

HISTORY

The PIDX Publication 3810 (Document ID 01-277-25-50-1992), “CODE Crude Oil Data Exchange Implementation Guidelines”, is the PIDX standard for exchanging document data from crude oil or product run tickets, crude oil lease and point of sale run statements, and tank strapping increment tables in a standardized fixed record format.

CODE was installed as an industry standard in 1978 transmitting oil run ticket information. Oil statement records were added to the system in January 1986. Tank increment records were added in 1989. In March 1992, there were a handful of PIDX Codes, less than 50. Now there are many more.

A PIDX Publication (Document ID 04-242-20-55-2003), “Petroleum Industry Product Code Structures,” describes the naming conventions of the PIDX Product Codes. Below are the fields included in the PETROLEUM INDUSTRY COMMON PRODUCT CODES, their structure, acceptable values and definition of the values.

COMMON PRODUCT CODES DATA STRUCTURE

Product codes are required elements in PIDX BOL protocol. Each product loaded, transferred or offloaded by a customer at a terminal has a PIDX code identifying that product. Protocol does not allow for free form text, therefore there have to be some standards/consistency in what a terminal uses for a product. Elements required are again listed below.

Column Name	Definition
Code	A one to three character alphanumeric product code assigned by the Downstream Subcommittee
Product Definition	Up to a 34 character alphanumeric definition of the product. Examples of acceptable values for gasolines are: REGULAR GASOLINE, UNLEADED REGULAR, UNLEADED REGULAR BLEND TO UNL MIDG



Description	Up to a 120 character alphanumeric description of the product. Examples of acceptable values for gasolines are: CONVENTIONAL, CONVENTIONAL-CARB, RFG, RFG-CARB, RBOB, RBOB-CARB
Cetane/Octane	The numeric value of the cetane or octane.
Oxygenated / RBOB Type	A single alphanumeric character indicating if the product is oxygenated and if so, with which oxygenate. Additionally, if the product is an RBIB this field describes the type of RBOB. Acceptable values and definitions are: A=ethanol, B=any renewable oxygenate, E=ether, M=MTBE, N=none, O=any oxygenate, R=ETBE (any renewable), S=refiner specified, T=TAME
Oxygenate Percent (% volume)	Percent of oxygenate (type chosen in field 5) volume
Additized	A single alphanumeric character indicating if the product is additized and if so, with what. Acceptable values and definitions are: Y=additized type not determined, P=additized with proprietary additive (additive would be proprietary if it is the proprietary additive of the final seller of the product.), G=additized with generic additive, N=not additized
RVP Percentage	Reid Vapor Pressure percentage.
Regulatory OXY %	Numeric value of the Regulatory Oxy Percentage.
VOC	A single alphanumeric character indicating whether the product is controlled by a Volatile Organic Compound Region and if so which one. Acceptable values are: 1=region1, 2=region2, N=Not VOC controlled.

Fungible / Segre (F/S)	A single alphanumeric character indicating whether the product is fungible or segregated. Acceptable values are: F=fungible, S=segregated.
Dyes 12	A single alphanumeric character indicating if the product contains a dye. Acceptable values are Y=yes, N=no.
Sulphur Content 13	A numeric indication of the sulphur content of the product. (If the sulphur content is .06% or higher, the product is considered to be a high sulphur product. If the sulphur content is .05% or lower, the product is considered to be low Sulphur. If the sulphur content is .0015% or lower, the product is considered to be ultra low sulphur.)
AM (Additive Message)	A single alphanumeric character indicating additized product. Acceptable values are: 1=base gasoline - not for sale to the ultimate customer, 2=detergent, 3=detergent additized gasoline, 4=specifically named detergent (additized oxygenate), 5=detergent (additized gasoline blending stock), 6=base gasoline (no additive)
EPA message fields	The following 11 columns are set to 'Y' if the message applies to the product (M3 has been excluded)
M1	Reformulated gasoline meets maximum 1.3 volume % benzene, minimum 1.5 wt % oxygen, maximum 2.7 wt % oxygen.
M2	Reformulated gasoline meets maximum 1.3 volume % benzene, minimum 1.5 wt % oxygen, maximum 3.5 wt % oxygen.

