
C	You have not reported [datefield2] or you have reported it as later than the Stack Retire Date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Unit Stack Configuration Evaluation *Condition:* Location Type *Begins With* U

Check Code: MONLOC-88

Check Name: Determine Non Load Based Indicator for Location

Related Former Checks:

Applicability: General Check

Specifications:

For a monitoring location:

If the Location Type begins with "U",

set the Location Non Load Based Indicator to the NonLoadBasedIndicator for the unit.

Otherwise,

Locate all MP Unit Stack Configuration records where the stack/pipe location is the monitoring location.

If the NonLoadBasedIndicator in all of the retrieved records is equal to 1,

set the Location Non Load Based Indicator to 1.

If the NonLoadBasedIndicator in all of the retrieved records is equal to 0,

set the Location Non Load Based Indicator to 0.

Otherwise,

set the Location Non Load Based Indicator to 0, and return result A.

Results:

Result	Description	Severity
A	You have reported that common stack or pipe [key] is linked to both a non-load-based unit and a load-based unit. This is invalid.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Load Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
3	Monitoring Plan Evaluation Report --- Location Evaluation
	Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-97

Check Name: Unit Type Consistent with Non Load Based Indicator

Related Former Checks: ARP-67

Applicability: General Check

Specifications:

If the Location Type begins with "U", and the NonLoadBasedIndicator is null or equal to 0,

Locate all Unit Type records for the location where the BeginDate is null or is on or before the Evaluation End Date and the End Date is null or is on or after the Evaluation Begin Date,

If the Unit Type in any of the retrieved is equal to "KLN" or "PRH",

return result A.

Results:

Result	Description	Severity
A	Based on the unit type, the unit does not generate load, but you did not report that Unit ID [key] was a non-load-based unit.	Critical Error Level 2

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation
	Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-98

Check Name: Overlapping Unit Capacity Records Reported

Related Former Checks:

Applicability: General Check

Specifications:

If Location Type begins with "U",

Locate all Unit Capacity records for this location where the BeginDate is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If there is more than one record active at any time during the location evaluation period,

return result A.

Results:

Result	Description	Severity
A	You have reported more than one unit capacity record for [unit] during the evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation
	Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-99

Check Name: Required Unit Capacity Record Reported for Unit

Related Former Checks:

Applicability: General Check

Specifications:

If Location Type begins with "U",

Locate all Unit Capacity records for this location where the BeginDate is null or is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If none are found,

return result A.

Otherwise,

If the BeginDate and EndDate of all the retrieved records does not span the entire location evaluation period,

return result B.

Results:

Result	Description	Severity
A	You have not reported a unit capacity record that was active during the evaluation period for [key].	Critical Error Level 1
B	You have not reported unit capacity records for [key] that span the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation
	Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-100

Check Name: Overlapping Location Attribute Records Reported

Related Former Checks:

Applicability: CEM Check

Specifications:

For the location:

Locate all Location Attribute records for this location where the BeginDate is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If there is more than one record active at any time during the location evaluation period,

return result A.

Results:

Result	Description	Severity
A	You have reported overlapping Location Attribute records for [key] during the evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --- Location Evaluation

Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-101

Check Name: Required Load Record Reported for Location

Related Former Checks: ARP-10, ARP-29A, NBP-50, NBP-51

Applicability: General Check

Specifications:

For any location:

Locate all Monitor Load records for this location where the BeginDate is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If none are found,

If Location Non Load Based Indicator is null or is equal to 0,

return result A.

Otherwise,

Locate all Test Summary records for this location where TestTypeCode is equal to "FF2LBAS", the BeginDate is or or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If any are found,

return result A.

Otherwise,

Locate a MonitorSystem record for the location with a SystemType equal to "SO2", "SO2R", "NOX", "NOXC", "CO2", "O2", "H2O", "H2OM", or "FLOW", a BeginDate on or before the Location Evaluation End Date, and a EndDate that is null or on or after the Location Evaluation Begin Date.

If found,

return result A.

Otherwise,

If the BeginDa te/BeginHour and EndDate /EndHour of all the retrieved records does not span the entire location evaluation period,

return result B.

Results:

Result	Description	Severity
A	You did not define load information that was active during the evaluation period for [key]. You must submit this information for each load-based monitoring location.	Critical Error Level 1
B	You did not define load information for [key] for the entire evaluation period. You must submit this information for each load-based monitoring location.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation *Condition:* Abort Location Evaluation *Equals* false

Check Code: MONLOC-103

Check Name: Required Primary Fuel Record Reported for Unit

Related Former Checks:

Applicability: General Check

Specifications:

If Location Type begins with "U", and Affected Unit is equal to true,

Locate all Unit Fuel records for this unit where the IndicatorCode is equal to "P", the BeginDate is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If none are found,

return result A.

Otherwise,

If the BeginDate and EndDate of all the retrieved records does not span the entire location evaluation period,

return result B.

Results:

Result	Description	Severity
A	You did not report a primary fuel that was active during the evaluation period for [key].	Critical Error Level 1
B	You did not report a primary fuel to span the entire evaluation period for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation *Condition:* Abort Location Evaluation *Equals* false

Check Code: MONLOC-104

Check Name: Overlapping Primary Fuels Reported

Related Former Checks: NBP-65

Applicability: General Check

Specifications:

If Location Type begins with "U",

Locate all Unit Fuel records for this unit where the IndicatorCode is equal to "P", the BeginDate is on or before the Location Evaluation End Date, and the EndDate is null or is on or after the Location Evaluation Begin Date.

If there is more than one record active at any time during the location evaluation period,

return result A.

Results:

Result	Description	Severity
A	You have defined overlapping primary fuel types for the current period for [key].	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --- Location Evaluation

Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-105

Check Name: Multiple Pipe Valid

Related Former Checks:

Applicability: Appendix D Check

Specifications:

If Location Type is equal to "MP",

return result A.

Results:

Result	Description	Severity
A	Most configurations do not require the definition of a multiple pipe. You should consult CAMD prior to defining a multiple pipe.	Informational Message

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation
	Condition: Abort Location Evaluation *Equals* false

Check Code: MONLOC-106

Check Name: Duplicate Stack Pipe Records

Related Former Checks:

Applicability: General Check

Specifications:

For a StackPipe record with a valid StackPipeID format:

Locate another StackPipe record for the location with a StackPipeID equal to the StackPipeID in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Stack/Pipe Evaluation

Check Code: MONLOC-107

Check Name: Unit Stack Configuration Record Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a UnitStackConfiguration record:

If the UnitID is null,

return result A.

Otherwise,

Locate another UnitStackConfiguration record with an associated StackPipeID and UnitID equal to the StackPipeID and UnitID in the current record.

If found,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Unit Stack Configuration Evaluation

Check Code: MONLOC-109

Check Name: Location Attribute Record Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Location Attribute record:

Locate another MonitoringLocationAttrib ute record for the location with a BeginDate that is equal to the BeginDate in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null,

Locate another Location Attribute record for the location with an EndDate that is equal to the EndDate in the current record.

If found,

return result A.

Otherwise,

If the location is a pipe (the StackPipeID of the monitoring location begins with "CP" or "MP"),

return result B.

Otherwise,

If the location is a pipe (the StackPipeID of the monitoring location begins with "CP" or "MP"),

return result B.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal
B	You have reported a monitor location attribute record for [key]. This record should only be reported for stacks, units that are not linked to stacks, or units with CEMS.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation

Check Code: MONLOC-111

Check Name: Monitoring Plan Contains All Used IDs for Location

Related Former Checks:

Applicability: General Check

Specifications:

For the location:

Set Unused IDs to null.

Locate all Used Identifier records for the location.

For each record with Table Code equal to "S":

Locate a Monitoring System record for the location where the Monitoring System ID is equal to the Identifier in the Used Identifier record.

If not found,

append "System ID: " + Identifier to Unused IDs.

For each record with Table Code equal to "C":

Locate a Component record for the location where the Component ID is equal to the Identifier in the Used Identifier record.

If not found,

append "Component ID: " + Identifier to Unused IDs.

For each record with Table Code equal to "F":

Locate a Monitoring Formula record for the location where the Formula ID is equal to the Identifier in the Used Identifier record.

If not found,

append "Formula ID: " + Identifier to Unused IDs.

If Unused IDs is not null,

return result A.

Results:

Result	Description	Severity
A	You have inappropriately deleted records for the location from the MP with the following IDs: [list]. You cannot delete these records because QA and emissions data have already been reported using these IDs.	Fatal

Usage:

1	Monitoring Plan Evaluation Report --- Location Evaluation

Check Category:

Monitoring Plan

Check Code: MONPLAN-1

Check Name: Monitoring Plan Has Affected Unit

Related Former Checks:

Applicability:

Specifications:

For the monitoring plan:

Locate a Unit Program record for any location in the monitoring plan with an EndDate that is null or is on or after the Evaluation Begin Date.

If no records are found,

return result A, and discontinue the evaluation of this plan.

Results:

Result	Description	Severity
A	There are no locations in this monitoring plan that were active during the evaluation period. Further evaluation of this monitoring plan will not be performed.	Informational Message

Usage:

1	Monitoring Plan Evaluation Report Monitoring Plan Evaluation

Check Code: MONPLAN-3

Check Name: Duplicate Monitoring Plan Comment Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Plan Comment record:

If the SubmissionAvailabilityCode in the current record is not equal to "UPDATED",

Locate another MonitoringPlanComment record for the location with a MonitoringPlanComment equal to the MonitoringPlanComment in the current record and a Begin Date equal to the BeginDate in the current record.

If found,

r eturn result A.

If not found and the EndDate in the current record is not null,

Locate another MonitoringPlanComment record for the location with a MonitoringPlanComment equal to the MonitoringPlanComment in the current record and an EndDate equal to the EndDate in the current record.

If found,

return result A.

Otherwise,

return result B.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal
B	This comment has already been submitted and cannot be changed. If you wish change this comment to resubmit it, please contact EPA for approval.	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitor Plan Comment Evaluation

Check Code: MONPLAN-4

Check Name: Monitor Plan Comment Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor Plan Comment record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitor Plan Comment Evaluation
2	Monitoring Plan Evaluation Report --- Monitor Plan Comment Evaluation

Check Code: MONPLAN-5

Check Name: Monitor Plan Comment End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor Plan Comment record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitor Plan Comment Evaluation
2	Monitoring Plan Evaluation Report --- Monitor Plan Comment Evaluation

Check Code: MONPLAN-6

Check Name: Monitor Plan Comment Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitor Plan Comment record:

If the BeginDate and EndDate are both valid, the EndDate is not null, and the BeginDate is after the EndDate,

return result A.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitor Plan Comment Evaluation
2	Monitoring Plan Evaluation Report --- Monitor Plan Comment Evaluation

Check Code: MONPLAN-7

Check Name: Monitor Plan Comment Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Plan Comment record:

If MonitorPlanComment is null,

return result A.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitor Plan Comment Evaluation

Check Code: MONPLAN-8

Check Name: Initialize Variables

Related Former Checks:

Applicability: General Check

Specifications:

For the monitoring plan:

If the associated First ECMPS Reporting Period for the monitoring plan is null,

Set ***ECMPS MP Begin Date*** to {01/01/200 9 }

Else

Set ***ECMPS MP Begin Date*** to the first day of the First ECMPS Reporting Period.

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Location Attribute Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Method Evaluation
3	Monitoring Plan Evaluation Report Monitoring Plan Evaluation
4	Obsolete Gas Flow Meter Calibration Test (Pass 1)
5	Obsolete Gas Flow Meter Calibration Test Evaluation
6	Obsolete Hg LME Default Test (Pass 1)
7	Obsolete Hg LME Default Test Evaluation

Check Code: MONPLAN-9

Check Name: Monitoring Plan Has Actively Reporting Units

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Plan:

If the End Reporting Period of the monitoring plan is null:

Locate all Unit Op Status record for all units in the monitoring plan with an Op Status Code equal to "RET" or "LTCS", and an End Date that is null.

If at least one record is found, and the monitoring plan contains a common stack or a common pipe,

Locate all Unit Op Status record for all units in the monitoring plan with an Op Status Code equal to "OPR", and an End Date that is null.

If at least one record is found,

return result A.

Otherwise,

If End Reporting Period of the monitoring plan is prior to the Begin Reporting Period of the monitoring plan,

return result B.

Otherwise,

Locate an Emissions Submission Access record for the monitoring plan where the Reporting Period is after the End Reporting Period of the monitoring plan.

If found,

retun result C.

Otherwise,

Locate all Unit Op Status records for all units in the monitoring plan with an Op Status Code equal to "RET" or "LTCS", a Begin Date that is in the year prior to the year of the End Reporting Period of the monitoring plan, and an End Date that is null or is after the End Reporting Period of the monitoring plan.

If at least one record is found, and the monitoring plan contains a common stack or a common pipe,

return result A.

Results:

Result	Description	Severity
A	The monitoring plan contains at least one unit that should not be reporting because it has retired or is in long-term cold storage. You should enter an End Date in the Unit Stack Configuration record that indicates the date when the unit no longer had to report.	Critical Error Level 2
B	The end reporting period is prior to the begin reporting period for the monitoring plan. Please contact ECMPS technical support to resolve this problem.	Critical Error Level 2
C	The end reporting period of the monitoring plan is inconsistent with the	Critical Error Level 2

emissions data reported for the monitoring configuration. If the unit is linked to a stack, be sure that you have reported an End Date in the Unit Stack Configuration record that indicates the date when the unit no longer had to report.

Usage:

1	Monitoring Plan Evaluation Report Monitoring Plan Evaluation

Check Code: MONPLAN-10

Check Name: Determine If Monitoring Plan Can Be Submitted

Related Former Checks:

Applicability: General Check

Specifications:

For the monitoring plan:

If the first day of the Begin Reporting Period of the monitoring plan is more than 60 days prior to the current date,

return result A.

Results:

Result	Description	Severity
A	You cannot submit a monitoring plan more than 60 days prior to when the monitoring plan becomes active. If the monitoring plan contains a single unit, the monitoring plan normally becomes active on the first day of the quarter of the earliest BeginDate in the MonitoringMethod records for the unit. If the monitoring plan contains one or more stack/pipes, the monitoring plan normally becomes active on the first day of the quarter of the latest BeginDate in the UnitStackConfiguration records associated with the units, stacks, and pipes in the monitoring plan.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report Monitoring Plan Evaluation

Check Code: MONPLAN-11

Check Name: Monitoring Plan Has Valid MATS Methods

Related Former Checks:

Applicability:

Specifications:

Set ***MatsRequiredCheck*** to false.

Set ***MatsEvaluationBeginDate*** to null.

Set *MatsMonitorMethodEarliestDate* to null.

Locate the earliest record by BeginDate in ***MpMethodRecords*** where ParameterCode is equal to "HGRE" "HGRH", "HCLRE", "HCLRH", "HFRE", "HFRH", "SO2RE", or "SO2RH" ,

If a record was located,

Set *MatsMonitorMethodEarliestDate* to BeginDate in the located record.

Set ***MatsRequiredCheck*** to true.

Set *MatsSupplementalMethodEarliestDate* to null.

Locate the earliest record by BeginDate/Hour in ***MatsMpMethodRecords*** ,

If a record was located,

Set *MatsSupplementalMethodEarliestDate* to BeginDate in the located record.

Set *MatsRuleComplianceDate* to null.

Locate ***SystemParameter*** lookup table record where Sys_Param_Name = 'MATS_RULE'.

If a record was located,

Set *MatsRuleComplianceDate* to Param_Value1 in the located record.

