

Annex B

Database Entity Relationship Diagrams

1. Overview

The data model presented in this annex represents a logical view of the database design for the ITL. It does not include the entities needed for the ITL AA, which might include additional report and job catalogs.

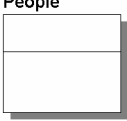
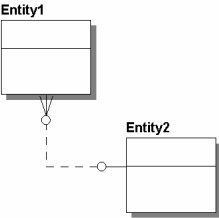
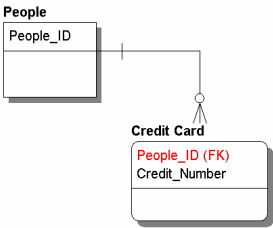
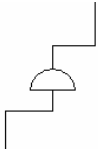
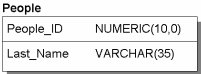
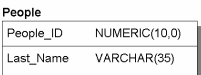
This Entity Relationship Diagram (ERD) and all its submodels are logical data models, not physical database design. Therefore, these models are normalised and may require some denormalisation when designing the physical database. These logical data models represent all of the possible data requirements for the ITL. They do not include the business processing rules that supplement the data model, which can be found in Annex E.

1.1 Conventions and Standards

The following figure describes the naming standards and diagramming conventions used in these models.

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Figure B1: Model Conventions and Standards

| Element | Name | Description |
|---|--------------|---|
|  | Entity | An entity represents a set of real or abstract things (people, places, events) that have common attributes or characteristics. Entities may be either independent or dependent and are the logical equivalent to a table. An independent entity is called a “parent” and the dependent tables to it are “children.” |
|  | Relationship | Relationships define how two entities are associated with each other. Relationships may be either optional or mandatory. A dotted line means the relationship is optional and a continuous line means that the relationship is mandatory. |
|  | Cardinality | The small circle at the end of a relationship line shows the ratio of parent entity to child entities. The presence of the circular dot defines where there is more than one occurrence of a dependent entity. For example, for each person (in the People entity) there are at least one or more Credit Cards associated with that person. |
|  | Subtype | A subtype is a relationship in which information is stored about a specific type of some other entity. For example, a SALARIED EMPLOYEE is a specific type of EMPLOYEE. Subtypes are used for expressing relationships that are only valid for that specific subtype. |
|  | Attributes | An attribute represents a type of characteristic or property about an entity. An attribute is described as having a datatype and length. Datatypes can be numeric, date and/or time, or variable character (Varchar). |
|  | Primary Key | When the attribute uniquely defines a single set of elements within an entity, that attribute (or set of attributes) is referred to as a Primary Key. Primary keys are shown at the top of the entity above the dividing line which distinguishes it from non-primary attributes. |

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1.2 Overview Model and Submodels

Due to the size of the ERD, the model is divided into subsections. The overview model (Figure B2) is an entity-only view of all entities and their relationships. For the purpose of clarity, all lookup tables which serve as foreign keys in the child tables have been removed from this model. Subsequent submodels may show relevant lookup tables as space provides. The remaining submodels provide attribute, datatype, and cardinality information, supporting the major processing types as defined in Section 3.5 of the ITL Technical Specification.

Figure B2: Overview Model

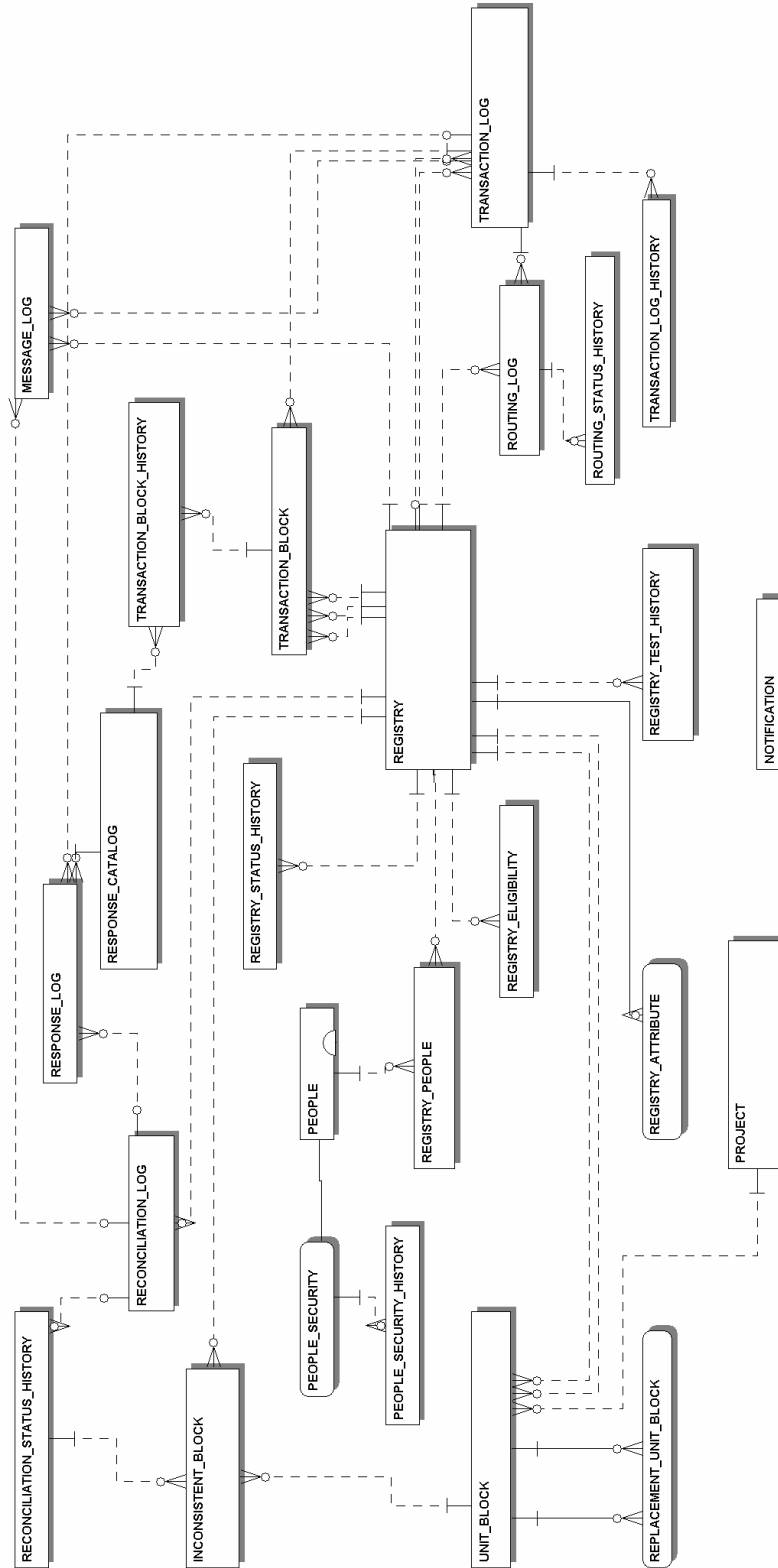
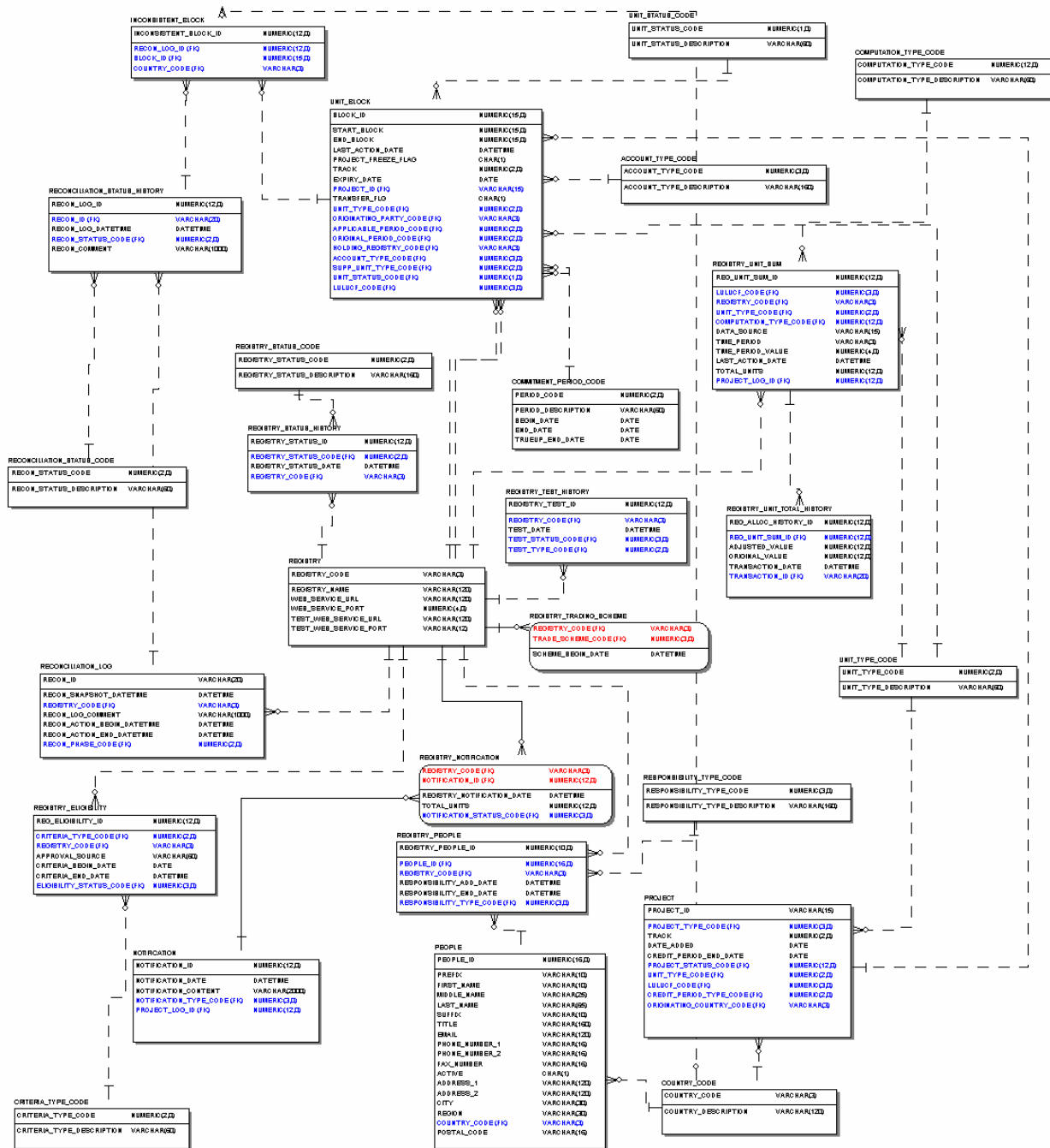
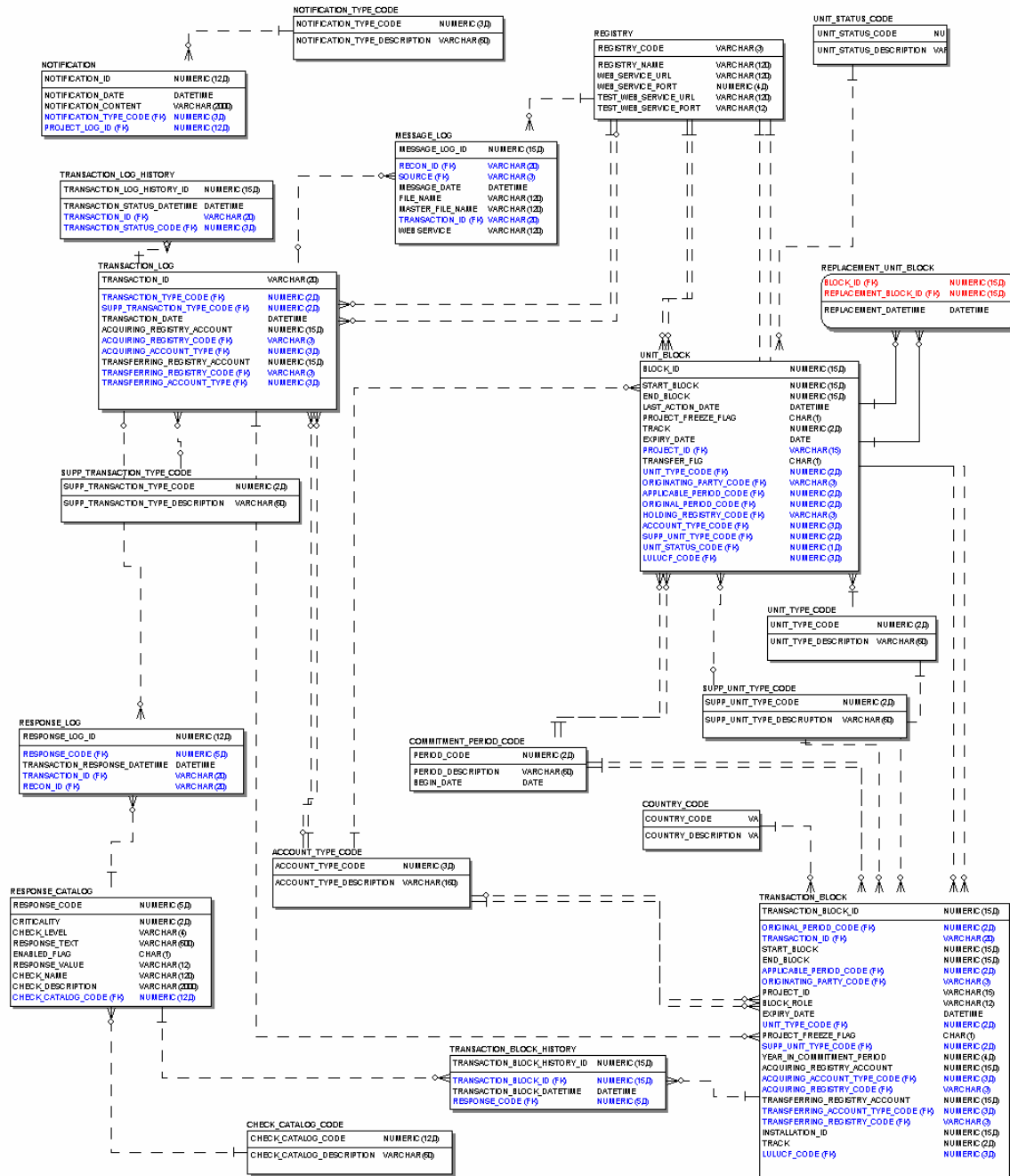


