NACS POS/Back Office Interface Guidelines

Common Data Elements And XML Data Interchange

Version 3.0

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Chapter 1- General Information

BACKGROUND

Version 1.0

The NACS POS/Back Office Standards Committee (Committee), at its meeting on May 9, 1997, appointed an adhoc Task Force to develop a list of data elements, organized in tables, for the exchange of information between disparate Back Office (BO) systems and Point-of-Sale (POS) systems. The Data Table Summit Task Force (Task Force) met on several occasions during 1997, 1998, and 1999. Minutes of the proceedings are available to any interested party and may be obtained from NACS at www.cstorecentral.com (See Appendix B.)

The initial work of the Task Force was summarized in a draft document for industry comment and was published on March 31, 1998. All POS and Back Office solution providers in the industry were provided a copy of the draft document and were requested to provide appropriate feedback during the comment period. Over the course of approximately six months comments were received from several solution providers and one retailer. After the comments were reviewed and action taken as appropriate, the Task Force recommended to the full Committee on January 26 and 27, 1999 that Version 1.0 of this document be forwarded to the NACS Technology Project Steering Committee for approval and endorsement.

At the Technology Steering Committee meeting on March 23, 1999, NACS Point-of-Sale Back Office Interface Guidelines, Common Data Elements, Version 1.0 (Guidelines) of this document was approved and a recommendation made to forward the document to the NACS Technology Committee for approval and publication.

The NACS Technology Committee met on April 20, 1999, and approved publication of Version 1.0 of this publication as a NACS Guideline.

Version 2.0

The Task Force met again in March 1999 to begin the follow up work commissioned by the POS Back Office Committee. Several additional meetings of the Task Force were held to continue building the dictionary of "common data elements."

The work of the Task Force was submitted on August 1, 1999, in the form of a Change Request to the Guidelines Standards Maintenance Committee

following the Guidelines for Recommending Changes as contained in both Versions 1.0 and 2.0 of this document.

The changes, which were approved for inclusion/modification or enhancement of the Guidelines, were incorporated in Version 2.1 of Common Data Elements. For a Record of Changes see Appendix E.

XML Data Interchange Version 1.0

During the deliberations of the Task Force from mid-1997 until adoption of Version 2 there was no attempt on the part of the Task Force to recommend a transport mechanism, file format, or communications protocol for the exchange of the common data elements. However, in January 1999, at the meeting of the NACS POS Back Office Committee the groundwork was laid for the Task Force to investigate XML (see below for a definition of terms) as a data interchange mechanism.

Beginning in October 1999, the Task Force began a review of XML and its possible use in developing industry guidelines for the interchange of the common data elements. The document, NACS Point-of-Sale Back Office Interface Guidelines – XML Data Interchange (NAXML), represented the initial work product of the Task Force as it pertains to XML for Data Interchange. The use of XML as a transport mechanism is one possible methodology. Version 1.0 of that document was approved by the NACS Technology Committee as an official guideline and it was published on May 1, 2000.

Version 3.0 Common Data Elements and XML Data Interchange

As the work of the Task Force continued throughout 2000, it became apparent that the two documents, Common Data Elements and XML for Data Interchange, needed to be combined for ease of use and to avoid confusion.

Version 3 of the NACS Point-of-Sale Back Office Guidelines reflects the most current work of the Task Force and combines the two previously issued independent documents.

In addition, Version 3 contains numerous additions to the Common Data Elements, several new Maintenance tables and the addition of the first transaction related table, POSJournal.

Caution

Although this document significantly advances the scope of material contained in both Common Data Elements Version 2.1 (ELEMENTS) and XML for Data Interchange Version 1.0, it should not be construed as being all-inclusive or complete. The Task Force and Committee recognize that gaps may exist and that they will be uncovered as implementation by solution providers advances.

Additionally, changes may be required as the various derivatives of XML reach the approved "standards" stage. The continued participation by POS and Back Office solution providers in the work of the Task Force and/or Committee is essential to insure the completion of the work. The committee also believes that early implementers should be aware that changes to the guidelines may be required and that *the Committee and Task Force will not be constrained by any existing implementation*.

Interim changes will be made to this document in accordance with the change procedures contained elsewhere in this document.

Scope of Work

Although initially only data that flows through the Point-of-Sale system was considered to be within the purview of the work of the Task Force, it has become apparent that the work of the NACS Device Integration and NACS Point-of-Sale Back Office Committees may be approaching a time of convergence with reference to the exchange of data between different types of devices. This will be the subject of discussion for the two committees in 2001.

The on-going effort to improve the Guidelines *will not* be impeded by any current, or planned implementation of the Guidelines.

INTRODUCTION

This document is the result of concerns expressed by the retail community related to the ability to pick back office solutions independently of POS solutions and yet have the two exchange data in an efficient electronic manner. Since early in the standards meetings sponsored by NACS, there has been retailer input and direction regarding their interest in BO/POS integration.

Recognizing the wide array of choices available to retailers for both POS and BO systems, it was determined that a set of data elements which would represent the basic or minimal information required to be passed between the two systems should be established. Any specific implementation will undoubtedly require unique elements to be added to the specification. This document should provide a basis for interface development. It does not purport to be a 'plug and play' specification – it is only a guideline. However, as a foundation, the Task Force believes this guideline represents the vast majority of information required to achieve an effective interface. To the extent this is achieved, thousands of hours will be saved in interface development projects.

The Task Force recognized that POS and BO systems also vary widely in capabilities. Entire generations of legacy systems are currently in use in the industry while new, next generation systems are continuing to be developed and deployed. Although the initial Guidelines addressed data elements only, the work was extended to include a Data Interchange mechanism using XML. The tables were originally designed for organization and display of the elements only. However, using XML these tables have formed the basis for XML application-to-application data exchanges. This *loose coupling* does not imply any type of database structure at either the receiving or sending application. Implementation using relational database technology by either application is not implied and should not be inferred to be a requirement.

Version 2.0 of these Guidelines addressed international considerations, such as currency and language. Refer to the Record of Changes for complete details.

Version 3.0 of these Guidelines added tables to address Combo and Mix-Match maintenance and transaction level reporting.

The initial objective of the work of the Task Force was *limited to the exchange of information necessary to sell an item and report those sales*. The follow up work extended the objective to include the following:

1. *Fuel and Tank Maintenance and Movement* which includes such elements as Fuel Grade and Fuel Product Name, Service, Price and Time Tiers.
2. *Tax Setup/Maintenance and Movement* which includes such elements as tax levels, tax exempt status and tax rates.
3. *Description* – includes such things as short and long descriptions to be used for pole displays, printed receipts, kitchen display, etc. It also includes language codes.
4. *Mix-Match* – includes the ability to specify items in a "mix-match", which is typically defined as "selling one or more items at a promotional price where the items are generally of the same product or family of products and generally have the same retail price."
   An example of this pricing strategy is a promotion where candy bars are normally $.59 each and a mix/match scheme is used to implement a '2 for $.99' price for any two candy bars purchased.
5. *Combo* – includes the ablility to specify items in a "combo", which is typically defined as "selling a specific set of items at promotional price., e.g. 1 drink, 1 sandwich, 1 bag of chips. Such items are generally not of the same product or family of products and generally do not have the same retail price.
6. *POSJournal* – For version 3.0 it includes those transactions that effect cash balancing (sales, refund, void). It is anticipated that additional event type transactions will be added in the future, including such events as cashier sign-in/sign-out, safe drops, etc.

Although specific examples of how the data elements and XML documents ***might be used*** are given throughout Version 3.0, it should be stressed that, to this point, no attempt has been made to define a "routing, transport and packaging mechanism" and no inferences should be drawn that such a layer is implied in these Guidelines.

Cash balancing and reconciliation issues with regard to summary level reporting were addressed in Version 2.0.

Cash balancing and reconciliation at the transaction level will be added to these Guidelines as an interim change to Version 3.0.

PURPOSE OF THE GUIDELINES

This version of the Guidelines is designed to offer Point-of-Sale and Back Office solution providers a starting point for discussion regarding the exchange of information between their systems. It provides a common framework, data dictionary, and data interchange mechanism for those

common data elements that are likely to be exchanged between provider systems.

Nothing in these Guidelines should be construed as to require any particular data model, format or structure.

The Common Data Elements are presented in a Data Dictionary and also in a logical grouping of the elements. Each such grouping has been given a table name for ease of reference. The use of a table structure is for the display of the data elements and does not imply any database structure.

The Data Interchange mechanism utilizes the tables of Common Data Elements for the exchange of application-to-application business data.

The lack of any particular data element in the Data Dictionary that is believed to be required by any solution provider may be added to the Dictionary on an implementation-by-implementation basis. If the solution provider believes the element should be permanently added to the Data Dictionary, the procedures for recommending changes, given below, should be followed.

The Committee recognizes that is not possible to attempt to address all data that has been created or will be created in the future by any particular POS or Back Office system.

PROVIDING FEEDBACK

NACS POS/Back Office Standards Committee, one of the four working committees of the NACS Technology Standards Project, has an open membership policy. Membership is open to anyone desiring to participate. The results of the Committee's activities are open to feedback and comment by anyone desiring to do so. Feedback and comments are encouraged so that the POS/Back Office Interface Guidelines have the broadest possible support within the industry. See below and Appendix C for procedures for submitting feedback and comments.

RECOMMENDING CHANGES

The NACS Technology Committee has approved the following interim procedures for making changes to these Guidelines:

1 – A Guidelines Maintenance Standing Committee (GMSC) shall be appointed by the NACS Standards Steering Committee. The GMSC shall be composed of all members of the NACS Point-of-Sale Back Office Standards Committee who have attended at least one of the

last two meetings of that committee.(See Appendix C)

2 – A POS/Back Office Interface Guidelines Change Request shall be submitted to the Guidelines Maintenance Standing Committee (GMSC).

3 – Change requests should be submitted electronically at least 30 days in advance of the beginning of each GMSC Discussion Period. The Discussion Periods will begin on February 1, August 1, and November 1 of each year.

4 – Fifteen days prior to the start of the Discussion Period members of the Guidelines Maintenance Standing Committee will be provided a copy of each Change Request submitted.

5 – An electronic bulletin board will be provided for the discussion of the change requests submitted and a formal vote will be taken at the end of the Discussion Period: March 1, September 1, and December 1 of each year. Approval will require that at least 50% of the eligible voters vote and that at least two-thirds of the number voting agree to the change.

6 – Changes approved will be posted on the NACS web site, www.cstorecentral.com, in the Technology Standards Section.

A physical meeting of the Guidelines Maintenance Standing Committee may not be necessary for it to conduct its business.

Chapter 2 – Common Data Elements

CONVENTIONS USED IN THE COMMON DATA ELEMENTS

- **NAXML –** This acronymn stands for NACS XML Guidelines and is used in conjunction with table names or table types (maintenance and movement) to form the root element of all XML document instances.
- **Table Names** - The naming convention for primary tables is **PBI** (POS/Back Office Interface), followed by the name of the table, such as **ISM** (Item Sales Movement). An underscore separates PBI and the table name. Tables are provided as a means of organizing the data elements in a logical manner. There is no implied database structure to this organization. Tables related to "maintenance" have a "T" as the last letter of the suffix. Tables related to "movement" have a "M" as the last letter of the suffix. Transaction level Tables have a "R" as the last leeter of the suffix.
- **Element Names** - Data element names are unique and may be used in multiple tables. The element name is mixed case, upper and lower, with no spaces. Acronyms are mixed case within the element name. The element name is separated from the Table name by an underscore. Although the same element names may be used in multiple tables, the description of its use may be slightly different in each table. When this occurs the same element will have multiple occurrences in the Data Element Dictionary. The "Used in Table" is the reference for the particular description given.
- **Definitions -** Wherever used in this document the following terms are defined as indicated:
    - *Item* - Is always the combination of the elements POSCodeFormat + POSCode + POSCodeModifier.
    - *Merchandise Code* - Is more commonly referred to as department or category.
    - *Fuel Grade* is defined as the wet stock dispensed to the customer. See Appendix F – Fuel Grade/Product Definitions and Tank Modeling.
    - *Fuel Product* is defined as the wet stock in the underground storage tank. See Appendix F – Fuel Grade/Product Definitions and tank modeling.

- **Element Name Suffix** -
    - *Amount* - Indicates a monetary value, in local currency, excluding price, generally a monetary sum.
    - *Code* - Indicates a key to a cross reference or look-up table or has a recognized normal usage, such as bar code or U.P.C. code.
    - *Count* - Indicates a numeric value which increments with each instance of the transaction - it cannot be negative.
    - *Flag* - Indicates a logical state that may be true, false or no value.
    - *ID* - Indicates an assigned identifier that may be alpha or numeric.
    - *Modifier* – Indicates a modifier of the element with the same name but without the suffix.
    - *Number* – Indicates a numeric value such as a totalizer reading.
    - *Price* - Indicates a numeric monetary value in local currency.
    - *Quantity* - Indicates a numeric value which increments or decrements with each instance of the transaction depending upon the type of transaction - it may be negative.
    - *Units* - Indicates a numeric value of each instance of the item/merchandise code or miscellaneous transaction in local units-of-measure.
    - *Volume* - Indicates a physical measurement in local units-of-measure volumetric terms.
    - Other – A plain language suffix is used when its meaning is obvious and the element does not fit into any of the above categories.
    - There are occasions when an element has been given a double suffix. When this occurs the modifying suffix is the last used.
- **Abbreviations** - The following abbreviations are used throughout the tables:
    - *Element* - These usage abbreviations are shown in the table column labeled "Usage." They are used to indicate the ***primary*** usage of the element within the primary table. In the Data Dictionary the element is listed as many times as there are different uses. The listing of abbreviations below is in the sort order used in each of the tables.
    - P = Primary Key for the table. It may also have the dual purpose of being the entry to a cross reference or look-up table.

- F = Foreign Key contains a value that is a primary key I n another table.
- Q = Qualifier – (all qualifiers are optional. Qualifiers when used provide finer granularity for the data.)
- L = Logical (a flag).
- D = Descriptor (used to provide a description).
- H = Header (basic information common to all records in the exchange). This does not imply any particular structure for record layout or file format.
- M = Metric – a measured value.
- *Opt/Man* - O = Optional, M = Mandatory, C = Conditional
- *Size* - 12, 4 = (xxxxxxx.xxxx) 12 positions total, including negative sign and precision indicator, if any, with 4 positions to the right of the precision indicator. Either a comma or decimal point may be used as the precision indicator. Indicates a range of values form a (negative) –999999.9999 to 9999999.9999.
- *Type* - N = Numeric, A = Alphanumeric, CUR = Currency, D = Date (defined as YYYYMMDD), T = Time is in 24 hour format (defined as HHMM), L = Logical and may have a value of "T" (True), "F" (False) or no value.
- *Table Xref* - Indicates the cross reference or look-up table where the value may be found or which contains additional data elements qualifying the foreign key.

- Other
  - *ISO Standards* – Whenever possible ISO Standards have been used for elements such as country and currency codes. It is incumbent upon the user of these Guidelines to verify that the most current revision of the ISO standard is being used.
    - *ISO 4217 – Currency Codes*
    - *ISO 8501 – Date/Time*

ASSUMPTIONS

The Task Force in the development of these elements, tables and XML documents made the following assumptions:

1. POS and BO systems vendors will need to map the standard elements to their own format at the time of interface development.

2. Units-of-Measure – The initial configuration and synchronization of BO and POS systems should include the units-of-measure to be used. Therefore, it is not necessary to pass units-of-measure information as a part of routine data exchanges.
3. No attempt has been made to define the "transport mechanism" at this time.
4. Currency symbols, commas, and hyphens should not be used.
5. The configuration of fuel dispensers is a POS/controller/dispenser issue and not POS/BO issue. Users could define a grade/product/tank relationship that does not match the way the site is actually plumbed/wired.

USAGE GUIDELINES

The Task Force recommends the following guidelines for usage apply to Common Data Element Tables and NAXML DTDs except as otherwise noted.

1. Mandatory elements – An element has been designated as Mandatory only if the Task Force believed that the element was absolutely necessary for the functioning of a POS system or for reporting movement information.
2. Optional elements – If both the BO and POS systems are capable of sending and/or receiving a value for an optional element, *it should be provided.*
3. Thousands separators should not be used in numeric elements.
4. Numeric elements are fixed length and should be filled with leading blanks, if necessary. Numeric and currency fields are identical in format and differ only in use. [1] Applies to Common Data Element Tables only.
5. Alphanumeric field lengths may be up to the maximum specified in the element description and should be left justified, but not padded or blank filled. This applies to Common Data Element Tables only.
6. Currency fields are fixed length and should be filled with leading blanks, if necessary. Currency symbols should not be used.

[1] The manner of implementation will determine if the field length for numeric and currency elements will be fixed or variable in length. Conversion of an element from fixed to variable length should be accomplished by removing any leading blanks.

Currency and numeric fields are identical in format and differ only in use.[2] Applies to Common Data Element Tables only.

7. Only negative values should be signed in numeric or currency fields. Placing a minus sign to the left of the most significant non-zero digit represents negative values. The absence of a sign in a numeric or currency field indicates a positive value. In an XML document instance the data should be signed in the manner in which it affects the transaction. For example, in an invoice an allowance would have a negative (-) effect on the invoice total amount.
8. Although an element may be designated as numeric, some POS/BO systems may require the element to be alphanumeric. Conversion of an element from numeric to alphanumeric should be accomplished by removing any leading blanks and left justifying the data. Applies to Common Data Element Tables only.
9. Use of the term "data tables" does not imply any relationships among the data elements; i.e. it does not imply a relational database.
10. If detailed data is being reported from the POS to the Back Office, there is not a need to report the aggregate total except as otherwise agreed between sending and receiving applications.

[2] The manner of implementation will determine if the field length for numeric and currency elements will be fixed or variable in length. Conversion of an element from fixed to variable length should be accomplished by removing any leading blanks.

Chapter 3 – XML for DATA TRANSFER

These Guidelines recommend using the eXtensible Markup Language (XML) as a vendor-neutral data exchange medium. Specifically, XML documents[3] are used to transfer data between the disparate Point-of-Sale and Back-Office systems; the content of these documents is defined and constrained by using document type definitions (or DTDs) as defined in XML 1.0.

XML BACKGROUND

XML is essentially a lighter weight, Web-friendly version of its parent language, the Standard Generalized Markup Language (SGML). Like SGML, XML is a meta-language, and as such it is suitable for defining other languages or data exchange vocabularies. As such, it is an architecture, not an application. In contrast, HTML is one particular vocabulary that has been defined using SGML. The difference is one of extensibility - while HTML has a single, fixed set of tags designed for a single purpose (describing how a document should be rendered for viewing in a browser), XML may be used to describe new document types in almost limitless ways.

XML brings a host of advantages for solving the problem of loose application-to-application integration and data exchange. It is a readily available open standard, which is designed to attach meaning directly to the data it represents, rendering it both “human readable” as well as simple to work with programmatically. Its ability to flexibly represent data sets whose content may often change makes XML a logical choice for a dynamic business environment. As more and more organizations adopt XML as a standard way to represent virtually any kind of structured data, the ability to exchange data using XML becomes increasingly appealing. In summary, XML offers the following features:

- Vendor neutral
- Human and machine readable
- Flexible and easily extensible
- Handles batch and real-time modes of operation
- Can be used for both legacy and the latest object-oriented systems

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- [3] An “XML document" refers to coherent and complete set of data elements as implied in the tables and made explicit in the document type definitions presented here.

- Simple to create and read using "Off-the-Shelf" parsers and other tools
- Approved and hosted by the World Wide Web Consortium (W3C) http://www.w3.org.

HOW XML WORKS

XML uses data elements to hold data. A data element is made up of three parts: a start-tag, content, and end-tag. The start-tag is enclosed in angle brackets (<>) and contains an identifier (sometimes called a generic identifier, or GI), which names the data. The start-tag may also have attributes (hereafter called XML attributes), which are simple name/value pairs, which describe the content data. The end-tag of the element is also enclosed in angle brackets and uses the same identifier as the start-tag, except that it starts with a slash (/). Data between the start-tag and the end-tag is the content of the element.

A typical XML tag is essentially an instruction issued by the sender (SEN) to the receiver (REC) that states, in effect, to treat the data enclosed in the brackets as the tag specifies, i.e., as customer name if the tags are <CustomerName>....</CustomerName>. Both the receiver and sender must have a common understanding of the tag names that are assigned to fields in an XML document. The use of the NACS Common Data Elements assures that both the receiver and sender have agreed on the meaning of the tags. This agreement is assured by the use of an associated Document Type Definition (DTD).

The use of an optional character following an element name in a DTD indicates a usage requirement for the element in the conforming XML document as follows:

- ? indicates the element may be present zero or one time.
- * indicates the element may be present zero or more times.
- + indicates the element may be present one or more times.
- If no character appears after an element name the element is required one time.

A DTD is a formal definition of data elements allowed and expected in a specific XML document. It specifies what names can be used for tags, where they may occur, the allowed value of associated data content and how everything fits together. However, the DTD does not indicate unit-of-measure information; therefore, the sender and receiver must have

reached prior agreement on the unit-of-measure implied by each tag containing a numerical value.