If (*MatsSupplementalMethodEarliestDate* is not null) AND (*MatsMonitorMethodEarliestDate* is not null)

Set ***MatsEvaluationBeginDate*** to the earlier of *MatsSupplementalMethodEarliestDate* and *MatsMonitorMethodEarliestDate* .

Else if (*MatsSupplementalMethodEarliestDate* is not null)

Set ***MatsEvaluationBeginDate*** to *MatsSupplementalMethodEarliestDate* .

Else if (*MatsMonitorMethodEarliestDate* is not null)

Set ***MatsEvaluationBeginDate*** to *MatsMonitorMethodEarliestDate* .

If (*MatsRuleComplianceDate* is not null) AND ((***MatsEvaluationBeginDate*** is null) OR (***MatsEvaluationBeginDate*** is after to *MatsRuleComplianceDate*))

// Override the date based on methods if it is after the MATS compliance date.

Set ***MatsEvaluationBeginDate*** to *MatsRuleComplianceDate* .

If (***MatsEvaluationBeginDate*** is not null) AND (***MatsEvaluationBeginDate*** is prior to ***EvaluationBeginDate***)

// Override the date based on methods and the MATS compliance date if it is prior to the evaluation begin date.

Set ***MatsEvaluationBeginDate*** to ***EvaluationBeginDate*** .

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation
2	Monitoring Plan Evaluation Report Monitoring Plan Evaluation

Check Code: MONPLAN-12

Check Name: Initialize Check Engine Values

Related Former Checks:

Applicability:

Specifications:

Set ***EvaluationBeginDate*** to the CheckEngine.EvalDefaultedBeganDate.

Set ***EvaluationEndDate*** to the CheckEngine.EvalDefaultedEndDate.

Set ***MaximumFutureDate*** to the CheckEngine.MaximumFutureDate.

Usage:

1	Monitoring Plan Evaluation Report Monitoring Plan Evaluation

Check Category:

Program

Check Code: PROGRAM-1

Check Name: Program Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For the ***CurrentProgram*** record:

If the UnitMonitorCertBeginDate is not null,

If the UnitMonitorCertBeginDate is after the current date , or the EndDate is before ***EvaluationBeginDate*** , or the end reporting period of the MP is not null and is prior to the UnitMonitorCertBeginDate,

set ***CurrentProgramActive*** to false.

else

set ***CurrentProgramActive*** to true.

If EmissionsRecordingBeginDate is not null and is after the ***EvaluationBeginDate***

set the ***ProgramEvaluationBeginDate*** to the EmissionsRecordingBeginDate.

else i f the UnitMonitor Cert BeginDate + 180 days is after to the ***EvaluationBeginDate*** ,

set the ***ProgramEvaluationBeginDate*** to the UnitMonitorCertBeginDate + 180 days.

Otherwise,

set the ***ProgramEvaluationBeginDate*** to the ***EvaluationBeginDate*** .

If ***CurrentProgram.ProgramCode*** is MATS, and ***MatsRequiredCheck*** is equal to true, and ***MatsEvaluationBeginDate*** is after the ***ProgramEvaluationBeginDate*** ,

set ***ProgramEvaluationBeginDate*** to ***MatsEvaluationBeginDate*** .

If the EndDate is null or the EndDate is after the ***EvaluationEndDate*** ,

set the ***ProgramEvaluationEndDate*** to the ***EvaluationEndDate*** ,

Otherwise,

set the ***ProgramEvaluationEndDate*** to the EndDate.

Locate a record in ***UnitOperatingStatusRecords*** for the unit where the OpStatusCode is equal to "RET" and the EndDate is null.

If found, and the BeginDate of the record in ***UnitOperatingStatusRecords*** is on or prior to the ***ProgramEvaluationEndDate*** ,

set the ***ProgramEvaluationEndDate*** to the day before the BeginDate of the Operating Status record.

Otherwise,

set ***CurrentProgramActive*** to false.

Usage:

1 Monitoring Plan Evaluation Report ------ Unit Program Evaluation

Check Code: PROGRAM-10

Check Name: Program Parameter Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For the ***Current Program Parameter*** record:

Set ***CurrentProgramParameterActive*** to true.

Set ***ProgramParameterEvaluationBeginDate*** to null.

Set ***ProgramParameterEvaluationEndDate*** to null.

If (***Current Program Active*** is false)

Set ***CurrentProgramParameterActive*** to false.

Else if (***CurrentProgramParameter*** .ParameterBeginDate is on or after ***ProgramEvaluationEndDate***)

Set ***CurrentProgramParameterActive*** to false.

Else if (***CurrentProgramParameter*** .ParameterEndDate is NOT null) AND (***CurrentProgramParameter*** .ParameterEndDate is on or before ***ProgramEvaluationBeginDate***)

Set ***CurrentProgramParameterActive*** to false.

Else if (***CurrentProgramParameter*** .ProgramCode is equal to "MATS") AND (***MatsEvaluationBeginDate*** is NOT null)

If (***ProgramEvaluationEndDate*** is on or before ***MatsEvaluationBeginDate***)

Set ***CurrentProgramParameterActive*** to false.

Else if (***CurrentProgramParameter*** .ParameterEndDate is NOT null) AND (***CurrentProgramParameter*** .ParameterEndDate is on or before ***MatsEvaluationBeginDate***)

Set ***CurrentProgramParameterActive*** to false.

If (***CurrentProgramParameterActive*** is true)

If (***ProgramEvaluationBeginDate*** is after the ***CurrentProgramParameter*** .ParameterBeginDate)

Set ***ProgramParameterEvaluationBeginDate = ProgramEvaluationBeginDate***

Else

Set ***ProgramParameterEvaluationBeginDate = CurrentProgramParameter*** .ParameterBeginDate.

If (***CurrentProgramParameter*** .ProgramCode is equal to "MATS") AND (***MatsEvaluationBeginDate*** is after ***ProgramParameterEvaluationBeginDate***)

Set ***ProgramParameterEvaluationBeginDate*** to ***MatsEvaluationBeginDate*** .

If (***CurrentProgramParameter*** .ParameterEndDate is null) OR (***ProgramParameterEvaluationEndDate*** is before ***CurrentProgramParameter*** .ParameterEndDate)

Set ***ProgramParameterEvaluationEndDate = ProgramEvaluationEndDate***

Else

Set ***ProgramParameterEvaluationEndDate = CurrentProgramParameter*** .ParameterEndDate

Usage:

1 Monitoring Plan Evaluation Report --------- Unit Program Parameter Evaluation

Check Code: PROGRAM-11

Check Name: Required Method Reported for Program

Related Former Checks: Replaces Program 2, 3, 5, 6, 8 and 9.

Applicability: General Check

Specifications:

For the ***CurrentProgramParameter*** record when RequiredInd equals 1, ProgramCode is NOT equal to "MATS", and ClassCode is not equal to "N", "NA" or "NB":

If ***CurrentProgramParameterActive*** is equal to true,

Result Type = null

Method Parameter List = Lookup Method Parameter List from Cross-Check Table "Program Parameter To Method Parameter" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Program Method Parameter Description = Lookup Method Parameter Description from Cross-Check Table "Program Parameter To Method Parameter" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Common Type List = Lookup Common Location Type List from Cross-Check Table "Program Parameter To Location Type" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Multiple Type List = Lookup Multiple Location Type List from Cross-Check Table "Program Parameter To Location Type" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Method Code List = Lookup Method Code List from Cross-Check Table "Program Parameter To Method Code" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Severity Code = Lookup Severity Code from Cross-Check Table "Program Parameter To Severity" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

/*

Locate all locations that can satisfy the method requirement for a program by themselves.

For Part 75, an MS location cannot satisfy the method requirement by itself if another active MS location exists. The other active MS must also have a method.

*/

Locate all Unit Stack Configuration records where:

1) Unit is the ***Current Program Parameter*** unit.

2) Stack/Pipe Location has a StackPipeID beginning with o ne of the items in *Common Type List* .

3) BeginDate is on or prior to the ***Program Parameter Evaluation End Date*** .

4) End Date is null or is on or after the ***Program Parameter Evaluation Begin Date*** .

Locate all Monitor Method records where the location is either the ***Current Program Parameter*** unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records, the ParameterCode is in *Method Parameter List* or the MethodCode is in *Method Code List* , the BeginDate is on or prior to the ***Program Parameter Evaluation End Date*** , and the End Date is null or is on or after the ***Program Parameter Evaluation Begin Date*** .

If no method records are found, or the BeginDate/BeginHour and EndDate/EndHour of the retrieved Method records do not span the entire Program Evaluation period,

Locate all Unit Stack Configuration records where unit is the ***Current Program Parameter*** unit, the stack/pipe location has a StackPipeID beginning with one of the items in *Common Type List* or *Multiple Type List* , the

BeginDate is on or prior to the ***Program Parameter Evaluation End Date*** and the End Date is null or is on or after the ***Program Parameter Evaluation Begin Date*** .

If there are no stack or pipes in the retrieved Unit Stack Configuration records with a StackPipeID that begins with one of the items in *Multiple Type List* ,

If no Method records are found,

Result Type = 'Missing'

Else

Result Type = 'Incomplete'

Else

Locate all Monitor Method records where the location is either the ***Current Program Parameter*** unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records , the ParameterCode is in *Method Parameter List* or the MethodCode is in *Method Code List* , the BeginDate is on or prior to the ***Program Parameter Evaluation End Date*** , and the End Date is null or is on or after the ***Program Parameter Evaluation Begin Date*** .

If no Method records are found,

Result Type = 'Missing'

Else if the BeginDate/BeginHour and EndDate/EndHour of the retrieved Method records do not span the entire Program Evaluation period,

Result Type = 'Incomplete'

Otherwise,

For each hour beginning with Hour 23 of the ***Program Parameter Evaluation Begin Date*** and ending with Hour 0 of the ***Program Parameter Evaluation End Date*** :

Locate all Unit Stack Configuration records where unit is the ***Current Program Parameter*** unit, the stack/pipe location has a StackPipeID beginning with one of the items in *Common Type List* or *Multiple Type List* , the BeginDate is on or prior to the hour being checked, and the End Date is null or is on or after the hour being checked.

Locate all Monitor Method records where the location is either the ***Current Program Parameter*** unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records , the ParameterCode is in *Method Parameter List* or the MethodCode is in *Method Code List* , the BeginDate/BeginHour is on or prior to the hour being checked, and the End Date is null or EndDate/EndHour is on or after the hour being checked.

If a Method record is found for the unit OR for any common stack/pipe in the retrieved Unit Stack configuration records,

Check next hour.

Else if the hour being checked is Hour 0,

If a Method record is found for at least one multiple stack but not all multiple stacks in the retrieved Unit Stack configuration records with a BeginDate that is prior to the date being checked,

Result Type = 'Incomplete'

else if a Method record is found for at least one multiple pipe but not all multiple pipes in the retrieved Unit Stack configuration records with a BeginDate that is prior to the date being checked,

Result Type = 'Incomplete'

Otherwise,

Check next hour.

Else if the hour being checked is Hour 23,

If a Method record is found for at least one multiple stack but not all multiple stacks in the retrieved Unit Stack configuration records with an EndDate that is null or after the date being checked,

Result Type = 'Incomplete'

else if a Method record is found for at least one multiple pipe but not all multiple pipes in the retrieved Unit Stack configuration records with an EndDate that is null or after the date being checked,

Result Type = 'Incomplete'

Otherwise,

Check next hour.

Otherwise,

If a Method record is found for at least one multiple stack but not all multiple stacks in the retrieved Unit Stack configuration records with a BeginDate prior to the date being checked and an EndDate that is null or after the date being checked,

Result Type = 'Incomplete'

else if a Method record is found for at least one multiple pipe but not all multiple pipes in the retrieved Unit Stack configuration records with a BeginDate prior to the date being checked and an EndDate that is null or after the date being checked,

Result Type = 'Incomplete'

Otherwise,

Check next hour.

If *Result Type* is equal to 'Missing',

If *Severity Code* equals 'NONCRIT',

Return result C

Else if *Severity Code* equals 'INFORM',

Return result E

Else

Return result A

Else if *Result Type* is equal to 'Incomplete',

If *Severity Code* equals 'NONCRIT',

Return result D

Else if *Severity Code* equals 'INFORM',

Return result F

Else

Return result B

Results:

Result	Description	Severity
A	Although Unit ID [Unit ID] is a [program] affected unit, no monitoring method(s) for [method] have been reported that was/were active during the evaluation period for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit.	Critical Error Level 1
B	Although Unit ID [Unit ID] is a [program] affected unit, monitoring method (s) for [method] have not been reported for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit for the entire evaluation period. If you believe that this error is incorrect, and has been caused by an inaccurate date in the Unit Program record, please contact Craig Hillock at Hillock.Craig@epamail.epa.gov.	Critical Error Level 1
C	Although Unit ID [Unit ID] is a [program] affected unit, no monitoring method(s) for [method] have been reported that was/were active during the evaluation period for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit.	Non-Critical Error
D	Although Unit ID [Unit ID] is a [program] affected unit, monitoring method (s) for [method] have not been reported for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit for the entire evaluation period. If you believe that this error is incorrect, and has been caused by an inaccurate date in the Unit Program record, please contact Craig Hillock at Hillock.Craig@epamail.epa.gov.	Non-Critical Error
E	Although Unit ID [Unit ID] is a [program] affected unit, no monitoring method(s) for [method] have been reported that was/were active during the evaluation period for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit.	Informational Message
F	Although Unit ID [Unit ID] is a [program] affected unit, monitoring method (s) for [method] have not been reported for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit for the entire evaluation period. If you believe that this error is incorrect, and has been caused by an inaccurate date in the Unit Program record, please contact Craig Hillock at Hillock.Craig@epamail.epa.gov.	Informational Message

Usage:

1	Monitoring Plan Evaluation Report --------- Unit Program Parameter Evaluation

Check Code: PROGRAM-12

Check Name: Required Method Reported for MATS

Related Former Checks:

Applicability: General Check

Specifications:

MATS Method Parameter Description = null.

For the ***CurrentProgramParameter*** record when ProgramCode is equals to "MATS", RequiredInd is equal to 1, and ClassCode is equal to "A":

If ***CurrentProgramParameterActive*** is equal to true,

MATS Method Parameter Description = Lookup Method Parameter Description from Cross-Check Table "Program Parameter To Method Parameter" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Method Parameter List = Lookup Method Parameter List from Cross-Check Table "Program Parameter To Method Parameter" where ProgramParameterCd equals the ***Current Program Parameter*** .ParameterCd.

Locate all Unit Stack Configuration records where:

1) Unit is the ***Current Program Parameter*** unit.

2) Stack/Pipe Location has a StackPipeID beginning with "CS" or "MS".

3) BeginDate is on or prior to the ***Program Parameter Evaluation End Date*** .

4) End Date is null or is on or after the ***Program Parameter Evaluation Begin Date*** .

Locate all Monitor Method or MATS Supplemental Method records where the location is either the ***Current Program Parameter*** unit or any of the stack/pipe locations in the retrieved Unit Stack Configuration records, the ParameterCode is in *Method Parameter List* , the BeginDate is on or prior to the ***Program Parameter Evaluation End Date*** , and the End Date is null or is on or after the ***Program Parameter Evaluation Begin Date*** .