Figure B3: Registry Submodel



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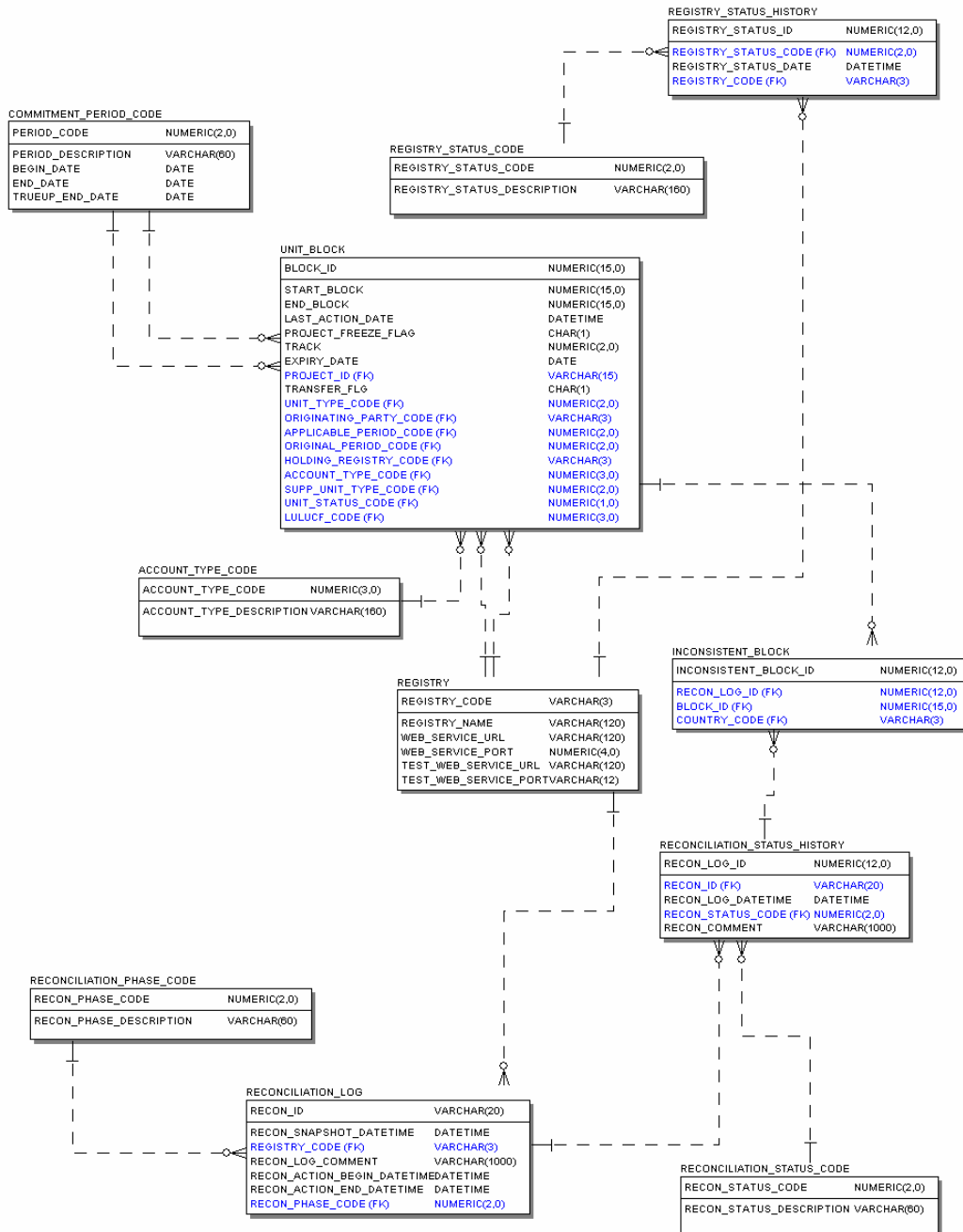
Figure B4: Transaction Process Submodel



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Figure B5: Reconciliation Submodel



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Figure B6: System Data Submodel