M1 & M2 exceptions	Exception to the minimum 1.5 wt% oxygen are the following areas which are minimum 1.6 wt % oxygen (The boundaries fo the covered areas are described in detail in 40 CFR.80.70). 1.Philadelphia-Wilmington-Trenton area; 2.Baltimore, MD area; 3.Houston-Galveston-Brazoria, TX area; 4.Atlantic City, NJ area comprised of Atlantic and Cape May counties; 5. Dallas-Fort Worth, TX area comprised of Collin, Dallas, Denton, and Tarrant counties; 6.Norfolk-Virginia Beach-Newport News (Hampton Roads), VA area comprised of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Suffolk, Virginia Beach, Williamsburg and James City and York counties; 7.Richmond, VA area comprised of Charles City, Chesterfield, Colonial Heights, Hanover, Henrico, Hopewell and Richmond counties; 8.Washington D.C. area comprised of the District of Columbia, Calvert, Charles, Frederick, Montgomery, and Prince Georges counties in MD, Alexandria, Fairfax, Falls Church, Manassas, Manassas Park and Arlington, Loudon, Prince William and Stafford counties in VA.
M4	VOC controlled for Region1, suitable for Region2, meets VOC reduction minimum of 32.6%
M5	VOC controlled for Region2, meets VOC reduction minimum of 13.1%
M6	Not VOC controlled
M7	Oxy Fuels Program RFG
M8	Not Oxy Fuels Program RFG

M9	Conventional Gasoline - this product does not meet the requirements for reformulated gasoline and may not be used in any reformulated area.
M10	Reformulated gasoline blendstock, meets maximum 1.3 wt% benzene; cannot be combined with RFG or with any other RBOB except other RBOB having the same requirements for oxygenate types and amounts.
M11	Blend RBOB with any oxygenate to 2.0 wt% and 5.7 vol% oxygen content.
M12	Blend RBOB with any oxygenate to 2.0 wt% and 10.8 vol% oxygen content.
Comments 14	Various additional information about the product.
State Code 15	unused in downstream EDI
Requester 15	Person who requested the product code.
Company 17	Company that request the product code.
Date Code Assigned 18	Date

CODE 1

A one to three character alpha-numeric code assigned by PIDX Downstream. Code 1 is assigned based on what family of fuels they belong to. Each Product Code is assigned to a fuel family, according to the table below.



Code 1	Product definition 2	
A	AVIATION GASOLINE	
B	FUEL ETHANOL	
C	MIDGRADE	
D	REGULAR	
E	HIGH SULFUR FUEL OIL #1	
F	HIGH SULFUR DIESEL #2	
G	HIGH SULFUR DIESEL #2	
H	KEROSENE	
I	ETHANOL / ADDITIVES	
J	JET FUEL, MILITARY	
K	JET FUEL, COMMERCIAL	
L	HIGH SULPHUR HEATING OIL #1	
M	HIGH SULPHUR HEATING OIL #2	
N	BUTANE	
O	MIDGRADE	
P	PREMIUM	
Q	PREMIUM	
R	REGULAR	
S	STOCK OILS	not for PIDX USE
T	ALCOHOL	
U	REGULAR	
V	ULTRA LOW SULFUR DIESEL #2	
W	GASOHOL	
X	SPECIAL USAGE	
Y	TRANSMIX / ASPHALT	
ZZZ	NO LOAD, RESERVED FOR TABS	

The first letter of the PIDX code begins with the appropriate designated letter to indicate family of fuel. Codes are then assigned in alphanumeric order.



- **One-digit codes and two-digit codes are not the current practice in code assignment. Three-character codes are currently being used.**

EXAMPLES:

CURRENT PRACTICE:

B Family – three-digit designation, assigned alphanumerically

Code 1	Product definition 2
B00	FUEL ETHANOL
B01	FUEL ETHANOL
B02	FUEL ETHANOL
B03	FUEL ETHANOL
B04	FUEL ETHANOL

V Family – three-digit designation, assigned alphanumerically

Code 1	Product definition 2
V9A	ULTRA LOW SULFUR DIESEL #2
V9B	Dyed ULSD HPFI w/ Winter X
V9C	Dyed ULSD HPFI w/ Winter X

NOT CURRENT:

One-digit designation

Code 1	Product definition 2
D	REGULAR



Two-digit designation

Code 1	Product definition 2
M6	HIGH SULPHUR HEATING OIL #2
M7	HIGH SULPHUR HEATING OIL #2
NP	PROPANE

PRODUCT DEFINITION 2

Up to a 34 character alpha-numeric definition of the product.