If no method records are found,

Return result A

Else if the BeginDate/BeginHour and EndDate/EndHour of the retrieved Method records do not span the entire Program Parameter Evaluation period,

Return result B

Results:

Result	Description	Severity
A	Although Unit ID [Unit ID] is a [program] affected unit, no monitoring method(s) for [method] have been reported that was/were active during the evaluation period for the unit, for a common stack or pipe linked to the unit, or for all multiple stacks or pipes linked to the unit.	Informational Message
B	Although Unit ID [Unit ID] is a [program] affected unit, monitoring method (s) for [method] have not been reported for the unit, or for a common or multiple stack linked to the unit for the entire evaluation period. If you believe that this error is incorrect, and has been caused by an inaccurate date in the Unit Program record, please contact Craig Hillock at Hillock.Craig@epamail.epa.gov.	Informational Message

Usage:

1 Monitoring Plan Evaluation Report --------- Unit Program Parameter Evaluation

Check Category:

Qualification

Check Code: QUAL-1

Check Name: Monitoring Qualification Type Consistent with Non Load Based Indicator

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor Qualification record with a valid QualificationTypeCode equal to "LMEA", "LMES", or "COMPLEX":

If the Location Non Load Based Indicator is equal to 1,

return result A.

Results:

Result	Description	Severity
A	You have reported an invalid Monitor Qualification record for [key] This qualification type does not apply to non-load based units.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Qualification Evaluation

Condition: Current Qualification Active *Equals* true

Check Code: QUAL-3

Check Name: Monitoring Qualification Type Consistent with Fuel

Related Former Checks: LME-1

Applicability: General Check

Specifications:

For a Monitor Qualification record with a valid Qualification Type Code is equal to "GF", "LMEA", or "LMES",

Locate a Fuel record for the location where the associated Fuel Group is not equal to "GAS" or "OIL", the BeginDate is on or before the Qualification Evaluation End Date, and the EndDate is null or is on or after the Qualification Evaluation Start Date.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported an invalid Monitor Qualification record for [key]. This type of qualification is only valid for units burning oil and/or gas fuels.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Qualification Evaluation
	Condition: Current Qualification Active *Equals* true

Check Code: QUAL-5

Check Name: Monitoring Qualification Type Consistent with Program and Reporting Frequency

Related Former Checks: LME-4A

Applicability: General Check

Specifications:

Set ***Qualification Consistent with Program and Reporting Frequency*** to true.

For a Monitor Qualification record with a valid QualificationTypeCode equal to "LMEA", "LMES", "PK", or "SK" :

If Qualification Type Code is equal to "SK":

Locate a Monitor Plan Reporting Frequency record for the location where ReportingFrequency is equal to "Q", the BeginQuarter is on or before the quarter of the Qualification Evaluation End Date, and the EndQuarter is null or is on or after the quarter of the Qualification Evaluation Start Date.

If found,

Set ***Qualification Consistent with Program and Reporting Frequency*** to false.

return result A.

If Qualification Type Code is equal to "PK" or "LMEA":

Locate a Monitor Plan Reporting Frequency record for the location where ReportingFrequency is equal to "Q", the Begin Quarter is on or before the quarter of the Qualification Evaluation End Date, and the EndQuarter is null or is on or after the quarter of the Qualification Evaluation Start Date.

If not found,

Set ***Qualification Consistent with Program and Reporting Frequency*** to false.

return result B.

If Qualification Type Code is equal to "LMES":

Locate a Location Program Parameter record for the unit where the ParameterCode is equal to 'NOX', the OzoneSeasonIndicator is equal to 1, the ClassCode is equal to "A" or "B" , the UnitMonitorCertBeginDate is on or before the Qualification Evaluation End Date, and the EndDate is null or is on or after the Qualification Evaluation Start Date.

If not found,

Set ***Qualification Consistent with Program and Reporting Frequency*** to false.

return result C.

Results:

Result	Description	Severity
A	You have reported an invalid Monitoring Qualification record for [key]. A Qualification Type of SK is not appropriate for units reporting on a quarterly basis.	Critical Error Level 1
B	You have reported an invalid Monitoring Qualification record for [key]. A Qualification Type of [type] is only appropriate for units reporting on a quarterly basis.	Critical Error Level 1
C	You have reported an invalid Monitoring Qualification record for [key]. A Qualification Type of LMES is only appropriate for units that belong to an	Critical Error Level 1

ozone-season program.

Usage:

1 Monitoring Plan Evaluation Report ------ Qualification Evaluation

Condition: Current Qualification Active *Equals* true

Check Code: QUAL-7

Check Name: Monitoring Qualification Percent Qualification Year Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If the QualificationYear is null,

return result A.

If the dates in the associated Monitor Qualification record are consistent and the QualificationYear is prior to the year of the BeginDate,

return result B.

If the EndDate in the associated Monitor Qualification record is null,

If the QualificationYear is greater than the current year and the Yr1QualificationDataTypeCode is not equal to "P" ,

return result B.

Otherwise,

If the dates in the associated Monitor Qualification record are consistent and the QualificationYear is more than one year after the year of the EndDate,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	The QualificationYear for [key] does not correspond to the BeginDate and EndDate in the Monitoring Qualification record.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-8

Check Name: Monitoring Qualification Percent Average Percent Value Valid

Related Former Checks: NBP-11A

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

Set Calculated Average Percent Value to null.

If AveragePercentValue is null,

return result A.

If AveragePercentValue is less than 0 or greater than 100,

return result B.

If Yr1PercentageValue, Yr2PercentageValue, and Yr3PercentageValue are all between 0 and 100,

Calculate Calculated Average Percent Value = (Yr1PercentageValue + Yr2PercentageValue + Yr3PercentageValue) / 3, and round the result to 1 decimal place.

If AveragePercentValue is not equal to Calculated Average Percent Value,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1
C	The average percent capacity or percent heat input from gas reported for [key] is not consistent with the average recalculated from the Year 1, 2 and 3 values.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true

Check Code: QUAL-11

Check Name: PCT Qualification Eligibility Valid

Related Former Checks: NBP-11B/C/D/E

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If the associated EndDate is null, or the QualificationYear and associated EndDate are both valid and the Qualification Year is less than the year of the EndDate,

If the associated QualificationTypeCode is equal to "GF",

If either the Yr1PercentageValue, Yr2PercentageValue, and Yr3PercentageValue is greater than or equal to 0 and less than 85.0,

return result A.

If the Calculated Average Percent Value is less than 90.0,

return result B.

Otherwise,

If either the Yr1PercentageValue, Yr2PercentageValue, and Yr3PercentageValue is greater than 20.0 and less than or equal to 100.0,

return result C.

If the Calculated Average Percent Value is greater than 10.0,

return result D.

If the associated EndDate is not null, and the QualificationYear and associated EndDate are both valid and the Qualification Year is one greater than the year of the EndDate,

If the associated QualificationTypeCode is equal to "GF",

If the Yr1PercentageValue, Yr2PercentageValue, and Yr3PercentageValue are all between 85.0 and 100, and the Calculated Average Percent Value is greater than or equal to 90.0,

return result E.

Otherwise,

If the Yr1PercentageValue, Yr2PercentageValue, and Yr3PercentageValue are all between 0 and 20.0, and the Calculated Average Percent Value is less than or equal to 10.0,

return result F.

Results:

Result	Description	Severity
A	The percent heat input from gas for one or more years reported for [key] is less than 85%, which is the minimum required percentage to qualify as a gas-fired unit.	Critical Error Level 2
B	The average of the reported yearly percent heat input from gas reported for [key] is less than 90%, which is the minimum required percentage to qualify	Critical Error Level 2

	as a gas-fired unit.	
C	The reported % capacity factor for one or more years reported for [key] is more than 20%, which is the maximum allowable capacity factor to qualify as a peaking unit.	Critical Error Level 2
D	The average of the reported yearly percent capacity factors reported for [key] is greater than 10%, which is the maximum allowable capacity factor to qualify as a peaking unit.	Critical Error Level 2
E	You have reported that the unit has lost its status as a gas-fired unit, yet the % heat input for gaseous fuel values reported for [key] do not indicate this.	Non-Critical Error
F	You have reported that the unit has lost its status as a peaking unit, yet the % capacity factors reported for [key] do not indicate this.	Non-Critical Error

Usage:

1	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-12

Check Name: Required LME Qualification for Program and Reporting Frequency

Related Former Checks: LME-4C/D/F

Applicability: LME Check

Specifications:

For a Monitor Qualification record with a valid QualificationTypeCode that begins with "LME":

If Qualification Type Code is equal to "LMES",

Set NOX LME Unit to true.

S et SO2 LME Unit to false.

Locate a Monitor Plan Reporting Frequency record for the location where the ReportingFrequency is equal to "Q", the BeginQuarter is on or before the quarter of the Qualification Evaluation End Date, and the EndQuarter is null or is on or after the quarter of the Qualification Evaluation Start Date.

If found,

Locate a Monitor Qualification record for the unit where the QualificationTypeCode is equal to "LMEA" and the Begin Date is on or before the later of the BeginDate in the current Monitor Qualification record and the first day of the BeginQuarter in the Reporting Frequency record.

If not found,

return result A.

If Qualification Type Code is equal to "LMEA",

Set NOX LME Unit to false.

S et SO2 LME Unit to false.

Locate a Monitoring Method record for the location where the MethodCode is equal to " LME " , the ParameterCode is equal to NOXM , the BeginDate is on or before the Qualification Evaluation End Date , and the EndDate is null or is on or after the Qualification Evaluation Start Date .

If found,

set NOX LME Unit to true.

Locate a Monitoring Method record for the location where the MethodCode is equal to " LME " , the ParameterCode is equal to 'SO2M' , the BeginDate is on or before the Qualification Evaluation End Date , and the EndDate is null or is on or after the Qualification Evaluation Start Date .

If found,

set SO2 LME Unit to true.

If NOX LME Unit is equal to false and SO2 LME Unit is equal to false.

Locate a Unit Program record for the unit where the ProgramCode is equal " RGGI" , the ClassCode is not equal to "N", the UnitMonitorCertBeginDate is on or before the Qualification Evaluation End Date, and the EndDate is null or is on or after the Qualification Evaluation Start Date.

If found,

set SO2 LME Unit and NOX LME Unit to true.

Locate a Location Program Parameter record for the location where the ParameterCode is equal to 'NOX', the OzoneSeasonInd is equal to 1, the RequiredInd is equal to 1, the ClassCode is equal to "A" or "B", the UnitMonitorCertBeginDate is on or before the Qualification Evaluation End Date, and the EndDate is null or is on or after the Qualification Evaluation Start Date.

If found,

Locate a Monitor Qualification record for the unit where the QualificationTypeCode is equal to "LMES" and the Begin Date is on or before the later of the BeginDate in the current Monitor Qualification record , May 1 of the year of the BeginDate in the the current Monitor Qualification record , and the earliest UnitMonitorCertBeginDate in the UnitProgram record.

If not found,

return result B.

Results:

Result	Description	Severity
A	You reported Monitor Qualification record for [key], but you did not report a LMEA qualification record that was active during the evaluation period. Units in a seasonal NOx program that report on a year-round basis must report LME qualification data on both an annual and ozone-season basis.	Critical Error Level 1
B	You reported Monitor Qualification record for [key], but you did not report an LMES qualification record that was active during the evaluation period. Units that report on a year-round basis that belong to a seasonal NOx program must report LME qualification data on both an annual and ozone-season basis.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Qualification Evaluation *Condition:* Current Qualification Active *Equals* true

Check Code: QUAL-14

Check Name: Required Monitoring System for Qualification

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitor Qualification record with a QualificationTypeCode equal to "PRATA1", "PRATA2", "COMPLEX", or "LOWSULF":

If QualificationTypeCode is equal to "LOWSULF",

set Qualification System Type to "SO2".

Otherwise,

set Qualification System Type to "FLOW".

Locate a Monitor System record for the location where the SystemTypeCode begins with the Qualification System Type, the BeginDate is on or before the Qualification Evaluation End Date, and the EndDate is null or is on or after the Qualification Evaluation Start Date.

If not found,

return result A.

Results:

Result	Description	Severity
A	You have reported a Monitor Qualification record for [key], but no [type] system that was active during the evaluation period has been reported at this location.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Qualification Evaluation *Condition:* Current Qualification Active *Equals* true

Check Code: QUAL-16

Check Name: Monitoring Qualification Qualification Type Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the ***CurrentQualification*** record:

If the QualificationTypeCode is null,

return result A.

Otherwise,

If QualificationTypeCode is equal to "LMEA", "LMES", "PK", "SK", "GF" , or "HGAVG" ,

If Location Type does not begin with "U",

return result C.

Else if QualificationTypeCode is equal to "LEE"

Find a record in ***LocationProgramRecords*** where:

1) ProgramCode is equal to "MATS".

2) The earlier of UnitMonitorCertBeginDate and EmissionReportingBeginDate (if it exists) is less than or equal to ***CurrentQualification*** .EndDate.

3) EndDate is null or is greater than or equal to ***CurrentQualification*** BeginDate.

If found,

If Location Type is equal to "MS", "CP" or "MP"

return result D.

Else

return result E

Otherwise,

Locate QualificationTypeCode in the QualificationTypeCode Lookup Table.

If not found,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You have reported an invalid Monitor Qualification record for [key]. This type of qualification only applies to units.	Critical Error Level 1
D	You have reported an invalid Monitor Qualification Record for [key]. This	Critical Error Level 1

	type of qualification only applies to units and common stacks.	
E	You have reported an invalid Monitor Qualification Record for [key]. An LEE qualification only applies to MATS program affected units.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation
2	Monitoring Plan Evaluation Report ------ Qualification Evaluation
	Condition: Current Qualification Active *Equals* true

Check Code: QUAL-18

Check Name: Monitoring Qualification Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Qualification Data record:

If BeginDate is null,

return result A.

If Qualification Type Code is equal to "LMEA" or "LMES",

set Earliest Begin Date to "01/01/2000".

If Qualification Type Code is equal to "PK", "SK", or "GF",

set Earliest Begin Date to "01/01/1996".

Otherwise,

set Earliest Begin Date to "01/01/1993".

If BeginDate is earlier than the Earliest Begin Date or later than Maximum Future Date,

return result B.

Else if Qualification Type Code is equal to "SK" or "LMES", and the BeginDate is not between May and September,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
3	Monitoring Plan Evaluation Report ------ Qualification Evaluation

Check Code: QUAL-19

Check Name: Monitoring Qualification End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Qualification Data record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
3	Monitoring Plan Evaluation Report ------ Qualification Evaluation

Check Code: QUAL-20

Check Name: Monitoring Qualification Dates Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Qualification Data record:

If the Monitoring Qualification Data Start Date is valid and the Monitoring Qualification Data End Date is valid,

If the BeginDate is after the EndDate,

set Monitor Qualification Dates Consistent to false, and return result A.

Otherwise,

set Monitor Qualification Dates Consistent to true.

Otherwise,

set Monitor Qualification Dates Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] which is prior to [datefield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
3	Monitoring Plan Evaluation Report ------ Qualification Evaluation

Check Code: QUAL-22

Check Name: Monitoring Qualification LME Data Qualification Year Valid

Related Former Checks: LME-2

Applicability: LME Check

Specifications:

For a Monitor Qualification LME record:

If QualificationDataYear is null,

return result A.

If QualificationDataYear is more than two years after the year of the BeginDate in the current qualification record or more than 3 years prior to the year of the BeginDate in the current qualification record,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Fatal
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LME Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification LME Evaluation *Condition:* Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification LME Evaluation *Condition:* Monitor Qualification Valid *Equals* true

Check Code: QUAL-23

Check Name: Monitoring Qualification LME Data SO2 Tons Valid

Related Former Checks: LME-3B, 3F, 4E

Applicability: LME Check

Specifications:

For a Monitor Qualification LME record:

If SO2 LME Unit is true,

If SO2Tons is null,

return result A.

If SO2Tons is less than 0,

return result B.

If SO2Tons is greater than 25.0

return result C.