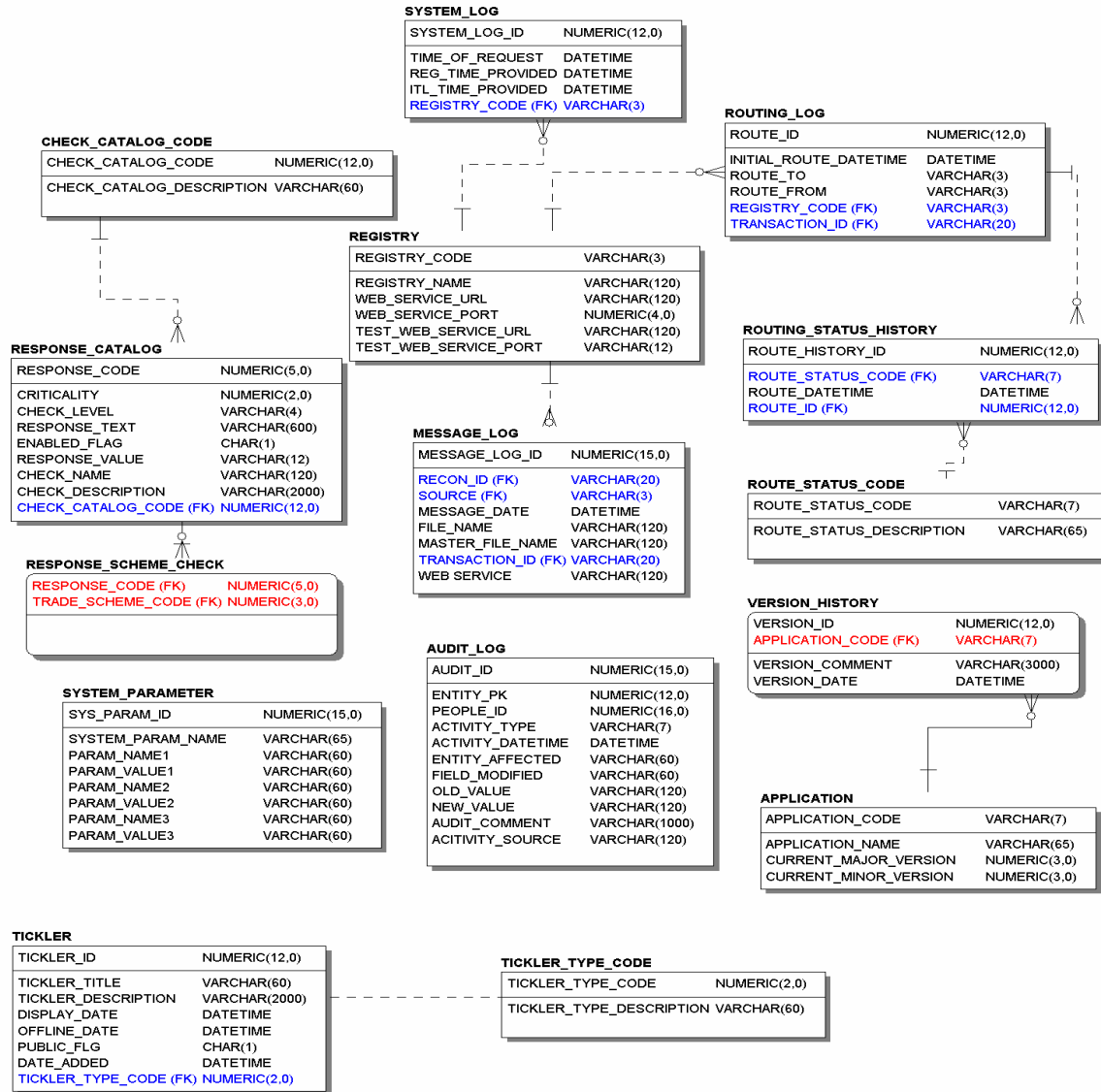
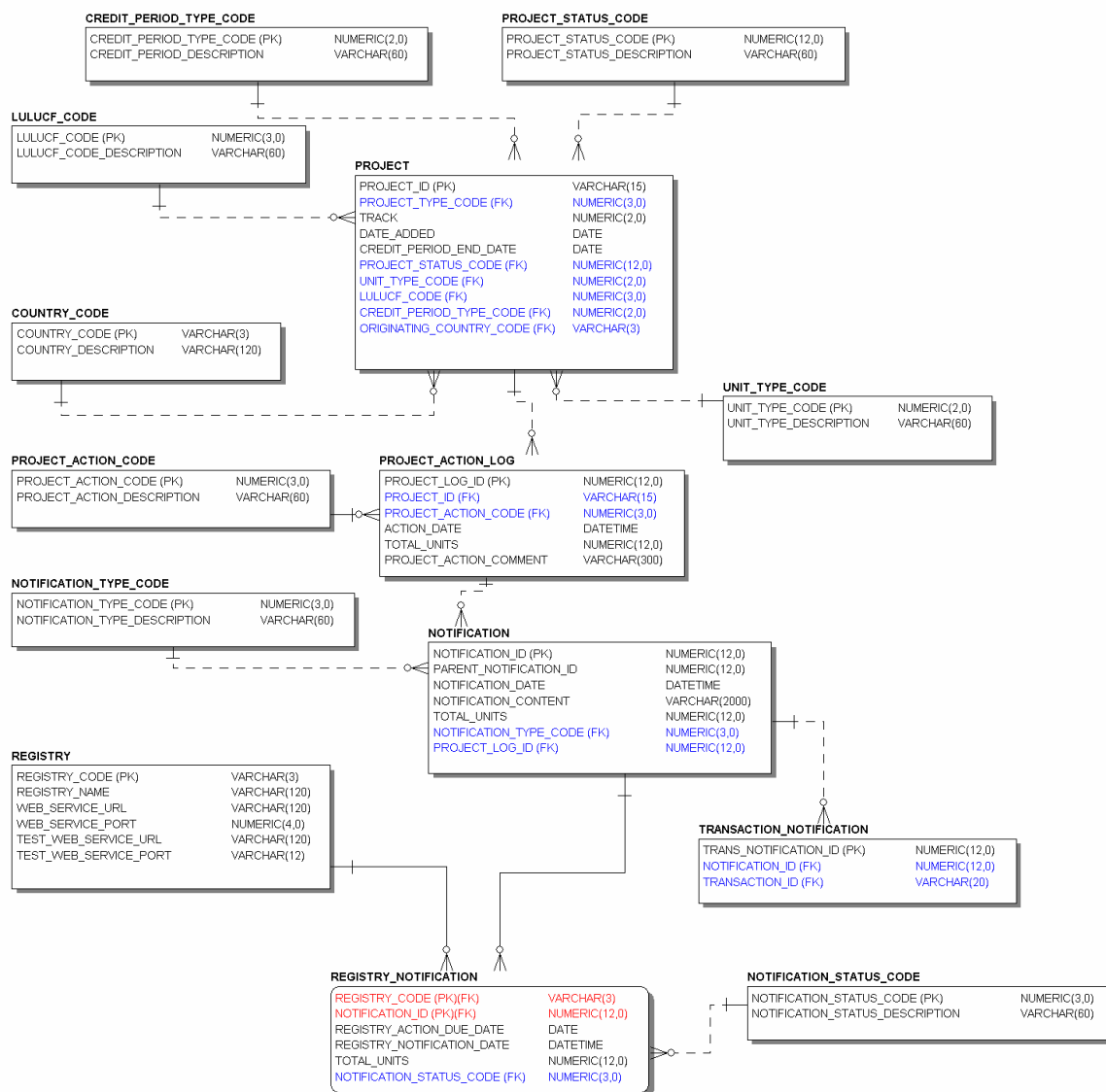


Figure B7: Projects and Notifications Submodel



Annex C

Data Element Definitions

Figure C1: List of Entities

| Entity Name | Description |
|----------------------------|--|
| Account Type Code | Lookup table of account types. Reference Annex D, Figure D2. |
| Application | Contains information about the current versions of ITL applications and related technical requirements (i.e., ITL AA, ITL PubWeb, DES, STL). |
| Audit Log | Contains record of all database actions occurring on selected tables in the database (i.e., inserts, updates and deletes). |
| Check Catalog Code | Collection of Rule Checks performed on transactions. These checks correspond to response codes for both success or failure on a check. |
| Commitment Period Code | Lookup table of Commitment Periods. Reference Annex D, Figure D4. |
| Computation Type Code | Lookup table of computation type codes. Reference Annex D, Figure D5. |
| Country Code | Lookup table of country codes per ISO3166. |
| Crediting Period Type Code | Lookup table of crediting period type codes. Reference Annex D, Figure D6. |
| Criteria Type Code | Lookup table of eligibility constraints. Reference Annex D, Figure D7. |
| Eligibility Status Code | Lookup table of eligibility status codes. Reference Annex D, Figure D8. |
| Government Account | Contains information of Account Identifiers for all retirement and cancellation accounts. |
| Inconsistent Block | Contains unit blocks that are identified during reconciliation action as potentially inconsistent. |
| LULUCF Code | Lookup table of LULUCF activity codes. Reference Annex D, Figure D9. |
| Message Log | Records all incoming and outgoing transaction messages as received from or sent to national registries. |
| Notification | Table of notifications that can be sent to registries. |
| Notification Status Code | Lookup table of notification status codes. Reference Annex D, Figure D10. |
| Notification Type Code | Lookup table of notification type codes. Reference Annex D, Figure D11. |
| People | Contains information on people that have a relationship with either the ITL, STL, or a registry. |
| People Security | Contains User IDs and current password providing access to the ITL. |

(cont.)

Figure C1: List of Entities (cont.)

| Entity Name | Description |
|-------------------------------|---|
| People Security History | Contains history of previously used passwords for a person assigned a User ID. |
| Project | Table of Projects that are managed by the CDM. |
| Project Action Code | Lookup table of Project Action Codes. Reference Annex D, Figure D13. |
| Project Action Log | History table of all the actions applied to a Project. |
| Project Status Code | Lookup table of Project status codes. Reference Annex D, Figure D14. |
| Project Type Code | Lookup table of Project type codes. Reference Annex D, Figure D15. |
| Reconciliation Log | Contains information about each reconciliation action initiated by the ITL, including date and time and comments. |
| Reconciliation Phase Code | Lookup table of reconciliation phase codes. Reference Annex D, Figure D16. |
| Reconciliation Status Code | Lookup table of reconciliation status codes. Reference Annex D, Figure D17. |
| Reconciliation Status History | Contains information about each stage of the reconciliation action, including the status, date and time, and comments. |
| Registry | Registries with whom the ITL communicates to validate and process transactions. |
| Registry Eligibility | Table of eligibility requirements met by a registry. Managed by the CNA data system. |
| Registry Notification | Table of all notifications sent to a registry. |
| Registry People | Relationship between a person and a registry. |
| Registry Status Code | Lookup table of status codes for a registry, identifying whether it is eligible to communicate with the ITL/STL. Reference Annex D, Figure D18. |
| Registry Status History | Contains a record of each of the various registry status changes. |
| Registry Test History | History of registry tests conducted. |
| Registry Trading Scheme | Contains information about additional trading programs. |
| Registry Unit Sum | Table that contains information regarding a registry's unit total sums grouped by data source and computation type. |
| Registry Unit Total History | Contains historical records of every transaction that modified the running total stored in the Registry Unit Sum table. |

(cont.)

Figure C1: List of Entities (cont.)

| Entity Name | Description |
|-------------------------------------|---|
| Replacement Unit Block | Contains information about unit blocks that have been replaced (as in tCERs and ICERs). There can only be one replacement record for a unit block. |
| Response Catalog | Lookup table of all response codes per DES Annex C. Contains indicator that response code is active and the response type. (Also contains CITL response codes.) |
| Response Log | Contains, for each transaction or reconciliation, all response codes generated by the ITL in its evaluation. These responses are non-unit block specific. |
| Response Scheme Check | Table of checks that are specific for a particular trading scheme. |
| Responsibility Type Code | Lookup table of responsibility codes that describe a person's responsibilities for a registry. Reference Annex D, Figure D19. |
| Route Status Code | Lookup table of codes describing routing log action. Reference Annex D, Figure D20. |
| Routing Log | Log of messages sent to and from the STL. |
| Routing Status History | Contains, for each transaction, a record of each status change sent to or received from the STL. |
| Snapshot Log | Log of all reconciliation snapshot data sets. |
| Supplementary Transaction Type Code | Lookup table of STL supplemental transaction type codes. |
| Supplementary Unit Type Code | Lookup table of STL supplemental unit type codes. |
| System Log | Contains information on administrative processes. |
| System Parameter | Contains system variables, to be defined as needed, for system configuration or system management. |
| Test Status Code | Lookup table of test results or test status. Reference Annex D, Figure D21. |
| Test Type Code | Lookup table of tests (to be defined). Reference Annex D, Figure D22. |
| Tickler | Contains information of upcoming events and announcements for the public website. |
| Tickler Type Code | Lookup table of tickler type codes. |
| Trade Scheme Code | Lookup table of trade schemes. Reference Annex D, Figure D23. |
| Transaction Block | Identifies the unit block(s) that are part of each transaction. |
| Transaction Block History | Contains, for each transaction, all response codes associated with a specific unit block. |
| Transaction Log | Contains a single record of each transaction that is submitted for validation to the ITL. |

(cont.)

