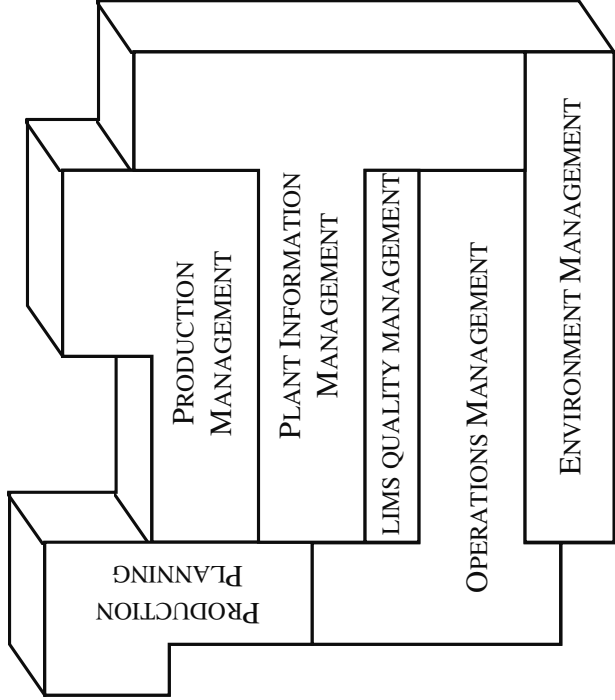


# PHD Tag Load



# Lesson Objective

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## Objectives

Given existing DCS tags with stated history collection requirements, perform a bulk Tag Load to configure the tags in the PHD database.

## Topics

- Overview of Tagload process
- Creating a Tag Load input data file
- Completing Tag Load forms
  - Tag Source Form
  - Tag Load Source System Configuration Form
  - Tag Load Interface Configuration Form
  - Tag types
- Initiating a Tag Load
- Performing detailed Tag Load procedure
- Hands-on exercises

**References:**    *Tag Load User Manual*, PIM0801 (CD)  
                      Tagloader User Guide (online)

# The Tag Load Process

---

The purpose of a Tag Load is to quickly bulk load DCS tag definitions into the PHD database.

The Tag Load process integrates concepts of parent tags and your plant's tag hierarchy.

The Tag Load utility was designed for large, complicated systems with multiple DCS's; many sites will not use all of its features. Good advice is to keep your Tag Load simple.

A Tag Load process can take several days to several weeks, depending on the system size.

Ex: Simple system with <10,000 tags = 3 days average

More good advice is to manually configure some tags to get familiar with the site's tag configuration requirements before attempting a tagload.

# Tag Load Steps

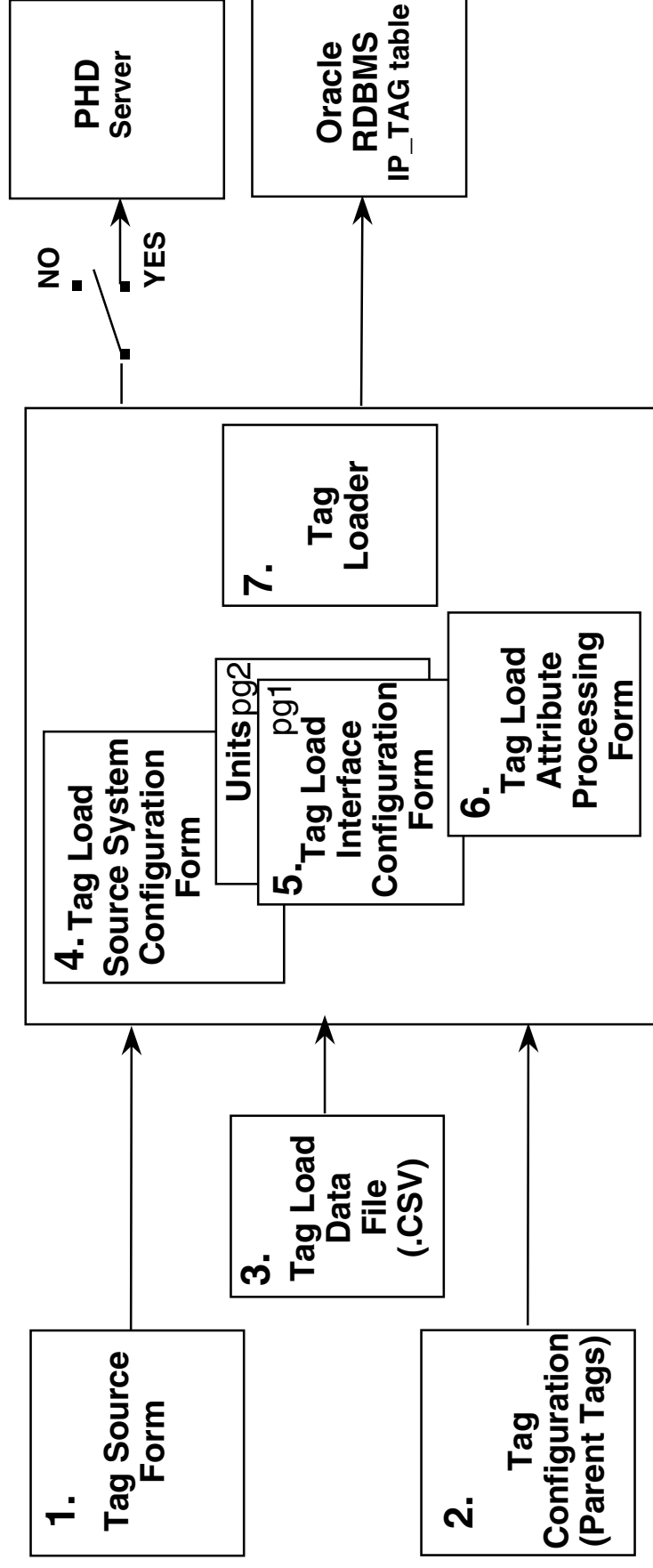
---

The Tag Load Process involves these tasks:

- |   | Prepare |
|---|---------|
| <ul style="list-style-type: none"><li>• Determine what you want to collect and how often.</li><li>• Use Doc Tool or whatever tool is available on the DCS to create one or more files containing the DCS tags to be collected; then massage the files to ensure that all the desired data is present and that certain rules are followed.</li><li>• Determine the PHD tag naming standards.</li><li>• Determine what types of parent tags to use on the system.</li><li>• Resolve Engineering Unit inconsistencies.</li></ul> |         |

- |  | Load |
|--|------|
| <ul style="list-style-type: none"><li>• Hand-load some tags to test each type of parameter you want to load.</li><li>• Complete Tag Load forms.</li><li>• Perform actual Tag Load and troubleshooting Tag Load errors.</li><li>• Check out key tags to verify their configuration is correct and that the same value seen at the DCS is being collected by the RDI.</li><li>• Turn on the tag “Store to Archive” function when everything looks good.</li><li>• This completes the Tag Load. The next process is to “tune” the tags.</li></ul> |      |

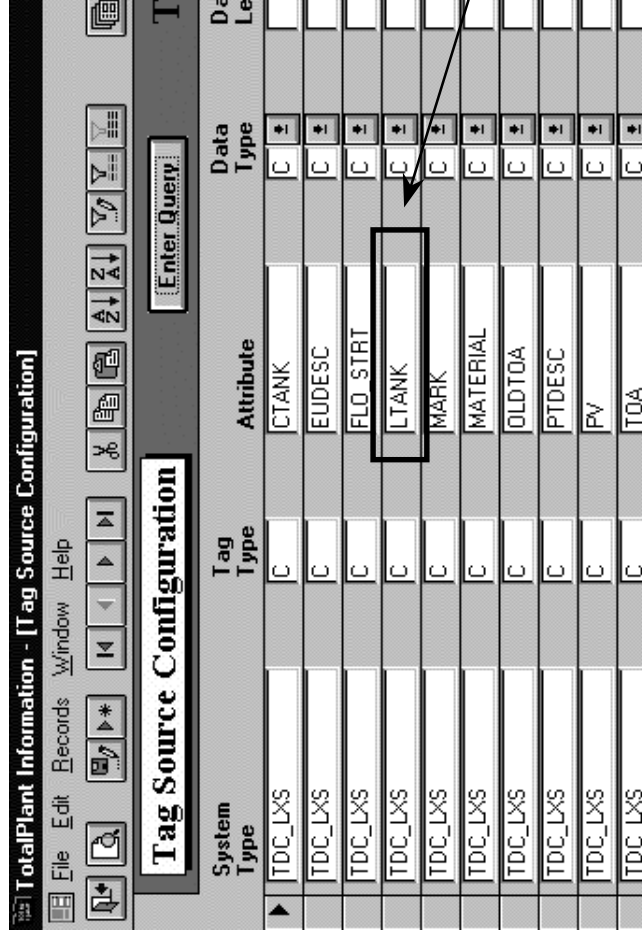
# PHD Tag Load Forms



- 1. Tag Source:** Specifies all parameter names to be historized and their data type (ex: PV, SP, OP = Real).
- 3. Tag Load Data File:** Specifies tag data to be used in Tag Load (name, description, units, range).
- 4. Source System Configuration:** Maps fields in the Tag Load Data File to PHD tag definition fields.
- 5. Interface Configuration:** Defines the different tag types in the DCS and the method for defining these types using the Tag Load Data File. Resolves different engineering unit nomenclatures that may exist on the DCS.
- 6. Attribute Processing:** Specifies “one to many relationship”; that is, which parameters for a specific tag type are to have PHD tags created. (Discussed in Advanced Tagloading in Course 5708.)

# Tag Source Configuration Form

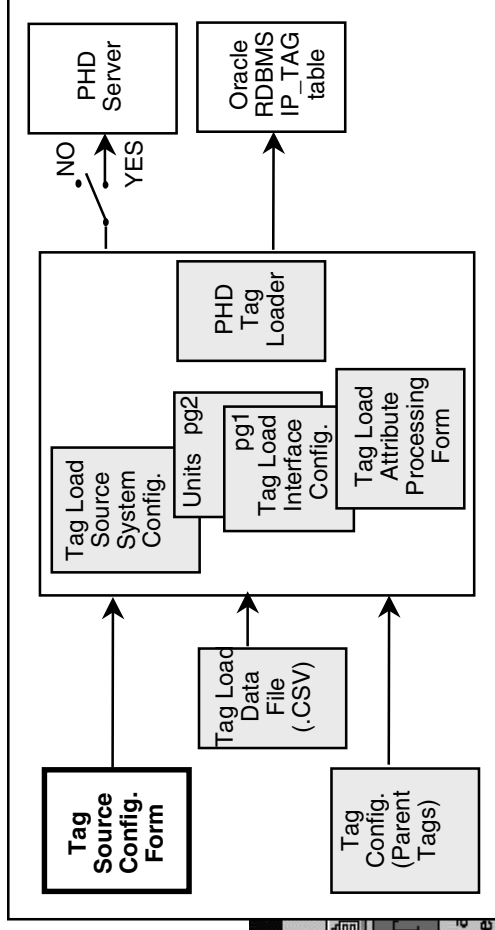
This form lists all the parameter names to be historized. It defines the parameter's tag type, attribute name, data length, and data type.