Otherwise,

If SO2Tons is not null,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than or equal to zero.	Critical Error Level 1
C	You reported a value for [fieldname] for [key], which exceeds allowable value to qualify as an LME unit.	Critical Error Level 1
D	You reported a value for [fieldname] for [key], but this value is not appropriate for the affected programs and/or qualification type.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report --------- Qualification LME Evaluation

Condition: Monitor Qualification Valid *Equals* true

2 Monitoring Plan Evaluation Report --------- Qualification LME Evaluation

Condition: Current Qualification Active *Equals* true

Check Code: QUAL-24

Check Name: Monitoring Qualification LME Data NOx Tons Valid

Related Former Checks: LME-3A, 3C, 3D, 3E, 3G

Applicability: LME Check

Specifications:

For a Monitor Qualification LME record:

If NOX LME Unit is true,

If NOxTons is null,

return result A.

If NOxTons is less than 0,

return result B.

If the associated QualificationTypeCode is equal to "LMES",

If the year of the BeginDate in the associated Monitor Qualification record is before 2002,

If NOxTons is greater than 25.0

return result C.

Otherwise,

If NOxTons is greater than 50.0

return result C.

Otherwise,

If the year of the BeginDate in the associated Monitor Qualification record is before 2002,

If NOxTons is greater than 50.0

return result C.

Otherwise,

If NOxTons is greater than 100.0

return result C.

Otherwise,

If NOxTons is not null,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than or equal to zero.	Critical Error Level 1

C	You reported a value for [fieldname] for [key], which exceeds allowable value to qualify as an LME unit.	Critical Error Level 1
D	You reported a value for [fieldname] for [key], but this value is not appropriate for the affected programs and/or qualification type.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report --------- Qualification LME Evaluation *Condition:* Current Qualification Active *Equals* true
2	Monitoring Plan Evaluation Report --------- Qualification LME Evaluation *Condition:* Monitor Qualification Valid *Equals* true

Check Code: QUAL-25

Check Name: Monitoring Qualification LME Data Operating Hours Valid

Related Former Checks:

Applicability: LME Check

Specifications:

For a Monitor Qualification LME record:

If OperatingHours is null,

return result A.

If OperatingHours is less than 0 or greater than 8784,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LME Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification LME Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification LME Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-27

Check Name: Monitoring Qualification Percent Year 1 Data Type Code Valid

Related Former Checks: NBP-10

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If the Yr1QualificationDataTypeCode is null,

return result A.

If Yr1QualificationDataTypeCode is equal "P",

If Yr1QualificationDataYear and QualificationYear are both valid, and Yr1QualificationDataYear is before the QualificationYear,

return result B.

If Yr1QualificationDataTypeCode is equal "A",

If Yr1QualificationDataYear and QualificationYear are both valid, and Yr1QualificationDataYear is on or after the QualificationYear,

return result C.

If Yr1QualificationDataTypeCode is equal "D",

If the associated QualificationTypeCode is not equal to "GF",

return result D.

If Yr1QualificationDataYear and QualificationYear are both valid, and Yr1QualificationDataYear is not equal to the QualificationYear,

return result E.

Otherwise,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You have reported that the data for [key] was projected data, but the [fieldname2] is prior to the QualificationYear.	Critical Error Level 1
C	You have reported that the data for [key] was historical data, but the [fieldname2] is not prior to the QualificationYear.	Critical Error Level 1
D	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
E	You have reported that the data for [key] was demonstration data, but Yr1QualificationDataYear is not equal to the QualificationYear.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation

2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation *Condition:* Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation *Condition:* Monitor Qualification Valid *Equals* true

Check Code: QUAL-28

Check Name: Monitoring Qualification Percent Year 1 Data Year Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Qualification Percent record:

If Yr1QualificationDataYear is null,

return result A.

If Yr1QualificationDataYear is less than 1990,

return result B.

If QualificationYear is valid, and Yr1QualificationDataYear is after the QualificationYear or is more than 3 years prior to the QualificationYear

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-29

Check Name: Monitoring Qualification Percent Year 1 Percentage Value Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If Yr1PercentageValue is null,

return result A.

If Yr1PercentageValue is less than 0 to greater than 100,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-34

Check Name: Monitoring Qualification Data Active

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Qualification Data record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Monitoring Qualification Data Active to false.

Otherwise,

set Monitoring Qualification Data Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Monitoring Qualification Data Evaluation Begin Date to the Evaluation Begin Date.

Otherwise,

set the Monitoring Qualification Data Evaluation Begin Date to the BeginDate.

If the EndDate is null or is after the Evaluation End Date,

set the Monitoring Qualification Data Evaluation End Date to the Evaluation End Date.

Otherwise,

set the Monitoring Qualification Data Evaluation End Date to the EndDate.

Usage:

1 Monitoring Plan Evaluation Report ------ Qualification Evaluation

Check Code: QUAL-35

Check Name: Duplicate Monitoring Qualification Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Qualification record:

Locate another Qualification record for the location with a QualificationTypeCode equal to the QualificationTypeCode in the current record and a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another Qualification record for the location with a QualificationTypeCode equal to the QualificationTypeCode in the current record and an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Evaluation

Check Code: QUAL-36

Check Name: Duplicate Monitoring Qualification Percent Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Qualification Percent record:

Locate another Monitoring Qualification Percent record for the qualification with a QualificationYear equal to the QualificationYear in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation

Check Code: QUAL-37

Check Name: Duplicate Monitoring Qualification LME Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Qualification LME record:

Locate another Monitoring Qualification LME record for the qualification with a QualificationDataYear equal to the QualificationDataYear in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LME Evaluation

Check Code: QUAL-38

Check Name: Monitoring Qualification Child Records Valid

Related Former Checks: ARP-39C, 44; LME-2

Applicability: General Check

Specifications:

For a valid Monitor Qualification record with consistent dates and a QualificationTypeCode equal to "PK", "SK", "GF", "LMEA", "LMES" , or "LEE":

If QualificationTypeCode is equal to "PK", "SK", or "GF",

Set Previous Data Year to the year of the BeginDate in the current record.

For each QualificationYear from the year of the BeginDate in the current record through the year of the EndDate in the current record (if EndDate is not null) or the current year (if EndDate is null):

Locate the Monitor Qualification Percent record for the current qualification and QualificationYear.

If found,

If Yr1QualificationDataYear is after the year of the BeginDate in the current qualification record,

If Yr1QualificationDataYear is not equal to Previous Data Year + 1,

return result A.

Otherwise,

set Previous Data Year to the Yr1QualificationDataYear.

Otherwise,

If Yr1QualificationDataYear is equal to the QualificationYear or is one or 2 years prior to the Qualification Year, and Initial Qualification is equal to false,

return result B.

If not found,

If QualificationYear is prior to the current year; or if QualificationYear is equal to the current year and the current month is later than June,

return result C.

If QualificationYear is equal to the current year and the current month is later than March,

Locate a Monitor Program Reporting Frequency record for the location where the ReportingFrequency is equal to "Q", the BeginQuarter is on or before the quarter of the Qualification Evaluation End Date, and the EndQuarter is null or is on or after the quarter of the Qualification Evaluation Start Date.

If found,

return result C.

If QualificationTypeCode begins with "LME",

Count the number of Monitor Qualification LME record for the current qualification.

If the number of records is not equal to 3,

return result D.

Otherwise,

Proceed through the retrieved Monitor Qualification LME records in ascending QualificationDataYear order.

If this is first Monitor Qualification LME record,

If QualificationDataYear is greater than the year of the BeginDate in the current qualification record or more than 3 years prior to the year of the BeginDate in the current qualification record,

return result E.

Otherwise,

set Previous Data Year to the QualificationDataYear.

Otherwise,

If QualificationDataYear is not equal to Previous Data Year + 1,

return result E.

Otherwise,

set Previous Data Year to the QualificationDataYear.

If QualificationTypeCode is equal to "L E E",

If ***QualificationTypeCodeValid***,

Count the number of Monitor Qualification L E E record s for the current qualification.

If the number of records is equal to 0 ,

return result F .

Results:

Result	Description	Severity
A	The sequence of actual and projected qualification data years in the Monitor Qualification Percent records for [key] is not valid.	Critical Error Level 1
B	You have reported projected data in the Monitor Qualification Percent records for [key], but this is not allowed when requalifying for this status.	Critical Error Level 1
C	You have not reported all the required Monitor Qualification Percent records for [key].	Critical Error Level 1
D	You have reported more or less than the three required Monitor Qualification LME records for [key].	Critical Error Level 1
E	The qualification data years in the Monitor Qualification LME records for [key] are not valid.	Critical Error Level 1
F	You have not reported at least one required Monitor Qualification Data Record for LEE.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Qualification Evaluation *Condition:* Current Qualification Active *Equals* true

Check Code: QUAL-39

Check Name: Overlapping Monitoring Qualification Record

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring Qualification record:

If Qualification Type Code Valid is equal to false, or Qualification Consistent with Non Load Based Indicator is equal to false (not null), or Qualification Consistent with Fuel is equal to false (not null), or Qualification Consistent with Program and Reporting Frequency is equal to false (not null),

set Monitor Qualification Valid to false.

Otherwise,

set Monitor Qualification Valid to true.

Locate another Monitor Qualification record for this location with the same Qualification Type Code, and a BeginDate that is before the BeginDate in the current record.

If found,

Set Initial Qualification to false.

If the EndDate of any retrieved record is null or the EndDate is on or after the BeginDate of the current record,

set Monitor Qualification Valid to false, and return result A.

If not found,

set Initial Qualification to true.

Results:

Result	Description	Severity
A	You have reported overlapping [type] monitoring qualification records for this location.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Qualification Evaluation *Condition:* Current Qualification Active *Equals* true

Check Code: QUAL-40

Check Name: Monitoring Qualification Percent Year 2 Data Type Code Valid

Related Former Checks: NBP-10

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If the Yr2QualificationDataTypeCode is null,

return result A.

If Yr2QualificationDataTypeCode is equal "P",

If Yr2QualificationDataYear and QualificationYear are both valid, and Yr2QualificationDataYear is before the QualificationYear,

return result B.

If Yr2QualificationDataTypeCode is equal "A",

If Yr2QualificationDataYear and QualificationYear are both valid, and Yr2QualificationDataYear is on or after the QualificationYear,

return result C.

Otherwise,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You have reported that the data for [key] was projected data, but the [fieldname2] is prior to the QualificationYear.	Critical Error Level 1
C	You have reported that the data for [key] was historical data, but the [fieldname2] is not prior to the QualificationYear.	Critical Error Level 1
D	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-41

Check Name: Monitoring Qualification Percent Year 2 Percentage Value Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If Yr2PercentageValue is null,

return result A.

If Yr2PercentageValue is less than 0 to greater than 100,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-42

Check Name: Monitoring Qualification Percent Year 2 Data Year Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Qualification Percent record:

If Yr2QualificationDataYear is null,

return result A.

If Yr2QualificationDataYear is less than 1990,

return result B.

If Yr1QualificationDataYear is valid, and Yr2QualificationDataYear is not one year after Yr1QualificationDataYear,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation *Condition:* Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation *Condition:* Monitor Qualification Valid *Equals* true

Check Code: QUAL-43

Check Name: Monitoring Qualification Percent Year 3 Data Type Code Valid

Related Former Checks: NBP-10

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If the Yr3QualificationDataTypeCode is null,

return result A.

If Yr3QualificationDataTypeCode is equal "P",

If Yr3QualificationDataYear and QualificationYear are both valid, and Yr3QualificationDataYear is before the QualificationYear,

return result B.

If Yr3QualificationDataTypeCode is equal "A",

If Yr3QualificationDataYear and QualificationYear are both valid, and Yr3QualificationDataYear is on or after the QualificationYear,

return result C.

Otherwise,

return result D.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You have reported that the data for [key] was projected data, but the [fieldname2] is prior to the QualificationYear.	Critical Error Level 1
C	You have reported that the data for [key] was historical data, but the [fieldname2] is not prior to the QualificationYear.	Critical Error Level 1
D	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-44

Check Name: Monitoring Qualification Percent Year 3 Percentage Value Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitor Qualification Percent record:

If Yr3PercentageValue is null,

return result A.

If Yr3PercentageValue is less than 0 to greater than 100,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values from [minvalue] to [maxvalue].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation
	Condition: Monitor Qualification Valid *Equals* true

Check Code: QUAL-45

Check Name: Monitoring Qualification Percent Year 3 Data Year Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring Qualification Percent record:

If Yr3QualificationDataYear is null,

return result A.

If Yr3QualificationDataYear is less than 1990,

return result B.

If Yr2QualificationDataYear is valid, and Yr3QualificationDataYear is not one year after Yr2QualificationDataYear,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification Percent Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation *Condition:* Current Qualification Active *Equals* true
3	Monitoring Plan Evaluation Report --------- Qualification PCT Evaluation *Condition:* Monitor Qualification Valid *Equals* true

Check Code: QUAL-46

Check Name: Monitoring Qualification LME Data NOx Tons Valid

Related Former Checks:

Applicability: LME Check

Specifications:

For a Monitor Qualification LME record:

If Nox Tons is not null,

If NOxTons is less than 0,

return result A.

If the associated QualificationTypeCode is equal to "LMES",

If the year of the BeginDate in the associated Monitor Qualification record is before 2002,

If NOxTons is greater than 25.0

return result B

Otherwise,

If NOxTons is greater than 50.0

return result B.

Otherwise,

If the year of the BeginDate in the associated Monitor Qualification record is before 2002,

If NOxTons is greater than 50.0

return result B.

Otherwise,

If NOxTons is greater than 100.0

return result B.

Results:

Result	Description	Severity
A	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than or equal to zero.	Critical Error Level 1
B	You reported a value for [fieldname] for [key], which exceeds allowable value to qualify as an LME unit.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LME Evaluation

Check Code: QUAL-47

Check Name: Monitoring Qualification LME Data SO2 Tons Valid

Related Former Checks:

Applicability: LME Check

Specifications:

For a Monitor Qualification LME record:

If SO2Tons is not null,

If the associated QualificationTypeCode is equal to "LMES",

return result C.

If SO2Tons is less than 0,

return result A.

If SO2Tons is greater than 25.0

return result B.

.

Results:

Result	Description	Severity
A	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than or equal to zero.	Critical Error Level 1
B	You reported a value for [fieldname] for [key], which exceeds allowable value to qualify as an LME unit.	Critical Error Level 1
C	You reported a value for [fieldname] for [key], but this value is not appropriate for the affected programs and/or qualification type.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LME Evaluation

Check Category:

Qualification LEE

Check Code: QUALLEE-1

Check Name: Qualification Test Type Valid

Related Former Checks:

Applicability:

Specifications:

Locate a record in ***QualificationLeeTestTypeCodeLookupTable*** where QualLeeTestTypeCode is equal to ***CurrentQualificationLee*** .QualLeeTestTypeCode.

If not found,

return result A.

Results:

Result	Description	Severity
A	You have reported an invalid Qualification Test Type.	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LEE Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification LEE Evaluation

Check Code: QUALLEE-2

Check Name: Qualification Test Date

Related Former Checks:

Applicability:

Specifications:

Locate the most recent record in ***QualificationLeeRecords*** for the current qualification where QualificationTestDate is before ***CurrentQualificationLee*** .QualificationTestDate.

If found,

If ***CurrentQualificationLee*** .QualificationTestType is equal to "INITIAL",

return result A.

Else if the QualificationTestDate in the located ***QualificationLeeRecords*** record is more than a year prior to ***CurrentQualificationLee*** .QualificationTestDate,

return result B.