These Guidelines include both the NACS XML (NAXML) Document Type Definitions (DTDs) and examples of their corresponding XML documents.

It is possible to design a set of XML documents for the interchange of the NACS Common Data Elements without reference to Document Type Definitions (DTDs). However, to do so could produce a chaotic situation whereby each system (POS/Back Office) could specify its own data elements and document constructs. The result would be vendor specific interfaces likely negating the benefits gained by "standardization" of the interchange.

The Task Force recognizes that not all solution providers will have the capability or desire to reference DTDs in their implementations. However, although the explicit use of DTDs is not required, to satisfy the requirements of these Guidelines the XML document must implicitly conform to the DTD.

XML PARSERS

From a programmatic standpoint, XML is very easy to work with; at least in its more basic forms. To generate XML compliant documents, a sending program need only produce standard text in a predefined way. XML receivers typically employ an XML parser to break the incoming document into its constituent data elements.

There are two levels of determining if an XML document is error free. The basic level checks to insure the document is "well-formed", i.e., it conforms to all of the syntactic rules for an XML document. The second level determines if the document is "valid", i.e., does it conform to the DTD that has been associated with it. An XML document can be well-formed but not valid. A valid document also must be well-formed (by definition).

Various XML parsers are available depending on the needs of the third-party application. Some parsers check only for well-formedness and others for both well-formedness and validity. Because the NACS POS Back Office Guidelines for XML Data Interchange recommend utilizing DTDs, a validating parser is strongly encouraged and recommended.

NAMESPACES

In July 1999, the W3C approved the namespaces specification.

Namespaces provides scoping for element and XML attribute names, and its use avoids naming collisions when XML documents are being exchanged in a broader context. Namespaces are a collection of names that are identified by a URI (Uniform Resource Identifier) where the names are used as XML elements and XML attributes. By reference to an XML namespace the same element name such as <bat> can be used with different meaning depending upon its referenced namespace declarations. Although these NACS Guidelines do not utilize namespaces in this version, solution providers should provide a namespace reference when exchanging these NAXML documents within a broader context that can include element and attribute names from other sources.

XML SCHEMAS

In October 2000, the W3C issued xml Schema as a Candidate Recommendation. This draft document contains *an almost final version* of the xml schema standard. This schema standard will extend the capabilities offered by DTDs: it will define data-types (such as string, date, and integer) as well as allow stronger reusable data-structures within documents. Because this document has not yet been issued as a W3C "Recommendation", it is still subject to change. For this reason the work in this document does not utilize any "unofficial" schema implementation. While other schema definitions already exist (SOX, XDR, etc.), these are each vendor specific.

Implementers of these Guidelines should follow the recommended data formats contained in these Guidelines in Chapter 4 to ease the transition to the more rigorous type checking that Schemas will allow.

It is anticipated that modification of these Guidelines may be necessary when Schema is issued as a "Recommendation" by the W3C.

XSL/XSLT

One of the challenges presented to the Task Force is how to specify the transfer of the Common Data Elements in a manner usable by all Point-of-Sale and Back Office Systems. The Task Force recognizes that not all systems will want the elements in the same order or at the same level of detail or summarization.

The use of XSLT (eXtensible Style Sheet Transformations) provides each system the ability to transform an XML document conforming to the NACS Guidelines into a XML document or other format required by that system. It is left to each system to develop the XSLT stylesheets needed to accomplish its own translation/transformation. For information

purposes, one example of a XSLT transformation is provided in these Guidelines.

DOCUMENT EXCHANGES

The only requirement imposed by these Guidelines for the exchange of documents is that both Point-of-Sale and Back Office systems should be capable of exporting data either in batch mode, (such as triggered at a prearranged time,) or in response to real-time requests directly from the other system.

Additional messages may be necessary to provide for choreography between sending and receiving application. This will form part of the on-going work of the Task Force.

Chapter 4 - Data Dictionary

It should be noted that Chapter 1 of this document is an integral part of the document and the purpose and use of the Data Dictionary and accompanying tables cannot be clearly understood without a thorough reading of that chapter.

This is a listing of all data elements. The Primary and Cross-Reference Tables that follow in Chapter 5 provide a logical grouping of these elements but do not imply that any particular database structure or data model should be used in implementing these Guidelines.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
AccountFirstName	D	First name of the account related to the tender type.	O	40	A	PJR
AccountID	Q	The identification of the account related to the tender type.	O	40	A	PJR
AccountInformation	D	Information about the account related to the tender type.	O	40	A	PJR
AccountLastName	D	The last name of the account related to the tender type.	O	40	A	PJR
AccountMiddleName	D	The middle name of the account related to the tender type.	O	40	A	PJR
AccountName	D	The name of the account related to the tender type.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ActiveFlag	L	The item/merchandise code can be sold. Default is "Yes.”	M	1	L	ITT MCT
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM PJR
AllowFractionalUnitFlag	L	The sale of a fractional unit of this item is allowed. Defautl is "No.”	O	1	L	RESTRICT
AllowWICFlag	L	The sale of the item/merchandise code is allowed in a WIC transaction. Default is "Yes.”	O	1	L	RESTRICT
ApprovalReferenceCode	D	The approval reference code received from the processing host.	O	40	A	PJR
AuthorizationApprovalDescription	D	Optional description of the circumstances of the approval.	O	40	A	PJR
AuthorizationDate	D	The date associated with the credit card authorization received from the processing host.	O	8	D	PJR
AuthorizationResponseCode	D	The authorization code received from the processing host.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
AuthorizationResponseDescription	D	The description of the authoriztion response received from the host.	O	40	A	PJR
AuthorizationTime	D	The time associated with the credit card authorization received from the processing host.	O	4	T	PJR
AuthorizedChangeAmount	M	The amount of change authorized by the authorizing credit card host for the related tender.	O	12,4	CUR	PJR
AuthorizingTerminalID	D	The identification of the POS or Credit Card Authorizing terminal related to the specific authorization.	O	40	A	PJR
BankAccountNumber	D	The bank account number of the check being processed.	O	16	N	PJR
BankID	D	The identification of the bank for the check being processed.	O	40	A	PJR
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginProhibitTimeFriday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeMonday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeSaturday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeSunday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeThursday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeTuesday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT
BeginProhibitTimeWednesday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
BirthDate	M	The birth date of the customer purchasing the item or the birth date of the employee selling the item.	O	8	D	PJR
BusinessDate	D	The business date assigned by the company. May not be the same as calendar date.	O	8	D	PJR
CashierBypassedFlag	L	Indicates the cashier bypassed the electronic authorization system.	O	1	L	PJR
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR
CheckNumber	D	The sequential number assigned to the check, which is generally pre-printed in the upper right hand corner of the check.	O	16	N	PJR
City	D	The city of the address.	O	40	A	PJR
ComboDescription	D	A free form description of the combination offered for sale - "combo", i.e., "Manager's Special", "Sandwich Combo", etc.	O	40	A	CBT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ComboID	P	The identification of the combo pricing scheme.	O	40	A	CBT
ComboItemQuantity	M	The quantity of the individual item in the combo,i.e., one sandwich, or one bag of chips, or one large soft drink.	O	16	N	CBT
ComboItemUnitPrice	M	The indivdual retail price of the item when included in the combo identified in the ComboID. This will reflect the effect of applying a discount to be item from its RegularSellPrice.	O	12,4	CUR	CBT PJR
ComboPrice	M	The RegularSellPrice of the Combo.	M	12,4	CUR	PJR
ComboReceiptDetailFlag	L	Indicates that the each item in the combo should be listed separately on the customer receipt. Default is "No"	O	1	L	PJR
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM ISM PJR
CurrencyCode	Q	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	FGM PJR
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CurrencySubCode	Q	A pointer to the currency look-up table.	O	4	A	FGM ISM MSM PJR
DefaultModifierFlag	Q	Indicates this is the default transaction item when there are multiple identical POSCodeFormat and POSCode combinations. It indicates the transaction item to enter into the sale when scan data is not uniquely related to one transaction item. It implies multiple modifiers. Default is "No."	O	1	L	ITT
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT PJR
Description16A	D	A short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays.	O	16	A	DESCRIPTION
Description24A	D	A long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays.	O	24	A	DESCRIPTION
Description48A	D	A ultra long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays.	O	48	A	DESCRIPTION
Description8A	D	A ultra short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays.	O	8	A	DESCRIPTION
DescriptionID	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions that may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DescriptionID	P	The description assigned to the DescriptionID.	M	30	A	DESCRIPTION
DiscountAmount	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	O	12,4	CUR	ISM MCM FGM PJR
DiscountCount	M	Total number of discount transactions associated with the DiscountAmount for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
DispenserDiscountAmount	M	Sum of all discounts applied by reducing the dispenser RegularSellPrice. FuelGradeSalesAmount already reflects this discount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	M	12,4	CUR	FGM PJR
DispenserDiscountCount	M	Total number of discount transactions applied by reducing the dispenser RegularSellPrice.	O	8	N	FGM
DriverID	D	The identification of the driver in a fleet card purchase.	O	40	A	PJR
ElectronicSignature	D	Used to give the electronic signature value where signature capture device is present for additional verification.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndProhibitTimeFriday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeMonday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeSaturday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeSunday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeThursday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndProhibitTimeTueday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndProhibitTimeWednesday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. (24 hour format (HHMM)).	O	4	T	RESTRICT
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EntryMethodID	D	Delineates the method by which an item was identified for the purposes of the transaction, I.e., scanned, PLU, manual entry, etc.	O	4	N	PJR
EventID	Q	The identification of a specific event responsible for the reward..	O	40	A	PJR
FamilyCode	D	That portion of a U.P.C. on a manufacturer's coupon used to identify an item's grouping for discount purposes.	O	3	N	ITT PJR
ForceOnLineFlag	L	Indicates that a manual authorization of the credit card authorization terminal was forced by the operator. Default is "No.”	O	1	L	PJR
ForceQuantityFlag	L	Force a quantity of the item to be keyed on the POS at the time of sale. Default is "Yes.”	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ForceQuantityFlag	L	Implies that a "quantity key" was used to indicate the number of units of an item included in the sale.	O	1	L	PJR
ForceWeightFlag	L	Indicates that the weight of the item was manually input at the time of sale. Default is "Yes.”		1	L	PJR
ForceWeightFlag	L	Force the weight of the item to be keyed on the POS at the time of sale. Defualt is "Yes.”	O	1	L	RESTRICT
FuelGradeActiveFlag	L	Indicates that fuel grade may be sold. Default is "Yes.”	M	1	L	FGT FOT
FuelGradeID	P	Is the FuelGradeID for the fuel grade.	M	6	A	FGM FGT FOT
FuelGradeNonResettableTotalAmount	M	The sum of the value of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	CUR	FGM
FuelGradeNonResettableTotalVolume	M	The volume of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	N	FGM
FuelGradeSalesAmount	M	The difference between the present period and the prior period FuelGradeNonResettableTotalAmount.	M	12,4	CUR	FGM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeSalesVolume	M	The difference between the present period and the prior period FuelGradeNonResettableTotalVolume. .	M	12,4	N	FGM
FuelGradeSequenceID	D	The sequence number to which the FuelGradeID is assigned. Normally hose ID.	O	4	N	FOT
FuelPositionID	P	Represents physical location where fuel is dispensed to one vehicle at a time.	M	4	N	FOT
FuelPositionID	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
FuelProductBlendPercent	M	This is the percentage of FuelProductID used in a blending of two fuel products to create a fuel grade. The blend percentage of FuelProductIDHigh is 100 less FuelProductBlendPercent. If not a blended fuel grade then put 100 as the FuelProductBlendPercent.	M	3	N	FGT
FuelProductDepth	M	The measured depth of fuel product in the tank inclusive of water. One or the other of FuelProductDepth or FuelProductVolume is mandatory.	C	8,3	N	TPM
FuelProductDescription	D	A description of the fuel product indicated by the FuelProductID.	O	40	A	FPT
FuelProductID	P	Is the FuelProductID for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductID of the fuel product with the lowest octane in the blend.	M	6	A	FPM FPT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductID	F	Is the FuelProductID for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductID of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
FuelProductIDHigh	F	Is the FuelProductID for the fuel grade in a dispenser blended product that has the highest octane in the blend.	O	6	A	FGT
FuelProductNonResettableAmountNumber	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable amount totalizer for that fuel product.	O	16,4	N	FPM
FuelProductNonResettableVolumeNumber	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable volume totalizer for that fuel product.	O	16,4	N	FPM
FuelProductTemperature	M	The temperature of the fuel product in the tank at the time of the depth/volume reading.	O	5,1	N	TPM
FuelProductVolume	M	The measured volume of fuel product in the tank inclusive of water. One or the other of FuelProductDepth or FuelProductVolume is mandatory.	C	12,4	N	FPM TPM
HostAuthorizedFlag	L	Indicates whether the authorization has been done locally or by a host. Default is "Yes" indicating host authorized.	O	1	L	PJR
IDExpirationDate	D	The expiration date of the identification used to provide proper age verification or customer identification.	O	8	D	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
IDIssuingAuthority	D	The identification of the agency issuing the identification being used to verify age/presenter.	O	40	A	PJR
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM PJR
ItemID	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many POSCodes and does not need to be unique.	O	24	A	ITT ISM PJR
ItemListDescription	D	A free form description of the list of items included in the list for the purposes of either a Mix-Match or Combo.	O	40	A	CBT ILT PJR
ItemListID	P	The identification of the list of items in the combo or mix-match.	O	40	A	ILT
ItemListID	F	A pointer to the Item List Table.	O	40	A	CBT MMT PJR
ItemTypeCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeCode is allowed.	O	4	A	ITT
ItemTypeSubCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeSubCode is allowed.	O	4	A	ITT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
JobID	D	The job identification of the vehicle in the fleet purchase.	O	40	A	PJR
LanguageCode	Q	A pointer to the language code lookup table.	O	4	A	DESCRIPTION
LimitUnits	M	The maximum number of units of an item/MerchandiseCode allowed in a single transaction.	O	4	N	RESTRICT
LinkCode	F	Pointer to LinkCode Table.	O	24	N	ITT MCT
ManualActionID	D	The identification of the action used to trigger the promotion.	O	40	A	PJR
ManualEntryFlag	L	If true indicates that the MiscellaneousSumCode values are derived from manual entry at the POS. Default is "No."	O	1	L	MSM
MerchandiseCode	P	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	MCT MCM
MerchandiseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ILT ITT TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MerchandiseCodeDescription	D	Native language description of the merchandise code normally printed on the register tape.	O	40	A	MCT MCM
MesssageID	D	The identification of the message that has been displayed to either the operator or the customer.	O	40	A	PJR
MinimumClerkAge	M	The minimum age required of the sales clerk in order to sell the item/merchandise code.	O	2	N	RESTRICT
MinimumCustomerAge	M	The minimum age required of the consumer in order to purchase the item/merchandise code.	O	2	N	RESTRICT
MiscellaneousSummaryAmount	M	The sum of the value of the individual transactions related to this code and sub-code.	M	16,4	CUR	MSM
MiscellaneousSummaryCode	P	Pointer to the look-up table.	M	4	A	MSM
MiscellaneousSummaryCount	M	Total number of individual transactions related to this code and sub-code. This value may be count, quantity, or volume depending upon usage.	O	16,4	N	MSM
MiscellaneousSummarySubCode	F	Pointer to the look-up table.	O	4	N	MSM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MiscellaneousSummarySubCodeModifier	Q	Modifier to the MiscellaneousSummarySubCode to provide an additional level of detail.	O	8	A	MSM
MixMatchDescription	D	A description of the MixMatch offer.	O	40	A	MMT
MixMatchID	P	The identification of the particular mix-match pricing scheme.	M`	4	N	MMT
MixMatchMaximumUnits	M	The maximum number of units of this item that may be purchased at the mix-match price.	O	4	N	MMT
MixMatchPrice	M	The total price for this quantity purchase level.	M	12,4	CUR	MMT
MixMatchStrictHighFlag	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if one additional unit is purchased the discount does not apply to that unit. Default is "Yes."	O	1	L	MMT
MixMatchStrictLowFlag	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if less than the minimum number of units is purchased the discount does not apply to those units. Default is "Yes."	O	1	L	MMT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MixMatchUnits	M	The number of units that need to be purchased to qualify for this price.	M	4	N	MMT
MoneyOrderCheckDigit	M	The check digit in the money order number.	O	1	N	PJR
MoneyOrderFaceAmount	M	The face value imprinted on the money order.	O	12,4	CUR	PJR
MoneyOrderFeeCollectedAmount	M	The value of the fee collected for processing the money order.	O	12,4	CUR	PJR
MoneyOrderNumber	M	The sequential number issued by the money order company to the individual money order being sold.	O	16,4	N	PJR
MoneyOrderTypeIndicator	D	An indicator as to the type of money order, I.e., vendor payment, payroll, customer, etc.	O	4	N	PJR
NumberOfVisits	M	The number of visits that has caused this promotion to be successful.	O	16	N	PJR
OdometerReading	M	The odometer reading of the vehicle purchasing fuel.	O	16	N	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OfflineFlag	L	Indicates the electronic authorizing terminal was offline at the time of the transaction.	O	1	L	PJR
OperatingUllage	M	The empty portion of a fuel product tank as determined by subtracting the FuelProductVolume (observed volume) from the TankMaximumOperatingVolume	O	16,4	N	TPM
OriginalAmount	M	The amount of the item in the original transaction.	O	12,4	CUR	PJR
OriginalApprovalCode	D	The approval code of the original transaction.	O	40	A	PJR
OriginalBusinessDate	D	The business date of the original transaction.	O	8	D	PJR
OriginalReferenceNumber	M	The reference number of the original transaction.	O	16,4	N	PJR
OriginalRegisterID	M	The identification of the register involved in the original transaction.	O	3	N	PJR
OriginalStoreLocationID	M	The identification of the Store in the original transaction.	O	10	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OriginalTransactionEndDate	D	The ending date of the original transaction	O	8	D	PJR
OriginalTransactionEndTime	D	The ending time of the original transaction.	O	6	T	PJR
OriginalTransactionID	Q	The identification of the original transaction.	O	40	A	PJR
OriginalTransactionNumber	M	The assigned number of the original transaction.	O	16	N	PJR
OriginalTransactionStartDate	D	The start date of the original transaction.	O	8	D	PJR
OriginalTransactionStartTime	D	The start time of the original transaction.	O	6	T	PJR
OutsideSalesFlag	Q	Indicates the sale was settled at the pump island by some means, such as credit card reader, cash acceptor, or cashier. Default is "No."	O	1	L	FGM PJR
PaymentSystemsProductCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the NACS Payment Systems Committee.	O	3	N	FGT ITT MCT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PersonalID	D	The identification number captured for identification, such as driver's license, social security, etc.	O	40	A	PJR
PersonalIDType	D	The type of identification used to identify the individual, I.e. driver's license, social security number, etc.	O	40	A	PJR
PhoneNumber	M	The phone number.	O	10	N	PJR
POSAssignedDate	D	The date assigned by the POS to the transaction. Is not necessarily the same as the business date.	O	8	D	PJR
POSAssignedSequenceNumber	M	The sequential number assigned by the POS to the transaction.	O	16	N	PJR
POSAssignedTime	D	The time assigned by the POS to the transaction.	O	4	T	PJR
POSCode	F	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in POSCodeFormat.	M	24	N	ILT
POSCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in POSCodeFormat.	M	24	N	ITT ISM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSCodeFormat	F	The type of coding scheme used in POSCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU 5=GTIN	M	2	N	ILT
POSCodeFormat	P	The type of coding scheme used in POSCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU 5=GTIN	M	2	N	ITT ISM PJR Pos Code Format
POSCodeModifier	F	Scan code or PLU modifier. In combination with POSCode and POSCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ILT
POSCodeModifier	P	Scan code or PLU modifier. In combination with POSCode and POSCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM PJR
PostalCode	D	The postal code of the address.	O	40	A	PJR
PreAuthorizationFlag	L	Indicates a "preauthoriztion" for the credit/debit/fleet card was obtained. Default is "Yes."	O	1	L	PJR
PriceOverrideApproverID	D	The identification of the person authorizing a price override.	O	40	A	PJR
PriceOverridePrice	M	The price of the item/merchandise/fuel after the override.	O	12,4	CUR	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PriceOverrideReasonCode	D	Indicates the reason for the price override.	O	40	A	PJR
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate the type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT PJR
PriceTierCode	D	A pointer to the Price Tier Table. The values indicate they type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FOT
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ProhibitDiscountFlag	L	A discount is not allowed on this item/merchandise code. Default is "Yes."	O	1	L	RESTRICT
ProhibitFoodStampFlag	L	Prohibit the use of food stamps with this item/merchandise code. Default is "Yes."	O	1	L	RESTRICT
ProhibitPriceLookupFlag	L	The clerk must key the price of this item/merchandise code at the time of sale. Default is "Yes."	O	1	L	RESTRICT
ProhibitPriceOverFlag	L	Prohibit use of the quantity key. Default is "Yes."	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProhibitQuantityKeyFlag	L	Prohibit use of the quantity key. Default is "Yes.”	O	1	L	RESTRICT
ProhibitRefundFlag	L	A refund of the item/merchandise code is not allowed. Default is "Yes.”	O	1	L	RESTRICT
ProhibitReturnFlag	L	A return of the item/merchandise code is not allowed. Default is "Yes.”	O	1	L	RESTRICT
ProhibitTaxModifierFlag	L	Instructs the POS to prohibit the clerk from modifying the tax amount on the sale of the item/merchandise code. Default is "Yes.”	O	1	L	RESTRICT
ProhibitTenderCode	F	Prohibit the use of a specific payment method. A pointer to the Tender Prohibit Table within the Restrictions Table. Default is "Yes.”	0	4	A	RESTRICT
PromotionAmount	M	Sum of value of promotions associated with the item/merchandise code being reported. For PJR the amount of the promotion associated with the item in the transaction or with the total transaction.	M	12,4	CUR	ISM MCM PJR
PromotionCount	M	Total count of promotion transactions associated with the item/merchandise code being reported.	O	8	N	ISM MCM
PromotionID	D	Identifies the promotion.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProviderID	D	Identifies the authorizing agency, bank or clearinghouse.	O	40	A	PJR
PumpTestAmount	M	Sum of the value of "pump for test" fuel grade in the reporting period.	M	12,4	CUR	FGM
PumpTestVolume	M	Volume of "pump for test" fuel grade in the reporting period.	M	12,4	N	FGM
ReadingDate	D	The date of the depth/volume reading. (YYYYMMDD)	O	8	D	TPM
ReadingTime	D	The time of the depth/volume reading. 24 hour format (HHMM)	O	4	T	TPM
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM PJR
RedeemedCouponID	D	The identification of the redeemed coupon.	O	40	A	PJR
RedeemedPointsQuantity	M	The number of points redeemed.	O	16,4	N	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RedeemedPointsTypeID	D	The identification of the type of points redeemed.	O	40	A	PJR
ReferenceNumber	M	Audit identifier for a specific authoriztion action.	O	16	N	PJR
RefundAmount	M	Sum of the value of refunds associated with the item/MerchandiseCode being reported. For PJR the amount of the refund associated with the item in the transaction or with the transaction as a whole.	M	12,4	CUR	ISM MCM PJR
RefundCount	M	Total count of refund transactions associated with the item/MerchandiseCode being reported.	O	8	N	ISM MCM
RefundReason	D	A description of the reason for the refund.	O	40	A	PJR
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RequestedAmount	M	The value for which authorization has been requested.	O	12,4	CUR	PJR
RevenueCenterID	D	The identification of the revenue or profit center within the store.	O	40	A	PJR
RewardedCouponID	D	The identification of the rewarded coupon.	O	40	A	PJR
RewardedPointsQuantity	M	The number of rewarded points.	O	16,4	N	PJR
RewardedPointsTypeID	D	The identification of the type of points rewarded.	O	40	A	PJR
SalesAmount	M	Sum of the value of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	CUR	ISM MCM PJR
SalesQuantity	M	Total quantity of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	N	ISM MCM PJR
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT MMT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SellingUnits	Q	Number of individual units in a transaction item at time of sale. For example, 6 for a 6 pack.	O	4	N	ITT ISM PJR
SendCheckFlag	L	A flag to indicate if a check should be returned to the customer. The default value is "No"	O	1	L	PJR
SerialNumber	M	The serial number.	O	40	A	PJR
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT PJR
ServiceLevelCode	D	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FOT
SocialSecurityNumber	M	The social security number.	O	9	N	PJR
State	D	The state of the address	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
StoreConceptID	D	The identification of the concept within the RevenueCenterID, I.e. Subway within a QSR RevenueCenterID.	O	40	A	PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
SuspendFlag	L	Indicates the authorizing host was in a suspend mode at the time of the transaction.	O	1	L	PJR
TankChartID	D	A pointer to a tank capacity chart not defined in this document.	O	4	N	TPT
TankDepth	M	The maximum depth of fuel product.	O	8,3	N	TPT
TankDescription	D	A description of the tank.	O	40	A	TPT
TankID	P	The assigned identification for a fuel product tank.	M	2	N	TPM TPT
TankID	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankID of the fuel product with the lowest octane in the blend.	M	2	N	FOT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankIDHigh	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankID of the fuel product with the highest octane in the blend.	O	2	N	FOT
TankInstallDate	D	The date the fuel product tank was installed	O	8	D	TPT
TankLowInventoryVolume	M	The fuel product volume to indicate a critically low inventory condition.	O	12,4	N	TPT
TankManifoldID	D	The identification of the fuel product tank manifold. Usage is implementation specific.	O	2	N	TPT
TankManufacturer	D	The name of the manufacturer of the fuel product tank.	O	40	A	TPT
TankMaximumOperatingVolume	M	The maximum amount of product which can be safely put into a tank.	O	12,4	N	TPT TPM
TankModelNumber	D	The model number of the fulel product tank.	O	40	A	TPT
TankReorderVolume	M	The fuel product volume in the tank at which fuel product should be reordered.	O	12,4	N	TPT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankSerialNumber	D	A description of the serial number of the fuel product tank.	O	40	A	TPT
TankVolume	M	The volumetric capacity of the fuel product tank in the pre-defined unit-of-measure.	O	12,4	N	TPT
TaxableSalesAmount	M	Sum of the taxable value of all sales for this TaxLevelID net of discounts and promotional allowances and after refunds.	M	12,4	CUR	TLM PJR
TaxableSalesRefundedAmount	M	Sum of the value of the refunds of the taxable sales for this TaxLevelID.	M	12,4	CUR	TLM PJR
TaxActiveFlag	L	Indicates whether this TaxLevelID is active future or past. Default is "Yes."	O	1	L	TLT
TaxCollectedAmount	M	The amount of tax collected.	M	12,4	CUR	TLM PJR
TaxDescription	D	Describes the tax authority.	O	40	A	TLT
TaxExemptReason	D	The reason the item/merchandise code was sold tax exempt.	O	40	A	TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxExemptSalesAmount	M	Sum of the value of the sales given exempt status net of discounts and promotional allowances and after refunds. (Exempt refers to transactions such as sales made to a customer with a tax exempt certificate.).	O	12,4	CUR	TLM PJR
TaxExemptSalestRefundedAmount	M	Sum of the value of the refunds on tax exempt sales	O	12,4	CUR	TLM PJR
TaxExemptSalesVolume	M	Total volume of tax exempt fuel grade.	O	12,4	N	FGM
TaxForgivenSalesAmount	M	Sum of the sales for this TaxLevelID sold on a tax forgiven basis net of discounts and promotional allowances and before refunds. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM PJR
TaxForgivenSalesRefundedAmount	M	Sum of the value of the refunds on tax forgiven sales for this TaxLevelID. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM PJR
TaxLevelID	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT PJR
TaxLevelID	F	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TST
TaxLevelIncludedID	D	Identifies the tax authority whose tax amount should be included in the taxable amount.	O	8	A	TIT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelSequenceID	D	Indicates the order in which tax levels should be applied.	O	8	A	TST
TaxRate	M	Percentage applicable to the ActualSellPrice of an item unless breakpoint matrix is used.	O	4	N	TLT
TaxReceiptDescription	D	Describes the tax authority in an abbreviated format.	O	8	A	TLT
TaxRefundedAmount	M	The amount of tax refunded.	M	12,4	CUR	TLM PJR
TaxRegistrationNumber	D	Number assigned by taxing authority that must appear on the register receipt or reports.	O	16	N	TLT
TaxSequenceNumber	D	Identifies the sequence that the included TaxLevelId should be followed to calculate the TaxLevelIDs taxes.	O	4	N	TIT
TaxStrategyDescription	D	A free form description of the Tax Strategy being identified.	O	40	A	TST
TaxStrategyID	P	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	M	4	N	TST

