Oracle Utilities Customer Care and Billing Release 2.3.1

Utility Reference Model

4.2.1.3a Validate Meter Reads

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ORACLE

Oracle Utilities Customer Care and Billing Utility Reference Model 4.2.1.3a, Release 2.3.1

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Chapter 1

Overview

This chapter provides a brief description of the Validate Meter Reads business process and associated process diagrams. This includes:

- **Brief Description**
    - **Actors/Roles**

Brief Description

Business Process: 4.2.1.3a Validate Meter Reads

Process Type: Sub-Process

Parent Process: 4.2.1 Collect and Process Meter Read

Sibling Processes: 4.2.1.1a Read Meter; 4.2.1.2a Load Meter Reads; 4.2.1.4 Manage Consumption Data Reporting, 5.3.2.1 Manage Field Activities and Field Orders

Organizations usually want to review reads outside certain defined limits prior to using these reads on a bill. Included are reads uploaded from various sources as well as reads entered online. This process describes the review for meter reads that fall outside predetermined high and low boundaries.

Based on established business rules, a read falling outside the predetermined boundaries can be reset or updated. The CSR or Authorized User determines whether to allow the read to be used for Billing.

Actors/Roles

The Validate Meter Reads business process involves the following actors and roles.

- **CC&B**: The Customer Care and Billing application. Steps performed by this actor/role are performed automatically by the application, without the need for user initiation or intervention.
- **CSR CC&B:** CSR or Authorized User of the Customer Care and Billing application.

Chapter 2

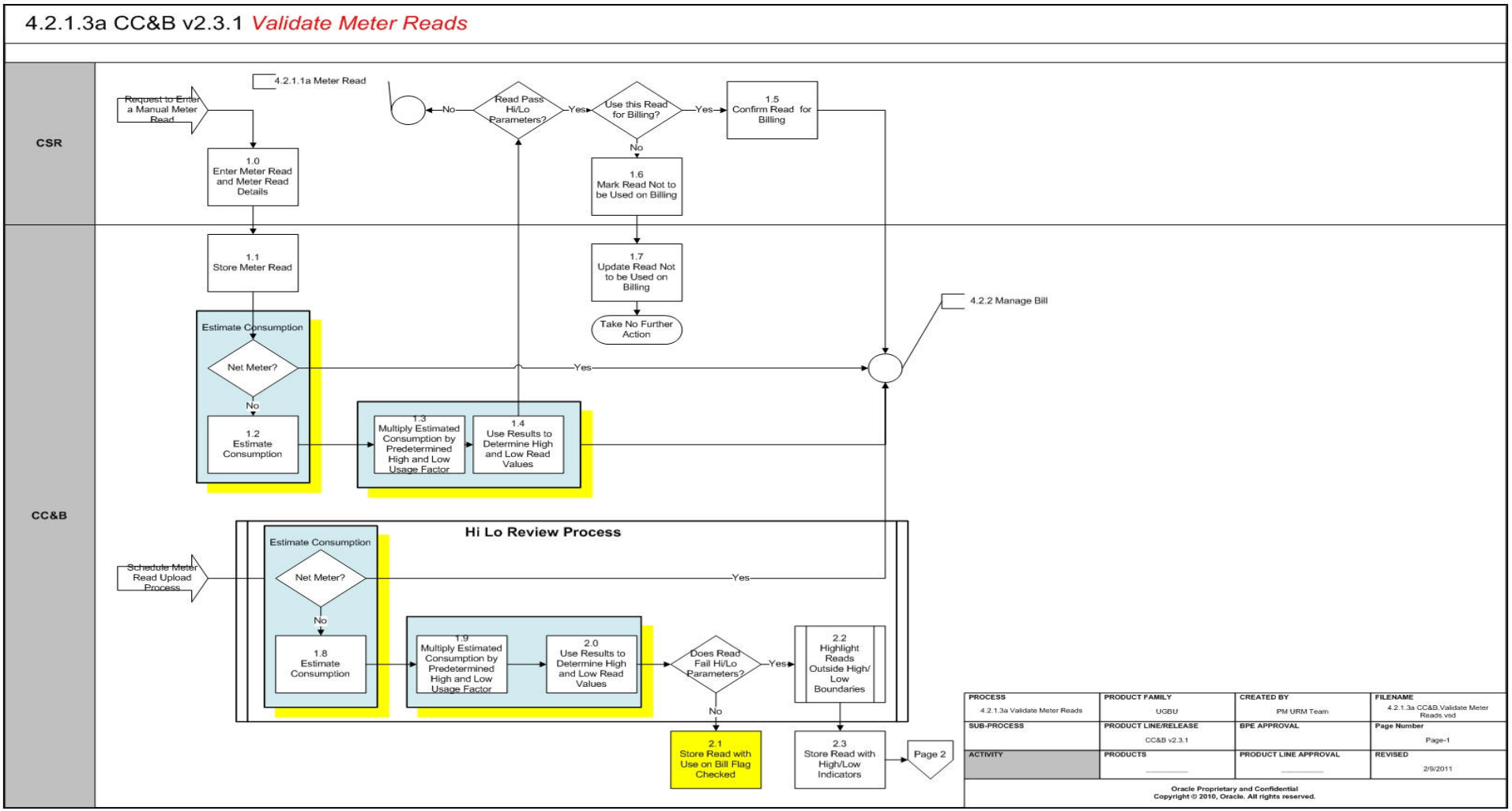
Detailed Business Process Model Description