Otherwise,

If ***CurrentQualificationLee*** .QualificationTestType is equal to "RETEST",

return result C.

Results:

Result	Description	Severity
A	You have reported a Qualification Test Type of "INITIAL" however prior qualification test records exist.	Critical Error Level 1
B	You have reported a qualification test date that is greater than one year prior to the Qualification Record.	Critical Error Level 1
C	You have reported a Qualification Test Type of "RETEST", an "INITIAL" tes type must be reported for the first test.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LEE Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification LEE Evaluation

Check Code: QUALLEE-3

Check Name: Qualification Values

Related Former Checks:

Applicability:

Specifications:

For ***CurrentQualificationLee*** :

If PotentialAnnualHgMassEmissions, ApplicableEmissionStandard, UnitsOfStandard, and PercentageOfEmissionStandard are NULL,

return result A.

Else if PotentialAnnualHgMassEmissions is NOT NULL, and at least one of ApplicableEmissionStandard, UnitsOfStandard, and PercentageOfEmissionStandard is NOT NULL,

return result B.

Else if PotentialAnnualHgMassEmissions is NULL, and at least one of ApplicableEmissionStandard, UnitsOfStandard, and PercentageOfEmissionStandard is NULL,

return result C.

Results:

Result	Description	Severity
A	You have reported an incomplete Qualification LEE record. Potential Annual Hg Mass Emissions, Applicable Emission Standard, Units Of Standard, and Percentage Of Emission Standard are blank.	Critical Error Level 1
B	You have reported an incomplete Qualification LEE record.	Critical Error Level 1
C	You have reported an incomplete Qualification LEE record.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Monitoring Qualification LEE Evaluation
2	Monitoring Plan Evaluation Report --------- Qualification LEE Evaluation

Check Category:

Span

Check Code: SPAN-1

Check Name: Span MPC Value Valid

Related Former Checks: NBP-37

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the MPCValue is null,

If the ComponentTypeCode is not equal to "FLOW" or "O2", and the SpanScaleCode is equal to "H",

set Span MPC Value Valid to false, and return result A.

If the MPCValue is not null,

If the ComponentTypeCode is equal to "FLOW" or "O2", or the SpanScaleCode is equal to "L"

set Span MPC Value Valid to false, and return result B.

Otherwise,

If the MPCValue is less than or equal to 0,

set Span MPC Value Valid to false, and return result C.

Otherwise,

If the ComponentTypeCode is equal to "NOX" and the SpanMethodCode is equal to "TB",

set Natural Gas Location to false.

Locate all Unit Fuel records linked to the location where the BeginDate is on or before the Span Evaluation End Date and the EndDate is null or is on or after the Span Evaluation Start Date.

If the FuelCode of any of the retrieved records is equal to "C",

set Location Fuel Category to "COAL".

If the Fuel Code of all of the retrieved records is equal to "NNG" or "PNG",

set Location Fuel Category to "GAS" and Natural Gas Location to true.

If the associated Fuel Group of all of the retrieved records is equal to "GAS",

set Location Fuel Category to "GAS".

If the associated Fuel Group of all of the retrieved records is equal to "OIL",

set Location Fuel Category to "OIL".

If the associated Fuel Group of all of the retrieved records is equal to "OIL" or "GAS",

set Location Fuel Category to "OIL/GAS".

Locate the NOX MPC to Fuel Category and Unit Type cross check record where NOXMPC is equal to the MPCValue in the current Span record, the FuelCategory is equal to the Location Fuel Category, and the UnitTypeCode is null.

If not found,

Locate all UnitType records linked to the location where the BeginDate is on or before the Span Evaluation End Date and the EndDate is null or is on or after the Span Evaluation Begin Date.

If NaturalGasLocation is equal to true,

Locate the NOX MPC to Fuel Category and Unit Type cross check record where NOXMPC is equal to the MPCValue in the current Span record, the FuelCategory is equal to the Location Fuel Category, "NG", or null, and the UnitTypeCode is any of the UnitTypeCodes in the retrieved records.

Otherwise,

Locate the NOX MPC to Fuel Category and Unit Type cross check record where NOXMPC is equal to the MPCValue in the current Span record, the FuelCategory is equal to the Location Fuel Category or null, and the UnitTypeCode is any of the UnitTypeCodes in the retrieved records.

If not found,

If MPCValue is not equal to 50, or the EndDate in the current Span record is null or is after 3/31/2003, or none of the UnitTypeCodes in the retrieved records is equal to "CT",

return result D.

If the ComponentTypeCode is equal to "HG" and the SpanMethodCode is equal to "TB",

If the MPCValue is not null and is not equal to 10, or 16,

return result E.

If the ComponentTypeCode is equal to " CO2 " and the SpanMethodCode is equal to "TB",

Locate all Unit Type records linked to th is location where the BeginDate is on or before the Span Evaluation End Date and the EndDate is null or is on or after the Span Evaluation Begin Date.

If the Unit Type in none of the retrieved records are equal to " KLN" or "PRH",

If MPCValue is not equal to 6 or 14,

return result F.

Otherwise,

If the Unit Type in all of the retrieved records are equal to "CC", "CT", "ICE", "OT", or "IGC", and the MPCValue is not equal to 6,

return result F.

If the Unit Type in none of the retrieved records are equal to "CC", "CT", "ICE", "OT", or "IGC", and the MPCValue is not equal to 14,

return result F.

Results:

Result	Description	Severity
A	You did not report an MPCValue for [key].	Critical Error Level 1
B	You have reported an MPCValue for [key], but an MPCValue is not appropriate for this ComponentTypeCode and SpanScaleCode.	Critical Error Level 1
C	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1
D	You reported a SpanMethodCode of "TB" for [key], which indicates that you	Critical Error Level 2

	used a standard MPCValue based on fuel type and unit type. However, the MPCValue that you reported is not consistent with the fuel type(s) and unit type(s) at this location.	
E	You reported a SpanMethodCode of "TB" for [key], which indicates that you used a standard MPCValue based on fuel type. However, the MPCValue that you reported is not a standard value.	Critical Error Level 2
F	You reported a SpanMethodCode of "TB" for [key], which indicates that you used a standard MPCValue based on unit type. However, the MPCValue that you reported is not consistent with the unit type(s) at this location.	Critical Error Level 2

Usage:

1	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-2

Check Name: Span MEC Value Valid

Related Former Checks: NBP-37, NBP-38

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the MECValue is null,

If the ComponentTypeCode is equal to "SO2" or "NOX", and SpanScaleCode is equal to "L",

set Span MEC Value Valid to false, and return result A.

If the ComponentTypeCode is equal to "SO2" or "NOX, the SpanScaleCode is equal to "H", and the DefaultHighRange is not null,

set Span MEC Value Valid to false, and return result B.

If the ComponentTypeCode is equal to "SO2" and the SpanScaleCode is equal to "H",

Locate a Location Control record for the location where the ParameterCode is equal to "SO2", the InstallDate is 180 days before the Span Evaluation End Date, and the RetireDate is null or is after the Span Evaluation Begin Date,

If found,

Locate a Location Attribute record for the location where the BypassIndicator is equal to 1, the BeginDate is on or before the Span Evaluation End Date, and the EndDate is null or is on or after the Span Evaluation Begin Date,

If not found,

return result C.

If the ComponentTypeCode is equal to "NOX" and the SpanScaleCode is equal to "H",

Locate a Unit Control record linked to the location where the ParameterCode is equal to "NOX", the ControlCode is equal to "H2O", "STM", "SCR", "SNCR", "DLNB", or "NH3", the InstallDate is 180 days before the Span Evaluation End Date, and the RetireDate is null or is after the Span Evaluation Begin Date,

If found,

Locate a Location Attribute record for the location where the BypassIndicator is equal to 1, the BeginDate is on or before the Span Evaluation End Date, and the EndDate is null or is on or after the Span Evaluation Begin Date,

If not found,

return result E.

If the MECValue is not null,

If the ComponentTypeCode is equal to "FLOW" , "O2" , "HG" or "HCL" ,

set Span MEC Value Valid to false, and return result F.

If the MECValue is less than or equal to 0,

set Span MEC Value Valid to false, and return result G.

Results:

Result	Description	Severity
A	You did not report an MECValue for [key]. This value is required in a non-flow low-scale span record.	Critical Error Level 1
B	You did not report an MECValue for [key], but you defined a DefaultHighRange value. You must determine a maximum expected concentration when using a default high range value.	Critical Error Level 1
C	You did not report an MECValue for [key], but you have reported SO2 controls at this location. You must determine an MEC for SO2 if controls are used.	Critical Error Level 2
E	You did not report an MECValue for [key], but you have reported add-on NOX controls at this location. You must determine an MEC for NOX if add-on controls are used.	Critical Error Level 2
F	You have inappropriately reported an MECValue for [key].	Critical Error Level 1
G	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1
H	You reported an MECValue for [key], but you have not reported any add-on NOX controls at this location. You should only determine an MEC for NOX if add-on controls are used.	Critical Error Level 2

Usage:

1 Monitoring Plan Evaluation Report ------ Span Evaluation

Condition: Current Span Active *Equals* true

Check Code: SPAN-3

Check Name: Span MPF Value Valid

Related Former Checks: NBP-37

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the ComponentTypeCode is equal to "FLOW",

If the MPFValue is null,

return result A.

Otherwise,

If the MPFValue is less than 500,000,

return result B.

If the ComponentTypeCode is not equal to "FLOW", and the MPFValue is not null,

return result C.

Results:

Result	Description	Severity
A	You have not reported a [fieldname] for [key], which is a required field for flow span.	Critical Error Level 1
B	You have reported an MPF for [key], which is lower than the expected minimum value of 500,000 scfh.	Critical Error Level 1
C	You have reported a value in [fieldname] for [key], which is inappropriate for a non-flow span record.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-4

Check Name: Span Scale Transition Point Value Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Span record with a valid ComponentTypeCode not equal to "HG", and a SpanScale equal to "H":

If ScaleTransitionPoint is not null,

If SpanValue is null and DefaultHighRangeValue is not null,

return result A.

If the dates are consistent in the Span record,

Locate all Span records for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the current span record, the SpanScale is equal to "L", the BeginDate and BeginHour is on or before Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If found,

If the ScaleTransitionPoint in all the retrieved records equal to the ScaleTransitionPoint in the current span record,

If, for any retrieved record where the FullScaleRangeValue is not null, the ScaleTransitionPoint is not between 1/2 and 1 times the FullScaleRangeValue in the retrieved record,

return result B.

Otherwise,

return result C.

If ScaleTransitionPoint is null, and the dates are consistent in the Span record,

If EndDate is null or the EndDate is on or after the ***ECMPS MP Begin Date*** ,

Locate an AnalyzerRange record for the location where the associated ComponentTypeCode is equal to the ComponentTypeCode in the current span record, the DualRangeIndicator is equal to 1, the BeginDate and BeginHour is on or before Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour in on or after the Span Evaluation Begin Date and Begin Hour.

If found,

return result D.

Results:

Result	Description	Severity
A	You have reported a ScaleTransitionPoint for [key], but you have indicated that you used a DefaultHighRangeValue. You should only report a ScaleTransitionPoint when using a dual-range analyzer.	Critical Error Level 1
B	You have reported a ScaleTransitionPoint for [key] that is not within the valid range of values. The ScaleTransitionPoint should be between one-half and one times the FullScaleRangeValue in the corresponding low-scale span record.	Critical Error Level 2

C	You have reported a ScaleTransitionPoint for [key], but you have not reported the same ScaleTransitionPoint in the corresponding low-scale span records.	Critical Error Level 1
D	You have not reported a ScaleTransitionPoint for [key], but you have indicated that you used a dual-range [type] component. You should report a ScaleTransitionPoint when you use a dual-range analyzer.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Span Evaluation *Condition:* Current Span Active *Equals* true

Check Code: SPAN-6

Check Name: Span Value Valid

Related Former Checks: NBP-43, ARP-57

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the SpanValue is null,

If the ComponentTypeCode is not equal to "NOX" or "SO2", or the SpanScaleCode is not equal to "H",

return result A.

If the SpanValue is not null,

If ComponentTypeCode is equal to "FLOW", and UnitsOfMeasure is not equal to "SCFH",

set Minimum Span Value to .001

If ComponentTypeCode is equal to "FLOW", and UnitsOfMeasure equal to "SCFH",

set Minimum Span Value to 500,000

If ComponentTypeCode is equal to "SO2", "NOX", "HG" or "HCL" ,

set Minimum Span Value to 1

If ComponentTypeCode is equal to "CO2" or "O2",

set Minimum Span Value to 0.1

If the SpanValue is less than the Minimum Span Value,

return result B.

If Maximum Span Value is not null, and the SpanValue is greater than the Maximum Span Value,

return result C.

If the ComponentTypeCode is not equal to "FLOW" , "HG" or "HCL",

If the SpanScaleCode is equal to "H" and the MPCValue is valid,

set MPC or MEC to "MPC".

If the SpanValue is less than the MPCValue,

return result D.

If the ComponentTypeCode is equal to "SO2","NOX", and the MPCValue * 1.25 (and rounded up to the next highest multiple of 100 ppm) is less than the SpanValue,

return result E.

If the SpanScaleCode is equal to "L" and the MECValue is valid,

set MPC or MEC to "MEC".

If the SpanValue is less than the MECValue,

return result D.

If the ComponentTypeCode is equal to "SO2","NOX", and MECValue * 1.25 (and rounded up to the next highest multiple of 100 ppm) is less than the SpanValue,

return result E.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	The span value for [key] is less than [minvalue], which is the lowest span value specified in Part 75 for this parameter.	Critical Error Level 2
C	The span value for [key] exceeds the highest reasonable span value of [maxvalue].	Critical Error Level 1
D	You reported a Span Value that is less than the [MPC/MEC] for [key].	Critical Error Level 1
E	You reported a SpanValue that is greater than 1.25 times the [MPC/MEC] (rounded up to the next highest multiple of 100 ppm) for [key].	Critical Error Level 2
F	You reported a SpanValue that is not equal to the MPC (rounded up to the next highest multiple of 10 ug/scm) for [key].	Critical Error Level 2
G	You reported a SpanValue that is not equal to 10 ug/scm for [key].	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-7

Check Name: Span Full Scale Range Value Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the FullScaleRange is null,

If the ComponentTypeCode is not equal to "NOX" or "SO2", or the DefaultHighRange is null, or the SpanScaleCode is equal to "L",

return result A.

If the FullScaleRange is not null, the SpanValue is valid, and the FullScaleRange is less than the SpanValue,

return result B.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported a FullScaleRange value that is less than the SpanValue for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-8

Check Name: Span Begin Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Span record:

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Code: SPAN-9

Check Name: Span Begin Hour Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Span record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Code: SPAN-10

Check Name: Span End Date Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Span record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Code: SPAN-11

Check Name: Span End Hour Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Span record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Code: SPAN-12

Check Name: Span Dates and Hours Consistent

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Span record:

If the EndDate is valid and not null, and the EndHour is null,

set Span Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Span Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Span Dates and Hours Consistent to false, return result C.

Otherwise,

set Span Dates and Hours Consistent to true.

Otherwise,

set Span Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Code: SPAN-13

Check Name: Span Active Status

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Span record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current Span Active to false.

Otherwise,

set Current Span Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the Span Evaluation Begin Date to the Evaluation Begin Date.

set the Span Evaluation Begin Hour to 0.

Otherwise,

set the Span Evaluation Begin Date to the BeginDate.

set the Span Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the Span Evaluation End Date to the Evaluation End Date.

set the Span Evaluation End Hour to 23.

Otherwise,

set the Span Evaluation End Date to the EndDate.

set the Span Evaluation End Hour to the EndHour.