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxStrategyID	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM PJR
TaxSymbol	D	Single character that prints on the register receipt to indicate the TaxLevelID.	O	4	A	TLT
TaxTableID	F	A pointer to a matrix of tax breakpoints for taxes that are not a straight percentage.	O	4	A	TLT
TaxTypeID	F	Pointer to a look up table.	M	4	A	TLT
TenderAmount	M	The sum of the value of the tender type taken.	M	12,4	CUR	PJR
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender that was used to finalize item/merchandise code sales.	M	4	A	ISMMSM PJR TENDER
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM PJR TENDER
TenderTransactionsCount	M	Count of the transactions associated with the type of tender.	O	8	N	MSM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
TimeTierCode	D	A pointer to the Time Tier Table. The values indicate the type of time tier by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FOT
TimeTierCode	Q	A pointer to the Operating Level Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT PJR
TransactionCount	M	Total number of individual transactions related to this item. This value may be count quantity or volume depending upon usage.	O	8,3	N	ISM MCM
TransactionEndDate	Q	The transacton end date.	O	8	D	PJR
TransactionEndTIme	Q	The transaction end time.	O	6	T	PJR
TransactionGrandAmount	M	The total amount of the transaction after applying transaction level discounts, promotions, taxes, etc.	O	12,4	CUR	PJR
TransactionGrossAmount	M	The gross amount of the transaction before applying transaction level discounts, promotions, taxes, etc.	O	12,4	CUR	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TransactionID	D	The identification assigned to the transaction.	O	40	A	PJR
TransactionNetAmount	M	The net amount of the transaction after applying transaction level discounts, promotions, taxes, etc.	O	12,4	CUR	PJR
TransactionStartDate	Q	The transaction start date.	O	8	D	PJR
TransactionStartTIme	Q	The transaction start time	O	6	T	PJR
TransactionTaxAmount	M	The amount of tax applied at the transaction level.	O	12,4	CUR	PJR
TransactionTaxExemptAmount	M	The amount of tax that is tax exempt at the transaction level.	O	12,4	CUR	PJR
TransactionType	D	The type of the transaction created at the POS, I.e., sale, refund, void, etc.	O	40	A	PJR
Ullage	M	Is the volume of the empty portion of a tank.	O	12,4	N	TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
VehicleID	D	The identification of the vehicle in the fleet purchase.	O	40	A	PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VisitFrequencyNumber	D	The number of visits triggering the promotion reward.	O	16	N	PJR
WashCode	M	The code assigned to the wash for customer use.	O	8	N	PJR
WashCodeDescription	D	A free form description of car wash.	O	40	A	PJR
WashCodeExpirationDate	D	The expiration date assigned to the wash code generated by the POS at the time of sale of the wash.	O	8	D	PJR
WaterDepth	M	The measured depth of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVolume is mandatory.	O	8,3	N	TPM
WaterVolume	M	The measured volume of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVolume is mandatory.	O	12,4	N	TPM

Chapter 5 - Tables

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

TABLE LISTING AND GENERAL DESCRIPTION

Two types of tables have been developed to enable the two-way exchange of data between disparate BO and POS systems. Primary tables may be supplemented by cross reference or look-up tables. The use of tables and the sort order of elements in the table listings are for presentation purposes only and there is no implied implementation requirement.

PRIMARY TABLES - Twenty primary tables have been developed by the Task Force. Additional elements are allowed as needed and agreed upon between BO and POS systems vendors. Only elements, which flow through the POS, have been considered and included in these tables. The tables are grouped in the following order and are alphabetical within groups:

- Maintenance
- Movement
- Report

Maintenance Tables

1. Combo Maintenance (CBT) – Contains those data elements which need to be sent from the BO system to the POS system to properly link and price items sold in a "combo." A combo is defined as "selling a specific set of items at a promotional price such as 1 drink, 1 sandwich, and 1 bag of chips.
2. Fuel Grade Maintenance (FGT) – Contains those data elements, which need to be sent from the BO system to the POS system to enable a *fuel grade* to be sold at the POS terminal. For a complete definition of a *fuel grade* refer to the Glossary.
3. Fuel Position Maintenance (FOT) – Contains those data elements, which need to be sent from the BO system to the POS system to establish *fuel grade* selling information for each fueling position including time tier, price tier, and service level.
4. Fuel Product Maintenance (FPT) – Contains those data elements, which need to be sent from the BO system to the POS system to enable a *fuel product* to be inventoried at the location and tied to

the fuel grades sold at the POS terminal/Dispenser. For a complete definition of fuel product refer to the Glossary.

5. Item Link Maintenance (ILT) – Contains those data elements which need to be sent from the BO system to the POS system to designate items for inclusion in either the mix-match or combo pricing scheme.
6. Item Maintenance (ITT) - Contains those data elements, which need to be sent from the BO system to the POS system to enable an *item* to be sold at the POS terminal. For a complete definition of an *item* refer to the Glossary.
7. Merchandise Code Maintenance (MCT) - Contains those data elements that need to be sent from the BO system to the POS system to properly maintain the status of all items at the *merchandise code* level. *Merchandise code* is most commonly known as department or category level. For a complete definition of *merchandise code* refer to the Glossary.
8. Mix-Match Maintenance (MMT) – Contains those data elements which need to be sent from the BO system to the POS system to properly identify and price items in a mix-match scheme. Mix-Match is defined as "selling one or more items at a promotional price where the items are generally of the same product or family of products and generally have the same retail price."
9. Tank Product Maintenance (TPT) – Contains those data elements, which need to be sent from the BO system to the POS system to establish the configuration of the locations tanks including product contained in the tank, tank capacity and other tank vital statistics. The elements contained in this table would generally be sent to the POS as part of an initial configuration.
10. Tax Includes Maintenance (TIT) – Contains those data elements, which need to be sent from the BO system to the POS system to establish taxing authority and calculation sequence for each tax level. The elements contained in this table would generally be sent to the POS as part of an initial configuration.
11. Tax Level Maintenance (TLT) – Contains those data elements, which need to be sent from the BO to the POS system to establish tax information per tax level including tax table to be used for breakpoints, tax rate, etc. The elements contained in this table would generally be sent to the POS as part of an initial configuration.
12. Tax Strategy Maintenance (TST) – Contains those data elements, which need to be sent from the BO to the POS system to maintain

methods and algorithms for the application of tax to items/merchandise code/fuel grade.

Movement Tables

1. Fuel Grade Movement (FGM) - Contains those data elements the POS system needs to send to the BO system to report *fuel grade* level sales. For a complete definition of *fuel grade* refer to the Glossary. It is implied that all *fuel grade sales* are included in the Merchandise Code Movement table (MCM) at the summary level either in total or by grade depending upon implementation setup.
2. Fuel Product Movement (FPM) – Contains those data elements the POS system needs to send to the BO system to report to report the movement of *fuel product* inventoried at the location from the tanks as tied to the fuel grades sold at the POS terminal/dispenser.
3. Item Sales Movement (ISM) - Contains those data elements the POS system needs to send to the BO system to report *item* sales. It is implied that all *item sales* are included in the Merchandise Code Movement table (MCM) at the summary level.
4. Merchandise Code Movement (MCM) - Contains those data elements the POS system needs to send to the BO system to report *merchandise code* level sales. It is implied that both *item sales* and *fuel grade sales* are included in this table at some summary level depending upon implementation setup.
5. Miscellaneous Summary Movement (MSM) - Contains those data elements the POS system needs to send to the BO system to report "non-sale" summary level detail for *miscellaneous transactions*, such as vendor payouts.
6. Tank Product Movement (TPM) - Contains those data elements the POS system needs to send to the BO system to report *fuel product* inventory levels.
7. Tax Level Movement (TLM) – Contains those data elements the POS system needs to send to the BO system to report tax collection information by *tax level* including taxable, tax exempt and tax forgiven amounts.

REPORT Tables

1. POSJournal (PJR) - Contains those data elements the POS system needs to send to the BO system on a transaction basis to record individual sales transactions. As of Version 3.0 this table only

addresses the cash balancing transactions of sales, void and refunds.

CROSS-REFERENCE – LOOK-UP TABLES - Three Cross Reference and twelve Look-up tables have been developed by the Task Force to support the Primary Tables listed above. Additional elements/code values are allowed as needed and agreed between BO system and POS system vendors. These tables are used for reference only and are not used to pass data.

Cross Reference Tables

1. *Description* – Contains the ultra short, short, long and ultra long descriptions for an item/merchandise code to be used by pole displays, kitchen monitors, register receipts, etc.
2. *Restrictions* - Used by both the Item Maintenance and Merchandise Code Maintenance Tables to cross-reference the element SalesRestrictCode. The values given reference the various restrictions that may be applied either to the sale of an individual item or to a complete merchandise code (category/department).

Look-up Tables

1. *Currency Code* – Contains the ISO 4217 code values for country and currency. It is incumbent upon the user of these Guidelines to insure that the most current set of codes is being used. The latest version may be obtained from the American National Standards Institute (ANSI).
2. *Item Type* – Contains the code values for the elements ItemTypeCode and ItemTypeSubCode. The values given represent a classification of items to define a selling process at the POS terminal.
3. *Merchandise Code* - Contains the code values for the element MdseCode (category/department). The NACS Category Management Committee in the Category Definitions and Numbering Guide has defined the values given. The use of these values is recommended to facilitate industry-wide benchmarking and reporting consistency. The latest version of the Guide is available from NACS at www.cstorecentral.com.
4. *Miscellaneous Summary Code* - Contains the code values for the MiscSumCode and MiscSumSubCode elements.
5. *Payment System Codes* - Contains the code values for the element PaymentSysProdCode. The NACS Payment Systems Standards Committee has defined the values given. These codes provide

credit card networks with information regarding the sale of products at the location. They are used by the network host to provide receipt printing and statement billing information to the consumer. The latest version of the code table is available from NACS at www.cstorecentral.com.

6. *POS Code Format* - Contains the code values for the element POSCodeFormat. The value of POSCodeFormat specifies the type of coding system used in the element POSCode.
7. *Price Tier* - Contains code values for the various price tiers that may be set for the sale of fuel grades. Typical values could include cash/credit, etc.
8. *Reason Code* - Contains the code values for the element ReasonCode. The values given represent the various reasons why an item or group of items was sold at a price other than the RegularSellPrice for the item(s).
9. *Service Level* - Contains code values for the various service levels which may be set for the sale of fuel grades. Typical values could include full serve, self-serve, partial self-serve, mini-serve, etc.
10. *Tender Prohibit* – Contains the code values for the elements ProhibtTenderType, Tender Code and TenderSubCode. The values are implementation defined and represent the various types of tender that may not be taken at the Point-of-Sale.
11. *Tender Type* - Contains the code values for the elements TenderCode and TenderSubCode. The values given represent the various types of tender, which may be rendered at the Point-of-Sale. Note: The range of values in this table is incomplete. Sufficient "user defined" values are provided to enable expansion of the table.
12. *Time Tier* – Contains code values for the various time tiers that may be set for the sale of fuel grades. Typical values could include day/night, Super (day of week), etc.

Other Tables – Additional tables may be added in the future.

TABLE DESCRIPTIONS: PRIMARY

The Primary Tables are presented in alphabetical order in two groups: (1) Maintenance Tables and (2) Movement Tables.