This chapter provides a detailed description of the Validate Meter Reads business process. This includes:

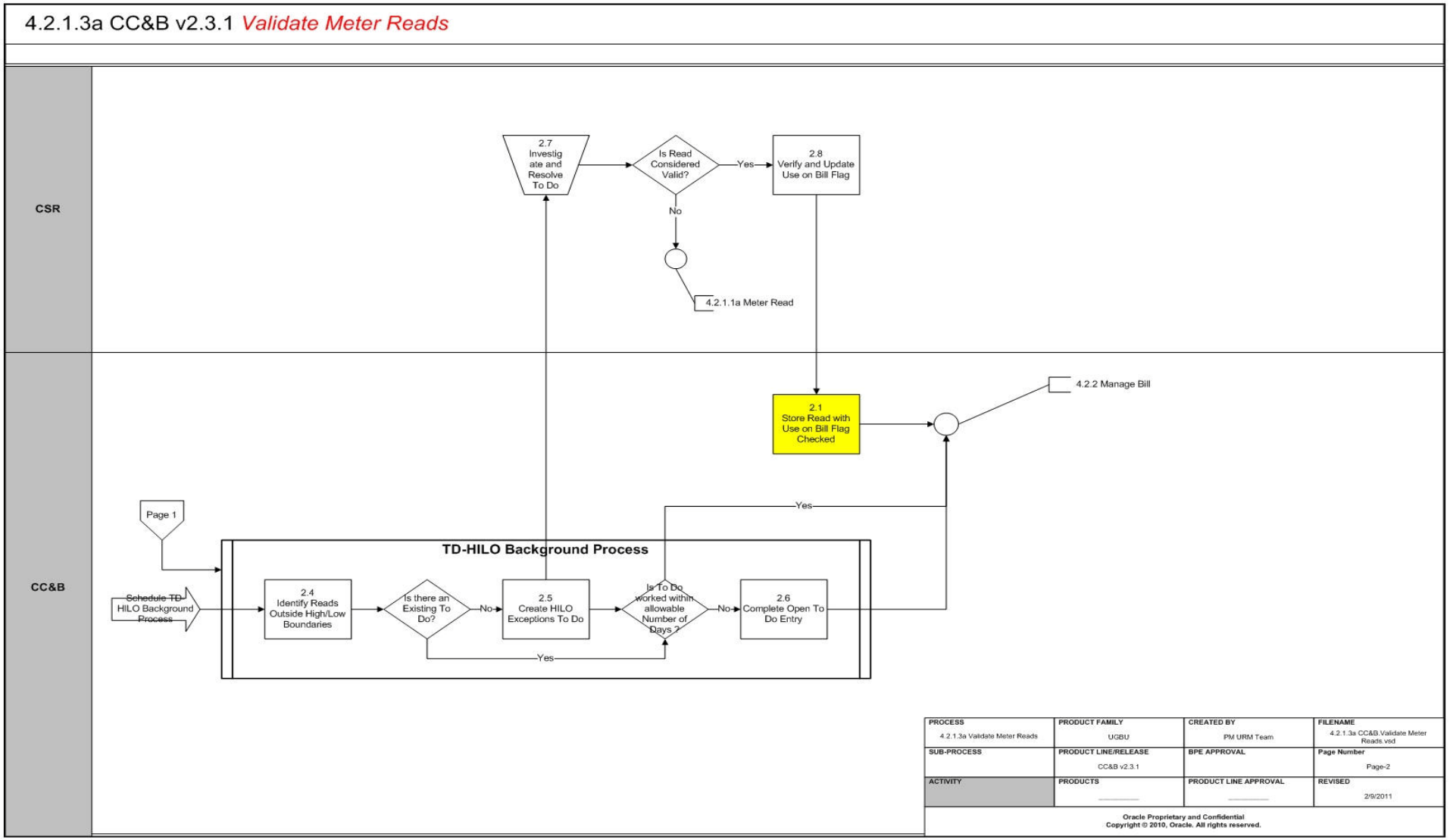
- **Business Process Diagrams**
  - **Validate Meter Reads Page 1**
  - **Validate Meter Reads Page 2**
- **Validate Meter Reads Description**
- **Meter Read Types**
- **Related Training**