Usage:

1	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Code: SPAN-16

Check Name: Flow Span Value Valid

Related Former Checks: ARP-41

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the ComponentTypeCode is equal to "FLOW",

If the FlowSpanValue is null,

return result A.

If the MPFValue is greater than 0 and not null, and the FlowSpanValue is not between 1.0 and 1.25 times the MPFValu (rounded to the nearest 1000 scfh),

return result B.

If the SpanValue is valid,

If the UnitsOfMeasure is equal to "SCFH", and the SpanValue is not equal to the FlowSpanValue,

return result C.

If the UnitsOfMeasure is equal to "KSCFH", and the FlowSpanValue / 1000 (rounded to the nearest integer) is not equal to the SpanValue (rounded to the nearest integer),

return result C.

If the UnitsOfMeasure is equal to "MSCFH", and the FlowSpanValue / 1000000 (rounded to the nearest integer) is not equal to the SpanValue (rounded to the nearest integer),

return result C.

If the UnitsOfMeasure is equal to "SCFM", and the FlowSpanValue / 60 (rounded to the nearest integer) is not equal to the SpanValue (rounded to the nearest integer),

return result C.

If the UnitsOfMeasure is equal to "KSCFM", and the FlowSpanValue / 60000 (rounded to the nearest integer) is not equal to the SpanValue (rounded to the nearest integer),

return result C.

If the ComponentTypeCode is not equal to "FLOW", and the FlowSpanValue is not null,

return result D.

Results:

Result	Description	Severity
A	You have not reported a [fieldname] for [key], which is a required field for flow span.	Critical Error Level 1
B	The Flow Span Value is not between 100 and 125% of the MPF for [key].	Critical Error Level 2
C	The SpanValue reported for [key], which was reported in [uom], is inconsistent with the FlowSpanValue reported in scfh.	Critical Error Level 1
D	You have reported a value in [fieldname] for [key], which is inappropriate for	Critical Error Level 1

a non-flow span record.

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-17

Check Name: Flow Span Full Scale Range Value Valid

Related Former Checks: ARP-41

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the ComponentTypeCode is equal to "FLOW",

If the FlowFullScaleRange is null,

return result A.

If the FlowSpanValue is valid, and the FlowFullScaleRange is not greater than or equal to the FlowSpanValue,

return result B.

If the ComponentTypeCode is not equal to "FLOW", and the FlowFullScaleRange is not null,

return result C.

Results:

Result	Description	Severity
A	You have not reported a [fieldname] for [key], which is a required field for flow span.	Critical Error Level 1
B	You reported a Flow Full Scale Range Value that is not greater than or equal to the Flow Span Value for [Key].	Critical Error Level 1
C	You have reported a value in [fieldname] for [key], which is inappropriate for a non-flow span record.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-18

Check Name: Span Scale Code Valid

Related Former Checks: NBP-35

Applicability: CEM Check

Specifications:

For the Span record with a valid ComponentTypeCode:

set ***SpanScaleCodeValid*** equal to true.

If the ComponentTypeCode is not equal to "FLOW",

If the SpanScaleCode is null,

set ***SpanScaleCodeValid*** equal to false.

return result A.

If the SpanScaleCode is not equal to "H" or "L",

set ***SpanScaleCodeValid*** equal to false.

return result B.

If ComponentTypeCode is equal to "HG" or "HCL",

If the SpanScaleCode is not equal to "H",

set ***SpanScaleCodeValid*** equal to false.

return result D.

If the ComponentTypeCode is equal to "FLOW", and the SpanScaleCode is not null,

set ***SpanScaleCodeValid*** equal to false.

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You reported a span scale in the span record for [key], but this is not appropriate for flow span record.	Critical Error Level 1
D	The [fieldname] [value] is invalid for [condition].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-20

Check Name: Span Component Type Code Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For the Span record:

Set Span MPC Valid and Span MEC Valid to true.

If the ComponentTypeCode is null,

return result A.

Otherwise,

Locate ComponentTypeCode in the Component Type Code Lookup Table where Span Indicator is equal to 1.

If not found,

return result B.

If found,

set Component Parameter Code to the ParameterCode in the lookup table record.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-21

Check Name: Span Units of Measure Code Valid

Related Former Checks: NBP-44, NBP-45, NBP-46

Applicability: CEM Check

Specifications:

For the Span record with a valid ComponentTypeCode:

If the UnitsOfMeasure is null,

return result A.

Otherwise,

Locate a record in the Parameter Units of Measure lookup table where the ParameterCode is equal to the Component Parameter Code and the UnitsOfMeasure is equal to the UnitsOfMeasure in the span record.

If found,

set Maximum Span Value to Max Value in lookup table record.

If not found,

Locate the UnitsOfMeasure in the Units of Measure Code Lookup Table.

If not found,

return result B.

If found,

return result C.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Fatal
C	You defined a units of measure of [value] that is inappropriate for the component type in the span record for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-36

Check Name: Span Default High Range Value Valid

Related Former Checks: ARP-26 A, B, E

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the DefaultHighRange is not null,

If ComponentTypeCode is not equal to "SO2" or "NOX", or the SpanScaleCode is equal to "L",

return result A.

If DefaultHighRange is less than or equal to 0,

return result B.

If the MPCValue is greater than 0 and not null, and the DefaultHighRange is not equal to two times the MPCValue,

If the ComponentTypeCode is not equal to "NOX", or the MPCValue is not equal to 50, or the DefaultHighRange is not equal to 200, or the EndDate is null or is after 3/31/2003,

return result C.

If the DefaultHighRange is null and the SpanValue is null,

If the SpanScaleCode is equal to "H", and the ComponentTypeCode is equal to "NOX" or "SO2",

return result D.

Results:

Result	Description	Severity
A	You have defined a default high range value for [key]. You should only report the default value in a high-scale SO2 or NOX span record.	Critical Error Level 1
B	The value [value] in the field [fieldname] for [key] is not within the range of valid values. This value must be greater than zero.	Critical Error Level 1
C	You have indicated the use of a default high range value for [key], but the value defined as the default in the span record is not 200% of the MPC.	Critical Error Level 1
D	You have not defined a SpanValue or a DefaultHighRange for [key]. You must report either a SpanValue or a DefaultHighRange in a high-scale [type] span record.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-37

Check Name: Default High Range Value Consistent with Span Value and Full Scale Range

Related Former Checks: ARP-26C/D

Applicability: CEM Check

Specifications:

For a Span record with a ComponentTypeCode equal to "SO2" or "NOX", and a SpanScaleCode equal to "H",

If the DefaultHighRange is not null, and either the SpanValue or the FullScaleRange are not null,

return result A.

Results:

Result	Description	Severity
A	You have indicated the use of a default high range for [key], but you have defined a span value and/or a full scale range value. You should not define a span value or full scale range if you are using a default high-range value.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-47

Check Name: High Scale Span Consistent with Low Scale Span

Related Former Checks: NBP-42A

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode and a SpanScaleCode equal to "L":

Locate all Span records for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the current Span record, the SpanScaleCode is equal to "H", the BeginDate and BeginHour is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If the SpanValue in the current span record is valid,

If, for any high-scale record found, the SpanValue is greater than 0, but less than the SpanValue in the current low-scale span,

return result A.

If the MECValue in the current span record greater than 0 and not null,

If, for any high-scale record found, the MECValue is greater than 0, but is not equal to the MECValue in the current low-scale span,

return result B.

Results:

Result	Description	Severity
A	You reported a SpanValue for [key] that is greater than the SpanValue in the corresponding high-scale span record. The high-scale span value must be greater than the low-scale span value.	Critical Error Level 1
B	You reported an MEC for [key] that is not equal to the MEC in the corresponding high-scale span record. The MEC values in these records should be the same.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Span Evaluation *Condition:* Current Span Active *Equals* true

Check Code: SPAN-48

Check Name: Required Low Scale Span Record Reported for Low MEC or Default High Range

Related Former Checks: ARP-26G

Applicability: CEM Check

Specifications:

For a Span record with a SpanScaleCode equal to "H":

IF the ComponentTypeCode equal to "SO2" or "NOX",

If the FullScaleRange is valid and non-null and the MECValue is valid and non-null:

If the MECValue is less than 20% of the FullScaleRange,

Locate all Span records for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the current Span record, the SpanScaleCode is equal to "L", the BeginDate and BeginHour is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If the DefaultHighRange is valid and non-null,

Locate all Span records for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the current Span record, the SpanScaleCode is equal to "L", the BeginDate and BeginHour is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If not found,

return result B.

If found, and the MECValue is not null, is greater than 0, and (rounded up to next highest 10ppm) is less than 20% of the FullScaleRange (if not null) in any record,

return result C.

Results:

Result	Description	Severity
A	The MEC reported is less than 20% of MPC for [key], but no corresponding low span scale record that was active during the evaluation period has been reported.	Critical Error Level 2
B	You have reported a DefaultHighRange value for [key], but no corresponding low span scale record that was active during the evaluation period has been reported.	Critical Error Level 1
C	You have indicated the use of a default high range value for [key], but this is not allowed, because the full scale range in the low-scale span record is more than five times the MEC.	Critical Error Level 2
D	The MEC reported is less than 20% of the SpanValue for [key], but no corresponding low span scale record that was active during the evaluation period has been reported.	Critical Error Level 2

Usage:

1	Monitoring Plan Evaluation Report ------ Span Evaluation

Condition: Current Span Active *Equals* true

Check Code: SPAN-50

Check Name: Span Method Code Valid

Related Former Checks: NBP-36

Applicability: CEM Check

Specifications:

For the Span record with a valid ComponentTypeCode and the ComponentTypeCode is equal to "FLOW" or Span Scale Code Valid is true:

If ComponentTypeCode is equal to "FLOW"

Locate a record in the Component Type and Span Scale to Span Method Cross Check Table where the ComponentTypeCode and SpanMethodCode are equal to ComponentTypeCode and SpanMethodCode in the span record.

Otherwise,

Locate record in the Component Type and Span Scale to Span Method Cross Check Table for the ComponentTypeCode, SpanScaleCode, and SpanMethodCode in the span record.

If not found,

If the SpanMethodCode is null,

If ComponentTypeCode is not equal to "O2",

return result A.

If the SpanMethodCode is not null,

Locate SpanMethodCode in the SpanMethodCode Lookup Table.

If not found,

return result B.

Otherwise,

return result C.

Results:

Result	Description	Severity
A	You did not provide [fieldname], which is required for [key].	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You defined a SpanMethodCode of [value], which is an invalid method of establishing the MPC/MEC/MPF for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
3	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-52

Check Name: Required Component Reported for Span

Related Former Checks: NBP-34

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode and a valid SpanScaleCode and a DefaultHighRange that is null:

If the ComponentTypeCode is equal to "FLOW"

Locate all System Component records for the location where the associated ComponentTypeCode is equal to "FLOW", the BeginDate and BeginHour is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

Otherwise,

Locate all Analyzer Range records for the location where the associated ComponentTypeCode is equal to the ComponentTypeCode in the current Span record, the AnalyzerRangeCode is equal to "A" or is equal to the SpanScaleCode in the current Span record, the BeginDate and BeginHour is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire span evaluation period,

return result B.

Results:

Result	Description	Severity
A	You reported a span record for [key], but you did not report a component that was active during the evaluation period with the same component type (and range).	Critical Error Level 1
B	You reported a span record for [key], but you did not report a component with the same component type (and range) that is active for the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Span Evaluation

Condition: Current Span Active *Equals* true

Check Code: SPAN-53

Check Name: Overlapping Span Records

Related Former Checks: ARP-66

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode and a valid SpanScaleCode:

Locate another Span record for the location where the ComponentTypeCode and SpanTypeCode is equal to the ComponentTypeCode and SpanScaleCode in the current span record, the BeginDate and BeginHour is on or after the BeginDate and BeginHour of the current record and is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If found,

return result A.

Results:

Result	Description	Severity
A	You have reported [key], but you have reported another span record with the same ComponentTypeCode (and SpanScaleCode) that was active at the same time.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ Span Evaluation *Condition:* Current Span Active *Equals* true

Check Code: SPAN-54

Check Name: Required High-Scale Span Record Reported

Related Former Checks: NBP-42B

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode and a SpanScaleCode equal to "L":

Locate all Span records for the location where the ComponentTypeCode is equal to the ComponentTypeCode in the current Span record, the SpanScaleCode is equal to "H", the BeginDate and BeginHour is on or before the Span Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the Span Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire span evaluation period,

return result B.

Results:

Result	Description	Severity
A	You defined a span record for [key], but you have not reported a corresponding high-scale span record that was active during the evaluation period. If the unit/stack has a dual range monitor or uses a default high range value the high-scale must also be defined. If the unit/stack has a single-scale monitor, define only a high-scale span record.	Critical Error Level 1
B	You defined a span record for [key], but you have not reported corresponding high-scale span records that span the entire evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ Span Evaluation

Condition: Current Span Active *Equals* true

Check Code: SPAN-55

Check Name: Duplicate Span Records

Related Former Checks:

Applicability: General Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If ComponentTypeCode is equal to "FLOW",

Locate another Span record for the location with a ComponentTypeCode that is equal to the ComponentTypeCode in the current record and a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another Span record for the location with a ComponentTypeCode that is equal to the ComponentTypeCode in the current record and an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Otherwise,

Locate another Span record for the location with a ComponentTypeCode that is equal to the ComponentTypeCode in the current record and a SpanScaleCode equal to the SpanScaleCode in the current record and a BeginDate/Hour equal to the BeginDate/Hour in the current record.

If found,

return result A.

If not found, and the EndDate in the current record is not null.,

Locate another Span record for the location with a ComponentTypeCode that is equal to the ComponentTypeCode in the current record and a SpanScaleCode equal to the SpanScaleCode in the current record and an End Date/Hour equal to the EndDate/Hour in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Flow Span Evaluation
2	Monitoring Plan Data Entry Screen Evaluation Span Evaluation

Check Code: SPAN-56

Check Name: Span MPC Value Valid

Related Former Checks: NBP-37

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the MPCValue is null,

If the ComponentTypeCode is not equal to "FLOW" or "O2", and the SpanScaleCode is equal to "H",

set Span MPC Value Valid to false, and return result A.

If the MPCValue is not null,

If the ComponentTypeCode is equal to "FLOW" or "O2", or the SpanScaleCode is equal to "L"

set Span MPC Value Valid to false, and return result B.

Otherwise,

If the MPCValue is less than or equal to 0,

set Span MPC Value Valid to false, and return result C.

Results:

Result	Description	Severity
A	You did not report an MPCValue for [key].	Critical Error Level 1
B	You have reported an MPCValue for [key], but an MPCValue is not appropriate for this ComponentTypeCode and SpanScaleCode.	Critical Error Level 1
C	You defined an invalid [fieldname] for [key]. This value must be greater than zero and less than 20,000.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation

Check Code: SPAN-57

Check Name: Span MEC Value Valid

Related Former Checks: NBP-37, NBP-38

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode:

If the MECValue is null,

If the ComponentTypeCode is not equal to "FLOW" or "O2" , and the SpanScaleCode is equal to "L",

set Span MEC Value Valid to false, and return result A.

If the ComponentTypeCode is equal to "SO2" , "HG" or "NOX " , the SpanScaleCode is equal to "H", and the DefaultHighRange is not null,

set Span MEC Value Valid to false, and return result B.

If the MECValue is not null,

If the ComponentTypeCode is equal to "FLOW" , "HG" or "O2" ,

set Span MEC Value Valid to false, and return result C.

If the MECValue is less than or equal to 0,

set Span MEC Value Valid to false, and return result D.