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

COMBO MAINTENANCE TABLE – CBT

The Combo Maintenance table provides information to the Point-of-Sale system regarding a combo pricing scheme. Combo is defined as "selling a specific set of items at promotional price., e.g. 1 drink, 1 sandwich, 1 bag of chips. Such items are generally not of the same product or family of products and generally do not have the same retail price.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ComboID	P	The identification of the combo pricing scheme.	M	40	A	CBT
ItemListID	F	A pointer to the Item List Table.	M	40	A	CBT MMT PJR
ComboDescription	D	A free form description of the combination offered for sale - "combo", i.e., "Manager's Special", "Sandwich Combo", etc.	O	40	A	CBT
ComboReceiptDetailFlag	L	Indicates that each item in the combo should be listed separately on the customer receipt. Default is "No."	O	1	L	CBT PJR
ComboReceiptDescription	D	Indicates that each item in the combo should be individually listed on the customer receipt.	O	40	A	CBT PJR
ItemListDescription	D	A free form description of the list of items included in the list for the purposes of either a Mix-Match or Combo.	O	40	A	CBT ILT PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ComboItemQuantity	M	The quantity of the individual item in the combo,i.e., one sandwich, or one bag of chips, or one large soft drink.	O	16	N	CBT
ComboPrice	M	The RegularSellPrice of the combo.	O	12,4	CUR	CBT PJR
ComboItemUnitPrice	M	The indivdual retail price of the item when included in the combo identified in the ComboID. This will reflect the effect of applying a discount to the item from its RegularSellPrice.	O	12,4	CUR	CBT PJR

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Grade Maintenance - FGT

This table has been assigned the name **PBI_FGT** and contains those data elements the BO system needs to send to the POS system to enable the sale of *fuel grades*. The key to this table is **FuelGradeID**. *Fuel grade* is defined as the wet stock being dispensed into the retail consumer's tank. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeID	P	Is the FuelGradeID for the fuel grade.	M	6	A	FGM FGT FOT
DescriptionID	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions that may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT
FuelProductID	F	Is the FuelProductID for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductID of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
FuelProductIDHigh	F	Is the FuelProductID for the fuel grade in a dispenser blended product that has the highest octane in the blend.	O	6	A	FGT
MerchandiseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ILT ITT TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PaymentSystemsProductCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the NACS Payment Systems Committee.	O	3	N	FGT ITT MCT
FuelPositionID	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate the type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT PJR
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT PJR
TaxStrategyID	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM PJR
TimeTierCode	Q	A pointer to the Operating Level Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT PJR
FuelGradeActiveFlag	L	Indicates that fuel grade may be sold. Default is "Yes."	M	1	L	FGT FOT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductBlendPercent	M	This is the percentage of FuelProductID used in a blending of two fuel products to create a fuel grade. The blend percentage of FuelProductIDHigh is 100 less FuelProductBlendPercent. If not a blended fuel grade then put 100 as the FuelProductBlendPercent.	M	3	N	FGT
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT PJR

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Position Maintenance - FOT

This table has been assigned the name **PBI_FOT** and contains those data elements the BO system needs to send to the POS system to establish the selling parameters for fuel grades at the fueling position, including time tier, price tier and service level. The key to this table is the combination of the elements **FuelPositionID and FuelGradeID**. *Fuel grade* is defined as the wet stock being dispensed into the retail consumer's tank. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

The configuration of fuel dispensers is a POS/ controller/ dispenser issue and not POS BO issue. Users could define a grade/product/tank relationship that does not match the way the site is actually plumed/wired. This is a relevant table for device integration to enhance.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeID	P	Is the FuelGradeID for the fuel grade.	M	6	A	FGM FGT FOT
FuelPositionID	P	Represents physical location where fuel is dispensed to one vehicle at a time.	M	4	N	FOT
TankID	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankID of the fuel product with the lowest octane in the blend.	M	2	N	FOT
TankIDHigh	F	The assigned identification for a fuel product tank. If it is a dispenser blended fuel grade then it is the TankID of the fuel product with the highest octane in the blend.	O	2	N	FOT
FuelGradeActiveFlag	L	Indicates that fuel grade may be sold. Default is "Yes."	M	1	L	FGT FOT
FuelGradeSequenceID	D	The sequence number to which the FuelGradeID is assigned. Normally hose ID.	O	4	N	FOT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PriceTierCode	D	A pointer to the Price Tier Table. The values indicate they type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FOT
ServiceLevelCode	D	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FOT
TimeTierCode	D	A pointer to the Time Tier Table. The values indicate the type of time tier by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FOT

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Fuel Product Maintenance - FPT

This table has been assigned the name **PBI_FPT** and contains those data elements the BO system needs to send to the POS system to enable the POS system to inventory fuel product. The key to this field is **FuelProductId**. *Fuel product* is defined as the wet stock being withdrawn from the tank inventory. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductID	P	An Identifier for a fuel product.	M	6	A	FPM FPT
FuelProductDescription	D	A description of the fuel product indicated by the FuelProductID.	O	40	A	FPT

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ITEM LIST MAINTENANCE TABLE – ILT

The Item List Maintenance table provides a linking mechanism to be used by the Mix-Match and Combo Tables to designate “items” for inclusion in the either the mix-match scheme or the combo.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ItemListID	P	The identification of the list of items in the combo or mix-match.	O	40	A	ILT
MerchandiseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ILT ITT TLM PJR
POSCode	F	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in POSCodeFormat.	M	24	N	ILT
POSCodeFormat	F	The type of coding scheme used in POSCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU 5=GTIN	M	2	N	ILT
POSCodeModifier	F	Scan code or PLU modifier. In combination with POSCode and POSCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ILT
ItemListDescription	D	A free form description of the list of items included in the list for the purposes of either a Mix-Match or Combo.	O	40	A	CBT ILT PJR

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Item Maintenance - ITT

This table has been assigned the name **PBI_ITT** and is designed to provide the data elements that need to be communicated from the BO system to the POS system to enable the POS terminal to sell an *item*. Additional elements are allowed as needed and agreed between BO system and POS system vendors. The sort order of elements in the table is for presentation purposes only and does not imply any implementation requirement.

The Task Force has defined an *item* as equal to the elements of POSCodeFormat + POSCode + POSCodeModifier. The combination of these three elements forms this table's key for transfer of data between the two systems.

POSCodeFormat describes the type of code, which follows in the element POSCode. For example, POSCodeFormat of "0" (zero) would indicate that the POSCode to follow is in U.P.C.-A code format. A value of "4" would indicate the POSCode is a PLU code/number.

POSCodeModifier is a modifier for the preceding POSCode. If not used it should have a value of "0" (zero). Values for this element other than "0" are as agreed between the two systems.

The values given for TaxStrategyId reference the various taxes that may be applied either to the sale of an individual item or to a complete merchandise code (category/department). The business rules for the uses of TaxCode are:

1. If the item does not have a TaxStrategyId, use the TaxStrategyId assigned to that MdseCode level.
2. If there is no TaxStrategyId for the item or the applicable MdseCode, use the POS default for taxes.
3. If there is no TaxStrategyID for the item or MdseCode and no POS default for Taxes, there is no tax to be applied.

The data elements RegularSellPrice, ActualSellPrice and InventoryValuePrice are defined for use in these tables as follows:

1. InventoryValuePrice – It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has

been performed for a promotion, this price will reflect that fact, and will be the same as the ActualSellPrice during the promotion.)

2. ActualSellPrice – It is the price at which the item is priced when sold in a transaction. This element does not appear in the Item Maintenance Table but it does appear in the Item Sales Movement Table.
3. RegularSellPrice – It is the non-discounted, non-promotional price at which an item is normally sold.

Examples of usage for these data elements is as follows:

1. For a single can of soda inventoried at $.89 and sold at $.89:
   - ActualSellPrice = .89
   - RegularSellPrice = .89
   - InventoryValuePrice = .89
2. For a six pack of the same soda sold at $2.99 but inventoried at the single can price:
   - ActualSellPrice = 2.99
   - RegularSellPrice = 2.99
   - InventoryValuePrice = 5.34
3. For a six pack of the same soda sold at $2.99 but with a promotional discount of $.50 on the six pack and inventoried at the single can price:
   - ActualSellPrice = 2.49
   - RegularSellPrice = 2.99
   - InventoryValuePrice = 5.34

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in POSCodeFormat.	M	24	N	ITT ISM PJR
POSCodeFormat	P	The type of coding scheme used in POSCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU 5=GTIN	M	2	N	ITT ISM PJR Pos Code Format

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSCodeModifier	P	Scan code or PLU modifier. In combination with POSCode and POSCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM PJR
DescriptionID	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions that may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT
ItemTypeCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeCode is allowed.	O	4	A	ITT
ItemTypeSubCode	F	A pointer to the Item Type Look-up table. A "null" or "no value" for ItemTypeSubCode is allowed.	O	4	A	ITT
LinkCode	F	Pointer to LinkCode Table.	O	24	N	ITT MCT
MerchandiseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ILT ITT TLM PJR
PaymentSystemsProductCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the NACS Payment Systems Committee.	O	3	N	FGT ITT MCT
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT MMT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DefaultModifierFlag	Q	Indicates this is the default transaction item when there are multiple identical POSCodeFormat and POSCode combinations. It indicates the transaction item to enter into the sale when scan data is not uniquely related to one transaction item. It implies multiple modifiers. Default is "No."	O	1	L	ITT
ItemID	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many POSCodes and does not need to be unique.	O	24	A	ITT ISM PJR
SellingUnits	Q	Number of individual units in a transaction item at time of sale. For example, 6 for a 6 pack.	O	4	N	ITT ISM PJR
TaxStrategyID	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM PJR
ActiveFlag	L	The item/merchandise code can be sold. Default is "Yes."	M	1	L	ITT MCT
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT PJR
FamilyCode	D	That portion of a U.P.C. on a manufacturer's coupon used to identify an item's grouping for discount purposes.	O	3	N	ITT PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM PJR
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT PJR

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Merchandise Code Maintenance - MCT

This table has been assigned the name **PBI_MCT** and is designed to provide the data elements that need to be communicated from the BO system to the POS system to enable the POS to properly maintain the status of all items at the merchandise code level. Additional elements are allowed as needed and agreed between BO system and POS system vendors. The sort order of elements in the table is for presentation purposes only and does not imply any implementation requirement.

The values given for TaxStrategyID reference the various taxes that may be applied either to the sale of an individual item or to a complete merchandise code (category/department). The business rules for the use of TaxCode are:

1. If the item does not have a TaxStrategyID, use the TaxStrategyID assigned to that MdseCode level.
2. If there is no TaxStrategyID for the item or the applicable MdseCode, use the POS default for taxes.
3. If there is no TaxStrategyID for the item or MdseCode and no POS default for Taxes, there is no tax to be applied.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MerchandiseCode	P	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	MCT MCM
DescriptionID	F	A pointer to the Description Cross Reference Table. The values of the table contain the ultra short, short, long and ultra long descriptions that may be used for pole displays, customer receipts, kitchen displays, etc.	O	30	A	ITT MCT FGT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
LinkCode	F	Pointer to LinkCode Table.	O	24	N	ITT MCT
PaymentSystemsProductCode	F	A pointer to the Payment Systems Product Code Table. The values of the table indicate the appropriate item/merchandise code as defined by the NACS Payment Systems Committee.	O	3	N	FGT ITT MCT
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT MMT
TaxStrategyID	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM PJR
ActiveFlag	L	The item/merchandise code can be sold. Default is "Yes."	M	1	L	ITT MCT
MerchandiseCodeDescription	D	Native language description of the merchandise code normally printed on the register tape.	O	40	A	MCT MCM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

MIX-MATCH MAINTENANCE TABLE – MMT

The Mix-Match Maintenance table provides pricing information to the Point-of-Sale system regarding Mix-Match items. Mix/Match is defined as "selling one or more items at a promotional price where the items are generally of the same product or family of products and generally have the same retail price. An example of this pricing strategy is a promotion where candy bars are normally $.59 each and a mix/match scheme is used to implement a '2 for $.99' price for any two candy bars purchased.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MixMatchID	P	The identification of the particular mix-match pricing scheme.	M`	4	N	MMT
ItemListID	F	A pointer to the Item List Table.	O	40	A	CBT MMT PJR
SalesRestrictCode	F	A pointer to a value in the SalesRestrict table. The values indicate the restrictions that apply to the item/merchandise code.	O	4	N	ITT MCT MMT
MixMatchStrictHighFlag	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if one additional unit is purchased the discount does not apply to that unit. Default is "Yes."	O	1	L	MMT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MixMatchStrictLowFlag	L	A flag to indicate that an exact multiple of the MixMatchUnits must be purchased for the discount to apply. This flag indicates that if less than the minimum number of units is purchased the discount does not apply to those units. Default is "Yes."	O	1	L	MMT
MixMatchDescription	D	A description of the MixMatch offer.	O	40	A	MMT
MixMatchMaximumUnits	M	The maximum number of units of this item that may be purchased at the mix-match price.	O	4	N	MMT
MixMatchPrice	M	The total price for this quantity purchase level.	M	12,4	CUR	MMT
MixMatchUnits	M	The number of units that need to be purchased to qualify for this price.	M	4	N	MMT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tank Product Maintenance - TPT

This table has been assigned the name **PBI_TPT** and contains those data elements the BO system needs to send to the POS system to inventory *fuel product by tank.* The key to this table is **TankID**. *Fuel product* is defined as the wet stock delivered into the storage tanks at the location. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankID	P	The assigned identification for a fuel product tank.	M	2	N	TPM TPT
FuelProductID	F	Is the FuelProductID for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductID of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
TankChartID	D	A pointer to a tank capacity chart not defined in this document.	O	4	N	TPT
TankDescription	D	A description of the tank.	O	40	A	TPT
TankInstallDate	D	The date the fuel product tank was installed	O	8	D	TPT
TankManifoldID	D	The identification of the fuel product tank manifold. Usage is implementation specific.	O	2	N	TPT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankManufacturer	D	The name of the manufacturer of the fuel product tank.	O	40	A	TPT
TankModelNumber	D	The model number of the fulel product tank.	O	40	A	TPT
TankSerialNumber	D	A description of the serial number of the fuel product tank.	O	40	A	TPT
TankDepth	M	The maximum depth of fuel product.	O	8,3	N	TPT
TankLowInventoryVolume	M	The fuel product volume to indicate a critically low inventory condition.	O	12,4	N	TPT
TankMaximumOperatingVolume	M	The maximum amount of product which can be safely put into a tank.	O	12,4	N	TPT TPM
TankReorderVolume	M	The fuel product volume in the tank at which fuel product should be reordered.	O	12,4	N	TPT
TankVolume	M	The volumetric capacity of the fuel product tank in the pre-defined unit-of-measure.	O	12,4	N	TPT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Includes Maintenance - TIT

This table has been assigned the name **PBI_TIT** and contains those data elements the BO system needs to send to the POS system to establish tax authority and calculation sequence for the application of taxes by tax level. The key to this field is **TaxLevelID**.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelID	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT PJR
TaxLevelIncludedID	D	Identifies the tax authority whose tax amount should be included in the taxable amount.	O	8	A	TIT
TaxSequenceNumber	D	Identifies the sequence that the included TaxLevelID should be followed to calculate the TaxLevelIDs taxes.	O	4	N	TIT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Level Maintenance – TLT

This table has been assigned the name **PBI_TLT** and contains those data elements the BO system needs to send to the POS system to establish the tax level information including tax table to be used for breakpoints, tax rate, etc. The key to this field is **TaxLevelID**.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelID	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT PJR
TaxTableID	F	A pointer to a matrix of tax breakpoints for taxes that are not a straight percentage.	O	4	A	TLT
TaxTypeID	F	Pointer to a look-up table.	M	4	A	TLT
TaxActiveFlag	L	Indicates whether this TaxLevelID is active future or past. Default is "Yes."	O	1	L	TLT
TaxDescription	D	Describes the tax authority.	O	40	A	TLT
TaxReceiptDescription	D	Describes the tax authority in an abbreviated format.	O	8	A	TLT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxRegistrationNumber	D	Number assigned by taxing authority that must appear on the register receipt or reports.	O	16	N	TLT
TaxSymbol	D	Single character that prints on the register receipt to indicate the TaxLevelID.	O	4	A	TLT
TaxRate	M	Percentage applicable to the ActualSellPrice of an item unless breakpoint matrix is used.	O	4	N	TLT

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Strategy Maintenance - TST

This table has been assigned the name **PBI_TST** and contains those data elements the BO system needs to send to the POS system to establish the tax strategy for the location including the methods and algorithms used for tax calculation. The key to this table is **TaxStrategyID**.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxStrategyID	P	A description of this tax strategy.	M	4	N	TST
TaxLevelID	F	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TST
TaxLevelSequenceID	D	Indicates the order in which tax levels should be applied.	O	8	A	TST
TaxStrategyDescription	D	A free form description of the Tax Strategy being identified.	O	40	A	TST

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Grade Movement - FGM

This table has been assigned the name **PBI_FGM** and contains those data elements the POS system needs to send to the BO system to report *fuel grade* movement. The key to this field is **FuelGradeID**. *Fuel grade* is defined as the wet stock being dispensed into the customer's vehicle. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelGradeID	P	Is the FuelGradeID for the fuel grade.	M	6	A	FGM FGT FOT
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM PJR
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR
CurrencyCode	Q	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	FGM PJR
CurrencySubCode	Q	A pointer to the currency look-up table.	O	4	A	FGM ISM MSM PJR
FuelPositionID	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
OutsideSalesFlag	Q	Indicates the sale was settled at the pump island by some means, such as credit card reader, cash acceptor, or cashier. Default is "No."	O	1	L	FGM PJR
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate the type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM PJR
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT PJR
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
TimeTierCode	Q	A pointer to the Operating Level Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT PJR
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM PJR
DiscountAmount	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	O	12,4	CUR	ISM MCM FGM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DiscountCount	M	Total number of discount transactions associated with the DiscountAmount for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
DispenserDiscountAmount	M	Sum of all discounts applied by reducing the dispenser RegularSellPrice. FuelGradeSalesAmount already reflects this discount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	M	12,4	CUR	FGM PJR
DispenserDiscountCount	M	Total number of discount transactions applied by reducing the dispenser RegularSellPrice.	O	8	N	FGM
FuelGradeNonResettableTotalAmount	M	The sum of the value of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	CUR	FGM
FuelGradeNonResettableTotalVolume	M	The volume of the fuel grade sold during the time period specified as computed by the non-resettable totalizer for that fuel grade.	O	16,4	N	FGM
FuelGradeSalesAmount	M	The difference between the present period and the prior period FuelGradeNonResettableTotalAmount.	M	12,4	CUR	FGM
FuelGradeSalesVolume	M	The difference between the present period and the prior period FuelGradeNonResettableTotalVolume..	M	12,4	N	FGM
PumpTestAmount	M	Sum of the value of "pump for test" fuel grade in the reporting period.	M	12,4	CUR	FGM
PumpTestVolume	M	Volume of "pump for test" fuel grade in the reporting period.	M	12,4	N	FGM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT PJR
TaxExemptSalesVolume	M	Total volume of tax exempt fuel grade.	O	12,4	N	FGM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Fuel Product Movement - FPM

This table has been assigned the name **PBI_FPM** and contains those data elements the POS system needs to send to the BO system to report *fuel product* movement. The key to this field is **FuelProduct**. *Fuel product* is defined as the wet stock being withdrawn from the tank inventory. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

> **Note:** In a non-blended situation the use of this table is optional. The Fuel Grade Movement table contains all necessary data for both grade and product movement. The only time product and grade differ is in a blended scenario.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
FuelProductID	P	Is the FuelProductID for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductID of the fuel product with the lowest octane in the blend.	M	6	A	FPM FPT
FuelPositionID	Q	Represents physical location where fuel is dispensed to one vehicle at a time.	O	4	N	FGM FPM FGT
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
FuelProductNonResettableAmountNumber	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable amount totalizer for that fuel product.	O	16,4	N	FPM
FuelProductNonResettableVolumeNumber	M	The ending reading of the fuel product sold during the time period specified as indicated by the non-resettable volume totalizer for that fuel product.	O	16,4	N	FPM
FuelProductVolume	M	The measured volume of fuel product in the tank inclusive of water. One or the other of FuelProductDepth or FuelProductVolume is mandatory.	C	12,4	N	FPM TPM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Item Sales Movement - ISM

This table has been assigned the name **PBI_ISM** and is designed to provide the data elements necessary for the POS system to report *item* level sales to the BO system. This table uses the *item* as the key. An *item* is defined as the combination of the elements POSCodeFormat + POSCode + POSCodeModifier.

The sum of all sales reported for a specific period, using this table, must not change regardless of how many detail records are generated.

> **Note:** Description is included in this table to facilitate visual inspection of the data stream**.**
>
> When a price change for an item or items occurs during the PriRptPer, the ReasonCode may be used to differentiate sales made at different ActualSellPrices and multiple records may be exchanged to account for these sales. The BO system would need to be capable of rolling up those different records to provide sales totals for each item.
>
> Multiple records for an item could be exchanged based on any optional item from the data table, with the requirement that the multiple records sum to the correct amount for that item for the time period.
>
> If the POS system is not capable of exchanging multiple records per item, the ActualSellPrice should reflect the average price for all sales of the item over the time period being reported, and the RegularSellPrice should indicate the price at the time the report was generated.
>
> The exchange of information using this table is not intended to address cash balancing and reconciliation or cashier accountability.
>
> It is assumed that all Item Sales Movement information is included within the Merchandise Code Movement (MCM) table at the summary level for the appropriate MdseCode.

The data elements RegularSellPrice, ActualSellPrice and InventoryValuePrice are defined for use in these tables as follows:

1. InventoryValuePrice – It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when

compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion, this price will reflect that fact, and will be the same as the ActualSellPrice during the promotion.)

2. ActualSellPrice – It is the price at which the item is priced when sold in a transaction. (This element does not appear in the Item Maintenance Table but it does appear in the Item Sales Movement Table.)
3. RegularSellPrice – It is the non-discounted, non-promotional promotional price at which an item is normally sold.