Figure C1: List of Entities (cont.)

| Entity Name | Description |
|--------------------------|--|
| Transaction Log History | Contains a record of each stage and status associated with processing a specific transaction. |
| Transaction Notification | Contains records of all transactions that were proposed in compliance with a notification. |
| Transaction Status Code | Lookup table of transaction status codes. Reference Annex D, Figure D24. |
| Transaction Type Code | Lookup table of transaction types. Reference Annex D, Figure D25. |
| Unit Block | Contains all of the units (defined by start and end blocks) which have been issued by registries under the Kyoto Protocol. |
| Unit Status Code | Lookup table of reasons a unit block may be in holding queue. Reference Annex D, Figure D26. |
| Unit Type Code | Lookup table of unit (allowance) types. Reference Annex D, Figure D27. |
| Version History | Contains information about versions of the DES. |

Figure C2: Account Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|---------------|------|-------------|--|
| Account Type Code | Number(3) | N | Y | Numeric code indicating the type of account. |
| Account Type Description | Varchar2(160) | Y | N | Text description of an account type. |

Figure C3: Application Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------|----------------|------|-------------|--|
| Application Code | Varchar2(7) | N | Y | Primary key code for application. |
| Application Name | Varchar2(65) | Y | N | Name of application. |
| Current Major Version | Number(3) | Y | N | Current major version of application. |
| Current Minor Version | Number(3) | Y | N | Current minor version of application. |
| Version Description | Varchar2(2000) | Y | N | Description of version enhancements, patches or modifications. |

Figure C4: Audit Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------|----------------|------|-------------|--|
| Audit ID | Number(15) | N | Y | Unique identifier for the Audit_Log table. |
| Activity Type | Varchar2(7) | N | N | The activity or action (often a table insert, update, or delete) for which an audit record is made. |
| Activity DateTime | DateTime | N | N | The date and time of an activity. |
| Entity Affected | Varchar2(60) | N | N | The table which was modified by an activity. |
| Entity PK | Varchar2(20) | N | N | Unique identifier of the entity affected. |
| Field Modified | Varchar2(60) | N | N | The table field that was modified by an activity. |
| Old Value | Varchar2(120) | N | N | The value of a field prior to an activity. |
| New Value | Varchar2(120) | N | N | The value of a field after an activity has modified the field. |
| Audit Comment | Varchar2(1000) | Y | N | Additional comments regarding an activity. |
| Activity Source | Varchar2(120) | Y | N | Identifies where the transaction originated from, generally as a terminal identification name or number. |
| People ID | Number(16) | Y | N | Unique identifier for a person. |

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Figure C5: Check Catalog Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------|--------------|------|-------------|-----------------------------------|
| Check Catalog Code | Numeric(12) | N | Y | Unique identifier of check group. |
| Check Catalog Description | Varchar2(60) | Y | N | Description of check group. |

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Figure C6: Commitment Period Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------|--------------|------|-------------|--|
| Period Code | Number(2) | N | Y | Code indicating the Commitment Period block. |
| Period Description | Varchar2(60) | Y | N | Text description of a Commitment Period. |
| Begin Date | Date | Y | N | Date on which Commitment Period begins. |
| End Date | Date | Y | N | Date on which Commitment Period ends. |
| True-up Date | Date | Y | N | Date on which true-up ends for this Commitment Period. |

Figure C7: Computation Type Code Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------------|--------------|------|-------------|---|
| Computation Type Code | Number(12) | N | Y | Unique identifier of computation type code. |
| Computation Type Description | Varchar2(60) | Y | N | Description of computation type code. |

Figure C8: Country Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------|---------------|------|-------------|--------------------------------|
| Country Code | Varchar2(7) | N | Y | Code indicating a country. |
| Country Description | Varchar2(120) | Y | N | Text description of a country. |

Figure C9: Credit Period Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------|--------------|------|-------------|---|
| Credit Period Type Code | Number(2) | N | Y | Unique identifier for crediting period type code. |
| Credit Period Description | Varchar2(60) | Y | N | Description of crediting period type code. |

Figure C10: Criteria Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------|--------------|------|-------------|--|
| Criteria Type Code | Number(2) | N | Y | Unique identifier of a criteria type code. |
| Criteria Type Description | Varchar2(60) | Y | N | Description of criteria type code. |

Figure C11: Eligibility Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------------|--------------|------|-------------|--|
| Eligibility Status Code | Number(3) | N | Y | Unique identifier of an eligibility status code. |
| Eligibility Status Description | Varchar2(60) | Y | N | Text description of an eligibility status code. |

Figure C12: Government Account Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------|--------------|------|-------------|--|
| Registry Code | Varchar2(3) | N | Y | Code identifying the registry. |
| Registry Account | Varchar2(15) | N | Y | Registry Account Identifier. |
| Account Type Code | Number(3) | N | N | Numeric code indicating the type of account. |
| Period Code | Number(2) | N | N | Code indicating the Commitment Period. |

Figure C13: Inconsistent Block Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------|-------------|------|-------------|--|
| Inconsistent Block ID | Number(12) | N | Y | Reference to a unit block involved in a reconciliation action. |
| Recon Log ID | Number(12) | N | N | Unique identifier of a record in the Reconciliation_Log table. |
| Originating Party Code | Varchar2(3) | N | N | Code identifying the originating country of the block. |
| Block ID | Number(15) | N | N | Unique identifier of a unit block. |

Figure C14: LULUCF Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------|--------------|------|-------------|---|
| LULUCF Code | Number(3) | N | Y | Code indicating the LULUCF activity associated with the units in the block. |
| LULUCF Code Description | Varchar2(60) | Y | N | Text description of a LULUCF activity. |

Figure C15: Message Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------|---------------|------|-------------|---|
| Message Log ID | Number(15) | N | Y | Unique identifier for the Message Log table. |
| Message Date | DateTime | N | N | Date and time an incoming message was received. |
| Master File Name | Varchar2(120) | Y | N | Name of Zipped master file that was created when incoming message was parsed to an XML document. |
| File Name | Varchar2(120) | Y | N | The file in which a message is stored. Different transaction types may be stored in separate paths. |
| Transaction ID | Varchar2(20) | Y | N | Unique identifier for a transaction. |
| Recon ID | Varchar2(20) | Y | N | Unique identifier for a reconciliation action. |
| Web Service | Varchar2(120) | Y | N | Web service involved in sending or receiving messages. |
| Source | Varchar2(3) | N | N | Code identifying the registry or STL as source of message. |

Figure C16: Notification Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|----------------|------|-------------|---|
| Notification ID | Number(12) | N | Y | Unique identifier of a notification record. |
| Notification Date | DateTime | Y | N | Date and time a notification was created. |
| Notification Content | Varchar2(2000) | Y | N | Content notification message. |
| Notification Type Code | Number(3) | N | N | Unique identifier of notification type code. |
| Project Log ID | Number(12) | Y | N | Unique identifier of Project action log record. |
| Parent Notification ID | Number(12) | Y | N | Identifies the parent notification of zero indicates a parent notification. |
| Notification Status Code | Number(3) | Y | N | Unique identifier of notification status code. |
| Total Units | Number(12) | Y | N | Total number of units affected by this notification. |

Figure C17: Notification Status Code Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------------|--------------|------|-------------|--|
| Notification Status Code | Number(3) | N | Y | Unique identifier of notification status code. |
| Notification Status Description | Varchar2(60) | Y | N | Description of notification status code. |

Figure C18: Notification Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------------|--------------|------|-------------|---|
| Notification Type Code | Number(3) | N | Y | Unique identifier of notification type codes. |
| Notification Type Description | Varchar2(60) | Y | N | Description of notification type codes. |

Figure C19: People Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------|------------------|-------------|--------------------|---|
| People ID | Number(16) | N | Y | Unique identifier for a person. |
| Prefix | Varchar2(10) | Y | N | The prefix of the person (Mr., Dr., etc.). |
| First Name | Varchar2(10) | Y | N | The first name or given name of a person. |
| Middle Name | Varchar2(25) | Y | N | The middle name of a person. |
| Last Name | Varchar2(65) | N | N | The last name or family name of a person. |
| Suffix | Varchar2(10) | Y | N | The suffix on a person's name, such as Jr. |
| Title | Varchar2(160) | Y | N | The title by which a person is referred, such as Mr. or Mrs. |
| Email | Varchar2(120) | Y | N | The email address of a person. |
| Phone Number 1 | Varchar2(16) | Y | N | Primary phone number. |
| Phone Number 2 | Varchar2(16) | Y | N | Secondary or mobile phone number. |
| Fax Number | Varchar2(16) | Y | N | The fax number of a person. |
| Active | Char(1) | Y | N | Indicator of whether or not the person is active. By default, a null value indicates active, a 1 indicates a non-active person. |
| Address 1 | Varchar2(120) | Y | N | The first line of an address for a person. |
| Address 2 | Varchar2(120) | Y | N | The second line of an address for a person. |
| City | Varchar2(30) | Y | N | The city in an address for a person. |
| Region | Varchar2(30) | Y | N | The region in which the address of a person is located. |
| Country Code | Varchar2(7) | N | N | Code indicating a country for the person's address. |
| Postal Code | Varchar2(16) | Y | N | The post code for the address of a person. |

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Figure C20: People Security Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------|---------------|------|-------------|--|
| People ID | Number(16) | N | Y | Unique identifier for a person. |
| Password | Varchar2(120) | Y | N | The password of a person. |
| Password Change Date | DateTime | Y | N | The date and time a person's password was last changed. |
| Login | Varchar2(12) | Y | N | The User ID assigned to a person. |
| Security Role | Number(1) | N | N | Security role access to the ITLAA. 1 = Audition, 2 = Registry Administrator, 3 = System Administrator. |

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Figure C21: People Security History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------|---------------|------|-------------|--|
| Security ID | Number(6) | N | Y | Identity key for Password History table. |
| Change Date | DateTime | Y | N | Date and time a password was changed. |
| Password | Varchar2(120) | Y | N | The old encrypted password of a person. |
| People ID | Number(16) | N | N | Unique identifier for a person. |
| Security Role | Number(1) | N | N | Security role access to the ITLAA. 1 = Audition, 2 = Registry Administrator, 3 = System Administrator. |

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Figure C22: Project Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------------|-------------|------|-------------|---|
| Project ID | Number(12) | N | Y | Unique identifier of a Project. |
| Track | Number(2) | Y | N | Code identifying the Project track. |
| Date Added | Date | Y | N | Date when the Project was added. |
| Crediting Period End Date | Date | Y | N | Date on which Project expires. After this date, ICERs for the Project can no longer be used for compliance and must be updated. |
| Unit Type Code | Number(2) | N | N | Code indicating the type of units in a block. |
| Project Status Code | Number(12) | N | N | Unique identifier of Project status codes. |
| LULUCF Code | Number(3) | N | N | Code indicating the LULUCF activity associated with the units in the block. |
| Crediting Period Type Code | Number(12) | N | N | Unique identifier for crediting period type code. |
| Country Code | Varchar2(3) | Y | N | Code indicating host country. |
| Project Type Code | Number(3) | Y | N | Code indicating type of Project. |

Figure C23: Project Action Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------------|--------------|------|-------------|---|
| Project Action Code | Number(3) | N | Y | Unique identifier of a Project action code. |
| Project Action Description | Varchar2(60) | Y | N | Description of a Project action code. |

Figure C24: Project Action Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------|---------------|------|-------------|--|
| Project Log ID | Number(12) | N | Y | Unique identifier of Project action log record. |
| Project ID | Number(12) | N | N | Unique identifier of a Project assigned by a CDM. |
| Action Date | DateTime | Y | N | Date in which action occurred. |
| Total Units | Number(12) | Y | N | Total number of units affected by this Project action. |
| Project Action Comment | Varchar2(300) | Y | N | Comment on Project action. |
| Project Action Code | Number(3) | N | N | Unique identifier of a Project action code. |

Figure C25: Project Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------------|--------------|------|-------------|---|
| Project Status Code | Number(3) | N | Y | Unique identifier of Project status code. |
| Project Status Description | Varchar2(60) | Y | N | Description of Project status code. |

Figure C26: Project Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|--------------|------|-------------|---|
| Project Type Code | Number(3) | N | Y | Unique identifier of Project type code. |
| Project Type Description | Varchar2(60) | Y | N | Description of Project type code. |

Figure C27: Reconciliation Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------------|-----------------|------|-------------|--|
| Recon ID | Varchar2(20) | N | Y | Unique identifier for a reconciliation action. |
| Recon Log Comment | Varchar2(1000) | Y | N | Comment regarding a reconciliation action. |
| Registry Code | Varchar2(3) | N | N | Code identifying the registry associated with a reconciliation action. |
| Recon Action Begin DateTime | DateTime | N | N | Date and time a reconciliation action was initiated by the ITL. |
| Recon Action End DateTime | DateTime | N | N | Date and time a reconciliation action was concluded by the ITL. |
| Recon Snapshot DateTime | DateTime | N | N | Date and time for which snapshot is to be provided. |
| Recon Phase Code | Number(2) | N | N | Unique identifier for a reconciliation start phase. |