Results:

Result	Description	Severity
A	You did not report an MECValue for [key]. This value is required in a non-flow low-scale span record.	Critical Error Level 1
B	You did not report an MECValue for [key], but you defined a DefaultHighRange value. You must determine a maximum expected concentration when using a default high range value.	Critical Error Level 1
C	You have inappropriately reported an MECValue for [key].	Critical Error Level 1
D	You defined an invalid [fieldname] for [key]. This value must be greater than zero and less than 20,000.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation

Check Code: SPAN-58

Check Name: High Span Scale Transition Point Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Span record with a valid ComponentTypeCode and a SpanScale equal to "H":

If ScaleTransitionPoint is not null,

If SpanValue is null and DefaultHighRangeValue is not null,

return result A.

Results:

Result	Description	Severity
A	You have reported a ScaleTransitionPoint for [key], but you have indicated that you used a DefaultHighRangeValue. You should only report a ScaleTransitionPoint when using a dual-range analyzer.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation

Check Code: SPAN-59

Check Name: Low Span Scale Transition Point Valid

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring Span record with a valid ComponentTypeCode and a SpanScale equal to "L":

If ScaleTransitionPoint is not null,

If FullScaleRangeValue is not null, and the ScaleTransitionPoint is not between 1/2 and 1 times the FullScaleRangeValue,

return result A.

Results:

Result	Description	Severity
A	You have reported a ScaleTransitionPoint for [key] that is not within the valid range of values. The ScaleTransitionPoint should be between one-half and one times the FullScaleRangeValue.	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation

Check Code: SPAN-60

Check Name: Span MPC MEC Value Consistency Check

Related Former Checks: New

Applicability: CEM Check

Specifications:

For a Span record with a valid ComponentTypeCode , and a null EndDate:

If EndDate is null

If the M P CValue is not null and MECValue is not null

If the MECValue is equal to or greater than the MPCValue

return result A .

Results:

Result	Description	Severity
A	You have reported a MECValue equal to or greater than the MPCValue for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation
	Condition: Current Span Active *Equals* true

Check Code: SPAN-61

Check Name: Span Scale Transition Point for HG

Related Former Checks:

Applicability:

Specifications:

For a Monitoring Span record with a valid ComponentTypeCode equal to "HG" or "HCL":

If ScaleTransitionPoint is not null,

return result A

Results:

Result	Description	Severity
A	You reported a value for [fieldname], which is not appropriate for [condition].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation Span Evaluation
2	Monitoring Plan Evaluation Report ------ Span Evaluation

Check Category:

System

Check Code: SYSTEM-1

Check Name: System Begin Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

Set System Record Valid to false.

If BeginDate is null,

return result A.

If BeginDate is earlier than 01/01/1993 or later than Maximum Future Date,

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation

Check Code: SYSTEM-2

Check Name: System Begin Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If BeginHour is null,

return result A.

If BeginHour is less than 0 or greater than 23

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation

Check Code: SYSTEM-3

Check Name: System End Date Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If EndDate is not null, and is earlier than 01/01/1993 or later than Maximum Future Date,

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Date], which is outside the range of acceptable values for this date for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation

Check Code: SYSTEM-4

Check Name: System End Hour Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If EndHour is not null, and is less than 0 or greater than 23

return result A.

Results:

Result	Description	Severity
A	You reported a [Fieldname] of [Hour], which is outside the range of acceptable values for this hour for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation

Check Code: SYSTEM-5

Check Name: System Dates and Hours Consistent

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If the EndDate is valid and not null, and the EndHour is null,

set Monitoring System Dates and Hours Consistent to false, and return result A.

If the EndHour is valid and not null, and the EndDate is null,

set Monitoring System Dates and Hours Consistent to false, and return result B.

If the BeginDate, BeginHour, EndDate, and EndHour are all valid,

If the EndDate is not null, and the BeginDate and BeginHour is after the EndDate and EndHour,

set Monitoring System Dates and Hours Consistent to false, return result C.

Otherwise,

set Monitoring System Dates and Hours Consistent to true.

Otherwise,

set Monitoring System Dates and Hours Consistent to false.

Results:

Result	Description	Severity
A	You reported [datefield2] but did not report an [hourfield2] for [key].	Critical Error Level 1
B	You reported [hourfield2] but did not report [datefield2] for [key].	Critical Error Level 1
C	You reported [datefield2] and [hourfield2], which is prior to [datefield1] and [hourfield1] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation

Check Code: SYSTEM-6

Check Name: System Active Status

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor System record with consistent dates:

If BeginDate is after Evaluation End Date or EndDate is before Evaluation Begin Date,

set Current System Active to false.

Otherwise,

set Current System Active to true.

If the BeginDate is prior to the Evaluation Begin Date,

set the System Evaluation Begin Date to the Evaluation Begin Date.

set the System Evaluation Begin Hour to 0.

Otherwise,

set the System Evaluation Begin Date to the BeginDate.

set the System Evaluation Begin Hour to the BeginHour.

If the EndDate is null or is after the Evaluation End Date,

set the System Evaluation End Date to the Evaluation End Date.

set the System Evaluation End Hour to 23.

Otherwise,

set the System Evaluation End Date to the EndDate.

set the System Evaluation End Hour to the EndHour.

Usage:

1	Monitoring Plan Evaluation Report ------ System Evaluation

Check Code: SYSTEM-7

Check Name: Monitoring System ID Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If the MonitoringSystemID is null,

return result A.

If the MonitoringSystemID does not consist of 3 alphanumeric characters:

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	The MonitoringSystemID [ID] has an invalid format. A MonitoringSystemID must contain three alphanumeric characters.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation
	Condition: Current System Active *Equals* True

Check Code: SYSTEM-8

Check Name: System Type Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For the Monitoring System record:

If the SystemTypeCode is null,

return result A.

Otherwise,

Locate SystemTypeCode in the System Type Lookup Table.

If not found,

return result B.

If found,

set System Parameter Code to the ParameterCode in the lookup table record.

set System Record Valid to true.

Locate a Used Identifier record for the location where the Table Code is equal to "S" and the Identifier is equal to the Monitoring System ID in the Monitoring System record.

If found,

If the SystemTypeCode is not equal to the Type or Parameter Code in the retrieved record,

If the SystemTypeCode begins with "H2O" and the Type or Parameter Code begins with "H2O",

return result C.

Otherwise,

return result D.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Fatal
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You have changed the SystemTypeCode for [key] from its previously reported value. You should only do this to correct invalid data. If you are installing a system with a different system type, you should add a new system.	Informational Message
D	You have changed the SystemTypeCode for [key] from its previously reported value. You should only do this to correct invalid data. If you are installing a system with a different system type, you should add a new system.	Critical Error Level 2

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation

2	Monitoring Plan Evaluation Report ------ System Evaluation *Condition:* Current System Active *Equals* True

Check Code: SYSTEM-9

Check Name: System Designation Code Valid

Related Former Checks: ARP-68

Applicability: General Check

Specifications:

For the Monitoring System record:

If the SystemDesignationCode is null,

return result A.

Locate SystemDesignationCode in System Designation Code Lookup table.

If not found,

return result C.

Else If SystemDesignationCode is equal to "CI" and SystemTypeCode is valid and SystemTypeCode is not equal to "SO2", "NOX", "NOXC" , or "SO2R",

return result B.

Else If SystemDesignationCode is equal to "RM" and SystemTypeCode is valid and SystemTypeCode is equal to "GAS", "OILM", "OILV", "OP", "NOXP", "NOXE" , "HG", "HCL", "HF", or "ST",

return result B.

Else If SystemDesignationCode is equal to " PB " and If SystemTypeCode is valid and SystemTypeCode is not equal to "NOX", or "NOXC",

return result B.

Results:

Result	Description	Severity
A	You have not reported the required value in the field [fieldname] for [key].	Critical Error Level 1
B	You reported [value] as the SystemDesignationCode for [key], which is not appropriate for the System Type [Monitor System Type].	Critical Error Level 1
C	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation
	Condition: Current System Active *Equals* True

Check Code: SYSTEM-10

Check Name: System Fuel Code Valid

Related Former Checks:

Applicability: General Check

Specifications:

For Monitoring System record:

Set System Fuel Code Valid to true and System Unit Fuel to null.

If the FuelCode in the Monitoring System record is null,

set System Fuel Code Valid to false, and return result A.

Otherwise,

Locate the FuelCode in the Fuel Code Lookup Table.

If not found,

set System Fuel Code Valid to false, and return result B.

If found, and the SystemTypeCode is valid,

Locate a record in the System Type to Fuel Group Cross Check table where the SystemTypeCode is equal to the SystemTypeCode in the Monitoring System record and the Fuel Group Code is equal to Fuel Group in the retrieved Fuel Code lookup table record.

If not found,

set System Fuel Code Valid to false, and return result C.

If found,

set System Unit Fuel to the UnitFuel in the retrieved Fuel Code lookup table.

Results:

Result	Description	Severity
A	You have not reported a Fuel Code for [key]. A Fuel Code is required for a [System Type] system.	Critical Error Level 1
B	You reported the value [value], which is not in the list of valid values, in the field [fieldname] for [key].	Critical Error Level 1
C	You have reported the Fuel Code [value] for [key], which is not appropriate for a [System Type] system.	Critical Error Level 1

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation
2	Monitoring Plan Evaluation Report ------ System Evaluation
	Condition: Current System Active *Equals* true

Check Code: SYSTEM-12

Check Name: System Type Consistent with Method

Related Former Checks: ARP-1

Applicability: General Check

Specifications:

For Monitoring System record with a valid System Type Code and consistent dates:

If the System Type Code is equal to "OILV", "OILM", or "GAS",

Locate a Monitoring Method record for the location with a MethodCode that begins with "AD", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If the System Type Code is equal to "LTGS" or "LTOL",

Locate a Monitoring Method record for the location with a MethodCode that begins with "LTF", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result A.

Otherwise,

Locate the SystemTypeCode in the Method Parameter and Method to System Type Cross Check table.

If found,

Locate a Monitoring Method record for the location with any ParameterCode and MethodCode combination found in the cross check table, a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result A.

Results:

Result	Description	Severity
A	You have not reported a method that is consistent with the system type [system type code] for [key] during the evaluation period.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-13

Check Name: System Type Consistent with Components

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor System record with consistent dates and a valid SystemTypeCode:

If the SystemTypeCode is equal to "SO2R", "NOX", or "CO2",

Locate all System Component records for the system where the ComponentTypeCode is equal to "CO2", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

For each record found,

Locate another System Component record for the system where the ComponentTypeCode is equal to "O2", the BeginDate and BeginHour is on or before the earlier of the System Evaluation End Date and End Hour and the End Date and End Hour of the retrieved System Component record, and the EndDate is null or the EndDate and EndHour is on or after the later of the System Evaluation Begin Date and Begin Hour and the Begin Date and Begin Hour of the retrieved System Component record.

If found,

return result A.

If the SystemTypeCode is equal to "SO2", "SO2R", "NOX", "NOXC", "CO2", "O2", "HG", "HF", "HCL", or "ST" ,

Locate all records in the System Type to Component Type cross-check table where the SystemTypeCode is equal to the SystemTypeCode in the current system record.

For each of the retrieved records in the cross-check table:

Locate all System Component records for the system where the ComponentTypeCode is equal to the ComponentTypeCode in the cross-check record, the ComponentID does not begin with "LK", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found,

Locate all Analyzer Range records for the components in the retrieved system component records, the AnalyzerRangeCode is equal to "H" or "A", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record overlaps the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record for a different component with a ComponentID that does not begin with "LK" at any time during the system evaluation period,

return result B.

Otherwise,

Locate all Analyzer Range records for the location where the ComponentID is equal to the ComponentID of any of the components in the retrieved system component records, the AnalyzerRangeCode is equal to "L" or "A", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record overlaps the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record for a different component with a ComponentID that does not begin with "LK" at any time during the system evaluation period,

return result B.

If the SystemTypeCode is equal to "H2O",

Locate all System Component records for the system where the associated ComponentTypeCode is equal to "O2", the ComponentID does not begin with "LK", the StartDate and StartHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If at least one record is found with an associated BasisCode equal to "B" and at least one record is found with an associated BasisCode equal to "W" or "D",

If the time span between BeginDate/Hour and EndDate/Hour of any record with a BasisCode equal to "B" overlaps with the time span between BeginDate/Hour and EndDate/Hour of any record with a BasisCode equal to "W" or "D" at any time during the system evaluation period,

return result C.

If more than one record is found with the same non-null BasisCode,

For each BasisCode with more than one record found,

Locate all Analyzer Range records for the components with this BasisCode in the retrieved system component records, the AnalyzerRangeCode is equal to "H" or "A", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record overlaps the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record for a different component with the same basis code and a ComponentID that does not begin with "LK" at any time during the system evaluation period,

return result B.

Otherwise,

Locate all Analyzer Range records for the location where the ComponentID is equal to the ComponentID of any of the components with this BasisCode in the retrieved system component records, the AnalyzerRangeCode is equal to "L" or "A", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record overlaps the intersection between BeginDate/Hour and EndDate/Hour of any analyzer range records and the associated system component record for a different component with the same basis code and a ComponentID that does not begin with "LK" at any time during the system evaluation period,

return result B.

Results:

Result	Description	Severity

A	You have reported a CEM system for [key] that contains an active CO2 component and a concurrently active O2 component. This is invalid.	Critical Error Level 1
B	You have reported a CEM or H2O system for [key] that contains more than one active analyzer with the same component type (and basis) and analyzer range. This is an invalid configuration of components.	Critical Error Level 1
C	You have reported an H2O system for [key] that contains an O2 component with a basis code of "B", and a concurrently active O2 component with a basis code of "W" or "D". This is an invalid configuration of components.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ System Evaluation
	Condition: Current System Active *Equals* true

Check Code: SYSTEM-14

Check Name: System Fuel Consistent with Unit Fuel

Related Former Checks:

Applicability: Appendix D Check

Specifications:

For Monitoring System record with a valid SystemTypeCode, a valid SystemFuelCode, and consistent dates:

If the FuelCode is not equal to "NFS" or "MIX",

Locate the latest Unit Fuel record linked to the location where the FuelCode is equal to the System Unit Fuel, the BeginDate is on or before the System Evaluation End Date, and the EndDate is null or is on or after the System Evaluation Begin Date.

If not found,

return result A.

If found,

If the Indicator Code in the retrieved record is equal to "I" or "E",

return result C.

If the EndDate of retrieved Unit Fuel record is not null, and either the EndDate of the Monitoring System record is null or the End Date of the Monitoring System record is later than the EndDate of the retrieved Unit Fuel record,

return result B.

Results:

Result	Description	Severity
A	The Fuel Code [Fuel Code] for [key] is inconsistent with the active fuels for the associated unit.	Critical Error Level 1
B	According to the Unit Fuel (and Unit Stack Configuration) records, the FuelCode [Fuel Code] for [key] is not being combusted for the entire evaluation period.	Informational Message
C	According to the Unit Fuel (and Unit Stack Configuration) records, the fuel flow system for [key] may be measuring an emergency or ignition fuel. Although it is permitted to define a fuel flow system for ignition or emergency fuels, it is not required to do so.	Informational Message

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-16

Check Name: RM System Consistent with Non-RM Systems

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring System record with a valid SystemDesignationCode equal to "RM", Required DAHS for System equal to true, and Required Non-DAHS Components for System equal to true:

Locate another Monitor System record for the location with the same SystemTypeCode, a SystemDesignationCode not equal to "RM", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found,

Locate all System Component records for all of the retrieved system where the associated ComponentTypeCode is not equal to "DAHS", "PLC", "FLC", or "PRB", the BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

For each of the retrieved System Component records.