Examples of usage for these data elements is as follows:

1. For a single can of soda inventoried at $.89 and sold at $.89:
   - ActualSellPrice = .89
   - RegularSellPrice = .89
   - InventoryValuePrice = .89
2. For a six pack of the same soda sold at $2.99 but inventoried at the single can price:
   - ActualSellPrice = 2.89
   - RegularSellPrice = 2.89
   - InventoryValuePrice = 5.34
3. For a six pack of the same soda sold at $2.99 but with a promotional discount of $.50 on the six pack and inventoried at the single can price:
   - ActualSellPrice = 2.39
   - RegularSellPrice = 2.89
   - InventoryValuePrice = 5.34

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in POSCodeFormat.	M	24	N	ITT ISM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSCodeFormat	P	The type of coding scheme used in POSCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU 5=GTIN	M	2	N	ITT ISM PJR Pos Code Format
POSCodeModifier	P	Scan code or PLU modifier. In combination with POSCode and POSCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM PJR
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM ISM PJR
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender that was used to finalize item/merchandise code sales.	M	4	A	ISMMSM PJR TENDER
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM PJR TENDER
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM PJR
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR
CurrencySubCode	Q	A pointer to the currency look-up table.	O	4	A	FGM ISM MSM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ItemID	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many POSCodes and does not need to be unique.	O	24	A	ITT ISM PJR
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM PJR
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
SellingUnits	Q	Number of individual units in a transaction item at time of sale. For example, 6 for a 6 pack.	O	4	N	ITT ISM PJR
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT PJR
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM PJR
DiscountAmount	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	O	12,4	CUR	ISM MCM FGM PJR
DiscountCount	M	Total number of discount transactions associated with the DiscountAmount for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM PJR
PromotionAmount	M	Sum of value of promotions associated with the item/merchandise code being reported. For PJR the amount of the promotion associated with the item in the transaction or with the total transaction.	M	12,4	CUR	ISM MCM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PromotionCount	M	Total count of promotion transactions associated with the item/merchandise code being reported.	O	8	N	ISM MCM
RefundAmount	M	Sum of the value of refunds associated with the item/MerchandiseCode being reported. For PJR the amount of the refund associated with the item in the transaction or with the transaction as a whole.	M	12,4	CUR	ISM MCM PJR
RefundCount	M	Total count of refund transactions associated with the item/MerchandiseCode being reported.	O	8	N	ISM MCM
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT PJR
SalesAmount	M	Sum of the value of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	CUR	ISM MCM PJR
SalesQuantity	M	Total quantity of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	N	ISM MCM PJR
TransactionCount	M	Total number of individual transactions related to this item. This value may be count quantity or volume depending upon usage.	O	8,3	N	ISM MCM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Merchandise Code Movement - MCM

This table has been assigned the name **PBI_MCM** and is designed to provide the data elements that should be sent from the POS system to the BO system for the purpose of reporting merchandise code movement. Typically, this is most commonly referred to as category/department sales totals. The key for this table is **MdseCode.**

> **Note:** In this table SalesAmt/SalesQty is the summary of all transactions affecting the merchandise code including Item Sales Movement (ISM) Table reported sales, if used. Therefore, it is assumed that all Item Sales Movement information is included within the Merchandise Code Movement (MCM) table at the summary level.
>
> Although a separate table is provided for the sale of fuel grades (FGM) most systems would probably also report fuel sales either in total or by grade as a MdseCode depending upon implementation setup.
>
> The exchange of information using this table is not intended to address cash balancing and reconciliation or cashier accountability.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MerchandiseCode	P	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	MCT MCM
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
MerchandiseCodeDescription	D	Native language description of the merchandise code normally printed on the register tape.	O	40	A	MCT MCM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
DiscountAmount	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	O	12,4	CUR	ISM MCM FGM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DiscountCount	M	Total number of discount transactions associated with the DiscountAmount for the item/merchandise code/fuel grade being reported.	O	8	N	ISM MCM FGM
PromotionAmount	M	Sum of value of promotions associated with the item/merchandise code being reported. For PJR the amount of the promotion associated with the item in the transaction or with the total transaction.	M	12,4	CUR	ISM MCM PJR
PromotionCount	M	Total count of promotion transactions associated with the item/merchandise code being reported.	O	8	N	ISM MCM
RefundAmount	M	Sum of the value of refunds associated with the item/MerchandiseCode being reported. For PJR the amount of the refund associated with the item in the transaction or with the transaction as a whole.	M	12,4	CUR	ISM MCM PJR
RefundCount	M	Total count of refund transactions associated with the item/MerchandiseCode being reported.	O	8	N	ISM MCM
SalesAmount	M	Sum of the value of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	CUR	ISM MCM PJR
SalesQuantity	M	Total quantity of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	N	ISM MCM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TransactionCount	M	Total number of individual transactions related to this item. This value may be count quantity or volume depending upon usage.	O	8,3	N	ISM MCM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Miscellaneous Summary Movement - MSM

This table has been assigned the name **PBI_MSM** and contains those data elements the POS system needs to send to the BO system to report miscellaneous summary level detail. The key to this table is **MiscSumCode**. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

> **Note:** The exchange of information using this table is not intended to address cash balancing and reconciliation or cashier accountability.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MiscellaneousSummaryCode	P	Pointer to the look-up table.	M	4	A	MSM
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM ISM PJR
MiscellaneousSummarySubCode	F	Pointer to the look-up table.	O	4	N	MSM
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender that was used to finalize item/merchandise code sales.	M	4	A	ISMMSM PJR TENDER
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM PJR TENDER

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR
CurrencySubCode	Q	A pointer to the currency look-up table.	O	4	A	FGM ISM MSM PJR
MiscellaneousSummarySubCodeModifier	Q	Modifier to the MiscellaneousSummarySubCode to provide an additional level of detail.	O	8	A	MSM
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
ManualEntryFlag	L	If true indicates that the MiscellaneousSumCode values are derived from manual entry at the POS. Default is "No."	O	1	L	MSM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM PJR
MiscellaneousSummaryAmount	M	The sum of the value of the individual transactions related to this code and sub-code.	M	16,4	CUR	MSM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MiscellaneousSummaryCount	M	Total number of individual transactions related to this code and sub-code. This value may be count, quantity, or volume depending upon usage.	O	16,4	N	MSM
TenderTransactionsCount	M	Count of the transactions associated with the type of tender.	O	8	N	MSM

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Tank Product Movement - TPM

This table has been assigned the name **PBI_TPM** and contains those data elements the POS system needs to send to the BO system to report *fuel product* inventory levels. The key to this table is **TankID**. *Fuel product* is defined as the wet stock delivered into the storage tanks at the location. Additional elements are allowed as needed and agreed between BO system and POS system vendors.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TankID	P	The assigned identification for a fuel product tank.	M	2	N	TPM TPT
FuelProductID	F	Is the FuelProductID for the fuel grade. If it is a dispenser blended fuel grade then it is the FuelProductID of the fuel product with the lowest octane in the blend.	M	6	A	FGT TPM TPT
ReadingDate	D	The date of the depth/volume reading. (YYYYMMDD)	O	8	D	TPM
ReadingTime	D	The time of the depth/volume reading. 24 hour format (HHMM)	O	4	T	TPM
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
FuelProductDepth	M	The measured depth of fuel product in the tank inclusive of water. One or the other of FuelProductDepth or FuelProductVolume is mandatory.	C	8,3	N	TPM
FuelProductTemperature	M	The temperature of the fuel product in the tank at the time of the depth/volume reading.	O	5,1	N	TPM
FuelProductVolume	M	The measured volume of fuel product in the tank inclusive of water. One or the other of FuelProductDepth or FuelProductVolume is mandatory.	C	12,4	N	FPM TPM

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OperatingUllage	M	The empty portion of a fuel product tank as determined by subtracting the FuelProductVolume (observed volume) from the TankMaximumOperatingVolume	O	16,4	N	TPM
TankMaximumOperatingVolume	M	The maximum amount of product which can be safely put into a tank.	O	12,4	N	TPT TPM
Ullage	M	Is the volume of the empty portion of a tank.	O	12,4	N	TPM
WaterDepth	M	The measured depth of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVolume is mandatory.	O	8,3	N	TPM
WaterVolume	M	The measured volume of water in the tank at the time of the depth/volume reading. One or the other of WaterDepth or WaterVolume is mandatory.	O	12,4	N	TPM

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Tax Level Movement - TLM

This table has been assigned the name **PBI_TLM** and contains those data elements the POS system needs to send to the BO system to report tax level collections and sales data. The key to this field is **TaxLevelID**.

Notes:

1. Non-Taxable sales are reported elsewhere.
2. Taxable Sales reported without a MdseCode Qualifier are the total taxable sales for the TaxLevelID and period.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxLevelID	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT PJR
MerchandiseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ILT ITT TLM PJR
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
TaxStrategyID	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
TaxExemptReason	D	The reason the item/merchandise code was sold tax exempt.	O	40	A	TLM PJR
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
TaxableSalesAmount	M	Sum of the taxable value of all sales for this TaxLevelID net of discounts and promotional allowances and after refunds.	M	12,4	CUR	TLM PJR
TaxableSalesRefundedAmount	M	Sum of the value of the refunds of the taxable sales for this TaxLevelID.	M	12,4	CUR	TLM PJR
TaxCollectedAmount	M	The amount of tax collected.	M	12,4	CUR	TLM PJR
TaxExemptSalesAmount	M	Sum of the value of the sales given exempt status net of discounts and promotional allowances and after refunds. (Exempt refers to transactions such as sales made to a customer with a tax exempt certificate.).	O	12,4	CUR	TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxExemptSalestRefundedAmount	M	Sum of the value of the refunds on tax exempt sales	O	12,4	CUR	TLM PJR
TaxForgivenSalesAmount	M	Sum of the sales for this TaxLevelID sold on a tax forgiven basis net of discounts and promotional allowances and before refunds. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM PJR
TaxForgivenSalesRefundedAmount	M	Sum of the value of the refunds on tax forgiven sales for this TaxLevelID. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM PJR
TaxRefundedAmount	M	The amount of tax refunded.	M	12,4	CUR	TLM PJR

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

POSJournal – PJR

This table has been assigned the name **PBI_PJR** and contains those data elements the POS system needs to send to the BO system to record individual sales transactions and other POS related events.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSCode	P	The scan code or PLU number used to access an item's information. The code-coding scheme used is designated in POSCodeFormat.	M	24	N	ITT ISM PJR
POSCodeFormat	P	The type of coding scheme used in POSCode 0=U.P.C.-A 1= U.P.C.-E 2=EAN8 3=EAN13 4=PLU 5=GTIN	M	2	N	ITT ISM PJR Pos Code Format
POSCodeModifier	P	Scan code or PLU modifier. In combination with POSCode and POSCodeFormat it uniquely identifies an item. If it is not used a value of "0" (zero) must be provided. It can be used to indicate pricing level.	M	4	N	ITT ISM PJR
TaxLevelID	P	A pointer to the Tax Level Table. The values of the table specify the tax level being reported. It usually defines a tax rate or table.	M	4	N	TIT TLM TLT PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CurrencyCode	F	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	MSM ISM PJR
ItemListID	F	A pointer to the Item List Table.	O	40	A	CBT MMT PJR
MerchandiseCode	F	Lowest level of merchandise hierarchy. Typically is referred to as department or category. This may be taken from the NACS Category Definitions and Numbering Guide.	M	10	A	FGT ILT ITT TLM PJR
TenderCode	F	A pointer to a value in the Tender Type table. The values indicate the type of tender that was used to finalize item/merchandise code sales.	M	4	A	ISMMSM PJR TENDE R
TenderSubCode	F	A pointer to a value in the Tender Type Sub table. The values indicate the sub-categories of the type of tender that were used to finalize item/merchandise code sales.	O	4	A	ISM MSM PJR TENDE R
AccountID	Q	The identification of the account related to the tender type.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ActualSellPrice	Q	The actual price at which an item/fuel grade was sold.	O	12,4	CUR	ISM FGM PJR
CashierID	Q	Identifies the cashier conducting the transaction(s) in the reporting period.	O	40	A	ISM MCM FGM MSM TLM PJR
CurrencyCode	Q	A pointer to the currency look-up table. This table uses the currency and country codes contained in ISO 4217-1995.	O	4	A	FGM PJR
CurrencySubCode	Q	A pointer to the currency look-up table.	O	4	A	FGM ISM MSM PJR
EventID	Q	The identification of a specific event responsible for the reward.	O	40	A	PJR
ItemID	Q	Item identifier. This is a retailer assigned number that may be a SKU or a pricebook number but it is not a vendor number. It may group many POSCodes and does not need to be unique.	O	24	A	ITT ISM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OriginalTransactionID	Q	The identification of the original transaction.	O	40	A	PJR
OutsideSalesFlag	Q	Indicates the sale was settled at the pump island by some means, such as credit card reader, cash acceptor, or cashier. Default is "No."	O	1	L	FGM PJR
PriceTierCode	Q	A pointer to the Price Tier Table. The values indicate the type of pricing level by which the customer purchased or may purchase the fuel grade. This is typically used for cash/credit pricing.	O	4	N	FGM FGT PJR
ReasonCode	Q	A pointer to a value in the ReasonCode table. The values indicate why the item/merchandise code/fuel grade was sold at a price different from the RegularSellPrice.	O	3	A	FGM ISM PJR
RegisterID	Q	The identification of the register that finalized the sales being reported. This is typically the register number.	O	3	N	ISM MCM FGM MSM TLM PJR
SellingUnits	Q	Number of individual units in a transaction item at time of sale. For example, 6 for a 6 pack.	O	4	N	ITT ISM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ServiceLevelCode	Q	A pointer to the Service Level Table. The values indicate the type of service by which the customer purchased or may purchase the fuel grade. This is typically used for self/full serve pricing.	O	4	N	FGM FGT PJR
TaxStrategyID	Q	It is a pointer to the Tax Strategy Maintenance Table that includes sufficient methods and/or algorithms to compute the tax relative to or required by that item/department. A TaxStrategyID = 0 indicates the item is non-taxable.	O	4	N	FGT ITT MCT TLM PJR
TillID	Q	Identifies the till in a multiple till per register scenario.	O	4	N	FGM ISM MCM MSM TLM PJR
TimeTierCode	Q	A pointer to the Operating Level Table. The values indicate the type of operating level by which the customer purchased or may purchase the fuel grade. This is typically used for day segment pricing.	O	4	N	FGM FGT PJR
TransactionStartDate	Q	The transaction start date.	O	8	D	PJR
TransactionStartTIme	Q	The transaction start time	O	6	T	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
CashierBypassedFlag	L	Indicates the cashier bypassed the electronic authorization system.	O	1	L	PJR
ComboReceiptDetailFlag	L	Indicates that the each item in the combo should be listed separately on the customer receipt. Default is "No"	O	1	L	PJR
ForceOnLineFlag	L	Indicates that a manual authorization of the credit card authorization terminal was forced by the operator. Default is "No."	O	1	L	PJR
ForceQuantityFlag	L	Implies that a "quantity key" was used to indicate the number of units of an item included in the sale.	O	1	L	PJR
ForceWeightFlag	L	Indicates that the weight of the item was manually input at the time of sale. Default is "Yes."		1	L	PJR
HostAuthorizedFlag	L	Indicates whether the authorization has been done locally or by a host. Default is "Yes" indicating host authorized.	O	1	L	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OfflineFlag	L	Indicates the electronic authorizing terminal was offline at the time of the transaction.	O	1	L	PJR
PreAuthorizationFlag	L	Indicates a "preauthoriztion" for the credit/debit/fleet card was obtained. Default is "Yes.”	O	1	L	PJR
SendCheckFlag	L	A flag to indicate if a check should be returned to the customer. The default value is "No"	O	1	L	PJR
SuspendFlag	L	Indicates the authorizing host was in a suspend mode at the time of the transaction.	O	1	L	PJR
AccountFirstName	D	First name of the account related to the tender type.	O	40	A	PJR
AccountInformation	D	Information about the account related to the tender type.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
AccountLastName	D	The last name of the account related to the tender type.	O	40	A	PJR
AccountMiddleName	D	The middle name of the account related to the tender type.	O	40	A	PJR
AccountName	D	The name of the account related to the tender type.	O	40	A	PJR
ApprovalReferenceCode	D	The approval reference code received from the processing host.	O	40	A	PJR
AuthorizationApprovalDescription	D	Optional description of the circumstances of the approval.	O	40	A	PJR
AuthorizationDate	D	The date associated with the credit card authorization received from the processing host.	O	8	D	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
AuthorizationResponseCode	D	The authorization code received from the processing host.	O	40	A	PJR
AuthorizationResponseDescription	D	The description of the authoriztion response received from the host.	O	40	A	PJR
AuthorizationTime	D	The time associated with the credit card authorization received from the processing host.	O	4	T	PJR
AuthorizingTerminalID	D	The identification of the POS or Credit Card Authorizing terminal related to the specific authorization.	O	40	A	PJR
BankAccountNumber	D	The bank account number of the check being processed.	O	16	N	PJR
BankID	D	The identification of the bank for the check being processed.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BusinessDate	D	The business date assigned by the company. May not be the same as calendar date.	O	8	D	PJR
CheckNumber	D	The sequential number assigned to the check, which is generally pre-printed in the upper right hand corner of the check.	O	16	N	PJR
City	D	The city of the address.	O	40	A	PJR
Description	D	Native language description of the transaction item.	O	40	A	ISM ITT PJR
DriverID	D	The identification of the driver in a fleet card purchase.	O	40	A	PJR
ElectronicSignature	D	Used to give the electronic signature value where signature capture device is present for additional verification.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EntryMethodID	D	Delineates the method by which an item was identified for the purposes of the transaction, I.e., scanned, PLU, manual entry, etc.	O	4	N	PJR
FamilyCode	D	That portion of a U.P.C. on a manufacturer's coupon used to identify an item's grouping for discount purposes.	O	3	N	ITT PJR
IDExpirationDate	D	The expiration date of the identification used to provide proper age verification or customer identification.	O	8	D	PJR
IDIssuingAuthority	D	The identification of the agency issuing the identification being used to verify age/presenter.	O	40	A	PJR
ItemListDescription	D	A free form description of the list of items included in the list for the purposes of either a Mix-Match or Combo.	O	40	A	CBT ILT PJR
JobID	D	The job identification of the vehicle in the fleet purchase.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ManualActionID	D	The identification of the action used to trigger the promotion.	O	40	A	PJR
MesssageID	D	The identification of the message that has been displayed to either the operator or the customer.	O	40	A	PJR
MoneyOrderTypeIndicator	D	An indicator as to the type of money order, I.e., vendor payment, payroll, customer, etc.	O	4	N	PJR
OriginalApprovalCode	D	The approval code of the original transaction.	O	40	A	PJR
OriginalBusinessDate	D	The business date of the original transaction.	O	8	D	PJR
OriginalTransactionEndDate	D	The ending date of the original transaction	O	8	D	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OriginalTransactionEndTime	D	The ending time of the original transaction.	O	6	T	PJR
OriginalTransactionStartDate	D	The start date of the original transaction.	O	8	D	PJR
OriginalTransactionStartTime	D	The start time of the original transaction.	O	6	T	PJR
PersonalID	D	The identification number captured for identification, such as driver's license, social security, etc.	O	40	A	PJR
PersonalIDType	D	The type of identification used to identify the individual, I.e. driver's license, social security number, etc.	O	40	A	PJR
POSAssignedDate	D	The date assigned by the POS to the transaction. Is not necessarily the same as the business date.	O	8	D	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSAssignedTime	D	The time assigned by the POS to the transaction.	O	4	T	PJR
PostalCode	D	The postal code of the address.	O	40	A	PJR
PriceOverrideApproverID	D	The identification of the person authorizing a price override.	O	40	A	PJR
PriceOverrideReasonCode	D	Indicates the reason for the price override.	O	40	A	PJR
PromotionID	D	Identifies the promotion.	O	40	A	PJR
ProviderID	D	Identifies the authorizing agency, bank or clearinghouse.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RedeemedCouponID	D	The identification of the redeemed coupon.	O	40	A	PJR
RedeemedPointsTypeID	D	The identification of the type of points redeemed.	O	40	A	PJR
RefundReason	D	A description of the reason for the refund.	O	40	A	PJR
RevenueCenterID	D	The identification of the revenue or profit center within the store.	O	40	A	PJR
RewardedCouponID	D	The identification of the rewarded coupon.	O	40	A	PJR
RewardedPointsTypeID	D	The identification of the type of points rewarded.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
State	D	The state of the address	O	40	A	PJR
StoreConceptID	D	The identification of the concept within the RevenueCenterID, I.e. Subway within a QSR RevenueCenterID.	O	40	A	PJR
TaxExemptReason	D	The reason the item/merchandise code was sold tax exempt.	O	40	A	TLM PJR
TransactionEndDate	Q	The transacton end date.	O	8	D	PJR
TransactionEndTIme	Q	The transaction end time.	O	6	T	PJR
TransactionID	D	The identification assigned to the transaction.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TransactionType	D	The type of the transaction created at the POS, I.e., sale, refund, void, etc.	O	40	A	PJR
VehicleID	D	The identification of the vehicle in the fleet purchase.	O	40	A	PJR
VisitFrequencyNumber	D	The number of visits triggering the promotion reward.	O	16`	N	PJR
WashCodeDescription	D	A free form description of car wash.	O	40	A	PJR
WashCodeExpirationDate	D	The expiration date assigned to the wash code generated by the POS at the time of sale of the wash.	O	8	D	PJR
BeginDate	H	Beginning date of reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginTime	H	Beginning time of the reporting period. 24 hour format (HHMM)	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
EndDate	H	Ending date of the reporting period. (YYYYMMDD).	O	8	D	FGM FPM ISM MCM MSM TLM TPM PJR
EndTime	H	Ending time of the reporting period. 24 hour format. (HHMM).	O	4	T	FGM FPM ISM MCM MSM TLM TPM PJR
PrimaryReportPeriod	H	The major reporting period associated with the data. It is typically a business day. It is represented by a sequence of integers that normally reset at some pre-determined time interval such as monthly, yearly etc.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR
ReportSequenceNumberID	H	A unique sequential report control number.	O	12	N	FGM FPM ISM MCM MSM TLM TPM PJR
SecondaryReportPeriod	H	This is the secondary reporting period that is a subset of the major reporting period. It is commonly associated with a shift and is represented by a sequence of integers that normally reset when the major reporting period increments.	O	8	N	FGM FPM ISM MCM MSM TLM TPM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
StoreLocationID	H	The store/location/site identifier assigned by the company to this physical location. It is typically the store number.	O	10	A	ISM MCM FGM FPM TPM MSM PJR
VendorModelVersion	H	A description of the POS or Back Office model/version. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
VendorName	H	The POS or Back Office vendor name. The use of this element is an implementation choice. Some may prefer to set up a general table containing this information.	O	10	A	FGM FPM ISM MCM MSM TLM PJR
AuthorizedChangeAmount	M	The amount of change authorized by the authorizing credit card host for the related tender.	O	12,4	CUR	PJR
BirthDate	M	The birth date of the customer purchasing the item or the birth date of the employee selling the item.	O	8	D	PJR
ComboItemUnitPrice	M	The indivdual retail price of the item when included in the combo identified in the ComboID. This will reflect the effect of applying a discount to be item from its RegularSellPrice.	O	12,4	CUR	CBT PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ComboPrice	M	The RegularSellPrice of the Combo.	M	12,4	CUR	PJR
CurrencyFaceValue	M	The value of the foreign currency specified by the currency code.	O	16,4	CUR	ISM FGM MSM PJR
DiscountAmount	M	Sum of all discounts associated with the item/merchandise code being reported. For fuel grade sales this sum is not reflected in FuelGradeSalesAmount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	O	12,4	CUR	ISM MCM FGM PJR
DispenserDiscountAmount	M	Sum of all discounts applied by reducing the dispenser RegularSellPrice. FuelGradeSalesAmount already reflects this discount. For PJR this is the amount of the discount associated with the individual item in the transaction or with the transaction as a whole.	M	12,4	CUR	FGM PJR
InventoryValuePrice	M	It is the price used to calculate inventory value when using the retail accounting method. It is the price basis for determining spot markups or markdowns when compared to the ActualSellPrice. (Note: if a bulk markdown has been performed for a promotion this price will reflect that fact and will be the same as the ActualSellPrice during the promotion.)	M	12,4	CUR	ITT ISM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MoneyOrderCheckDigit	M	The check digit in the money order number.	O	1	N	PJR
MoneyOrderFaceAmount	M	The face value imprinted on the money order.	O	12,4	CUR	PJR
MoneyOrderFeeCollected Amount	M	The value of the fee collected for processing the money order.	O	12,4	CUR	PJR
MoneyOrderNumber	M	The sequential number issued by the money order company to the individual money order being sold.	O	16,4	N	PJR
NumberOfVisits	M	The number of visits that has caused this promotion to be successful.	O	16	N	PJR
OdometerReading	M	The odometer reading of the vehicle purchasing fuel.	O	16	N	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
OriginalAmount	M	The amount of the item in the original transaction.	O	12,4	CUR	PJR
OriginalReferenceNumber	M	The reference number of the original transaction.	O	16,4	N	PJR
OriginalRegisterID	M	The identification of the register involved in the original transaction.	O	3	N	PJR
OriginalStoreLocationID	M	The identification of the Store in the original transaction.	O	10	A	PJR
OriginalTransactionNumber	M	The assigned number of the original transaction.	O	16	N	PJR
PhoneNumber	M	The phone number.	O	10	N	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
POSAssignedSequenceNumber	M	The sequential number assigned by the POS to the transaction.	O	16	N	PJR
PriceOverridePrice	M	The price of the item/merchandise/fuel after the override.	O	12,4	CUR	PJR
PromotionAmount	M	Sum of value of promotions associated with the item/merchandise code being reported. For PJR the amount of the promotion associated with the item in the transaction or with the total transaction.	M	12,4	CUR	ISM MCM PJR
RedeemedPointsQuantity	M	The number of points redeemed.	O	16,4	N	PJR
ReferenceNumber	M	Audit identifier for a specific authoriztion action.	O	16	N	PJR
RefundAmount	M	Sum of the value of refunds associated with the item/MerchandiseCode being reported. For PJR the amount of the refund associated with the item in the transaction or with the transaction as a whole.	M	12,4	CUR	ISM MCM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
RegularSellPrice	M	The non-promotional price of the transaction item/fuel grade. It can be negative. It is the price at which the item should normally be sold as modified by the provided qualifiers.	M	12,4	CUR	FGM FGT ISM ITT PJR
RequestedAmount	M	The value for which authorization has been requested.	O	12,4	CUR	PJR
RewardedPointsQuantity	M	The number of rewarded points.	O	16,4	N	PJR
SalesAmount	M	Sum of the value of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	CUR	ISM MCM PJR
SalesQuantity	M	Total quantity of the item/merchandise code sold. Returns and other allowances are included in this number.	M	12,4	N	ISM MCM PJR
SerialNumber	M	The serial number.	O	40	A	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
SocialSecurityNumber	M	The social security number.	O	9	N	PJR
TaxableSalesAmount	M	Sum of the taxable value of all sales for this TaxLevelID net of discounts and promotional allowances and after refunds.	M	12,4	CUR	TLM PJR
TaxableSalesRefundedAmount	M	Sum of the value of the refunds of the taxable sales for this TaxLevelID.	M	12,4	CUR	TLM PJR
TaxCollectedAmount	M	The amount of tax collected.	M	12,4	CUR	TLM PJR
TaxExemptSalesAmount	M	Sum of the value of the sales given exempt status net of discounts and promotional allowances and after refunds. (Exempt refers to transactions such as sales made to a customer with a tax exempt certificate.).	O	12,4	CUR	TLM PJR
TaxExemptSalestRefundedAmount	M	Sum of the value of the refunds on tax exempt sales	O	12,4	CUR	TLM PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TaxForgivenSalesAmount	M	Sum of the sales for this TaxLevelID sold on a tax forgiven basis net of discounts and promotional allowances and before refunds. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM PJR
TaxForgivenSalesRefundedAmount	M	Sum of the value of the refunds on tax forgiven sales for this TaxLevelID. (Forgiven refers to transactions such as foodstamp and WIC sales.)	O	12,4	CUR	TLM PJR
TaxRefundedAmount	M	The amount of tax refunded.	M	12,4	CUR	TLM PJR
TenderAmount	M	The sum of the value of the tender type taken.	M	12,4	CUR	PJR
TransactionGrandAmount	M	The total amount of the transaction after applying transaction level discounts, promotions, taxes, etc.	O	12,4	CUR	PJR
TransactionGrossAmount	M	The gross amount of the transaction before applying transaction level discounts, promotions, taxes, etc.	O	12,4	CUR	PJR