Figure C28: Reconciliation Phase Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------------|--------------|------|-------------|---|
| Recon Phase Code | Number(2) | N | Y | Unique identifier of a reconciliation phase code. |
| Recon Phase Code Description | Varchar2(60) | Y | N | Description of a reconciliation phase code. |

Figure C29: Reconciliation Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|--------------|------|-------------|---|
| Recon Status Code | Number(2) | N | Y | Code indicating the status of a reconciliation action. |
| Recon Status Description | Varchar2(60) | Y | N | Text description of a status for a reconciliation action. |

Figure C30: Reconciliation Status History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------|----------------|------|-------------|--|
| Recon Log ID | Number(12) | N | Y | Unique identifier of a record in the Reconciliation_Log table. |
| Recon ID | Varchar2(20) | N | N | Unique Identifier for a reconciliation action. |
| Recon Log DateTime | DateTime | Y | N | Date and time a record is made in the reconciliation status history. |
| Recon Status Code | Number(2) | N | N | Code indicating the status of a reconciliation action. |
| Recon Comment | Varchar2(1000) | Y | N | Comment regarding the status of a reconciliation process. |

Figure C31: Registry Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------|---------------|------|-------------|---|
| Registry Code | Varchar2(3) | N | Y | Code identifying the registry. |
| Registry Name | Varchar2(120) | Y | N | Name of a registry. |
| Web Service URL | Varchar2(120) | Y | N | The Web service URL from which the registry will broadcast its Web services. |
| Web Service Port | Number(4) | Y | N | The port on which the registry will run its Web services. |
| Test Web Service URL | Varchar2(120) | Y | N | The Web service URL from which the registry will broadcast its test Web services. |
| Test Web Service Port | Number(4) | Y | N | The port on which the registry will run its test Web services. |

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Figure C32: Registry Eligibility Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------|--------------|------|-------------|---|
| Reg Eligibility ID | Number(12) | N | Y | Unique identifier for a registry eligibility record. |
| Criteria Begin Date | Date | Y | N | Date in which eligibility action occurred. |
| Approval Source | Varchar2(60) | Y | N | Identifies who approved the eligibility requirement. |
| Registry Code | Varchar2(3) | N | N | Code identifying the registry. |
| Criteria Type Code | Number(2) | N | N | Unique identifier of eligibility type code. |
| Criteria End Date | DateTime | Y | N | Date when eligibility action for registry became invalid. |
| Eligibility Status Code | Number(3) | N | N | Unique identifier of an eligibility status code. |

Figure C33: Registry Notification Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------------|-------------|------|-------------|---|
| Registry Code | Varchar2(3) | N | Y | Code identifying the registry. |
| Notification ID | Number(12) | N | Y | Unique identifier of a notification record. |
| Total Units | Number(12) | Y | N | Total number of units affected by the Project action for this registry. |
| Registry Notification Date | DateTime | Y | N | Date and time in which notification was sent. |
| Notification Status Code | Number(12) | N | N | Status of notification status as a registry responds to a notification. |
| Registry Action Due Date | Date | Y | N | Date in which an action is due from a registry in response to a notification. |

Figure C34: Registry People Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|-------------|------|-------------|---|
| Registry People ID | Number(10) | N | Y | Unique identifier for a registry-person relationship. |
| People ID | Number(16) | N | N | Unique identifier for a person. |
| Registry Code | Varchar2(3) | N | N | Code identifying the registry. |
| Responsibility Add Date | DateTime | N | N | The date on which a registry-people responsibility started. |
| Responsibility End Date | DateTime | Y | N | The date on which a registry-people responsibility ended. |
| Responsibility Type Code | Number(3) | N | N | Code indicating the type of responsibility that exists between a registry and a person. |

Figure C35: Registry Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------------|---------------|------|-------------|---|
| Registry Status Code | Number(2) | N | Y | Code indicating an operating or permission status for registries. |
| Registry Status Description | Varchar2(160) | Y | N | Text description of a registry status. |

Figure C36: Registry Status History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------|-------------|------|-------------|--|
| Registry Status ID | Number(12) | N | Y | Unique identifier for a registry status record. |
| Registry Status Code | Number(2) | N | N | Code indicating an operating or permissions status for registries. |
| Registry Status Date | DateTime | Y | N | Date and time on which status began. |
| Registry Code | Varchar2(3) | N | N | Code identifying the registry. |

Figure C37: Registry Test History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------|-------------|------|-------------|--|
| Registry Code | Varchar2(3) | N | Y | Code identifying a registry. |
| Test Date | DateTime | Y | N | Date on which a test was received, performed or completed. |
| Test Status Code | Number(3) | N | N | Code indicating the status of a test or test submission. |
| Test Type Code | Number(2) | N | N | Code indicating type of test submission. |

Figure C38: Registry Trading Scheme Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------|-------------|------|-------------|--|
| Registry Code | Varchar2(3) | N | Y | Code identifying a registry. |
| Trade Scheme Code | Number(3) | N | Y | Code identifying trade scheme. |
| Scheme Begin Date | DateTime | N | N | Date registry began participating in trading scheme. |

Figure C39: Registry Unit Sum Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------|--------------|------|-------------|---|
| Registry Unit Sum ID | Number(12) | N | Y | Unique identifier for a Registry Unit Sum record. |
| Registry Code | Varchar2(3) | N | N | Code identifying the registry. |
| Unit Type Code | Number(2) | Y | N | Code identifying the type of units. |
| LULUCF Code | Number(3) | Y | N | Code identifying the LULUCF activity. |
| Computation Type Code | Number(12) | N | N | Code identifying computation type. |
| Data Source | Varchar2(15) | N | N | Identifies source of data such as CDM Executive Board or C&A database. |
| Time Period | Varchar2(3) | Y | N | Indicates whether the aggregate unit value for this record is an annual or compliance period. |
| Time Period Value | Numeric(4) | Y | N | The value for the time period indicated. |
| Last Action Date | DateTime | N | Y | Date in which record was last updated. |
| Total Units | Number(12) | N | N | Total number of units. |
| Project Log ID | Number(12) | Y | N | Associated Project Log action. |

Figure C40: Registry Unit Total History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------|--------------|------|-------------|---|
| Registry Alloc History ID | Number(12) | N | Y | Unique identifier of a Registry Unit Total History record. |
| Registry Unit Sum ID | Number(12) | N | N | Unique identifier for a Registry Unit Sum record. |
| Adjusted Value | Number(12) | N | N | Aggregate value for transaction. This value can be expressed as either a positive or negative number to reflect an increase or decrease in the running total. |
| Original Value | Number(12) | N | N | Original running total value prior to being adjusted by the adjusted value. |
| Transaction Date | DateTime | N | N | Date in which transaction occurred. |
| Transaction ID | Varchar2(20) | N | N | Unique identifier of a transaction. |

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Figure C41: Replacement Unit Block Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|----------------------|------------|------|-------------|--|
| Block ID | Number(15) | N | Y | Unique identifier of a unit block. |
| Replacement Block ID | Number(15) | N | Y | Unique identifier of a unit block that was replaced. |
| Replacement DateTime | DateTime | N | N | Date and time when unit block was replaced. |

Figure C42: Response Catalog Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------|----------------|------|-------------|--|
| Response Code | Number(5) | N | Y | Code indicating a response to a transaction process, such as a transaction validation. |
| Response Text | Varchar2(600) | Y | N | The English text describing a response. |
| Enabled Flag | Char(1) | Y | N | Identifies whether the response code is currently enabled or not. |
| Response Value | Varchar2(12) | Y | N | Identifies if the response is for a success or failure on a check. |
| Check Name | Varchar2(120) | Y | N | Name of rule or check. |
| Check Description | Varchar2(2000) | Y | N | Text description of a check. |
| Check Catalog Code | Number(12) | N | N | Unique identifier of check group. |

Figure C43: Response Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------------|--------------|------|-------------|--|
| Response Code | Number(5) | N | N | Code indicating a response to a transaction process, such as a transaction validation. |
| Transaction ID | Varchar2(20) | Y | N | Unique identifier for a transaction. |
| Transaction Response DateTime | DateTime | N | N | Date and time a transaction response is sent. |
| Response Log ID | Number(12) | N | Y | Unique identifier for a Response_Log record. |
| Recon ID | Varchar2(20) | Y | N | Unique identifier for a reconciliation action. |

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Figure C44: Response Scheme Check Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------|-----------|------|-------------|--|
| Response Code | Number(5) | N | Y | Code indicating a response to a transaction process, such as a transaction validation. |
| Trade Scheme Code | Number(3) | N | Y | Unique identifier of a trading scheme code. |

Figure C45: Responsibility Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------------|---------------|------|-------------|---|
| Responsibility Type Code | Number(3) | N | Y | Code indicating the type of relationship between a registry and a person. |
| Responsibility Type Description | Varchar2(160) | Y | N | Text description of the relationship between a person and a registry. |

Figure C46: Route Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|--------------|------|-------------|--|
| Route Status Code | Varchar2(7) | N | Y | Code indicating the status of a routing event. |
| Route Status Description | Varchar2(65) | Y | N | Text description of a routing event status. |

Figure C47: Routing Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------|--------------|------|-------------|--|
| Route ID | Number(12) | N | Y | Unique identifier for a routing event. |
| Initial Route DateTime | DateTime | Y | N | Date and time of a routing event. |
| Registry Code | Varchar2(3) | N | N | Code identifying a registry. |
| Transaction ID | Varchar2(20) | N | N | Unique identifier for a transaction. |
| Route To | Varchar2(3) | N | N | Identifies where message is being routed to. |
| Route From | Varchar2(3) | N | N | Identifies where message is being routed from. |

Figure C48: Routing Status History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------|-------------|------|-------------|--|
| Route History ID | Number(12) | N | Y | Unique identifier for each status change of a routing event. |
| Route Status Code | Varchar2(7) | N | N | Code indicating the status of a routing event. |
| Route DateTime | DateTime | Y | N | Date and time of a routing event. |
| Route ID | Number(12) | N | N | Unique identifier for a routing event. |

Figure C49: Snapshot Log

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------------|--------------|------|-------------|---|
| Snapshot ID | Number(12) | N | Y | Unique identifier for each snapshot row. |
| Recon ID | Varchar2(20) | N | N | Unique identifier for a reconciliation action. |
| Account Type Code | Number(3) | N | N | Numeric code identifying type of account. |
| Originating Registry Code | Varchar(3) | N | N | Originating Registry Code. |
| Account Commitment Period | Number(2) | N | N | Commitment period for the account. |
| Unit Type Code | Number (2) | N | N | Code identifying the type of unit in block. |
| Start Block | Number(15) | N | N | Number indicating the beginning of a range of serial numbers. |
| End Block | Number(15) | N | N | Number indicating the end of a range of serial numbers. |

Figure C50: Supplementary Transaction Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--|--------------|------|-------------|---|
| Supplementary Transaction Type Code | Number(2) | N | Y | Code indicating supplementary transaction type. |
| Supplementary Transaction Type Description | Varchar2(60) | Y | N | Description of supplementary transaction type. |