The screenshot shows the 'Tag Source Configuration' window with a table of parameters. The table has columns for System Type, Tag Type, Attribute, Data Type, and Data Length. The 'LTANK' attribute is highlighted with a red box.

System Type	Tag Type	Attribute	Data Type	Data Length
TDC_LXS	C	CTANK	C	40
TDC_LXS	C	EUDESC	C	40
TDC_LXS	C	FLO_STRT	C	24
TDC_LXS	C	LTANK	C	40
TDC_LXS	C	MARK	C	20
TDC_LXS	C	MATERIAL	C	48
TDC_LXS	C	OLDTOA	C	16
TDC_LXS	C	PTDESC	C	16
TDC_LXS	C	PV	C	40
TDC_LXS	C	TOA	C	16

A common source of Tag Load errors is when CDS parameters are specified in the Tag Load Attribute Processing form, but are missing from this Tag Source Configuration form.



For LXS and CM50S RDIs, the data length of reals, integers, and ordinals = 4

If you need to collect LCN CDS parameters, you must add their names to this form.

(Refer to *PHD User Guide*.)

# Tag Source Configuration Form, continued

This form also “drives” the content of the pulldown lists for System Type, Tag Type, and Attribute in the Tag Configuration form.

**TotalPlant Information - [Tag Source Configuration]**

File Edit Records Window Help

**Tag Source Configuration** Enter Query

System Type	Tag Type	Attribute	Data Type	Data Length	Sync Attribute Description
TDC_LXS	C	CTANK	C	40	
TDC_LXS	C	EUDESC	C	40	
TDC_LXS	C	FLO_STRT	C	24	
TDC_LXS	C	LTANK	C	40	
TDC_LXS	C	MATERIAL	C	40	
TDC_LXS	C	OLDTOA	C	16	
TDC_LXS	C	PTDESC	C	16	
TDC_LXS	C	PV	C	40	
TDC_LXS	C	TOA	C	16	
TDC_LXS	E	ALENBST	C	8	
TDC_LXS	E	FLAG	C	8	
TDC_LXS	E	FLAGS	C	8	
TDC_LXS	E	LM	C	8	
TDC_LXS	E	MODE	C	8	