Business Process Diagrams

Validate Meter Reads Page 1



Validate Meter Reads Page 2



Validate Meter Reads Description

This section includes detailed descriptions of the steps involved in the Validate Meter Reads business process, including:

- **1.0 Enter Meter Read and Meter Read Details**
- **1.1 Store Meter Read**
- **1.2 Group - Estimate Consumption**
- **1.3 Group - Multiply Estimated Consumption by Predetermined High and Low Usage Factor**
- **1.4 Group - Use Results to Determine High and Low Read Values**
- **1.5 Confirm Read for Billing**
- **1.6 Mark Read Not to be Used on Billing**
- **1.7 Update Read Not to be Used by Billing**
- **1.8 Group - Estimate Consumption**
- **1.9 Group - Multiply Estimated Consumption by Predetermined High and Low Usage Factor**
- **2.0 Group- Use Results to Determine High and Low Read Values**
- **2.1 Store Read with Use on Bill Flag Checked**
- **2.2 Group - Highlight Reads Outside High/Low Boundaries**
- **2.3 Store Read with High/Low Indicators**
- **2.4 Group - Identify Reads Outside High/Low Boundaries**
- **2.5 Group - Create HILO Exceptions To Do**
- **2.6 Group - Complete Open To Do Entry**
- **2.7 Investigate and Resolve To Do**
- **2.8 Verify and Update use on Bill Flag Checked**

1.0 Enter Meter Read and Meter Read Details

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User enters the meter read and meter read details.

1.1 Store Meter Read

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Reads within the high/low boundaries are stored in CC&B with the use on bill switch on. Reads outside the high/low boundaries are referred to process 4.2.1.1a Read Meter.

1.2 Group - Estimate Consumption

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: When a read is added to CC&B, online or in an upload, the system checks consumption to determine if it is considered to be reasonable. CC&B estimates consumption. If the SP is setup for Negative Consumption, the Estimate Consumption process will not be performed and the process will proceed directly to 4.2.2 Manage Billing. Historical usage for the current customer as well as historical and current usage for similar customers may be considered. The geographic location as well as other factors may also be considered. Consumption variations based on geographic location may be defined separately. Consumption trends based on the type of service and the type of property may be considered.