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
TransactionNetAmount	M	The net amount of the transaction after applying transaction level discounts, promotions, taxes, etc.	O	12,4	CUR	PJR
TransactionTaxAmount	M	The amount of tax applied at the transaction level.	O	12,4	CUR	PJR
TransactionTaxExemptAmount	M	The amount of tax that is tax exempt at the transaction level.	O	12,4	CUR	PJR
WashCode	M	The code assigned to the wash for customer use.	O	8	N	PJR

TABLE DESCRIPTIONS: CROSS REFERENCE AND LOOK-UP

It should be noted that Chapter 1 is an integral part of this document and the purpose and use of these Tables cannot be clearly understood without a thorough reading of that chapter.

Cross reference/Look-up Tables - These tables support the POS/ Back Office Interface Tables. The Primary Data Table contains the key field for entry into these tables. A complete description of each field is contained in the Data Dictionary. These tables are for reference only and are not used to pass data.

Description Cross-Reference Table

This cross reference table is used by several tables to provide ultra short, short, long and ultra long descriptions of an item/merchandise code for use by pole displays, kitchen monitors, customer receipts, etc.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
DescriptionID	P	The identification assigned to this description table element. Generally this element would include the key elements of the table being referenced. For example an item description would include the POSCode, POSCodeFormat and POSCodeModifier elements.	M	30	A	DESCRIPTION
LanguageCode	Q	A pointer to the language code lookup table.	O	4	A	DESCRIPTION
Description16A	D	A short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	16	A	DESCRIPTION
Description24A	D	A long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	24	A	DESCRIPTION

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
Description48A	D	An ultra long description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	48	A	DESCRIPTION
Description8A	D	An ultra short description of the item/merchandise code/fuel grade typically used for register receipts, kitchen displays, customer pole displays, etc.	O	8	A	DESCRIPTION

Restrictions Cross-Reference Table -

This cross-reference table is used by both the Item Maintenance and Merchandise Code Maintenance Tables to cross-reference the element SalesRestrictCode. The values given reference the various restrictions that may be applied either to the sale of an individual item or to a complete merchandise code (category/department). The business rules for use of this table are:

1. If the item does not have a SalesRestrictCode, use the SalesRestrictCode assigned to that MdseCode level.
2. If there is no SalesRestrictCode for the item or the applicable MdseCode, use the POS default for Sales Restrictions.
3. If there is no SalesRestrictCode for the item or MdseCode and no POS default for Sales Restrictions, the restriction does not apply.

The following table illustrates how sales restrictions are applied by time. See definitions for each of the BeginProhibitTime and EndProhibitTime elements.

? Case 1 prohibits time is 6:00 - 22:00. BeginProhibitTimeDay = 0600 EndProhibitTimeDay = 2200

?? Case 2 prohibit time is 0:00 - 6:00, and 22:00 - 23:59. In this case the ending time for the day precedes the BeginProhibitTime for the same day and it is implied that the BeginProhibitTimeDay is 2200 and the EndProhibitTime for the day is 0600.

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProhibitTenderCode	F	Prohibit the use of a specific payment method. A pointer to the Tender Prohibit Table within the Restrictions Table. Default is "Yes."	0	4	A	RESTRICT
AllowWICFlag	L	The sale of the item/merchandise code is allowed in a WIC transaction. Default is "Yes."	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeFriday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT
BeginProhibitTimeMonday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT
BeginProhibitTimeSaturday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT
BeginProhibitTimeSunday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
BeginProhibitTimeThursday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT
BeginProhibitTimeTuesday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT
BeginProhibitTimeWednesday	Q	The time when the prohibition of the sale of the item(s) begins for the day. If the BeginProhibitTime for the day is later then the EndProhibitTime it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359 [24 hour format (HHMM)].	O	4	T	RESTRICT
EndProhibitTimeFriday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndProhibitTimeMonday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT
EndProhibitTimeSaturday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT
EndProhibitTimeSunday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT
EndProhibitTimeThursday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
EndProhibitTimeTueday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT
EndProhibitTimeWednesday	Q	The time when the sale prohibition of the item(s) ends. If the ending time for the day precedes the BeginProhibitTime for the same day then it is implied that the initial BeginProhibitTime is 0000 and the secondary EndProhibitTime is 2359. [24 hour format (HHMM)].	O	4	T	RESTRICT
AllowFractionalUnitFlag	L	The sale of a fractional unit of this item is allowed. Default is "No."	O	1	L	RESTRICT
ForceQuantityFlag	L	Force a quantity of the item to be keyed on the POS at the time of sale. Default is "Yes."	O	1	L	RESTRICT
ForceWeightFlag	L	Force the weight of the item to be keyed on the POS at the time of sale. Defualt is "Yes."	O	1	L	RESTRICT
ProhibitDiscountFlag	L	A discount is not allowed on this item/merchandise code. Default is "Yes."	O	1	L	RESTRICT
ProhibitFoodStampFlag	L	Prohibit the use of food stamps with this item/merchandise code. Default is "Yes."	O	1	L	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
ProhibitPriceLookupFlag	L	The clerk must key the price of this item/merchandise code at the time of sale. Default is "Yes.”	O	1	L	RESTRICT
ProhibitPriceOverFlag	L	Prohibit use of the quantity key. Default is "Yes.”	O	1	L	RESTRICT
ProhibitQuantityKeyFlag	L	Prohibit use of the quantity key. Default is "Yes.”	O	1	L	RESTRICT
ProhibitRefundFlag	L	A refund of the item/merchandise code is not allowed. Default is "Yes.”	O	1	L	RESTRICT
ProhibitReturnFlag	L	A return of the item/merchandise code is not allowed. Default is "Yes.”	O	1	L	RESTRICT
ProhibitTaxModifierFlag	L	Instructs the POS to prohibit the clerk from modifying the tax amount on the sale of the item/merchandise code. Default is "Yes.”	O	1	L	RESTRICT
LimitUnits	M	The maximum number of units of an item/MerchandiseCode allowed in a single transaction.	O	4	N	RESTRICT
MinimumClerkAge	M	The minimum age required of the sales clerk in order to sell the item/merchandise code.	O	2	N	RESTRICT

Element	Usage	Description	Opt/ Man	Size	Type	Used in Tables
MinimumCustomerAge	M	The minimum age required of the consumer in order to purchase the item/merchandise code.	O	2	N	RESTRICT

Currency Code Look-up Table

This look-up table contains the code values for the elements **CurrencyCode and CurrencySubCode.**

This table is derived from ISO 3166 and ISO 4217. These international standards are updated and revised periodically. Users of this documentation should verify they are using the most current codes.

Notes:

1. International Standard ISO 4217 contains a three-letter alphabetic code and an equivalent three-digit numeric code for the representation of currencies and funds. The Standard is intended for use in any application of trade, banking or administration where names of currencies or funds are required to be represented in a coded form. The code is designed to be equally suitable for automated or manual applications.

2. The currencies appearing in this table are those of the countries listed in International Standard ISO 3166, "Codes for the representation of names of countries.

3. The Code Structure is as follows: the first (leftmost) two characters of a currency code provide a code unique to a currency authority; where practicable, they are linked to the geographical location of that currency authority and correspond to the ALPHA-2 codes of ISO 3166. Where the currency is not associated with a single geographical entity as described in ISO 3166, a specially-allocated ALPHA-2 code has been reserved and should be used to describe the currency authority.

4. The third (rightmost) character of the alphabetic code is an indicator derived from the name of the major currency unit - example: USD for United States dollar.

Item Type Look-up Table

The keys to this table are the elements **ItemTypeCode** and **ItemTypeSubCode** both are found in the Item Maintenance Table. This look-up table is designed to provide for the classification of items to define a selling process at the Point-of-Sale terminal. A "null or "no value" for ItemTypeCode and ItemTypeSubCode is allowed.

This lookup table is not all-inclusive. ItemTypeSubCodes may be added as necessary for individual company use.

ItemTypeCode	Description	ItemTypeSubCode	Description
CARW	Car Wash	User Defined	
FEES	Fees	User Defined	
FUEL	Fuel	User Defined	
GIFT	Gift Certificates	User Defined	
LISC	Licenses	User Defined	
LOTO	Lotto	User Defined	
LORY	Lottery	User Defined	
MISC*	Miscellaneous	User Defined	
MORD	Money Order	User Defined	
MRH	Merchandise	User Defined	
PHON	Phone Cards	User Defined	
POST	Postage Stamps	User Defined	
QSR	Food	User Defined	
SERV	Services	User Defined	
VDEO	Video Rental	User Defined	

*Miscellaneous should be used only in the rarest of occasions.

Merchandise Code Look-up Table

The key to this table is the element **MdseCode** that is found in the Merchandise Code Maintenance (MCT) and Merchandise Code Movement (MCM) Tables. The NACS Category Management Standards Committee has defined the values given for MdseCode.

The NACS Category Definitions and Numbering Guide

- Is designed for establishing performance benchmarks.
- Enables a business framework for retailers and suppliers to work together to achieve goals.
- Provides full flexibility for retailers to define categories for category management initiatives.
- Includes all products sold in convenience stores including motor fuels.

The latest version of the Guide may be found at www.cstorecentral.com under "Technology Standards."

Miscellaneous Summary Codes -

This look-up table contains the values for the elements **MiscSumCode** and **MiscSumSubCode** found in the Miscellaneous Summary Movement (MSM) table.

It is possible that a separate table to handle serialized transactions may be required.

> **Note:** Sales totalizers are net totalizers. Grade totalizers are the total of all transactions whether they were sales, refunds, etc. And they are always positive.
>
> This look-up table is not all-inclusive and additional codes have been reserved for individual company use.

MiscSumCode Value	MiscSumCode	MiscSumSubCode Value	MiscSumSubCode	MiscSumSubCode Mod
1	Safe Drop	0		
1	Safe Drop	1	Envelope	(Envelope Number)
1	Safe Drop	2	Reserved for use by mutual consent	
1	Safe Drop	3	Reserved for use by mutual consent	
2	Safe Loan	0		
2	Safe Loan	1	Reserved for use by mutual consent	
2	Safe Loan	2	Reserved for use by mutual consent	
2	Safe Loan	3	Reserved for use by mutual consent	
3	Refunds	0		
4	Payouts	1		
4	Payouts	2	General Ledger	(General Ledger Account Number)
4	Payouts	3	House Account	
4	Payouts	4		
4	Payouts	5	Lottery (scratch) pay	
4	Payouts	6	Lotto (online) pay	
4	Payouts	7	Vendor pay	
4	Payouts	8		
4	Payouts	9	Reserved for use by mutual consent	
5	Payins	1	Utility Payment	
5	Payins	2		
5	Payins	3	House Account	
5	Payins	4	Returned Check Fee	
5	Payins	5	Lottery (scratch) pay	
5	Payins	6	Lotto (online) pay	
5	Payins	7	Vendor pay	
5	Payins	8		
5	Payins	9	Reserved for use by mutual consent	
5	Payins	10	Reserved for use by mutual consent	
6	Totalizers	1	Beginning Grand	
6	Totalizers	2	Beginning Sales	

MiscSumCode Value	MiscSumCode	MiscSumSubCode Value	MiscSumSubCode	MiscSumSubCode Mod
6	Totalizers	3	Ending Grand	
6	Totalizers	4	Ending Sales	
6	Totalizers	5	Money Order Begin	
6	Totalizers	6	Money Order End	
6	Totalizers	7	Car Wash Begin	
6	Totalizers	8	Car Wash End	
6	Totalizers	9	Reserved for use by mutual consent	
6	Totalizers	10	Reserved for use by mutual consent	
7	Statistics	1	Correction	
7	Statistics	2	Discounts	
7	Statistics	3	Items Sold	
7	Statistics	4	No-sales	
7	Statistics	5	Suspends	
7	Statistics	6	Suspends /Void	
7	Statistics	7	Transactions	
7	Statistics	8	Void Items	
7	Statistics	9	Void Transactions	
7	Statistics	10	Post Voids	
7	Statistics	11	Tax Code Changes	
7	Statistics	12	Drive offs	
7	Statistics	13	Food stamp/WIC status changes	
7	Statistics	14	Change on checks	
		15	Refunds	
7	Statistics	16	Reserved for use by mutual consent	
8	Discount	1	Amount - applies to individual items as a fixed amount per item.	
8	Discount	2	Amount - applies to individual items as a percentage of the RegularSellPrice.	
8	Discount	3	Mix-Match - applies to all items in the sale equally.	
8	Discount	4	Mix-Match - applies to one or more items in the sale as defined in the Mix-Match table.	
8	Discount	5	Promotional - based on time of the sale, i.e., day of week, time of day, etc.	
8	Discount	6	Fuel - based on cents/gallon as defined in the Item Maintenance table.	
8	Discount	7	Coupon - as defined in the initial set-up as to the use of coupons as method-of-payment tender types or as discounts or both depending upon type of coupon.	
8	Discount	8	Senior Citizen	
8	Discount	9	Employee	
8	Discount	10	Police	
8	Discount	11	Reserved for use by mutual consent	

MiscSumCode Value	MiscSumCode	MiscSumSubCode Value	MiscSumSubCode	MiscSumSubCode Mod
8	Discount	12	Reserved for use by mutual consent	
9	Summary Totals	1	Reserved for use by mutual consent	
10	Sales	1	All sales taxable & non-taxable, net	
10	Sales	2	Non-taxable sales	
10	Sales	3	Nontaxable sales refunded	
11	Opening Balance (for cashier reconciliation this is opening till)			
12	Closing Balance (for cashier reconciliation this is the gross ending till)			
13	Balance-on-hand			
14	Balance Forward (for cashier reconciliation this is till forward)			
15	Till Loan In			
16	Till Loan Out			

Payment Systems Codes Look-up Table -

The key to this table is the element **PaymentSysProdCode** that is found in the Item Maintenance (ITT) and Merchandise Code Maintenance (MCT) Tables. The values given have been defined by the NACS Payments Systems Standards Committee and are part of the larger NACS Technology Standards Project.

These product code definitions are for use in electronic payment systems formats.

These codes define petroleum and merchandise products and services by assigning them a specific three-digit number. These codes are designed to report the sales of products in a standard manner over payment systems networks. These codes do not indicate category/department use within the Back Office or Point-of-Sale systems.

The latest version of this code table is available from NACS and may be found at ***www.cstorecentral.com*** under "Technology Standards."

POS Code Format Look-up Table

This look-up table contains the code values for the element **POSCodeFormat.** The value of **POSCodeFormat** specifies the type of coding system used in the element **POSCode.**

Vendor software should be prepared to strip out check digits as they may optionally appear.

This look-up table is not all-inclusive and additional codes have been reserved for individual company use.