**Tag Configuration**

Tagname Tag No Send

Source Tag Spec Source Tag Index A B C

System Type Tag Type Attribute

Convert From Units Collector Name Scan Seconds Tolerance Type

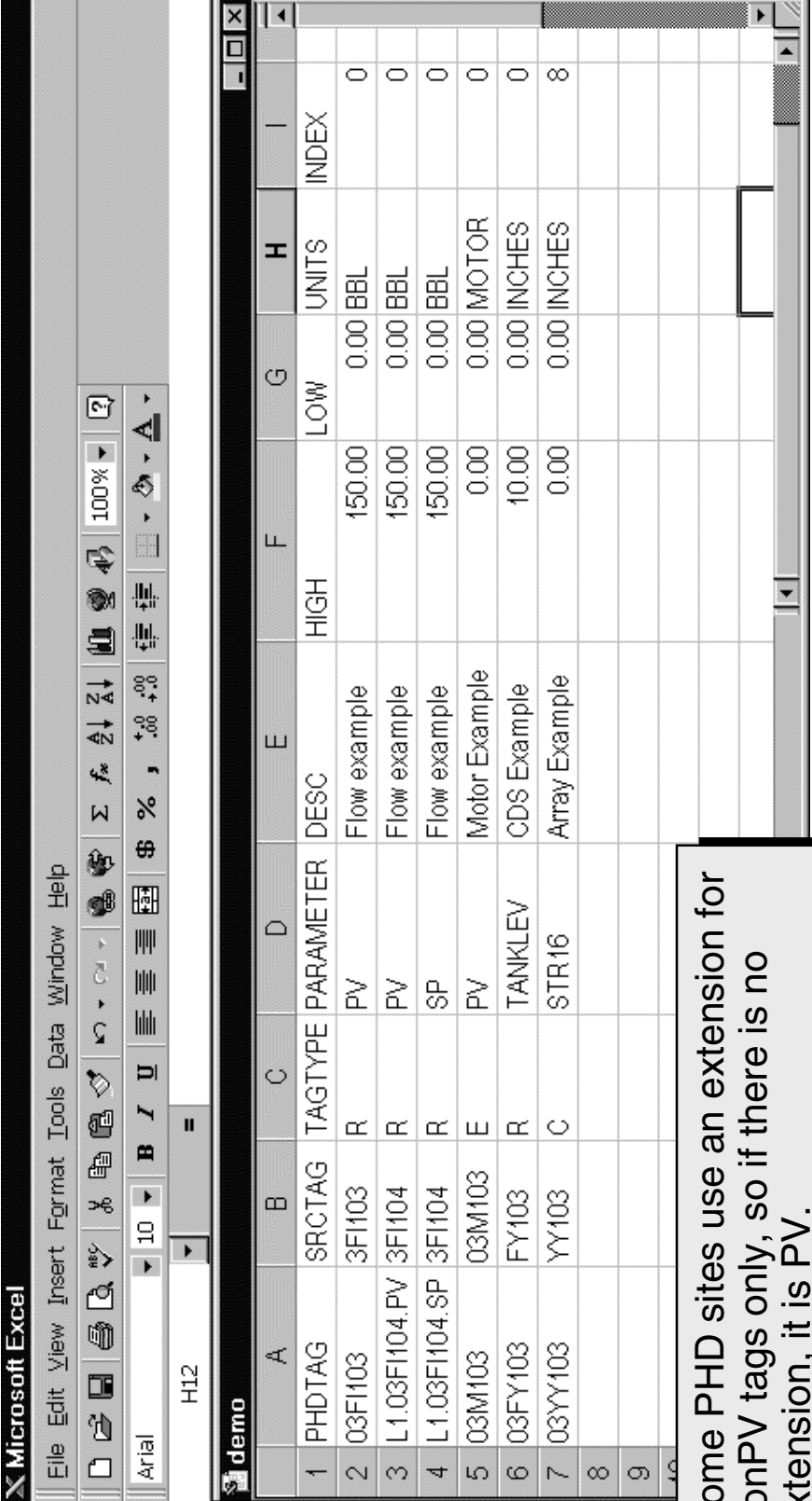
**Data Collection**

Update Tag Type Update Attribute Range Multiplication Factor Prefix Description

These four entries and the Sync Attribute Description apply to Tag Reference Database Synchronization.

# Tag Load Data File - Basic Example

This is an example of the file for a simple Tag Load on an L<sup>X</sup>S or CM50S system.  
(Note: You may end up doing multiple Tag Loads with multiple Tag Load data files.)

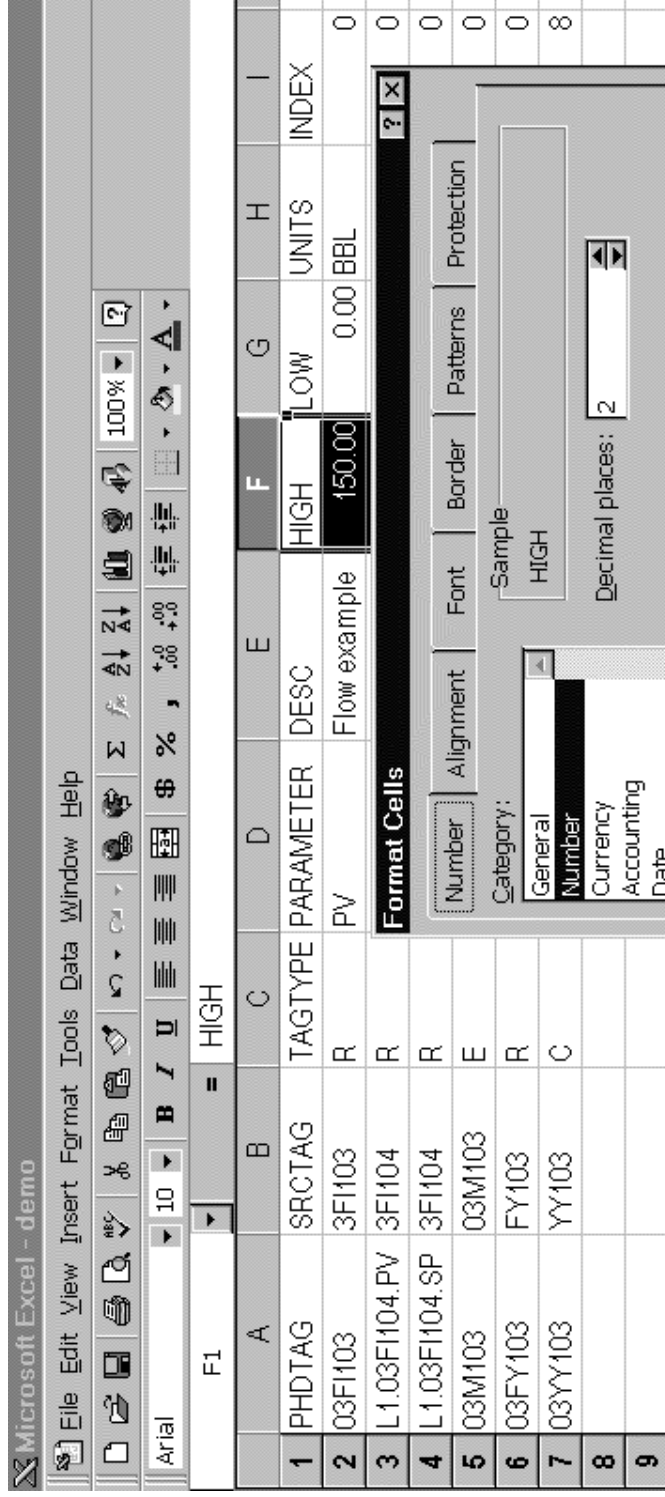


demo								
	A	B	C	D	E	F	G	H
	PHDTAG	SRCTAG	TAGTYPE	PARAMETER	DESC	HIGH	LOW	UNITS
1								INDEX
2	03FI103	3FI103	R	PV	Flow example	150.00	0.00	BBL
3	L1.03FI104.PV	3FI104	R	PV	Flow example	150.00	0.00	BBL
4	L1.03FI104.SP	3FI104	R	SP	Flow example	150.00	0.00	BBL
5	03M103	03M103	E	PV	Motor Example	0.00	0.00	MOTOR
6	03FY103	FY103	R	TANKLEV	CDS Example	10.00	0.00	INCHES
7	03YY103	YY103	C	STR16	Array Example	0.00	0.00	INCHES
8								
9								
10								

Some PHD sites use an extension for nonPV tags only, so if there is no extension, it is PV.