Entities to Configure
Algorithm Parameters
Trend Area
Trend Class
High Low Factors
Installation Options - Meter Read High Low Limits Algorithm

Available Algorithm(s)
MR-EST-TREND - this algorithm uses trend data to estimate consumption
TSMRE-LA - this algorithm is used to estimate consumption using three different methods (stopping at the first successful method). It first tries to estimate consumption using historical data for the account and service point. If this is unsuccessful, it uses trend data to estimate consumption
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

1.3 Group - Multiply Estimated Consumption by Predetermined High and Low Usage Factor

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: As part of the high/low review process, the system calculates a low and a high usage amount by multiplying the estimated consumption obtained in step 1 by a predetermined value or factor. This factor or value is defined separately.

Entities to Configure
High/Low Factors
Installation Options - Meter Read High Low Limits Algorithm

Available Algorithm(s)
MR-EST-TREND - this algorithm uses trend data to estimate consumption
TSMRE-LA - this algorithm is used to estimate consumption using three different methods (stopping at the first successful method). It first tries to estimate consumption using historical data for the account and service point. If this is unsuccessful, it uses trend data to estimate consumption
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

1.4 Group - Use Results to Determine High and Low Read Values

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: CC&B uses the calculated high and low usage amounts and the previous read value to determine a high and low read value.

Entities to Configure
High/Low Factors
Installation Options - Meter Read High Low Limits Algorithm

Available Algorithm(s)
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

1.5 Confirm Read for Billing

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized user confirms that the reads are to be used by billing.

1.6 Mark Read Not to be Used on Billing

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User determines this read is not acceptable to use on a bill and ensures the use on bill switch is off.

1.7 Update Read Not to be Used by Billing

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The system updates the read such that it is ignored and not billed during billing.

1.8 Group - Estimate Consumption

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: When a read is added to CC&B, online or in an upload, the system checks consumption to determine if it is considered to be reasonable. CC&B estimates consumption. Historical usage for the current customer as well as historical and current usage for similar customers may be considered. The geographic location as well as other factors may also be considered. Consumption variations based on geographic location may be defined separately. Consumption trends based on the type of service and the type of property may be considered.

Entities to Configure
Algorithm Parameters
Trend Area
Trend Class
High Low Factors
Installation Options - Meter Read High Low Limits Algorithm

Available Algorithm(s)
MR-EST-TREND - this algorithm uses trend data to estimate consumption
TSMRE-LA - this algorithm is used to estimate consumption using three different methods (stopping at the first successful method). It first tries to estimate consumption using historical data for the account and service point. If this is unsuccessful, it uses trend data to estimate consumption
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

1.9 Group - Multiply Estimated Consumption by Predetermined High and Low Usage Factor

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: As part of the high/low review process, the system calculates a low and a high usage amount by multiplying the estimated consumption obtained in step 1 by a predetermined value or factor. This factor or value is defined separately.

Entities to Configure
High/Low Factors
Installation Options - Meter Read High Low Limits Algorithm

Available Algorithm(s)
MR-EST-TREND - this algorithm uses trend data to estimate consumption
TSMRE-LA - this algorithm is used to estimate consumption using three different methods (stopping at the first successful method). It first tries to estimate consumption using historical data for the account and service point. If this is unsuccessful, it uses trend data to estimate consumption
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

2.0 Group- Use Results to Determine High and Low Read Values

See **Validate Meter Reads Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: CC&B uses the calculated high and low usage amounts and the previous read value to determine a high and low read value.

Entities to Configure
High/Low Factors
Installation Options - Meter Read High Low Limits Algorithm

Available Algorithm(s)
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

2.1 Store Read with Use on Bill Flag Checked

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Reads within the high/low boundaries are stored in CC&B with the use on bill switch on. Reads outside the high/low boundaries are referred to process 4.2.1.1a Read Meter.

2.2 Group - Highlight Reads Outside High/Low Boundaries

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The meter reading's consumption is outside of the high/low boundaries. The read is flagged accordingly. If configured, the read may still be used for billing unless the CSR or Authorized User disallows the reading.