Examples of acceptable values for gasolines are:

- REGULAR GASOLINE**
- UNLEADED REGULAR**
- UNLEADED REGULAR BLEND TO UNL MIDG**
- UNLEADED MIDGRADE**
- UNLEADED MIDGRADE 50/50**
- UNLEADED MIDGRADE 60/40**
- UNLEADED PREMIUM**
- UNLEADED PREMIUM BLEND TO UNL MIDG**

Effective October, 1998, **REGULAR GASOLINE (LEADED)** has been eliminated from the database. Additionally, as all gasolines are unleaded, the word unleaded will be assumed and eliminated from the description. This description change will help those of us who query the database in reducing typing.

EXAMPLES:



Code 1 Product definition 2	
B17	FUEL ETHANOL
DS1	REGULAR
DS2	REGULAR
V82	ULTRA LOW SULFUR DIESEL #2

DESCRIPTION 3

Up to a 120 character alpha-numeric description of the product. Examples of acceptable values for gasolines are:

- CONVENTIONAL
- CONVENTIONAL-CARB
- RFG
- RFG-CARB
- OPRG
- CARB
- RBOB
- RBOB-CARB
- RBOB-OPRG

Effective October, 1998, the word **CONVENTIONAL** will be abbreviated as "**CG**".

A delimited ascii version of the database in its pre-October change condition will be stored as HIST1098.TXT.

EXAMPLES:



Code 1	Product definition 2	Description 3
C02	MIDGRADE	CG
C03	MIDGRADE	CG
C04	MIDGRADE	CG - CBG
C2P	MIDGRADE	RBOB
CMB	MIDGRADE	CG - GPA
O01	MIDGRADE	RBOB - CARB
O05	MIDGRADE	RFG

CETANE/OCTANE 4

The numeric value of the cetane or octane.

EXAMPLES:

Code 1	Product definition 2	Description 3	Cetane/octane 4
C0D	MIDGRADE	CG	89
C0E	MIDGRADE	CG	88

OXYGENATED/RBOB TYPE 5

A single alpha-numeric character indicating if the product is oxygenated and if so, with which oxygenate.

Additionally, if the product is an RBOB, this field describes the type of RBOB.

Acceptable values and definitions are:



- A = ETHANOL**
- B = ANY RENEWABLE OXYGENATE**
- E = ETHER**
- M = MTBE**
- N = NONE**
- O = ANY OXYGENATE**
- R = ETBE(ANY RENEWABLE)**
- S = REFINER SPECIFIED**
- T = TAME**

OXYGENATE PERCENT % V 6:

Percent of oxygenate (type chosen in field 5) volume.

EXAMPLES:

Code 1	Product definition 2	Description 3	Cetane/octane 4	Oxygenated/rbob type 5	Oxygenate percent % v 6
B09	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85
C0E	MIDGRADE	CG	88	A	10
C0R	MIDGRADE	RBOB	90	O	

ADDITIZED 7

A single alpha-numeric character indicating if the product is additized and if so, with what. Acceptable values and definitions are:



Y = ADDITIZED TYPE NOT DETERMINED
P = ADDITIZED WITH PROPRIETARY ADDITIVE (additive would be proprietary if it is the proprietary additive of the final seller of the product.)
G = ADDITIZED WITH GENERIC ADDITIVE
N = NOT ADDITIZED

EXAMPLES:

Code 1	Product definition 2	Description 3	Cetane/octane 4	Oxygenated/rbo Oxygenate type 5	percent % v 6	Additized 7
A20	AVIATION GASOLINE			N		Y
B19	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85	G

RVP PERCENTAGE 8

Reid Vapor Pressure Percentage

EXAMPLES:

Code 1	Product definition 2	Description 3	Cetane/octane 4	Oxygenated/rbob Oxygenate type 5	percent % v 6	Additized 7	Rvp percentage 8
B00	FUEL ETHANOL	ALTERNATIVE FUEL - Ed79-83		A	79-83	N	7.0-9.5

REGULATORY OXY % 9

Numeric value of the Regulatory Oxy Percentage

EXAMPLES:



Product Code 1	Product definition 2	Description 3	Cetane/octane 4	Oxygenated/rbo type 5	Oxygenate percent % v 6	Additized Rvp 7	Regulatory oxy % 9
C78	MIDGRADE	CG	89	A	7.8	P	2.7

VOC 10

A single alpha-numeric character indicating whether the product is controlled by a Volatile Organic Compound Region and if so, which one.

Acceptable values are:

- 1 = Region 1**
- 2 = Region 2**
- N = Not VOC Controlled**

EXAMPLES:

Code 1	Product definition 2	Description 3	[. . .]	Voc 10
OUB	MIDGRADE	RFG - CARB	[. . .]	1
B00	FUEL ETHANOL	ALTERNATIVE FUEL - Ed79-83	[. . .]	N

FUNGIBLE/SEGREG (F/S) 11

A single alpha-numeric character indicating whether the product is fungible or segregated.

Acceptable values are:

- F = Fungible**
- S = Segregated**

Code 1	Product definition 2	Description 3	[. . .]	Voc 10	Fungible/segre (f/s) 11
B00	FUEL ETHANOL	ALTERNATIVE FUEL - Ed79-83	[. . .]	N	F

DYES 12

A single alpha-numeric character indicating if the product contains a dye.

Acceptable values are:

Y = Yes

N = No

Code 1	Product definition 2	Description 3	[. . .]	Dyes 12
G8N	LOW SULFUR DIESEL #2	DIESEL W/ 2% BIO OIL	[. . .]	Y

SULPHUR CONTENT 13

A numeric indication of the sulphur content of the product. (If the sulphur content is .06 % or higher, the product is considered to be a high sulphur product. If the sulphur content is .05 % or lower, the product is considered to be a low sulphur product.)

Code 1	Product definition 2	Description 3	[. . .]	Dyes 12	Sulphur content 13
G8N	LOW SULFUR DIESEL #2	DIESEL W/ 2% BIO OIL	[. . .]	Y	0.0500



ADDITIVE MESSAGE (AM) INDICATORS

Additive message (**AM**) indicators are in the AM (additive message) field of the Petroleum Feedstocks And Refined Product Code database. Message indicators for the AM field are 1 through 6:

1	Base gasoline - not for sale to the ultimate customer
2	Detergent
3	Detergent additized gasoline
4	Specifically name detergent - additized oxygenate
5	Detergent - additized gasoline blending stock
6	Base gasoline - no additive

Indicators for the following EPA message fields will be set to "Y" if the message applies to the product:

M1	"Reformulated gasoline meets max 1.3 vol % benzene, min 1.5 wt % oxygen, max 2.7 wt % oxygen"
M2	"Reformulated gasoline meets max 1.3 vol % benzene, min 1.5 wt % oxygen, max 3.5 wt % oxygen"
Exception to the "min 1.5 wt % oxygen" in M1 & M2 are the following areas which are "min 1.6 wt % oxygen" (The boundaries of the covered areas are described in detail in 40 CFR. 80.70):	
1	Philadelphia-Wilmington-Trenton area
2	Baltimore, MD area
3	Houston-Galveston-Brazoria, TX area