# Tag Load Data File Requirements



- The Tag Load Data File must be in comma-separated-variable (CSV) format.
- The first row of the file must be *field names* (headers) for the columns of data, in CSV format. (This is the same format as saving an Excel spreadsheet as a CSV file.)
- The second row of the file must be the first *data* record.
- Each column in the first data record must contain a *valid* type of data in each field in order for the Tag Load Utility to process the remaining rows properly. For example, do not insert “xxx” or blanks in the high limit field and change its cell format to number as shown above.

# Tag Load Data File Requirements, continued

Microsoft Excel - demo										
File Edit View Insert Format Tools Data Window Help										
Arial 10 B I U = HIGH										
F1 = HIGH										
A	B	C	D	E	F	G	H	I		
1	PHDTAG	SRCTAG	TAGTYPE	PARAMETER	DESC	HIGH	LOW	UNITS	INDEX	
2	03FI103	3FI103	R	PV	Flow example	150.00	0.00 BBL			0

- All floating point columns must be formatted with decimal points. If no decimal points exist in the first row of a floating point column, the tagloader assumes that the column contains integer data and will import the data as integer. This has severe consequences on the setting of the HI\_EXTREME and LO\_EXTREME fields.
- Honeywell recommends the following types of tag data be in the file:

Name of DCS tag	Engineering Units	Tag Description
Name of the PHD tag	High limit	Index
Tag Type	Low limit	

For various reasons, additional data may be included in the file, such as

  - Parameter to be historized (upper case)
  - Parent Tag
  - Scan Seconds
- For convention and to prevent errors, follow these rules in the file:
  - Do not use blanks or special characters (such as an underbar \_ and \$) in field names.
  - Use upper case for field names.
  - No blank rows in the file.
  - Remove commas (if any) from tag descriptions or encapsulate them in double quotes.

# Tag Load Data File Requirements, *continued*

The example file shown below resulted from a query performed with the Honeywell TPS System Documentation Tool.

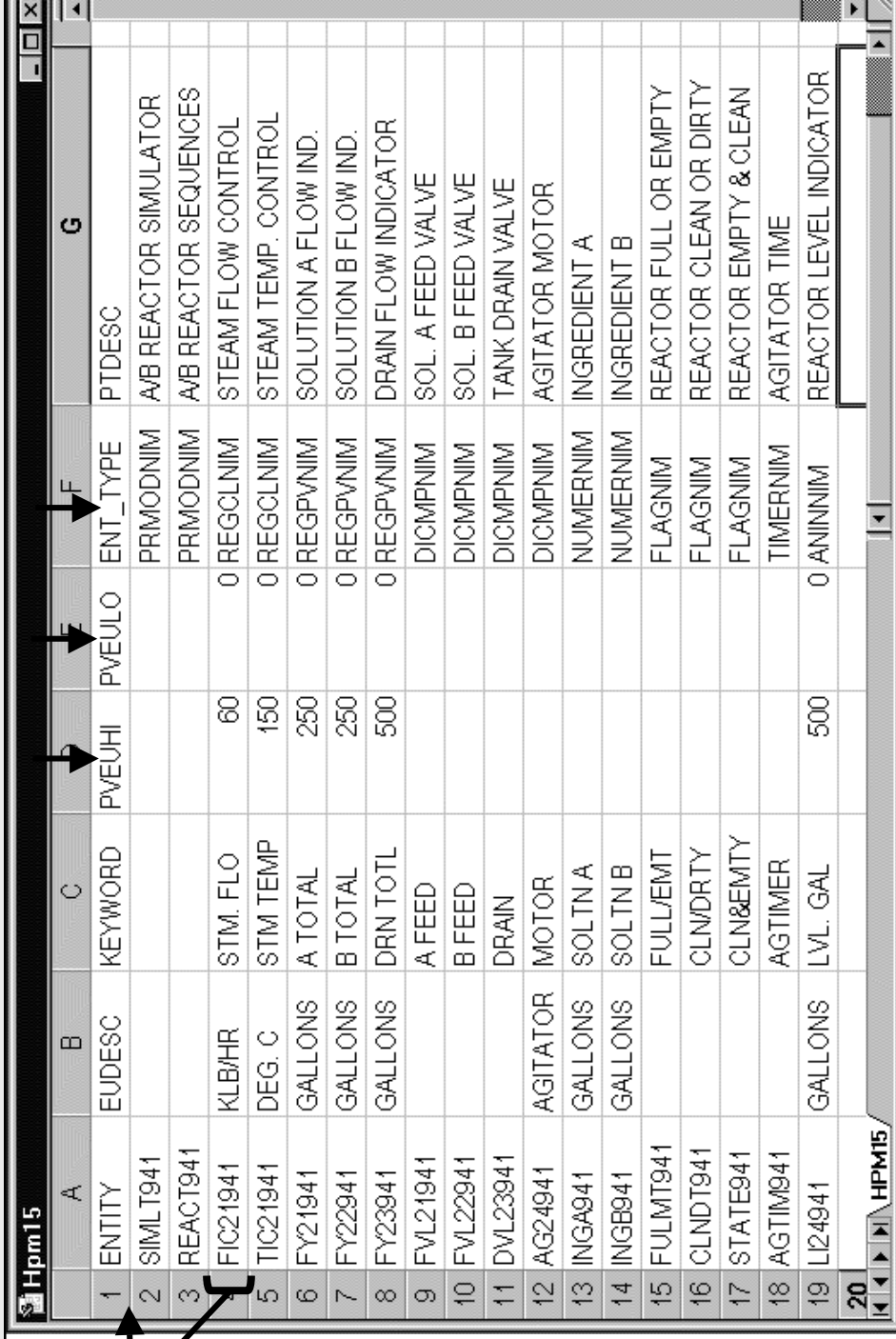
What changes would have to be made to this file for it to be usable by the Tag Loader?