Entities to Configure
High/Low Factors
Installation Options - Meter Read High Low Limits Algorithm
Installation Options - Use High/Low Read Failures on Bill Switch

Available Algorithm(s)
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

2.3 Store Read with High/Low Indicators

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Reads outside the high/low boundaries are stored in CC&B. Based on configuration, the use on bill switch is off.

Entities to Configure
Installation Options - Use High/Low Read Failures on Bill Switch

2.4 Group - Identify Reads Outside High/Low Boundaries

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: CC&B identifies those reads that fail a high/low review.

2.5 Group - Create HILO Exceptions To Do

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Meter reads that fall outside the high/low boundaries are placed on a review list for investigation by a CSR or Authorized User. Each register read linked to the meter read that has review high / low set to Y, the process attempts to classify the reading as "very low", "low", "high" or "very high". If any of the register reads that failed high/low should not be used on the bill, the meter's read use on bill flag is set to No. It is only set to Yes if all register reads can be used on a bill.

Entities to Configure
Batch Control Parameters
High/Low Factors

Available Algorithm(s)
HILO-FACTBL - this algorithm defined on installation options uses High Low Factor table to determine high and low limits for reads

Customizable Processes
TD-HILO - This background process creates a To Do entry for every meter read that has at least one register read that failed high/low review. If more than one register fails high/low, the "worst" register read is used. This process sorts very low, low, high and very high reads based on parameters established on the background process

2.6 Group - Complete Open To Do Entry

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The High/Low background process first completes To Do Entries that are still open. Usually High/Low exceptions have a priority timeframe to ensure reads are accurate and available for billing purposes. The number of days to keep an exception entry open is based on established business rules, timeframes for incoming reads and billing cycles.

Customizable Processes
TD-HILO - This background process creates a To Do entry for every meter read that has at least one register read that failed high/low review. If more than one register fails high/low, the "worst" register read is used. It also looks for open To Do entries beyond a given number of days.

2.7 Investigate and Resolve To Do

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: Based on established business rules the CSR or Authorized User will review and explore different options to resolve exception. This may include creation of a new field activity, estimation of reads or additional investigation.

2.8 Verify and Update use on Bill Flag Checked

See **Validate Meter Reads Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User determines this read is acceptable to use on a bill and ensures the use on bill switch is on.

Meter Read Types

Read Type	Description
Billing Force	Meter reads with this value are entered by a billing administrator who wants to force billing to bill a customer for a given amount of consumption.
Verified	A meter reader using a handheld device records meter reads with this value. The handheld device deems a read as "verified" if the meter reader typed the same dial reading in twice. Some organizations have their handhelds programmed to require the double entry of dial readings when the entered value is outside normative values (i.e., the resultant consumption fails high / low checks).
Regular	A meter reader using a handheld device records meter reads with this value. See the description for "verified" above for the difference between a "regular" and a "verified" reading.
Customer Read	A customer provides meter reads with this value.
System Prorate	Meter reads with this value are created by the system automatically when prorating normal cycle-based reads for use with an off-cycle start service or stop service.
Office Estimate	Meter reads with this value are informed guesses of consumption. These would be used when there was no real reading (i.e., a regular or verified reading), and the system was not allowed to estimate consumption (for whatever reason). This value is rarely used.
Service Provider Estimate	Meter reads with this value are estimates of consumption made by a 3rd party service provider, such as an MDMA, the distribution company, or an energy supply company.
System Estimate	The billing process creates meter reads with this value when a reading cannot be found and the service agreement allows estimation.
No Read	Meter reads with this value are entered to indicate that a read was purposefully not performed (for whatever reason - mad dog, nasty rose bush, deep snow, etc.). A read with this value is not a read at all; it's just an audit trail.

Related Training

The following User Productivity Kit (UPK) modules provide training related to this business process:

- Oracle Utilities UPK for Customer Care and Billing, Administrative Setup
- Oracle Utilities UPK for Customer Care and Billing, Rating and Billing for Interval Data