Locate a System Component record for the current system with the same Component ID.

If any are found, and the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour,

return result B.

Results:

Result	Description	Severity
A	You have reported a [System Type] RM System for [key], but you have not reported a corresponding non-RM system at the location.	Critical Error Level 1
B	You have reported an RM [System Type] system for [key], which contains components that are also part of a non-RM [System Type] system at the location.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-17

Check Name: Backup System Consistent with Primary System

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring System record with a valid SystemTypeCode, a SystemDesignationCode is equal to "B" or "RB", and consistent dates:

Locate all System Component records for the system where the associated ComponentTypeCode is not equal to "DAHS", "PLC", or "FLC", the BeginDate and BeginHour in on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour in on or after the System Evaluation Begin Date and Begin Hour.

Locate another Monitoring System for the location where the SystemTypeCode is equal to the SystemTypeCode of the current system, the SystemDesignationCode is equal to "P", the BeginDate and BeginHour in on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour in on or after the System Evaluation Begin Date and Begin Hour.

For each of the retrieved system records:

Locate all System Component records for the location where the MonitoringSystemID is equal to the MonitoringSystemID in the retrieved system record, the associated ComponentTypeCode is not equal to "DAHS", "PLC", or "FLC", the BeginDate and BeginHour in on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour in on or after the System Evaluation Begin Date and Begin Hour.

If the list of ComponentIDs in the retrieved records is equal to the list of ComponentIDs in the System Component records for the current system,

return result A.

Results:

Result	Description	Severity
A	You have reported a backup system [key] that has the same non-DAHS components that are part of the primary [System Type] system at the location.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-18

Check Name: Required DAHS Component Reported for System

Related Former Checks: NBP-12

Applicability: General Check

Specifications:

For a Monitoring System record with consistent dates:

Set Required DAHS for System to true.

Locate all System Component record for the system where the ComponentTypeCode is equal to "DAHS".

If not found,

set Required DAHS for System to false, and return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire system evaluation period,

return result B.

Results:

Result	Description	Severity
A	The system does not contain a required DAHS component that was active during the evaluation period for [key].	Critical Error Level 1
B	The system does not contain a required DAHS component records for [key] to span the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ System Evaluation *Condition:* Current System Active *Equals* true

Check Code: SYSTEM-19

Check Name: Required Non-DAHS Components Reported for System

Related Former Checks: NBP-16, NBP-18

Applicability: General Check

Specifications:

For a Monitoring System record with a valid System Type and consistent dates:

Set Required Non-DAHS Components for System to true.

Set Required Probe to false.

If the SystemType is not equal to "H2O" or " ST ",

Locate the System Type in the System Type to Component Type Cross Check Table where Mandatory is equal to "Yes".

If found,

Locate all System Component records for the system where the ComponentTypeCode is equal to the ComponentTypeCode in the retrieved cross check record; the ComponentID does not begin with "LK"; the StartDate and StartHour is on or before the System Evaluation End Date and End Hour; and the EndDate is null or the EndDate is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

set Missing Components for System to the ComponentTypeCode in the cross check record.

If found,

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire system evaluation period,

set Incomplete Components for System to the ComponentTypeCode in the cross check record.

If ComponentTypeCode is equal to "SO2", "NOX", "CO2", "O2", "H2O", "HCL", "HF", or "HG" and the SampleAcquisitionMethodCode is equal to "DIL", "DOU", "DIN", "EXT", or "WXT",

set Required Probe to true.

Locate the System Type in the System Type to Component Type Cross Check Table where Mandatory is null.

If found,

Locate all System Component records for the system where the ComponentTypeCode is equal to any of the ComponentTypeCodes in the retrieved cross check records; the ComponentID does not begin with "LK"; the StartDate and StartHour is on or before the System Evaluation End Date and End Hour; and the EndDate is null or the EndDate is on or after the System Evaluation Begin Date and Begin Hour.

If none are found,

append the ComponentTypeCodes in the retrieved cross check records to Missing Components for System.

If found,

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire system evaluation period,

append the ComponentTypeCodes in the retrieved cross check records to Incomplete Components for System.

If ComponentTypeCode is equal to "SO2", "NOX", "CO2", "O2", "H2O", "HCL", "HF", or "HG" and the SampleAcquisitionMethodCode is equal to "DIL", "DOU", "DIN", "EXT", or "WXT",

set Required Probe to true.

If Missing Components for System is not null, and Incomplete Components for System is null,

set Required Non-DAHS Components for System to false, and return result A.

If Incomplete Components for System is not null, and Missing Components for System is null,

return result B.

If both Missing Components for System and Incomplete Components for System are not null,

set Required Non-DAHS Components for System to false, and return result C.

If the SystemType is equal to "H2O",

Locate all System Component records for the system where the ComponentTypeCode is equal to "O2", the ComponentID does not begin with "LK", the BasisCode is equal to "B" or "W", the StartDate and StartHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result D.

If found,

If the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire system evaluation period,

return result E.

If the SampleAcquisitionMethodCode is equal to "DIL", "DOU", "DIN", "EXT", or "WXT",

set Required Probe to true.

For each retrieved record with a BasisCode equal to "W":

Locate all System Component records for the system where the ComponentTypeCode is equal to "O2", the ComponentID does not begin with "LK", the BasisCode is equal to "D", the StartDate and StartHour is on or before the System Evaluation End Date and End Hour in the retrieved record, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result D.

If found and the BeginDate/BeginHour and EndDate/EndHour of the retrieved "D" records do not span the intersection of the system evaluation period and the time span between the BeginDate/BeginHour and EndDate/EndHour of the retrieved "W" record,

return result E.

If the SystemType is equal to " ST ",

Locate all System Component records for the system where the ComponentTypeCode is equal to " STRAIN "; the ComponentID does not begin with "LK"; the StartDate and StartHour is on or before the System Evaluation End Date and End Hour; and the EndDate is null or the EndDate is on or after the System Evaluation Begin Date and Begin Hour.

If less than two are found,

set Required Non-DAHS Components for System to false, and Missing Components for System to " STRAIN "

Otherwise,

For each retrieved System Component record,

Locate all System Component records for the system where the ComponentTypeCode is equal to " STRAIN "; the ComponentID does not equal to ComponentID in the System Component record being evaluated; the StartDate and StartHour is on or before the System Evaluation End Date and End Hour; and the EndDate is null or the EndDate is on or after the System Evaluation Begin Date and Begin Hour.

If the BeginDate/BeginHour and EndDate/EndHour of the second set of retrieved records does not span the entire system evaluation period,

set Missing Components for System to " STRAIN ", exit for.

If Missing Components for System is not null,

return result F.

Results:

Result	Description	Severity
A	You have not reported [missing component] component(s) that was/were active during the evaluation period for [key]. This component type is required in a [system type] monitoring system.	Critical Error Level 1
B	You have not reported [incomplete component] component(s) for [key] that is/are active for the entire evaluation period. If the component(s) was/were not installed during part of the evaluation period, you will not be allowed to report measured emissions using this monitoring system during the period of time when the [incomplete component] component(s) was/were not active.	Informational Message
C	You have not reported a(n) [missing component] component that was active during the evaluation period for [key]. Also, you have not reported a [incomplete component] component that is active for the entire evaluation period. These component types are required in a [system type] monitoring system.	Critical Error Level 1
D	You have not reported wet-basis and dry-basis component(s) that was/were active during the evaluation period for [key]. These components are required in an H2O monitoring system.	Critical Error Level 1
E	You have not reported active wet-basis and dry-basis component(s) for [key] for the entire evaluation period. These components required in an H2O monitoring system.	Critical Error Level 1
F	You did not report two [missing component] that were concurrently active for the entire evaluation period for [key]. Two ADSP components are required in a sorbent trap monitoring system.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-20

Check Name: Required Formula Reported for System

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitor System record with consistent dates and a valid SystemTypeCode:

If the SystemTypeCode is equal to "OILV" or "OILM",

Locate all System Component records for the system where the associated ComponentTypeCode is equal to "OFFM" or "BOFF", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and they overlap at any time during the system evaluation period,

Locate all Formula records for the location with a ParameterCode equal to the "FOIL", a FormulaCode equal to "N-OIL", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

set Missing Formula for System to "FOIL N-OIL", and return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the entire time that the system component records overlap during the system evaluation period,

set Missing Formula for System to "FOIL N-OIL", and return result B.

If the SystemTypeCode is equal to "GAS",

Locate all System Component records for the system where the associated ComponentTypeCode is equal to "GFFM" or "BGFF", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and they overlap at any time during the system evaluation period,

Locate all Formula records for the location with a ParameterCode equal to the "FGAS", a FormulaCode equal to "N-GAS", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

set Missing Formula for System to "FGAS N-GAS", and return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the entire time that the system component records overlap during the system evaluation period,

set Missing Formula for System to "FGAS N-GAS", and return result B.

If the SystemTypeCode is equal to "FLOW",

Locate all System Component records for the system where the associated ComponentTypeCode is equal to "FLOW", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If more than one record is found, and they overlap at any time during the system evaluation period,

Locate all Formula records for the location with a ParameterCode equal to the "FLOW", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

set Missing Formula for System to "FLOW", and return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the entire time that the system component records overlap during the system evaluation period,

set Missing Formula for System to "FLOW", and return result B.

If the SystemTypeCode is equal to "H2O",

Locate all Formula records for the location with a ParameterCode equal to "H2O", a FormulaCode equal to "F-31" or "M-1K", a BeginDate and BeginHour on or before the System Evaluation End Date and End Hour, and an EndDate that is null or and EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result C.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved formula records do not span the entire system evaluation period,

return result D.

Results:

Result	Description	Severity
A	You reported [system type] [key], which has more than one concurrently active flowmeter component, but you did not report a(n) [formula type] formula record that was active during the evaluation period. If this system really has more than one component that measures flow, this formula is required. Otherwise, you should correct the system component records so that the dates/hours in these records do not overlap.	Critical Error Level 1
B	You reported [key], but you did not report [formula type] formula records that are active for the entire evaluation period. These formulas are required when using a [system type] system with more than one flowmeter.	Critical Error Level 1
C	You reported [key], but you did not report an H2O formula record that was active during the evaluation period to compute emission values for this location. This formula is required when using an H2O system.	Critical Error Level 1
D	You reported [key], but you did not report H2O formula records that are active for the entire evaluation period. This formula is required when using an H2O system.	Critical Error Level 1
E	You reported [key], but you did not report an HGC formula record that was active during the evaluation period to compute emission values for this location. This formula is required when using an HGK system.	Critical Error Level 1
F	You reported [key], but you did not report HGC formula records that are active for the entire evaluation period. This formula is required when using an HGK system.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-21

Check Name: Required Defaults Reported for System

Related Former Checks:

Applicability: General Check

Specifications:

For a Monitoring System record with a valid SystemTypeCode, a valid FuelCode, and consistent dates:

If the SystemTypeCode is equal to "NOXE",

Locate all Monitor Default records for the location with a ParameterCode equal to "NORX", a DefaultPurposeCode equal to "MD", a FuelCode equal to the FuelCode in the system record, an OperatingConditionCode equal to "A" or "U, a BeginDate and BeginHour that is on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour,

If not found,

add "NORX MD" to Missing Default for System.

If found, and the Begin and End Dates for the retrieved record do not span the entire system evaluation period,

add "NORX MD" to Incomplete Default for System.

Locate all Monitor Default records for the location with a ParameterCode equal to "NOCX", a DefaultPurposeCode equal to "MD", a FuelCode equal to the FuelCode in the system record, an OperatingConditionCode equal to "A" or "U, a BeginDate and BeginHour that is on or before the System Evaluation End Date and End Hour, and an EndDate that is null or an EndDate and EndHour that is on or after the System Evaluation Begin Date and Begin Hour,

If not found,

add "NOCX MD" to Missing Default for System.

If found, and the Begin and End Dates for the retrieved record do not span the entire system evaluation period,

add "NOCX MD" to Incomplete Default for System.

If Missing Default for System is not null, and Incomplete Default for System is null,

return result A.

If Missing Default for System is null, and Incomplete Default for System is not null,

return result B.

If Missing Default for System is not null, and Incomplete Default for System is not null,

return result C.

Results:

Result	Description	Severity
A	You did not report a [missing] default record that was active during the evaluation period for fuel code [fuel], which is required when you defined a [system type] monitoring system for [key] for this fuel.	Critical Error Level 1
B	You did not report a [incomplete] default record for fuel code [fuel], which is active for the entire evaluation period. This default is required when you define a [system type] monitoring system for [key] for this fuel.	Critical Error Level 1
C	You did not report a [missing] default record that was active during the	Critical Error Level 1

evaluation period for fuel code [fuel], which is required when you defined a [system type] monitoring system for [key] for this fuel. Also, you did not report a [incomplete] default record for fuel code [fuel], which is active for the entire evaluation period.

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-22

Check Name: Required Fuel Flow Record Reported for Fuel System

Related Former Checks: NBP-52A

Applicability: Appendix D Check

Specifications:

For a Monitoring System record with consistent dates and a SystemTypeCode equal to "OILV", "OILM", or "GAS":

If the SystemTypeCode is equal to "OILV" or "OILM",

Locate a System Component record for the system where the ComponentTypeCode is equal to "OFFM", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If the SystemTypeCode is equal to "GAS",

Locate a System Component record for the system where the ComponentTypeCode is equal to "GFFM", the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If the System Component record is found,

Locate a System FuelFlow record for the system where the BeginDate and BeginHour is on or before the System Evaluation End Date and End Hour, and the EndDate is null or the EndDate and EndHour is on or after the System Evaluation Begin Date and Begin Hour.

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire system evaluation period,

return result B.

Results:

Result	Description	Severity
A	You did not report a system fuel flow record that was active during the evaluation period for [key].	Critical Error Level 1
B	You did not report system fuel flow records for [key] that span the entire evaluation period.	Critical Error Level 1

Usage:

1	Monitoring Plan Evaluation Report ------ System Evaluation *Condition:* Current System Active *Equals* true

Check Code: SYSTEM-23

Check Name: Required Probe Reported for CEM System

Related Former Checks:

Applicability: CEM Check

Specifications:

For a Monitoring System record with a valid System Type and consistent dates:

If Required Probe is equal to true and the EndDate of the system is null or is on or after 1/1/2008,

Locate all System Component record for the system where the ComponentTypeCode is equal to "PRB".

If not found,

return result A.

If found, and the BeginDate/BeginHour and EndDate/EndHour of the retrieved records do not span the entire system evaluation period on or after 1/1/2008,

return result B.

Results:

Result	Description	Severity
A	You have not reported [missing component] component(s) that was/were active during the evaluation period for [key]. This component type is required in a [system type] monitoring system.	Critical Error Level 1
B	You have not reported [incomplete component] component(s) for [key] that is/are active for the entire evaluation period. This component type is required in a [system type] monitoring system.	Critical Error Level 1

Usage:

1 Monitoring Plan Evaluation Report ------ System Evaluation

Condition: Current System Active *Equals* true

Check Code: SYSTEM-24

Check Name: Duplicate System Records

Related Former Checks:

Applicability: General Check

Specifications:

For a System record:

Locate another System record for the location with a MonitoringSystemID that is equal to the MonitoringSystemID in the current record.

If found,

return result A.

Results:

Result	Description	Severity
A	Another [recordtype] record already exists with the same [fieldnames].	Fatal

Usage:

1	Monitoring Plan Data Entry Screen Evaluation System Evaluation