Hpm15							G	
	A	B	C	D	E	F		
1	ENTITY	EUDESC	KEYWORD	PVEUHI	PVEULO	ENT_TYPE	PTDESC	
2	SIMLT941					PRMODNIM	A/B REACTOR SIMULATOR	
3	REACT941					PRMODNIM	A/B REACTOR SEQUENCES	
4	FIC21941	KLB/HR	STM. FLO	60	0	REGCLNIM	STEAM FLOW CONTROL	
5	TIC21941	DEG. C	STM TEMP	150	0	REGCLNIM	STEAM TEMP. CONTROL	
6	FY21941	GALLONS	A TOTAL	250	0	REGPVNIM	SOLUTION A FLOW IND.	
7	FY22941	GALLONS	B TOTAL	250	0	REGPVNIM	SOLUTION B FLOW IND.	
8	FY23941	GALLONS	DRN TOTL	500	0	REGPVNIM	DRAIN FLOW INDICATOR	
9	FVL21941		A FEED			DICMPNIM	SOL. A FEED VALVE	
10	FVL22941		B FEED			DICMPNIM	SOL. B FEED VALVE	
11	DVL23941		DRAIN			DICMPNIM	TANK DRAIN VALVE	
12	AG24941	AGITATOR	MOTOR			DICMPNIM	AGITATOR MOTOR	
13	INGA941	GALLONS	SOLTN A			NUMERNIM	INGREDIENT A	
14	INGB941	GALLONS	SOLTN B			NUMERNIM	INGREDIENT B	
15	FULMT941		FULL/EMPTY			FLAGNIM	REACTOR FULL OR EMPTY	
16	CLNDT941		CLN/DRTY			FLAGNIM	REACTOR CLEAN OR DIRTY	
17	STATE941		CLN&EMPTY			FLAGNIM	REACTOR EMPTY & CLEAN	
18	AGTIM941		AGTIMER			TIMERNIM	AGITATOR TIME	
19	L124941	GALLONS	LVL. GAL	500	0	ANINNIM	REACTOR LEVEL INDICATOR	
20								

# Tag Load Data File Requirements, *continued*

## Answers:

- The first data record (row 2) must contain valid data in each field. Move FIC21941 to row 2.
- Do not use underbars in field names. Delete the underbar from ENT\_TYPE.
- Format the PVEUHI and PVEULO columns with decimal points



	A	B	C	D	E	F	G
	ENTITY	EUDESC	KEYWORD	PVEUHI	PVEULO	ENT_TYPE	PTDESC
1	SIMLT941					PRMODNIM	A/B REACTOR SIMULATOR
2	REACT941					PRMODNIM	A/B REACTOR SEQUENCES
3	FIC21941	KLB/HR	STM. FLO	60	0	REGCLNIM	STEAM FLOW CONTROL
5	TIC21941	DEG. C	STM TEMP	150	0	REGCLNIM	STEAM TEMP. CONTROL
6	FY21941	GALLONS	A TOTAL	250	0	REGPVNIM	SOLUTION A FLOW IND.
7	FY22941	GALLONS	B TOTAL	250	0	REGPVNIM	SOLUTION B FLOW IND.
8	FY23941	GALLONS	DRN TOTL	500	0	REGPVNIM	DRAIN FLOW INDICATOR
9	FVL21941		A FEED			DICMPNIM	SOL. A FEED VALVE
10	FVL22941		B FEED			DICMPNIM	SOL. B FEED VALVE
11	DVL23941		DRAIN			DICMPNIM	TANK DRAIN VALVE
12	AG24941	AGITATOR	MOTOR			DICMPNIM	AGITATOR MOTOR
13	INGA941	GALLONS	SOLTN A			NUMERNIM	INGREDIENT A
14	INGB941	GALLONS	SOLTN B			NUMERNIM	INGREDIENT B
15	FULMT941		FULL/EMT			FLAGNIM	REACTOR FULL OR EMPTY
16	CLNDT941		CLN/DRTY			FLAGNIM	REACTOR CLEAN OR DIRTY
17	STATE941		CLN&EMTY			FLAGNIM	REACTOR EMPTY & CLEAN
18	AGTIM941		AGTIMER			TIMERNIM	AGITATOR TIME
19	LI24941	GALLONS	LVL. GAL	500	0	ANINNIM	REACTOR LEVEL INDICATOR
20							

# Tag Load Source System Configuration Form

This form maps PHD field names in the IP\_TAG table to column names in the Tag Load Data File. Enter only the column names that map directly to a PHD Field Name.