Figure C51: Supplementary Unit Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------------------|--------------|------|-------------|---|
| Supplementary Unit Type Code | Number(2) | N | Y | Numeric code indicating the supplementary unit type code. |
| Supplementary Unit Type Description | Varchar2(60) | Y | N | Description of supplementary unit type code. |

Figure C52: System Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------|--------------|------|-------------|---|
| System Log ID | Number(12) | N | Y | Unique identification of system Log. |
| Job Name | Varchar2(40) | N | N | Name of job or process. |
| Returned Value | Varchar2(25) | Y | N | The returned value, if requested. |
| Registry Code | Varchar2(3) | Y | N | The registry that job was sent to. |
| Action Date | DateTime | N | N | Date and time Process was last run |
| Requested Value | Varchar2(25) | Y | N | The value or parameter requested |
| Job Status | Varchar2(3) | Y | N | Indication if job is enabled ("E") or offline ("O") or failed ("F") |

Figure C53: System Parameter Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------|--------------|------|-------------|---|
| Sys Param ID | Number(15) | N | Y | Unique identifier for a system parameter. |
| System Param Name | Varchar2(65) | Y | N | Name of system parameter. |
| Param Name1 | Varchar2(60) | Y | N | Name of system parameter number one. |
| Param Value1 | Varchar2(60) | Y | N | Value of system parameter number one. |
| Param Name2 | Varchar2(60) | Y | N | Name of system parameter number two. |
| Param Value2 | Varchar2(60) | Y | N | Value of system parameter number two. |
| Param Name3 | Varchar2(60) | Y | N | Name of system parameter number three. |
| Param Value3 | Varchar2(60) | Y | N | Value of system parameter number three. |

Figure C54: Test Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------|--------------|------|-------------|---|
| Test Status Code | Number(3) | N | Y | Code indicating the status of a test submission. |
| Test Status Description | Varchar2(60) | Y | N | Text description of a status for a test submission. |

Figure C55: Test Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------|--------------|------|-------------|---|
| Test Type Code | Number(2) | N | Y | Code indicating a type of test submission. |
| Test Type Description | Varchar2(60) | Y | N | Text description for the type of test submission. |

Figure C56: Tickler Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|---------------------|----------------|------|-------------|---|
| Tickler ID | Number(15) | N | Y | Unique identifier of tickler. |
| Tickler Title | Varchar2(60) | N | N | Title of tickler event. |
| Tickler Description | Varchar2(2000) | Y | N | Full description of event. |
| Display Date | Date | Y | N | Date event is displayed. |
| Offline Date | Date | Y | N | Date in which event is no longer displayed. |
| Public Flg | Char(1) | Y | N | Identifies whether the event should be available to the public. |
| Date Added | Date | Y | N | Date event was added to the tickler. |
| Tickler Type Code | Number(2) | N | N | Code identifying the type of tickler. |

Figure C57: Tickler Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|--------------|------|-------------|--|
| Tickler Type Code | Number(2) | N | Y | Unique identifier of a tickler type. |
| Tickler Type Description | Varchar2(60) | Y | N | Text description of a tickler type code. |

Figure C58: Trade Scheme Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------|--------------|------|-------------|--|
| Trade Scheme Code | Number(3) | N | Y | Unique identifier of a trading scheme. |
| Trade Scheme Description | Varchar2(60) | Y | N | Text description of trade scheme. |

Figure C59: Transaction Block Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------|--------------|------|-------------|---|
| Transaction Block ID | Number(15) | N | Y | Reference to a unit block involved in a transaction. |
| Original Period Code | Number(2) | Y | N | Code indicating the original Commitment Period of the units in the block. |
| Transaction ID | Varchar2(20) | N | N | Unique identifier for a transaction. |
| Start Block | Number(15) | Y | N | Number indicating the beginning of a range of serial numbers. |
| End Block | Number(15) | Y | N | Number indicating the end of a range of serial numbers. |
| Applicable Period Code | Number(2) | N | N | Code indicating the currently applicable Commitment Period of the units in the block. |
| Originating Party Code | Varchar2(3) | N | N | Code identifying the originating country. |
| Project Identifier | Varchar2(12) | Y | N | Country code and Project number which uniquely identify a JI Project. |
| Block Role | Varchar2(1) | Y | N | Identifier field for unit blocks used for replacement (replaced or to be replaced). |
| Expiry Date | DateTime | Y | N | Date in which an ICER or tCER expires. |

(cont.)

Figure C60: Transaction Block Entity Details (cont.)

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------------|-------------|------|-------------|--|
| Unit Type Code | Number(2) | N | N | Code indicating the type of units in a block. |
| Project Freeze Flag | Char(1) | Y | N | Identifies whether an ICER has been frozen. |
| Supplementary Unit Type Code | Number(2) | N | Y | Numeric code indicating the supplemental unit type code. |
| Year in Commitment Period | Number(4) | Y | N | Given year within a Commitment Period. Values are 2005, 2006, 2007, etc. |
| Acquiring Registry Account | Number(15) | Y | N | Account of Acquiring Registry. |
| Acquiring Account Type Code | Number(3) | N | N | Numeric code indicating the type of account. |
| Acquiring Registry Code | Varchar2(3) | N | N | Code identifying the registry. |
| Transferring Registry Account | Number(15) | Y | N | Account of Transferring Registry. |
| Transferring Account Type Code | Number(3) | Y | N | Account of Transferring Registry. |
| Transferring Registry Code | Varchar2(3) | N | N | Code identifying the registry. |
| Installation ID | Number(15) | Y | N | Identifier of installation number. |
| Track | Number(2) | Y | N | Code identifying Project track. |
| LULUCF Code | Number(3) | Y | N | Code identifying the LULUCF activity associated with the units in the block. |

Figure C61: Transaction Block History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------------|------------|------|-------------|--|
| Transaction Block History ID | Number(15) | N | Y | Identifier for a transaction block history record. |
| Transaction Block ID | Number(15) | N | N | Reference to a unit block involved in a transaction. |
| Transaction Block DateTime | DateTime | Y | N | Date and time a transaction block status was updated. |
| Response Code | Number(5) | N | N | Code indicating a response to a transaction process, such as a transaction validation. |

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Figure C62: Transaction Log Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------------------|--------------|------|-------------|---|
| Transaction ID | Varchar2(20) | N | Y | Unique identifier for a transaction. |
| Transaction Type Code | Number(2) | N | N | Code indicating the type of transaction. |
| Transaction Date | DateTime | Y | N | Date on which a transaction was submitted. |
| Acquiring Registry Code | Varchar2(3) | N | N | Code identifying the Acquiring Registry. |
| Acquiring Registry Account | Number(15) | Y | N | Account for Acquiring Registry. |
| Acquiring Account Type | Number(3) | N | N | Code identifying the acquiring account type. |
| Transferring Registry Account | Number(15) | N | N | Account for Transferring Registry. |
| Transferring Registry Code | Varchar2(3) | N | N | Code identifying the Transferring Registry. |
| Transferring Account Type | Number(3) | N | N | Code identifying the transferring account type. |
| Supplementary Transaction Type Code | Number(2) | Y | N | Code indicating supplementary transaction type. |

Figure C63: Transaction Log History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------------|--------------|------|-------------|---|
| Transaction Log History ID | Number(12) | N | Y | Unique identifier for a transaction status. |
| Transaction Status DateTime | DateTime | Y | N | Date and time the transaction status changed. |
| Transaction ID | Varchar2(20) | N | N | Unique identifier for a transaction. |
| Transaction Status Code | Number(3) | N | N | Code indicating the transaction status. |

Figure C64: Transaction Notification Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------------|--------------|------|-------------|---|
| Transaction Notification ID | Number(12) | N | Y | Unique identifier for a transaction notification. |
| Notification ID | Number(12) | N | N | Unique identifier for a notification. |
| Transaction ID | Varchar2(20) | N | N | Unique identifier for a transaction. |

Figure C65: Transaction Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|--------------------------------|--------------|------|-------------|---|
| Transaction Status Code | Number(3) | N | Y | Code indicating the transaction status. |
| Transaction Status Description | Varchar2(60) | Y | N | Text description of a transaction status. |

Figure C66: Transaction Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------------|--------------|------|-------------|--|
| Transaction Type Code | Number(2) | N | Y | Code indicating the type of transaction. |
| Transaction Type Description | Varchar2(60) | Y | N | Text description of a type of transaction. |

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Figure C67: Unit Block Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------------------|--------------|------|-------------|---|
| Block ID | Number(15) | N | Y | Unique identifier of a unit block. |
| Start Block | Number(15) | N | N | Number indicating the beginning of a range of serial numbers. |
| End Block | Number(15) | N | N | Number indicating the end of a range of serial numbers. |
| Unit Type Code | Number(2) | N | N | Code indicating the type of units in a block. |
| Original Period Code | Number(2) | N | N | Code indicating the original Commitment Period of the units in the block. |
| Applicable Period Code | Number(2) | N | N | Code indicating the currently applicable Commitment Period of the units in the block. |
| Originating Party Code | Varchar2(3) | N | N | Code identifying the registry. |
| Holding Registry Code | Varchar2(3) | N | Y | Code identifying the registry currently holding unit block. |
| Account Type Code | Number(3) | N | N | Numeric code indicating the type of account. |
| Supplementary Unit Type Code | Number(2) | Y | N | Numeric code indicating the supplemental unit type code. |
| Unit Status Code | Number(1) | N | N | Code indicating the status of a unit block. |
| Expiry Date | Date | Y | N | Date in which ICERs or tCERs expire. |
| Project Freeze Flag | Char(1) | Y | N | Identifies whether an ICER has been frozen. |
| Last Action Date | DateTime | Y | N | Date and time the last action was performed. |
| Project ID | Number(12) | N | N | Unique identifier for a Project. |
| Track | Number(2) | Y | N | Code identifying Project track. |
| LULUCF Code | Number(3) | Y | N | Code identifying the LULUCF activity associated with the units in the block. |
| Project Identifier | Varchar2(12) | Y | N | Country code and Project number which uniquely identifies a JI Project. |
| Transfer Flag | Char(1) | Y | N | Identifies whether a converted ERU has been transferred from the originating party. |

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Figure C68: Unit Status Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-------------------------|--------------|------|-------------|---|
| Unit Status Code | Number(1) | N | Y | Code indicating the status of a unit block. |
| Unit Status Description | Varchar2(60) | Y | N | Text description of a unit block status. |

Figure C69: Unit Type Code Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|-----------------------|--------------|------|-------------|---|
| Unit Type Code | Number(2) | N | Y | Code indicating the type of units in a block. |
| Unit Type Description | Varchar2(60) | Y | N | Text describing the type of units in a block. |

Figure C70: Version History Entity Details

| Attribute | Data Type | Null | Primary Key | Description |
|------------------|----------------|------|-------------|---|
| Version ID | Number(12) | N | Y | Unique identifier for a version. |
| Application Code | Varchar2(7) | N | Y | Primary key code for application. |
| Version Comment | Varchar2(3000) | Y | N | Brief explanation of features, corrections or enhancements available in this version. |
| Version Date | DateTime | Y | N | Date on which a version was implemented. |