POSCodeFormat	POSCodeFormat Value	Comment
0	U.P.C.-A	This is the preferred format.
1	U.P.C.-E	If possible this code should be converted to the U.P.C.-A format.
2	EAN 8	
3	EAN 13	
4	PLU	
5	GTIN (SCC 14)	
6	Reserved for individual use.	

Price Tier Code Look-up Table

This table contains the code values for the element PriceTierCode. The values are implementation defined and represent the various types of price tiers that may in effect at a particular location. The key to this table is the element **PriceTierCode** that is found in the Fuel Sales Movement Table.

Notes:

PriceTierCode when used in combination with the **TimeTierCode** and **ServiceLevelCode** provides a complete description of the pricing and service method being summarized.

PriceTierCode values above 0002 are "user defined."

This look-up table is not all-inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

PriceTier Code	PriceTierCode Value
0001	Cash
0002	Credit
0003	User Defined
0004	User Defined
0005	User Defined
0006	User Defined
0007	User Defined
0008	User Defined
0009	User Defined
0010	User Defined

Reason Code Look-up Table -

The key to this table is the element **ReasonCode** that is found in the Item Sales Movement (ISM) and Merchandise Code Movement (MCM) Tables**.** This look-up table is designed to provide the various reasons why an *item* or group of items was/were sold at a price other then the regular selling price for the *item(s).*

ReasonCode	Description
EMP	Employee Discount
EXP	Expiration Date
FCW	Free Car Wash
FRS	Freshness
FSH	Frequent Shopper
GOW	Goodwill Discount
RPC	Regular Price change during reporting period
MGR	Manager Promotion
POL	Police Discount
SCD	Senior Citizen Discount
TPC	Temporary Price Change

Service Level Look-up Table

This table contains the code values for the element **ServiceLevelCode**. The values are implementation defined and represent the various types of service levels that may in effect at a particular location. The key to this table is the element **ServiceLevelCode** that is found in the Fuel Sales Movement Table (FGM).

Notes:

ServiceLevelCode values above 0005 are "user defined."

ServiceLevelCode when used in combination with the **TimeTierCode** and **PriceTierCode** provides a complete description of the pricing and service method being summarized.

This look-up table is not all-inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

ServiceLevelCode	ServiceLevelCode Value
0001	Full Service
0002	Self Service
0003	Partial Self Service
0004	Mini Self Service
0005	Unattended Service
0006	User Defined
0007	User Defined
0008	User Defined
0009	User Defined
0010	User Defined

Tender Prohibit Look-up Table

This table contains the code values for the elements ProhibtTenderType, TenderCode and TenderSubCode. The values are implementation defined and represent the various types of tender that may not be taken at the Point-of-Sale. The key to this table is the element **ProhibitTenderCode** that is found in the Restrictions Table. This look-up table is designed to provide the various types of tender and tender sub-types that may not be used to finalize a sale.

> **Note:** TenderSubCode values from 0200 to 0900 are "user defined." TenderCode values between 0500 and 0700 are "user defined."
>
> This look-up table is not all-inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

ProhibitTender Code	Tender Code	Description	Tender SubCode	Description
15	0060	Credit Cards	0001	American Express
15	0070	Fleet Cards	0201	Wright Express
16	0060	Credit Cards	0001	American Express
22	0020	Check	0220	Payroll
22	0060	Credit Cards	0001	American Express

In the example shown above, a ProhibitTenderCode of 15 would indicate that neither American Express nor Wright Express cards could be accepted. A ProhibitTenderCode of 16 would indicate that only American Express cannot be accepted and a ProhibitTenderCode of 22 would indicate that neither Payroll checks nor American Express credit cards could be accepted.

Tender Type Look-up Table-

The keys to this table are the elements **TenderCode** and **TenderSubCode,** both of which are found in the Method-of-Payment (MOP) Table. This look-up table is designed to provide the various types of tender and tender sub-types that might be rendered at the Point-of-Sale.

> **Note: TenderSubCode** values from 0200 to 0900 are "user defined."
> **TenderCode** values between 0500 and 0700 are "user defined."

This look-up table is not all-inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

TenderCode	Description	TenderSubCode	Description
0010	Cash	0000	
		0001	
		0002	
		0003	
0020	Check	0000	
		0001	Commercial Check
		0002	Employee Check
		0003	Government Check
0030	Money Order	0000	
0040	Food Stamps	0000	
0045	EBT	0000	
		0001	EBT Cash
		0002	EBT CB
		0003	EBT Food stamp
0050	Gift Certificates	0000	
0060	Credit Cards	0000	
		0001	American Express
		0002	Visa
		0003	MasterCard
		0004	Oil Company
		0005	Proprietary
0070	Fleet Cards	0000	
0080	Debit Cards	0000	
0090	Radio Frequency	0000	
0100	Pre-Paid Cards	0000	
0110	Smart Cards	0000	
0130	House Charges (on-account)	0000	
0140	Cash back	0000	
0150	Drive-off	0000	
0160	Lottery Winning ticket	0000	
0170	Lotto Winning ticket	0000	
0180	Coupons	0000	
		0001	Manufacturer
		0002	Store

TenderCode	Description	TenderSubCode	Description
0190	WIC Payment	0000	
0200	Pump-for-test	0000	
0210			
0500-0700	User Defined	0000	
0900	Generic	0000	

Time Tier Code Look-up Table

This table contains the code values for the element TimeTierCode. The values are implementation defined and represent the various types of time tiers that may in effect at a particular location. The key to this table is the element **TimeTierCode** that is found in the Fuel Sales Movement Table.

> **Notes: TimeTierCode** when used in combination with the **PriceTierCode** and **ServiceLevelCode** provides a complete description of the pricing and service method being summarized.
>
> **TimeTierCode** values above 0009 are "user defined."

This look-up table is not all-inclusive and descriptions are provided for example only. Additional codes may be added as necessary for individual company use.

TimeTierCode	TimeTierCode Value
0001	Day
0002	Night
0003	Super Monday
0004	Super Tuesday
0005	Super Wednesday
0006	Super Thursday
0007	Super Friday
0008	Super Saturday
0009	Super Sunday
0010	User Defined

Chapter 6 – NAXML Framework

DESIGN PRINCIPLES

These Guidelines have been designed in accordance with the following principles:

- There is no attempt to specify the communications mechanism by which the documents are exchanged at this time. This may be added at a later time.
- There is no attempt to specify the application interface between systems, only the business documents they exchange. This may be added at a later time.
- There is no attempt to specify the manner by which the sending system produces the documents or to specify what actions will result when they are received.
- Because there is no requirement for a particular transport, many aspects of message security, such as digital signatures and similar issues, are not addressed at this time.
- By keeping the integration on the business level, each business is able to present a clear and stable interface to its business partners despite changes in its internal technology implementation, organization or process.
- The extensibility of XML allows data elements not specified in the NACS Data Element Dictionary to be accommodated. The Task Force intends to provide a means to achieve additional flexibility in a later version.
- Parsed character data (#PCDATA) elements may get more explicit data-types when XML Schemas are introduced.

XML DOCUMENT CONTENT TYPES

These guidelines have defined the following business content types to facilitate the data interchange:

- Maintenance and Movement Tables (PBI)
- Transaction Reports (RPT)
- Table Request (TRQ) – (May be added in a later version.)
- Configuration Tables (CFG) - (May be added in a later version.)

- Acknowledgments (ACK) - (May be added in a later version.)
- Supplemental Tables (SYS) - These include system specific requirements such as security, audit trails, etc. - (May be added in a later version.)

REPOSITORY

The DTDs and sample XML documents can be located at www.naxml.org in the folder "Version3POSBackOffice." The Guidelines will be available at www.cstorecentral.com.

NAXML DTD USAGE

Although the explicit use of a NAXML DTD is not required in a XML document, the XML document must conform to the corresponding DTD in order to satisfy the requirements of these Guidelines. If tags corresponding to fields that are not required are absent, the default value listed in the data tables for that field is assumed.

DOCUMENT NAMING

The XML document should contain all information required to completely identify its content without reference to some external transport mechanism.

DOCUMENT CONSTRUCTION

There are 4 DTDs that contain all of the requirements for producing XML documents that provide for the exchange of the Common Data Elements.

These are:

1. NAXML-PBIDictionary.dtd
   This DTD contains declarations for all of the Common Data Elements except those used in all conforming documents. (See PBICommon.dtd below.) Note that XML attributes are used only in rare instances. Additionally, note that, by convention, all data element tags use the naming structure found in Common Data Elements.
2. NAXML-PBIMaintenance.dtd
   This DTD defines the structure of all possible XML documents conforming to the maintenance table structures outlined in Common Data Elements.

3. NAXML-PBIMovement.dtd
   This DTD defines the structure of all possible XML documents conforming to the movement table structures outlined in Common Data Elements.
4. NAXML-POSJournal.dtd
   This DTD defines the structure of the XML documents used for transaction and event reporting.

Chapter 7 – NAXML Document Type Definitions (DTD)

An electronic version of the NAXML DTDs is available from www.naxml.org in the folder "Version3POSBackOffice." As implementation proceeds, it is expected that minor changes to the structure of the DTDs may be necessary. For that reason they are not printed here. Reference only is made to significant information contained in the DTDs or implementation guidance for certain XML elements or attributes.

A number of XML tags have been created to simplify document construction and usage. These tag names follow the same naming convention as the Common Data Elements. These elements are declared in the appropriate DTD.

The use of an optional character following an element name in a DTD indicates a usage requirement for the element in the conforming XML document as follows:

- ? indicates the element may be present zero or one time.
- * indicates the element may be present zero or more times.
- + indicates the element may be present one or more times.

If no character appears after an element name the element is required one time.

The DTDs and sample XML documents shown in this document are hard coded to provide a URI to the above listed server. These should be modified as necessary by implementers and testers.

NOTE:

In the root element of all documents, version refers to the version of the DTD being used. It will be "fixed" for each version of DTD. VendorName and VendorModelVersion refer to the sending party.

PBIDICTIONARY.DTD

The Data Dictionary contains all of the data elements listed in the Data Element Dictionary in Chapter 4. Additional XML elements required to give structure to the document tree or provide XML document related information only are contained in the following table.

XML Element/Attribute	Definition	Usage
POSJournal version="1.0"	Defines the version of the dtd for validation.	The attribute version must contain the value that is #FIXED in the DTD. Presently 1.0.
TableAction	type=" " attribute is required with the value of either "initialize" or "update." "initialize" means to remove all elements from any existing table before beginning. "update" means to only change those elements identified, using the active (current) RecordAction element.	Required
RecordAction	"type" attribute is required with the value of either "create", "addchange", "modify", or "delete." The element applies to any elements in the current sub-tree which are not otherwise marked. RecordAction appearing within a sub-tree overrides any parent definition within that sub-tree.	Required

Chapter 8 – NAXML Sample Documents

An electronic version of each of the NAXML sample documents is available from www.naxml.org in the folder "Version3POSBackOffice."

These documents may be used as standalone maintenance requests or movement reports or all maintenance may be combined into one maintenance request or all movement reports may be combined into one movement report in conformance with the appropriate DTD. For illustration purposes they are provided as individual request or report documents.

Because the DTDs are subject to change as implementation continues the sample documents will also change. For this reason the sample documents are not reproduced here but are available from the web site link given above.

As of the publication of this document the following sample XML documents were available. Check the web site for additions or deletions.

- CBT.XML (COMBO MAINTENANCE)
- FGT.XML (FUEL GRADE MAINTENANCE)
- FOT.XML (FUEL POSITION MAINTENANCE)
- FPT.XML (FUEL PRODUCT MAINTENANCE)
- ILT.XML (ITEM LINK MAINTENANCE)
- ITT.XML (ITEM MAINTENANCE)
- MCT.XML (MERCHANDISE CODE MAINTENANCE)
- MMT.XML (MIX-MATCH MAINTENANCE)
- TIT.XML (TAX INCLUDES MAINTENANCE)
- TLT.XML (TAX LEVEL MAINTENANCE)
- TPT.XML (TANK PRODUCT MAINTENANCE)
- TST.XML (TAX STRATEGY MAINTENANCE)
- FGM.XML (FUEL GRADE MOVEMENT)
- FPM.XML (FUEL PRODUCT MOVEMENT)
- ISM.XML (ITEM SALES MOVEMENT)
- MCM.XML (MERCHANDISE CODE MOVEMENT)

- MSM.XML (MISCELLANEOUS SUMMARY MOVEMENT)
- TLM.XML (TAX LEVEL MOVEMENT)
- TPM.XML (TANK PRODUCT MOVEMENT)
- PJR.XML (POS Journal)

Chapter 9 - Sample XSL Documents

An electronic version of the NAXML sample documents in this chapter is available from www.naxml.org in the folder "Version3POSBackOffice."

For this example, the files TPM.dtd and TPM.xml were used as the input. The XSL stylesheet or transform document is TPX.xsl. The output files are TPX.dtd and TPX.xml. The file TPM.dtd was developed by combining PBIDictionary.dtd and PBIMovement.dtd then stripping out all elements except those required to produce a Tank Product Movement report.

In the TPX.xsl transform document the following actions were applied to the base xml and dtd documents:

Element	Action
DOCTYPE Declaration	Removed from TPM.xml
TransmissionHeader and MovementHeader	Combined into TransmissionHeader
VendorName, VendorModelVersion, ReportSequenceNumber, PrimaryReportPeriod, SecondaryReportPeriod	Removed
BeginDate & BeginTime	Changed to ReportBeginDate and ReportBeginTime
EndDate & EndTime	Changed to ReportEndDate and ReportEndTime
Ullage	Changed to Operating Ullage

GLOSSARY

BO - BO is the acronym for the retailers Back Office system. It is generally the system that performs “daily book” accounting for the location.

Fuel Grade - Fuel Grade is defined as the wet stock that is actually dispensed through the dispenser hose into the retail consumer’s container.

Fuel Product - Fuel Product is defined as the wet stock that is delivered into the retailer’s individual tanks.

Item - Item is defined as the combination of the data elements POSCodeFormat + POSCode + POSCodeModifier. See the Data Dictionary for the definition of each of these elements.

Merchandise Code - Merchandise Code is most commonly referred to as department or category. It may be taken from the NACS Category Definitions and Numbering Guide.

PBI - PBI is the acronym for POS/Back Office Interface.

POS - POS is the acronym for the Point-of-Sale system, referring to the Point-of-Sale terminals or cash registers used to transact consumer sales at the store.

Table – The term “table” is used within these Guidelines to indicate a logical grouping of data elements. It does not indicate any particular database structure or data model should be used in implementing the Guidelines.

Wet Stock – This term is generally used interchangeably with Fuel Grade and Fuel Product. For clarity in this document the terms Fuel Grade and Fuel Product are used.

Appendix A - Data Table Summit Task Force Members

Bob Johnson, Chair	Pinnacle Corporation
John Arrizza	Marconi Commerce Systems
Terry Bissonnette	Csoft International. Inc.
Chuck Blevins	Radiant Systems, Inc.
Sam Davis	Professional Datasolutions, Inc.
David Ezell	Verifone, Inc.
David Gallacher	Advantage Energy, Inc.
David Godwin	Verifone, Inc.
Richard Forrester	Syscorp
Barb Hall	Advantage Energy, Inc.
Jerry Harlow	Radiant Systems, Inc.
Richard Halter	Apigent Solutions
Sharon Henry	Autogas, Inc.
Fred Hoff	Autogas, Inc.
Vicki Kristoff	Pinnacle Corporation
Mike McQuarrie	ACS Retail Solutions
Ricky Miller	ACS Retail Solutions
Ben Nafa	Advantage Energy, Inc.
Pablo Reiter	Csoft International, Inc.
Phil Robertson	Marconi Commerce Systems
Wayne Schroeder	Radiant Systems
Peter Steele	Pinnacle Corporation
Joe Tuttle	Radiant Systems
Bill Wade	Professional Datasolutions, Inc.
Edwin Yu	Chevron
Gene Gerke	Gerke & Associates, Inc
John Hervey	Gerke & Associates, Inc/NACS
Alan Thiemann	Taylor, Thiemann, & Aitken

APPENDIX B - Obtaining Additional Information

The minutes of all Committee and Task Force sessions are available from NACS at www.cstorecentral.com. To access do the following:

1. Logon to www.cstorecentral.com
2. Select Technology Standards
3. Select POS/Back Office Standards Committee
4. Select Meeting Minutes

Additional information may also be obtained by contacting:

via Mail	via Fax	via e-mail
John Hervey National Association of Convenience Stores 1605 King Street Alexandria, VA 22314	John Hervey 703-684-3600	jhervey@cstorecentral.com

APPENDIX C – Instructions for Feedback, Comment, and Recommending Changes

The Data Table Summit meetings have been conducted under the auspices of the NACS POS/Back Office Standards Committee, one of the four working committees of the NACS Technology Standards Project. Membership on both the POS Back Office Technology Standards Committee and the Data Table Summit Task Force is open to anyone desiring to participate. The results of the Committee's activities are open to feedback and comment by anyone desiring to do so. Feedback and comments are encouraged so that the POS/Back Office Interface Guidelines have the broadest possible support within the industry.

Version 1.0 of the POS/Back Office Interface Guidelines were approved for publication by the NACS Technology Committee on April 20, 2000. Version 2.0 was approved as a result of the approved Change Request submitted by the POS Back Office Task Force on March 1, 2000. Version 3 was released for Public Comment on February 1, 2001.

FEEDBACK AND COMMENTS

Comments on these Interface Guidelines should be addressed to:

via Mail	via Fax	via e-mail
John Hervey National Association of Convenience Stores 1605 King Street Alexandria, VA 22314	John Hervey 703-684-3600	jhervey@cstorecentral.com

Recommending change

The POS/Back Office Standards Committee has recommended to the NACS Technology Standards Committee the following procedures for making changes to these Guidelines:

1 – A Guidelines Maintenance Standing Committee (GMSC) shall be appointed by the NACS Standards Steering Committee. The GMSC shall be composed of all members of the NACS Point-of-Sale Back Office Standards Committee who have attended at least one of the last two meetings of that committee.

2 – A POS/Back Office Interface Guidelines Change Request shall be submitted to the Guidelines Maintenance Standing Committee

(GMSC).

3 – Change requests should be submitted electronically at least 30 days in advance of the beginning of each GMSC Discussion Period. The Discussion Periods will begin on February 1, August 1, and November 1 of each year.

4 – Fifteen days prior to the start of the Discussion Period members of the Guidelines Maintenance Standing Committee will be provided a copy of each Change Request submitted.

5 – An electronic bulletin board will be provided for the discussion of the change requests submitted and a formal vote will be taken at the end of the Discussion Period: March 1, September 1, and December 1 of each year. Approval will require that at least 50% of the eligible voters vote and that at least two-thirds of the number voting agree to the change.

6 – Changes approved will be posted on the NACS web site www.cstorecentral.com in the Technology Standards Section.

A physical meeting of the Guidelines Maintenance Standing Committee may not be necessary for it to conduct its business.

Email to:
jhervey@cstorecentral.com NACS Control No.:_____

Point-of-Sales/Back Office Guidelines
Change Request Form

Submitter completes Sections A, B, and C
Administrator completes Section D

A. Submitter:

Name: Title:
Company: Phone:
Address:

B. Proposed Action:

C. Reason for Change:

D. Guidelines Maintenance Committee Action:

1. Received _____ (date)
2. Sent to Committee Members _____(date) _____ (number)
3. Members Voting Final Date _____

   Yes _____ No _____ Number _____ (requires 2/3 "Yes" for approval)

   Number of Eligible Voters _____

   _____ Percent of Members Voting (at least 50% must vote)

4. Change Effective Date _____

Appendix D – Typical Cash Balancing and Reconciliation Routine.

Cashier Balancing Example – Miscellaneous Summary Movement Table

HEADER		
Data Element	**Value**	**Comment**
RptSeqNumId		
PriRptPer		
SecRptPer		
BeginDate		
BeginTime		
EndDate		
EndTime		
StoreLocationId		
VendorName		
VendorModelVersion		
CashierId		
RegisterId		
TillId		
DETAIL (Sources/To be accounted for)		
MiscSumCode	11	Opening Balance
MiscSumAmt	100	$100
MiscSumCode	5	Payins
MiscSumAmt	25	$25
MiscSumCode	10	All Sales Taxable and Non-taxable net of refunds
MiscSumAmt	500	$500
Detail (Uses/Accounted for)		
MiscSumCode	12	Closing Balance (gross ending till)
MiscSumAmt	613	$613
MiscSumCode	4	Payouts
MiscSumAmt	10	$10
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	390	$390
TenderCode	0010	Cash
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	50	$50
TenderCode	0020	Check
TenderSubCode	0003	Government Check
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	5	$5
TenderCode	0060	Credit Card
TenderSubCode	0001	American Express
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	8	$8
TenderCode	0040	Food Stamps
MiscSumCode	1	Safe Drop
MiscSumAmt	10	$10
TenderCode	0010	Cash
CurrencyCode	CAD	Canadian Dollars
MiscSumCode	1	Safe Drop

MiscSumAmt	10	$10
TenderCode	0010	Cash
CurrencyCode	CAD	Canadian Dollars
CurrencySubCode	0001	Canadian Quarters
MiscSumCode	14	Balance Forward
MiscSumAmt	100	$100
TenderCode	0010	Cash
MiscSumCode	13	Balance-on-Hand
MiscSumAmt	30	$30
TenderCode	0020	Check
TenderSubCode	0001	Commercial Check

Total to be accounted for = $625
Total accounted for = $623
-$2 (short)

Appendix E – Record of Changes

This is a complete record of modifications, enhancements and changes made between Version 1, Version 2 and Version 3.