PHD Field Name	Source System Field Name
DSCR	PTDESC
HI_EXTREME	PVEUHI
LO_EXTREME	PVEULO
SRC_TAGNAME	ENTITY
TAGNAME	ENTITY
UNITS	EUDESC
*	

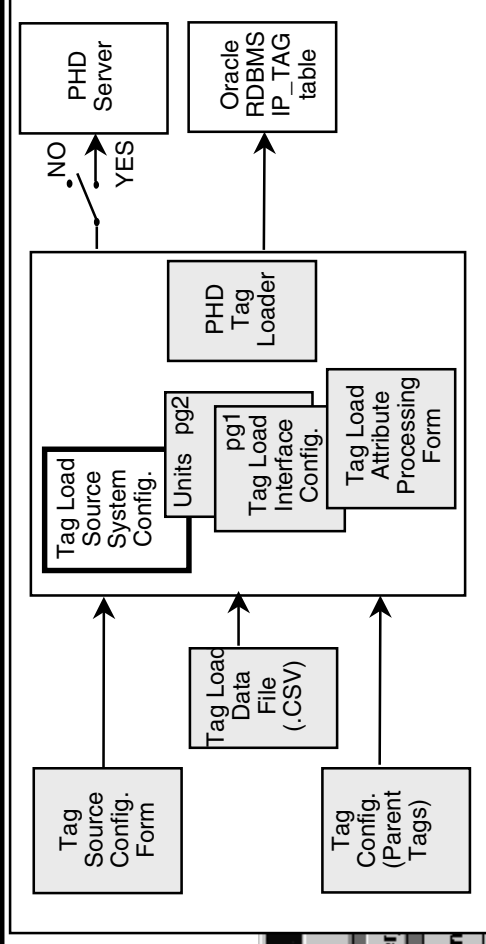
fields in the IP\_TAG table

column names from the tagload data file

This list box shows all of the entries in the Oracle IP\_TAG table.

This form cannot include columns in the Tag Load Data File that do not represent fields in the IP\_TAG table.

Any column name specified in this form must be present in the Tag Load Data File.



# Source System Form and Tagload File Examples

TotalPlant Information - [Tag Load Source System Configuration]

File Edit View Insert Format Tools Data Window TPH Help

Tag Load Source System Configuration

Source System TDC\_LXS

PHD Field Name

DSCR

HI\_EXTREME

LO\_EXTREME

SRC\_INDEXA

SRC\_TAGNAME

TAGNAME

UNITS

Source System Field Name

DESC

HIGH

LOW

INDEX

SRCTAG

PHDTAG

UNITS

TotalPlant Information - [Tag Load Source System C

File Edit View Insert Format Tools Data Window Help

Example A

A	B	C	D	E	F	G	H	I
1	PHDTAG	SRCTAG	TAGTYPE	PARAMETER	DESC	HIGH LOW	UNITS	INDEX
2	03FI103	3FI103	R	PV	Flow example	150 0	BBL	0
3	L1 03FI104PV	3FI104	R	PV	Flow example	150 0	BBL	0
4	L1 03FI104SP	3FI104	R	PV	Flow example	150 0	BBL	0
5	03M103	03M103	E	PV	Motor Example	0 0	MOTOR	0
6	03FY103	FY103	R	TANKLEV	CDS Example	10 0	INCHES	0
7	03YY103	YY103	C	STR16	Array Example	0 0	INCHES	8

TotalPlant Information - [Tag Load Source System C

File Edit View Insert Format Tools Data Window Help

Example B

Tag Load Source System Configuration

Enter Query

Source System TDC\_LXS

System Uses EGU Span

PHD Field Name

DSCR

HI\_EXTREME

LO\_EXTREME

SRC\_TAGNAME

TAGNAME

UNITS

Source System Field Name

PTDESC

PVEUHI

PVEULO

ENTITY

ENTITY

EUDESC

Record: 1 of 1 (Filtered)

PHD Field Name

PHD Field Name

Tag Load Source System Configuration

Enter Query

Source System TDC\_LXS

System Uses EGU Span

PHD Field Name

DSCR

HI\_EXTREME

LO\_EXTREME

SRC\_TAGNAME

TAGNAME

UNITS

Source System Field Name

PTDESC

PVEUHI

PVEULO

ENTITY

ENTITY

EUDESC

Record: 1 of 1 (Filtered)