Figure C71: Primary Keys

| Entity | Key Column | Key Order | Name |
|-------------------------------|----------------------------|-----------|------------------------------|
| Account Type Code | Account Type Code | 1 | PK Account Type Code |
| Application | Application Code | 1 | PK Application |
| Audit Log | Audit ID | 1 | PK Audit Log |
| Check Catalog Code | Check ID | 1 | PK Check Catalog |
| Commitment Period Code | Period Code | 1 | PK Commitment Period |
| Computation Type Code | Computation Type Code | 1 | PK Computation Type Code |
| Country Code | Country Code | 1 | PK Country Code |
| Crediting Period Type Code | Crediting Period Type Code | 1 | PK Crediting Period Type |
| Criteria Type Code | Criteria Type Code | 1 | PK Eligibility |
| Eligibility Status Code | Eligibility Status Code | 1 | PK Eligibility Status Code |
| Government Account | Registry Code | 1 | PK Government |
| Government Account | Registry Account | 2 | PK Account |
| Inconsistent Block | Inconsistent Block ID | 1 | PK Inconsistent Block |
| LULUCF Code | LULUCF Code | 1 | PK LULUCF Code |
| Message Log | Message Log ID | 1 | PK Message Log |
| Notification | Notification ID | 1 | PK Notification |
| Notification Status Code | Notification Status Code | 1 | PK Notification Status Code |
| People | People ID | 1 | PK People |
| People Security | People ID | 1 | PK People Security |
| People Security History | Security ID | 1 | PK People Security History |
| Project | Project ID | 1 | PK Project |
| Project Action Code | Project Action Code | 1 | PK Project Action Code |
| Project Action Log | Project Log ID | 1 | PK Project Action Log |
| Project Action Log | Project Action Code | 1 | PK Project Action Log |
| Project Status Code | Project Status Code | 1 | PK Project Status Code |
| Project Type Code | Project Type Code | 1 | PK Project Type Code |
| Reconciliation Log | Recon ID | 1 | PK Reconciliation Log |
| Reconciliation Phase Code | Recon Phase Code | 1 | PK Reconciliation Phase Code |
| Reconciliation Status Code | Recon Status Code | 1 | PK Recon Status Code |
| Reconciliation Status History | Recon Log ID | 1 | PK Recon Status History |

(cont.)

Figure C71: Primary Keys (cont.)

| Entity | Key Column | Key Order | Name |
|-----------------------------|----------------------------|-----------|--------------------------------|
| Registry | Registry Code | 1 | PK Registry |
| Registry Eligibility | Reg Eligibility ID | 1 | PK Registry Eligibility |
| Registry Notification | Notification ID | 1 | PK Registry Notification |
| Registry Notification | Registry Code | 1 | PK Registry Notification |
| Registry People | Registry People ID | 1 | PK Registry People |
| Registry Status Code | Registry Status Code | 1 | PK Registry Status Code |
| Registry Status History | Registry Status ID | 1 | PK Registry Status History |
| Registry Test History | Registry Code | 1 | PK Registry Test History |
| Registry Trading Scheme | Registry Code | 1 | PK Registry Trade Scheme |
| Registry Trading Scheme | Trade Scheme Code | 2 | PK Registry Trade Scheme |
| Registry Unit Sum | Registry Unit Sum ID | 1 | PK Registry Unit Sum |
| Registry Unit Total History | Registry Unit Total ID | 1 | PK Registry Unit Total History |
| Replacement Unit Block | Block ID | 1 | PK Relationship Unit Block |
| Replacement Unit Block | Replacement Block ID | 2 | PK Relationship Unit Block |
| Response Catalog | Response Code | 1 | PK Response Code |
| Response Log | Response Log ID | 1 | PK Response Log |
| Response Scheme Check | Response Code | 1 | PK Response Scheme Check |
| Response Scheme Check | Trade Scheme Code | 1 | PK Response Scheme Check |
| Responsibility Type Code | Responsibility Type Code | 1 | PK Responsibility Type Code |
| Route Status Code | Route Status Code | 1 | PK Route Status Code |
| Routing Log | Route ID | 1 | PK Routing Log |
| Routing Status History | Route History ID | 1 | PK Route Status History |
| Supp Transaction Type Code | Supp Transaction Type Code | 1 | PK Supp Transaction Type Code |
| Supp Unit Type Code | Supp Unit Type Code | 1 | PK Supp Unit Type Code |
| System Log | System Log ID | 1 | PK System Log |
| System Parameter | Sys Param ID | 1 | PK System Parameter |
| Test Status Code | Test Status Code | 1 | PK Test Status Code |
| Test Type Code | Test Type Code | 1 | PK Test Type Code |
| Trade Scheme Code | Trade Scheme Code | 1 | PK Trade Scheme Code |

(cont.)

Figure C71: Primary Keys (cont.)

| Entity | Key Column | Key Order | Name |
|---------------------------|------------------------------|-----------|------------------------------|
| Transaction Block | Transaction Block ID | 1 | PK Transaction Block |
| Transaction Block History | Transaction Block History ID | 1 | PK Transaction Block History |
| Transaction Log | Transaction ID | 1 | PK Transaction Log |
| Transaction Log History | Transaction Log History ID | 1 | PK Transaction Log History |
| Transaction Notification | Trans Notification ID | 1 | PK Transaction Notification |
| Transaction Status Code | Transaction Status Code | 1 | PK Transaction Status Code |
| Transaction Type Code | Transaction Type Code | 1 | PK Transaction Type Code |
| Unit Block | Block ID | 1 | PK Unit Block |
| Unit Status Code | Unit Status Code | 1 | PK Unit Status Code |
| Unit Type Code | Unit Type Code | 1 | PK Unit Type |
| Version History | Version ID | 1 | PK Version History |
| Version History | Application Code | 2 | PK Version History |

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Figure C72: Foreign Keys

| Parent Table | Child Table | Column(s) |
|----------------------------|--------------------------|--------------------------------|
| Account Type Code | Unit Block | Account Type Code |
| Account Type Code | Registry Attribute | Account Type Code |
| Account Type Code | Transaction Log | Transferring Account Type |
| Account Type Code | Transaction Log | Acquiring Account Type |
| Account Type Code | Transaction Block | Acquiring Account Type Code |
| Account Type Code | Transaction Block | Transferring Account Type Code |
| Application | Version History | Application Code |
| Attribute Type Code | Registry Attribute | Attribute Type Code |
| Check Catalog Code | Check Response | Check ID |
| Commitment Period | Registry Attribute | Period Code |
| Commitment Period | Transaction Block | Original Period Code |
| Commitment Period | Transaction Block | Applicable Period Code |
| Commitment Period | Unit Block | Original Period Code |
| Commitment Period | Unit Block | Applicable Period Code |
| Country Code | People | Country Code |
| Country Code | Project | Country Code |
| Country Code | Transaction Block | Originating Party Code |
| Country Code | Inconsistent Block | Originating Party Code |
| Country Code | Unit Block | Originating Party Code |
| Crediting Period Type Code | Project | Crediting Period Type Code |
| Criteria Type Code | Registry Eligibility | Criteria Type Code |
| Eligibility Status Code | Registry Eligibility | Eligibility Status Code |
| LULUCF Code | Project | LULUCF Code |
| LULUCF Code | Unit Block | LULUCF Code |
| Notification | Registry Notification | Notification ID |
| Notification | Transaction Notification | Notification ID |
| Notification Status Code | Registry Notification | Notification Status Code |
| Notification Type Code | Notification | Notification Type Code |

(cont.)

Figure C72: Foreign Keys (cont.)

| Parent Table | Child Table | Column(s) |
|-------------------------------|-------------------------------|----------------------------|
| People | People Security | People ID |
| People | Registry People | People ID |
| People Security | People Security History | People ID |
| Project | Project Action Log | Project ID |
| Project | Unit Block | Project ID |
| Project | Project Action Log | Project ID |
| Project | Unit Block | Project ID |
| Project Action Code | Project Action Log | Project Action Code |
| Project Action Log | Notification | Project Log ID |
| Project Action Log | Notification | Project Action Code |
| Project Status Code | Project | Project Status Code |
| Reconciliation Log | Reconciliation Status History | Recon ID |
| Reconciliation Log | Message Log | Recon ID |
| Reconciliation Phase Code | Reconciliation Log | Recon Phase Code |
| Reconciliation Status Code | Reconciliation Status History | Recon Status Code |
| Reconciliation Status History | Inconsistent Block | Recon Log ID |
| Registry | Message Log | Registry Code |
| Registry | Reconciliation Log | Registry Code |
| Registry | Registry Attribute | Registry Code |
| Registry | Registry Notification | Registry Code |
| Registry | Registry People | Registry Code |
| Registry | Registry Status History | Registry Code |
| Registry | Registry Test History | Registry Code |
| Registry | Routing Log | Registry Code |
| Registry | Registry Eligibility | Registry Code |
| Registry | Transaction Log | Acquiring Registry Code |
| Registry | Transaction Log | Transferring Registry Code |

(cont.)

Figure C72: Foreign Keys (cont.)

| Parent Table | Child Table | Column(s) |
|-------------------------------------|---------------------------|-------------------------------------|
| Registry | Registry Trading Scheme | Registry Code |
| Registry | Transaction Block | Registry Code |
| Registry | Transaction Block | Transferring Registry Code |
| Registry | Transaction Block | Acquiring Registry Code |
| Registry | Unit Block | Holding Registry Code |
| Registry Status Code | Registry Status History | Registry Status Code |
| Response Catalog | Response Log | Response Code |
| Response Catalog | Response Scheme Check | Response Code |
| Response Catalog | Transaction Block History | Response Code |
| Responsibility Type Code | Registry People | Responsibility Type Code |
| Route Status Code | Routing Status History | Route Status Code |
| Routing Log | Routing Status History | Route ID |
| Supplementary Transaction Type Code | Transaction Log | Supplementary Transaction Type Code |
| Supplementary Unit Type Code | Unit Block | Supplementary Unit Type Code |
| Supplementary Unit Type Code | Transaction Block | Supplementary Unit Type Code |
| Test Status Code | Registry Test History | Test Status Code |
| Test Type Code | Registry Test History | Test Type Code |
| Trade Scheme Code | Registry Trading Scheme | Trade Scheme Code |
| Trade Scheme Code | Response Scheme Check | Trade Scheme Code |
| Transaction Block | Transaction Block History | Transaction Block ID |
| Transaction Log | Message Log | Transaction ID |
| Transaction Log | Routing Log | Transaction ID |
| Transaction Log | Transaction Block | Transaction ID |
| Transaction Log | Response Log | Transaction ID |
| Transaction Log | Transaction Log History | Transaction ID |
| Transaction Status Code | Transaction Log History | Transaction Status Code |
| Transaction Type Code | Transaction Log | Transaction Type Code |
| Unit Block | Replacement Unit Block | Replacement Block ID |

(cont.)

Figure C72: Foreign Keys (cont.)

| Parent Table | Child Table | Column(s) |
|---------------------|--------------------|------------------|
| Unit Block | Inconsistent Block | Block ID |
| Unit Status Code | Unit Block | Block ID |
| Unit Type Code | Unit Block | Unit Type Code |
| Unit Type Code | Transaction Block | Unit Type Code |
| Unit Type Code | Project | Unit Type Code |

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Annex D

Lookup Tables and Values

This annex defines the codes for all support tables used in this technical specification. These codes define the acceptable values for lookup tables in the ITL database.