4	The Atlantic City, NJ area comprised of Atlantic County, Cape May County
5	The Dallas-Fort Worth, TX area comprised of Collin County, Dallas County, Denton County, Tarrant County
6	Norfolk-Virginia Beach-Newport News (Hampton Roads), VA area composed of Chesapeake, Hampton, James City County, Newport News, Norfolk, Poquoson, Suffolk, Virginia Beach, Williamsburg, York County
7	Richmond, VA area comprised of Charles City County, Chesterfield County, Colonial Heights, Hanover County, Henrico County, Hopewell, Richmond
8	Washington D.C. area comprised of The District of Columbia, Calvert County MD, Charles County MD, Frederick County MD, Montgomery County MD, Prince Georges County MD, Alexandria VA, Arlington County VA, Fairfax VA, Fairfax County VA, Falls Church VA, Loudon County VA, Manassas VA, Manassas Park VA, Prince William County VA, Stafford County VA
M4	"VOC-Controlled for Region 1, suitable for Region 2, meets VOC reduction minimum of 25.0%."
M5	"VOC-Controlled for Region 2, meets VOC reduction minimum of 23.4%."
M6	"Not VOC-Controlled"
M7	"Oxy Fuels Program RFG" (Message may not be needed after 12/31/97.)
M8	"Not Oxy Fuels Program RFG" (Message may not be needed after 12/31/97.)
M9	"Conventional Gasoline - this product does not meet the requirements for reformulated gasoline and may not be used in any reformulated area". May contain ethers.
M10	"Reformulated gasoline blendstock, meets maximum 1.3 wt% benzene; cannot be combined with RFG or with any other RBOB except other RBOB having the same requirements for oxygenate types and amounts"
M11	"Blend RBOB with any oxygenate to 2.0 wt % and 5.7 vol % oxygen content"

M12	"Blend RBOB with ether only oxygenate to 2.0 wt % and 10.8 vol % oxygen content"
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ATLANTA GEORGIA GASOLINE MESSAGE: (Eff: 5/1/99)

If product is delivered into any of the following Georgia counties, this message applies: **"ATLANTA GA GASOLINE: MEETS 150 PPM AVERAGE SULPHUR AT THE REFINERY OF ORIGIN"**.

County	State/Cty Code	County	State/Cty Code
Gwinnett	10007	Hall	10009
Haralson	10011	Henry	10015
Jackson	10018	Newton	10047
Paulding	10050	Pickens	10052
Rockdale	10062	Spaulding	10066
Walton	10087	Fulton	60000
De Kalb	60002	Barrow	60026
Bartow	60027	Butts	60037
Carrol	60041	Cherokee	60047
Clayton	60051	Cobb	60053
Coweta	60058	Dawson	60062
Douglas	60067	Fayette	60075
Forsyth	60077		

Effective September 1, 1999 the following new regulatory message applies to all California (state-wide) motor gasoline invoices and bills of lading:

"THIS GASOLINE CONTAINS 0.6 PERCENT BY VOLUME OR MORE MTBE"

Effective December 1, 1999, the following new regulatory message applies to all California (state-wide) motor gasoline invoices and bills of lading (replacing the message above):

"THIS GASOLINE CONTAINS 0.6 PERCENT OR MORE BY VOLUME MTBE"

COMMENTS 14

Various additional information about the product.



STATE CODE 15

Not used in Downstream EDI.

REQUESTER 16

Person who requested the product code.

COMPANY 17

Company that requested the product code.

DATE CODE ASSIGNED 18

Date.

EXAMPLE - PARADOX, FORMVIEW

Below is an example of an Industry Common Product Code displayed in Paradox, Formview. Copies of the Petroleum Industry Common Product Codes are available in the following PC formats: Lotus 1-2-3, Excel, Dbase III, Paradox, Visicalc, PFS and delimited ascii.



Code 1:	O20
Product Definition 2:	UNLEADED MIDGRADE
Description 3:	RFG
Cetane/Octane 4:	89
Oxygenated/RBOB Type 5:	O
Oxygenate Percent % v 6:	
Additized 7:	Rvp Percentage 8: 7.4
Regulatory Oxy % 9:	2
VOC 10:	1
Fungible/Segregated (F/S) 11:	F
Dyes 12:	N
Sulphur Content 13:	
AM:	3
M1:	Y
M2:	N
M3:	Y
M4:	Y
M5:	N
M6:	N
M7:	N
M8:	Y
M9:	N
M10:	N
M11:	N
M12:	N
State Code 15:	
Comments 14:	
Requester 16:	JERRY HINSON
Company 17:	EXXON
Date Code Assigned 18:	5/03/95
Record Number:	359

REQUESTING CODES

- The expectation is that requestors have gone into the spreadsheet and seen if there's a code already there.
- PIDX relies on the requester giving all the appropriate information.
- Codes are assigned in alphabetic numeric order.
- One-digit codes and two-digit codes are not the current practice in code assignment. Three-character codes are currently being used.