Version 1 to Version 2	
Section	**Change**
Table of Contents	Updated to reflect Version 2 changes.
Preface	Updated to reflect Version 2 changes.
Acknowledgments	Updated to reflect Task Force membership additions since the publication of Version 1.
Chapter 1 - Background	Updated publication history and to add information on Version 2 development.
- Caution	Section added to clarify purpose and scope of completed work and to emphasize that the "ongoing effort to improved the Guidelines will not be impeded by any current or planned implementation of these Guidelines."
- Introduction	Added paragraph to describe significant changes in Version 2, including addressing international issues such as language and currency, new tables, and cashier balancing and reconciliation.
- Future Work	Rewritten to update based on the progress made since the publication of Version 1. Also included statement regarding future development of a transport layer using XML.
- Conventions	
- Element Names	Modified Paragraph to indicate the Data Dictionary will contain multiple instances of an element if its description and/or usage differs depending upon the table in which it is used.

Version 1 to Version 2	
Section	**Change**
- Definitions	Added definitions for Fuel Grade and Fuel Product.
- Element Name Suffix	Added element suffix of Num.
- Abbreviations - Element	Modified as indicated in Element Names above. In addition, element sort order for each of the tables is provided.
- Foreign Key	Redefined as "contains a value that is a primary key in another table."
- Qualifier	Redefined as "all qualifiers are optional. Qualifiers when used provide finer granularity of the data."
- Metric	Added to definition "a measured value."
- Size	Modified to provide an example.
- Other	Added paragraph regarding ISO standards and the use of ISO 4217-1995 for currency codes.
- Assumptions	1. Deleted item 3 with regard to language. 2. Modified paragraph relative to currency symbols. 3. Deleted paragraph regarding cash balancing. 4. Added paragraph regarding fuel dispenser configuration.
- Usage Guidelines	1. Modified paragraph 3 to read, "Thousands separators should not be used in numeric elements." 2. Added paragraph 10, which reads, "If detailed data is being reported from the POS to the Back Office there is not a need to report the aggregate total."

Chapter 2 – Data Dictionary	1. Removed the element usage abbreviations from the element name and added a new column with the abbreviation corresponding to the particular description and table usage. 2. Added the following elements (refer to the Data Dictionary for description, usage, size, type, requirement designator, and applicable tables): ♦ CashierID ♦ CurrencyCode ♦ CurrencyFaceValue ♦ CurrencySubCode ♦ Description16A ♦ Description24A ♦ Description48A ♦ Description8A ♦ DescriptionId ♦ DispenserDiscountAmt ♦ DispenserDiscountCnt ♦ FuelGradeActiveFlg ♦ FuelGradeId (previously Grade) ♦ FuelGradeNonResettableTotalAmt (previously GradeNonResettableTotalAmt) ♦ FuelGradeNonResettableTotalVol (previously GradeNonResettableTotalVol) ♦ FuelGradeSalesAmt (previously GradeSalesAmt) ♦ FuelGradeSalesVol (previously GradeSalesVol) ♦ FuelGradeSeqId ♦ FuelPositionId ♦ FuelProductBlendPercent ♦ FuelProductDepth ♦ FuelProductDescription ♦ FuelProductId ♦ FuelProductIdHigh ♦ FuelProductNonResettableTotalAmtNum ♦ FuelProductNonResettableTotalVolNum ♦ FuelProductTemp ♦ FuelProductVol ♦ LanguageCode

	♦ MiscSumSubCodeMod ♦ PriceTierCode ♦ ServiceLevelCode ♦ TankChartId ♦ TankDepth ♦ TankDescription ♦ TankIdHigh ♦ TankInstallDate ♦ TankLowInventoryVol ♦ TankManifoldId ♦ TankManufacturer ♦ TankModNum ♦ TankReorderVol ♦ TankSerialNum ♦ TankVol ♦ TaxActiveFlg ♦ TaxCollectedAmt ♦ TaxDescription ♦ TaxExemptRefundedAmt ♦ TaxForgivenSalesAmt ♦ TaxForgivenSalesRefundedAmt ♦ TaxLevelId ♦ TaxLevelIncludedId ♦ TaxLevelSeqId ♦ TaxRate ♦ TaxReceiptDescription ♦ TaxRefundedAmt ♦ TaxRegistrationNum ♦ TaxSeqNum ♦ TaxStrategyDescription ♦ TaxStrategyId ♦ TaxSymbol ♦ TaxTableId ♦ TaxTypeId ♦ TillId ♦ TimeTierCode 3. The descriptions of the following elements were modified: ♦ Description ♦ DiscountAmt ♦ DiscountCnt ♦ RegularSellPrice ♦ SalesAmt

	♦ SalesQty ♦ TankId ♦ TaxExemptAmt ♦ TaxExemptVol
Chapter 3 – Tables - Primary Tables	1. Divided listing into 2 subgroups; Maintenance Tables and Movement Tables. 2. Reordered table listings to be alphabetical within subgroup. 3. Added the following Maintenance Tables: ♦ Fuel Grade Maintenance (FGT) ♦ Fuel Position Maintenance (FOT) ♦ Fuel Product Maintenance (FPT) ♦ Tank Product Maintenance (TPT) ♦ Tax Included Maintenance (TIT) ♦ Tax Level Maintenance (TLT) ♦ Tax Strategy Maintenance (TST) 4. Added the following Movement Tables: ♦ Fuel Grade Movement (FGM) (renamed from Fuel Sales Movement, modified and expanded) ♦ Fuel Product Movement (FPM) ♦ Tank Product Movement (TPM) (renamed from Tank Product Inventory, modified and expanded). ♦ Tax Level Movement (TLM) 5. Combined, modified and expanded the Miscellaneous Summary Report and Method-of-Payment Tables in a new table, Miscellaneous Summary Movement.
Cross-Reference & Look-up Tables	1. Changed order in which the tables are listed to group by either Cross-Reference or Look-up and to list alphabetically within the group. 2. Added a new Cross-Reference Table, Description. 3. Added the following Look-up Tables: (see each table for a complete description of the purpose and use.) ♦ Currency Code ♦ Price Tier ♦ Service Level

	♦ Time Tier 4. Deleted FuelGrade/Product Look-up Table. 5. Redefined Miscellaneous Summary Code and Tender Code Look-up Tables.
Other Tables	Modified paragraph to reflect update work accomplishments and future work items.
Glossary	Added "Wet Stock" to the list of terms.
Appendix A	Modified to update with Task Force membership changes since the publication of Version 1.
Appendix C	Updated to reflect current status of the Guidelines.
Appendix D	1. "Summary Of Table Notes" was deleted. 2. Added "Typical Cash Balancing and Reconciliation Routine."
Appendix E	Added "Record of Changes."
Appendix F	Added "Fuel Grade/Product Definitions and Tank Modeling."

The following changes have been made to the document in Version 2.1.

Section	Change
Chapter 2 – Data Dictionary	Changed the following Data Element names and changed from Optional to Mandatory: PosVendorName to VendorName PosVendorModelVersion to VendorModelVersion.
	Added the elements CurrencyCode and CurrencySubCode as optional elements in the ISM table and CurrencySubCode as an optional element in the FGM table.
	Changed the Optional/Mandatory designation from Mandatory to Optional wherever appearing for the elements PromoAmt and RefundAmt.

	Added the element MdseCode to the ISM table as an optional element.
	Changed FuelProductDescription disignation in table FPT from Optional to Mandatory.
	Changed TaxActiveFlg designation from Optional to Mandatory.
FGM Table	Added the element CurrencySubCode as an optional element.
FPT Table	Changed FuelProductDescription from Optional to Mandatory.
ISM Table	Added the elements CurrencyCode and CurrencySubCode as Optional elements.
	Added the element MdseCode as an optional element.
	Changed from Mandatory to Optional the elements PromoAmt and RefundAmt.
MCM Table	Changed from Mandatory to Optional the elements PromoAmt and RefundAmt.
TLT Table	Changed TaxActiveFlg designation from Optional to Mandatory.

Version 2 to Version 3	
Section	**Change**
Version 2.1 of Common Data Elements and Version 1.0 of XML Data Interchanged merged in Version 3.0. Unless otherwise stated below Version 1 and Version 2 refer to the Common Data Elements document.	
Table of Contents	Updated to reflect Version 3 changes.
Preface	Updated to reflect Version 3 changes.

Version 2 to Version 3	
Section	**Change**
Acknowledgments	Updated to reflect Task Force membership additions since the publication of Version 2.
Chapter 1 - Background	Updated publication history and to add information on Version 3 development.
- Caution	Section added to clarify purpose and scope of completed work and to emphasize that the "ongoing effort to improved the Guidelines will not be impeded by any current or planned implementation of these Guidelines."
- Introduction	Added paragraph to describe significant changes in Version 3, including sales transaction, mix-match, and combo table additions.
- Future Work	Rewritten to update based on the progress made since the publication of Version 2. Also included statement regarding the use XML as the data interchange file format.
Chapter 2 – Data Dictionary	1. Added a large number of data elements to support the new tables.
Chapter 3 – Tables - Primary Tables	1. Added the following Maintenance Tables: • Combo Maintenance • MixMatch Maintenance 2. Added the following Movement Tables: ♦ POS Journal
Cross-Reference & Look-up Tables	
Other Tables	Modified paragraph to reflect update work accomplishments and future work items.
Glossary	
Appendix A	Modified to update with Task Force membership changes since the publication of Version 2.

Version 2 to Version 3	
Section	**Change**
Appendix C	Updated to reflect current status of the Guidelines.
Appendix G	Added “Tank Monitoring Definitions”

Version 1 of XML Data Interchange to Version 3 of Combined Document	
Section	**Change**
Unless otherwise stated below Version 1 refers to the XML Data Interchange document.	
Table of Contents	Updated to reflect Version 3 changes.
Preface	Updated to reflect Version 3 changes.
Acknowledgments	Updated to reflect Task Force membership additions since the publication of Version 1.
Chapter 1	Incorporated into appropriate section of Version 3.
Chapter 2 – Introduction	Incorporated into appropriate section of Version 3.
Chapter 3 – XML for Data Transfer	Chapter 4 of this document with appropriate changes to reflect merged document.
Chapter 4 – NAXML Framework	Chapter 5 of this document with appropriate changes to reflect merged document.
Chapter 5 – NAXML Document Type Definitions (DTD)	Chapter 6 of this document with appropriate changes to reflect merged document.
Chapter 6 – NAXML Sample Documents	Chapter 7 of this document with appropriate changes to reflect merged document.
Chapter 7 – Sample XSL Documents	Chapter 8 of this document with appropriate changes to reflect merged document.
Appendix A	Notes merged in Chapter 5.

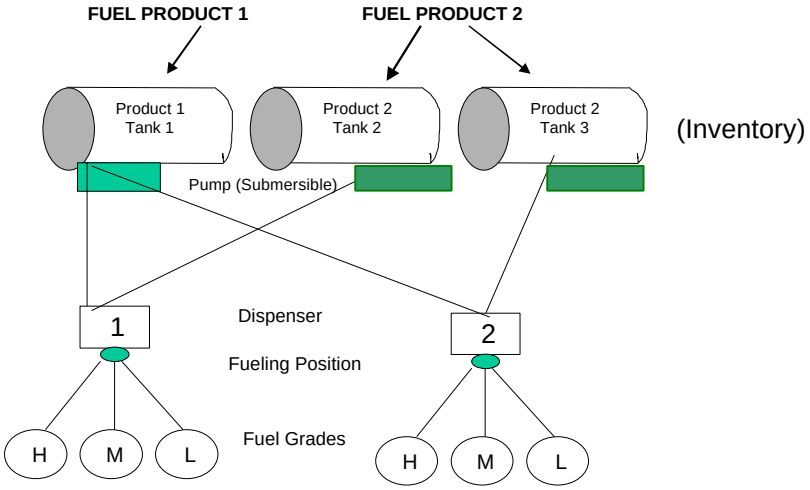
Version 1 of XML Data Interchange to Version 3 of Combined Document	
Section	**Change**
Other Appendices	Deleted or merged with Version 2 of Common Data Elements

Significant Changes to Data Element Terminology Version 2 Common Data Elements & Version 1 of XML Data Interchange to Version 3	
Section	**Change**
1 - All acronyms are now shown all in upper case. 2 – All abbreviations have been spelled out, i.e., PosCodeMod becomes POSCodeModifier. 3 – The root element of all documents has changed to reflect NAXML-	

Appendix F – Fuel Grade/Product Definitions and Tank Modeling

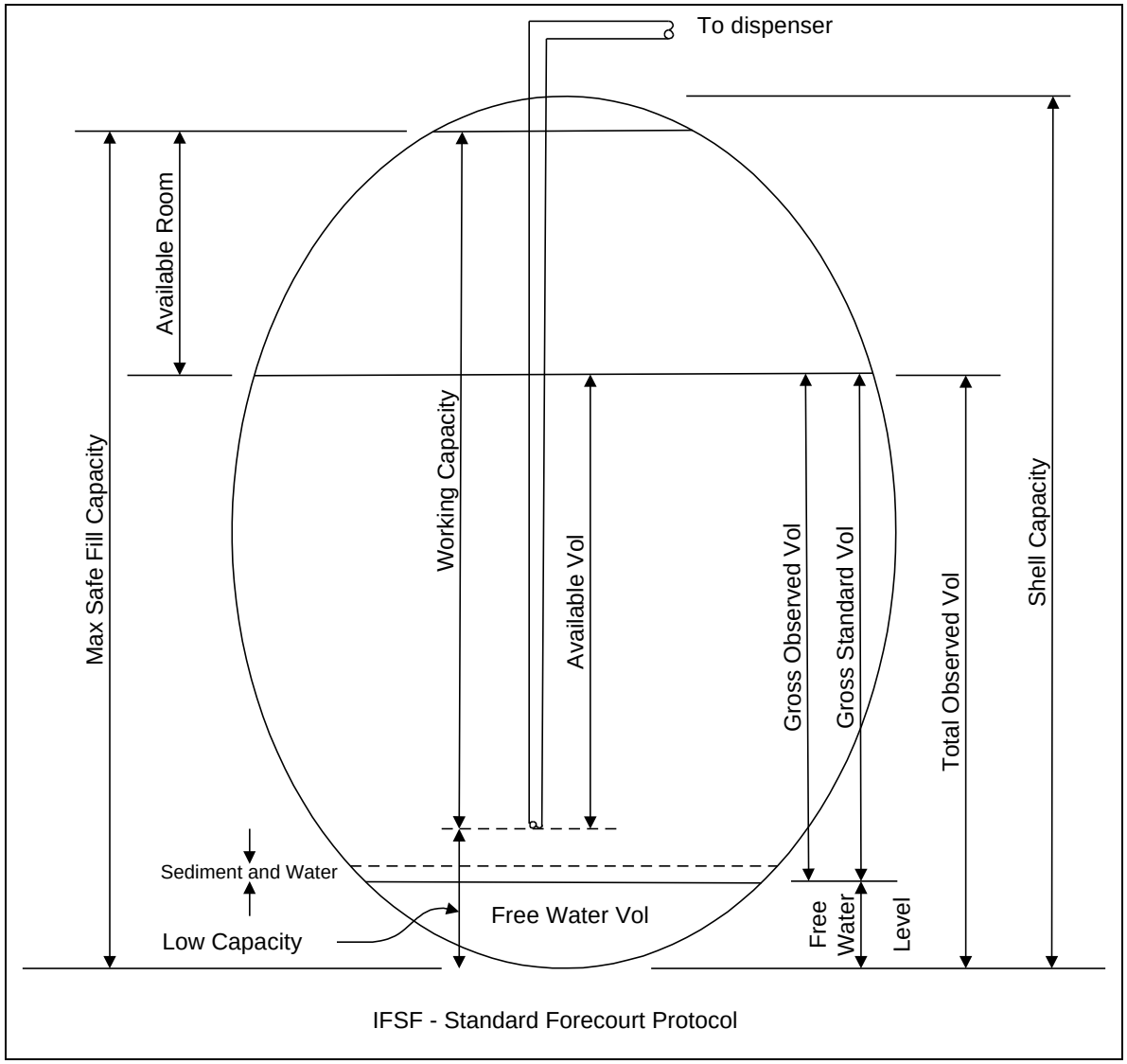
The diagram shown below provides an example of a location tank pluming and usage installation in order to illustrate the definition of terms adopted by the committee. It also shows the relationship between tanks, fuel products, fueling positions, and fuel grades.

This diagramed implementation reflects a physical site location having the following characteristics: three product storage tanks with submersible pumps, two dispensers with only one fueling position each, at each fueling position a total of three grades of product can be dispensed of which are two 'straight' grades and one is a blended grade.

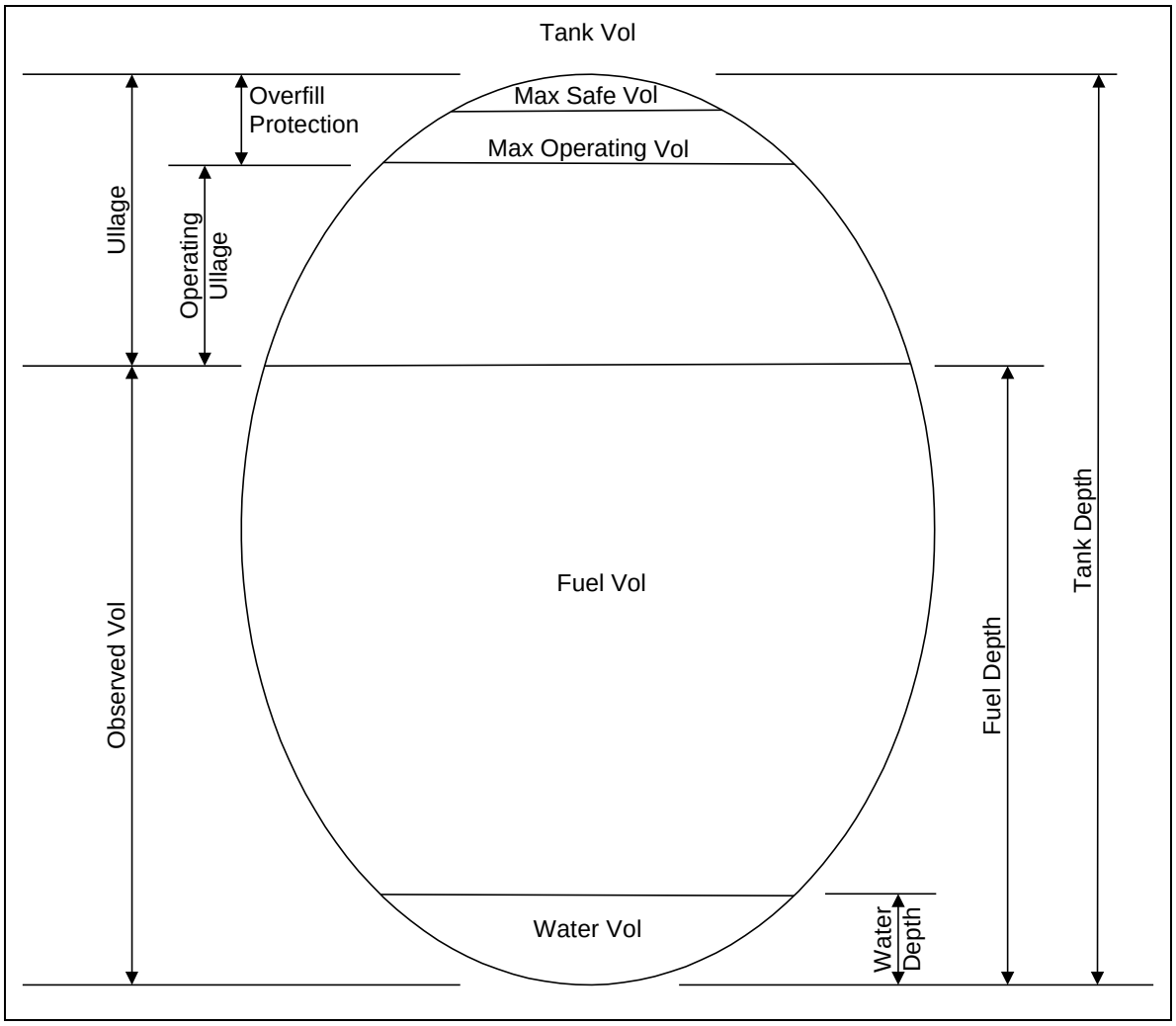


Appendix G – Fuel Tank Monitoring Definitions

IFSF



IFSF - Standard Forecourt Protocol


Tank Vol
Overfill
Protection
Max Safe Vol
Max Operating Vol
Ullage
Operating
Ullage
Fuel Vol
Observed Vol
Fuel Depth
Tank Depth
Water Vol
Water
Depth