Figure D1: List of Lookup Tables

| Table | Description |
|----------------------------|---|
| Account Type Code | Identifies the type of unit accounts in a registry. |
| Check Catalog Code | Identifies the type of check. |
| Commitment Period Code | Identifies the current Commitment Period. |
| Computation Type Code | Describes aggregate computation types for a registry. Typical codes identify a registry's Commitment Period Reserve and Allowable Quantity. |
| Crediting Period Type Code | Identifies crediting period types. |
| Criteria Type Code | Identifies eligibility types. |
| Eligibility Status Code | Identifies eligibility status. |
| LULUCF Activity Code | Identifies Land Use, Land Use Change, and Forestry categories. |
| Notification Status Code | Identifies status of a registry notification. |
| Notification Type Code | Identifies notification type codes. |
| Party Type Code | Defines the role of the Party. |
| Project Action Code | Identifies action taken by CDM Executive Board. |
| Project Status Code | Identifies Project status. |
| Project Type Code | Identifies the type of project. |
| Reconciliation Phase Code | Identifies the phase of reconciliation to be initiated. |
| Reconciliation Status Code | Identifies the status of a reconciliation process. |
| Registry Status Code | Identifies the operational status of a registry. |
| Responsibility Type Code | Identifies the type of responsibility a person has to a registry. |
| Route Status Code | Identifies the status of a message routing. |
| Test Status Code | Identifies the status of a test. |
| Test Type Code | Identifies the type of test. |
| Trade Scheme Code | Lookup table of trade schemes. |

(cont.)

Figure D1: List of Lookup Tables (cont.)

| Table | Description |
|-------------------------|--|
| Transaction Status Code | Identifies the status of a transaction. |
| Transaction Type Code | Identifies the type of transaction. |
| Unit Status Code | Identifies whether the units have been flagged for processing. |
| Unit Type Code | Identifies the type of unit. |

Figure D2: Account Type Code

| Code | Description |
|------|--|
| 100 | Holding Account |
| 110 | Pending Account |
| 120 | Operator Holding Account |
| 121 | Person Holding Account |
| 210 | Net Source Cancellation Account (Type 1) (national registries only) |
| 220 | Non-compliance Cancellation Account (Type 2) (national registries only) |
| 230 | Voluntary Cancellation Account (Type 3) (national registries only) |
| 240 | Excess Issuance Cancellation Account (Type 4) (CDM Registry only) |
| 250 | Mandatory (Cancellation Account (Type 5) |
| 300 | Retirement Account |
| 411 | tCER Replacement Account for Expiry (Type 1) |
| 421 | ICER Replacement Account for Expiry (Type 1) |
| 422 | ICER Replacement Account for Reversal in Storage (Type 2) |
| 423 | ICER Replacement Account for Non-submission of Certification Report (Type 3) |

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Figure D3: Check Catalog Code

| Code | Description |
|-------------|---|
| 1 | Message Viability |
| 2 | Registry Validation |
| 3 | Data Integrity |
| 4 | Message Sequence for Registry Messages |
| 5 | Message Sequence for STL Messages |
| 6 | Message Sequence for Reconciliation |
| 7 | General Transaction Checks |
| 10 | Issuance |
| 20 | Conversion |
| 30 | External transfer |
| 40 | Cancellation |
| 50 | Replacement |
| 60 | Retirement |
| 70 | Carry-over |
| 80 | Expiry Date Change |
| 100 | Reconciliation Data Integrity |
| 110 | Reconciliation Message Sequence for Registry Messages |
| 120 | Reconciliation Message Sequence for STL Messages |
| 130 | Reconciliation Checks |
| 140 | Registry Messages |

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Figure D4: Commitment Period Code

| Code | Description |
|------|---|
| 0 | Supplementary Program Commitment Period (2005 - 2007) |
| 1 | First Commitment Period |
| 2 | Second Commitment Period |
| 3 | Third Commitment Period |
| 4 | Fourth Commitment Period |

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Figure D5: Computation Type Code

| Code | Description |
|------|---|
| 1 | Unit Type Issuance Level |
| 2 | Commitment Period Holdings |
| 3 | Reserve Limit |
| 4 | Unit Type Issuance Limit |
| 5 | Carry-over Limit |
| 6 | Retirement Limit |
| 7 | Converted Level |
| 8 | Carry-over Level |
| 9 | Project Issuance Level |
| 10 | Retirement Level |
| 11 | Track 2 ERU First-time Transfer Level |
| 12 | Notification Requirement Attainment Level |

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Figure D6: Crediting Period Type Code

| Code | Description |
|------|-------------------------------------|
| 1 | Non-renewable - Maximum of 30 years |
| 2 | Renewable - Maximum of 20 years |

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Figure D7: Criteria Type Code

| Code | Description |
|------|--|
| 1 | Kyoto Protocol Party |
| 2 | Completion of Assigned Amount calculation |
| 3 | National System in place |
| 4 | National registry in place |
| 5 | Submission of most recent required Inventory |
| 6 | Submission of supplementary information on Assigned Amount |
| 7 | Suspension of eligibility to make transfers |

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Figure D8: Eligibility Status Code

| Code | Description |
|------|---------------------|
| 1 | Approved |
| 2 | Approved by default |
| 3 | Not approved |
| 4 | Suspended |
| 5 | Unknown |

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Figure D9: LULUCF Activity Code

| Code | Description |
|------|---------------------------------|
| 1 | Afforestation and reforestation |
| 2 | Deforestation |
| 3 | Forest management |
| 4 | Cropland management |
| 5 | Grazing land management |
| 6 | Revegetation |

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Figure D10: Notification Status Code

| Code | Description |
|------|--|
| 1 | Sent |
| 2 | In Progress (registry engaged in transactions) |
| 3 | Completed (registry has met notification criteria) |

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Figure D11: Notification Type Code

| Code | Description |
|------|--|
| 1 | Net Source Cancellation |
| 2 | Non-Compliance Cancellation |
| 3 | Impending tCER or ICER Expiry |
| 4 | Reversal in Storage for CDM Project |
| 5 | Non-Submission of Certification Report for CDM Project |
| 6 | Excess Issuance for CDM Project |
| 7 | Commitment Period Reserve Change |
| 8 | Unit Carry-over |
| 9 | Notification Update |

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Figure D12: Party Type Code

| Code | Description |
|------|---------------------|
| 1 | Initiating Registry |
| 2 | Acquiring Registry |

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Figure D13: Project Action Code

| Code | Description |
|------|--|
| 1 | Approved |
| 2 | Suspended |
| 3 | Closed |
| 4 | Issuance |
| 5 | Conversion |
| 6 | Reversal in Storage |
| 7 | Non-submission of Certification Report |
| 8 | Renewal of Crediting Period |

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Figure D14: Project Status Code

| Code | Description |
|------|--------------|
| 1 | Pending |
| 2 | Approved |
| 3 | Unknown |
| 4 | Not approved |

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Figure D15: Project Type Code

| Code | Description |
|------|-----------------------------------|
| 1 | Joint Implementation (JI) |
| 2 | Clean Development Mechanism (CDM) |

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Figure D16: Reconciliation Phase Code

| Code | Description |
|------|-------------------|
| 1 | Totals |
| 2 | Unit Block Detail |
| 3 | Audit Trail |

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Figure D17: Reconciliation Status Code

| Code | Description |
|------|--|
| 1 | Initiated |
| 2 | Validated |
| 3 | ITL Totals Inconsistent |
| 4 | ITL Unit Blocks Inconsistent |
| 5 | ITL Completed |
| 6 | ITL Completed with Manual Intervention |
| 7 | ITL Start Request Denied |
| 8 | STL Totals Inconsistent |
| 9 | STL Unit Blocks Inconsistent |
| 10 | STL Validated |
| 11 | STL Completed with Manual Intervention |

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Figure D18: Registry Status Code

| Code | Description |
|------|---------------------|
| 0 | Full Operation |
| 1 | Reconciliation Only |
| 2 | Not Operating |
| 3 | Closed |

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Figure D19: Responsibility Type Code

| Code | Description |
|------|---------------------------------------|
| 1 | Registry Manager |
| 2 | Database Administrator/System Manager |
| 3 | Contact |

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Figure D20: Route Status Code

| Code | Description |
|------|-------------------|
| 1 | Sent to STL |
| 2 | Received from STL |

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Figure D21: Test Status Code

| Code | Description |
|------|-------------|
| 1 | In Progress |
| 2 | Failed |
| 3 | Passed |
| 4 | Abandoned |

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Figure D22: Test Type Code

| Code | Description |
|-------------|------------------------------|
| 1 | Communication Initialization |
| 2 | Website Access |
| 3 | Information Retrieval |
| 4 | Issuance |
| 5 | Conversion |
| 6 | Internal Transfer |
| 7 | External Transfer |
| 8 | Cancellation |
| 9 | Retirement |
| 10 | Carry-over |
| 11 | Replacement |
| 12 | Expiry Date Change |
| 13 | Reconciliation |

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Figure D23: Trade Scheme Code

| Code | Description |
|-------------|---------------------------------|
| 1 | European Commission GHG Trading |

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Figure D24: Transaction Status Code

| Code | Description |
|-------------|------------------------------|
| 1 | Proposed |
| 2 | Checked (No Discrepancy) |
| 3 | Checked (Discrepancy) |
| 4 | Completed |
| 5 | Terminated |
| 6 | Rejected |
| 7 | Cancelled |
| 8 | Accepted |
| 9 | STL Checked (No Discrepancy) |
| 10 | STL Checked (Discrepancy) |

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Figure D25: Transaction Type Code

| Code | Description |
|-------------|--|
| 1 | Issuance - Initial creation of a unit |
| 2 | Conversion - Transformation of unit to create an ERU |
| 3 | External - External transfer of unit between registries |
| 4 | Cancellation - Internal transfer of unit |
| 5 | Retirement - Internal transfer of unit |
| 6 | Replacement - Internal transfer of unit |
| 7 | Carry-over - Change of validity to subsequent Commitment Period |
| 8 | Expiry Date Change |
| 10 | Internal - Internal transfer of unit/supplementary program transaction |

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Figure D26: Unit Status Code

| Code | Description |
|-------------|--|
| 0 | Available |
| 1 | Not Available Due to Transaction |
| 2 | Not Available Due to ITL Inconsistency |
| 3 | Not Available Due to Transaction and ITL Inconsistency |
| 4 | Not Available Due to STL Inconsistency |
| 5 | Not Available Due to Transaction and STL Inconsistency |

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Figure D27: Unit Type Code

| Code | Description |
|-------------|---|
| 0 | Non-Kyoto Unit |
| 1 | AAU - Assigned Amount Unit |
| 2 | RMU - Removal Unit |
| 3 | ERU - Emission Reduction Unit (converted from an AAU) |
| 4 | ERU - Emission Reduction Unit (converted from an RMU) |
| 5 | CER - Certified Emission Reduction Unit |
| 6 | tCER - Temporary CER |
| 7 | ICER - Long Term CER |

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