PHD Field Name

PHD Field Name

Microsoft Excel - HPM15.csv

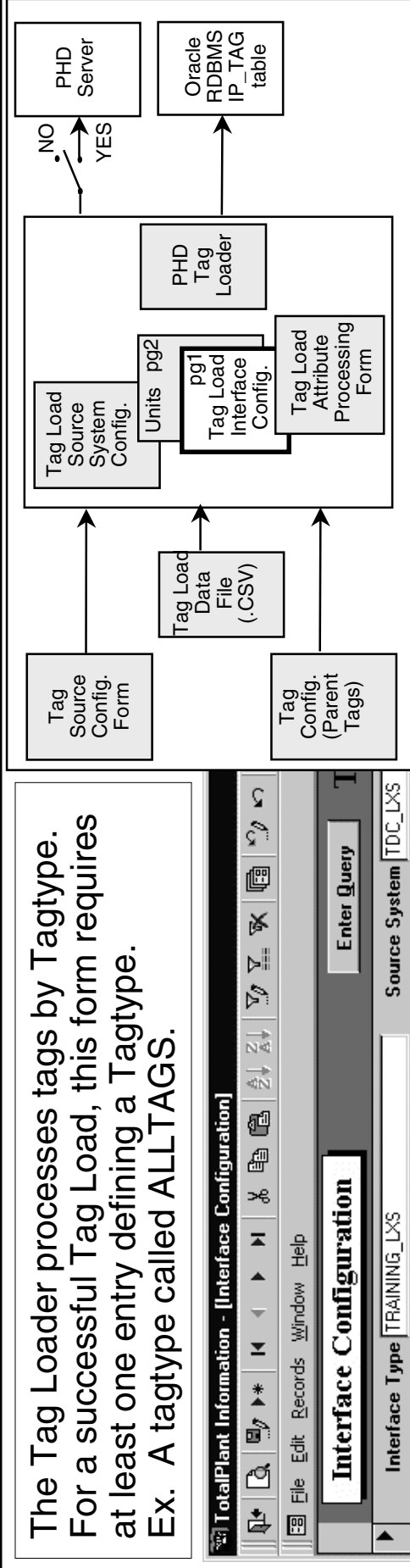
File Edit View Insert Format Tools Data Window Help

Example B

A	B	C	D	E	F	G	
1	ENTITY	EUDESC	KEYWORD	PVEUHI	PVEULO	PTDESC	
2	FIC21941	KLB/HR	STM FLO	60.0	0.0 REGCLNIM	STEAM FLOW CONTROL	
3	TIC21941	DEG C	STM TEMP	150.0	0.0 REGCLNIM	STEAM TEMP. CONTROL	
4	FY21941	GALLONS	A TOTAL	250.0	0.0 REGPVNIM	SOLUTION A FLOW IND.	
5	FY22941	GALLONS	B TOTAL	250.0	0.0 REGPVNIM	SOLUTION B FLOW IND.	
6	FY23941	GALLONS	DRN TOTL	500.0	0.0 REGPVNIM	DRAIN FLOW INDICATOR	
7	FVL21941		A FEED		DICMPNIM	SOL A FEED VALVE	
8	FVL22941		B FEED		DICMPNIM	SOL B FEED VALVE	
9	DVL23941		DRAIN		DICMPNIM	TANK DRAIN VALVE	
10	AG24941		AGITATOR MOTOR		DICMPNIM	AGITATOR MOTOR	
11	INGA941		GALLONS	SOLTN A	NUMERNIM	INGREDIENT A	
12	INGB941		GALLONS	SOLTN B	NUMERNIM	INGREDIENT B	
13	FULMT941			FULL/EMT	FLAGNIM	REACTOR FULL OR EMPTY	
14	CLNDT941			CLN/DRTY	FLAGNIM	REACTOR CLEAN OR DIRTY	
15	STATE941			CLN&EMTY	FLAGNIM	REACTOR EMPTY & CLEAN	
16	AGTIM941			AGTIMER	TIMERNIM	AGITATOR TIME	
17	L24941		GALLONS	LVL GAL	500.0	0.0 ANINIM	REACTOR LEVEL INDICATOR
18							

# Tag Load Interface Configuration Form - Tagtypes

The Tag Loader processes tags by Tagtype. For a successful Tag Load, this form requires at least one entry defining a Tagtype. Ex. A tagtype called ALLTAGS.



The screenshot shows the 'Interface Configuration' window for 'TRAINING\_LXS'. The 'Interface Type' is set to 'TRAINING\_LXS' and the 'Source System' is 'TDC\_LXS'. The 'Unit' is 'Tag Type'. The 'Tagtype ID/' section shows 'ALLTAGS' selected. The 'Source Column Name' is 'PHDTAG'. The 'PHD Tagtype/' section shows 'Is Not' selected. The 'Sequence/' is 'NULL'. The 'PHD Format' is 'PHD Format'. The 'Match Value' is 'NULL'. The 'Record' is '1' of '1'. The 'Definition of tagtypes for interface' is shown at the bottom.

In the example shown on the left, tags will be assigned to the ALLTAGS tagtype if there is a tagname in the PHDTAG column of the tagload file (see Example A on previous page).

The Source Column Name list box contains column names defined previously on the Source System Configuration Form.

# Engineering Units

Microsoft Excel - HPM15.csv

File Edit View Insert Format Tools Data Window Help

100%

Arial

D12

	A	B	C	D	E	F	G
1	ENTITY	EUDESC	KEYWORD	PVEUHI	PVEULO	ENT_TYPE	PTDESC
2	FIC21941	KLB/HR	STM. FLO	60.0	0.0	REGCLNIM	STEAM FLOW CONTROL
3	TIC21941	DEG. C	STM TEMP	150.0	0.0	REGCLNIM	STEAM TEMP. CONTROL
4	FY21941	GALLONS	A TOTAL	250.0	0.0	REGPVNIM	SOLUTION A FLOW IND.
5	FY22941	GALLONS	B TOTAL	250.0	0.0	REGPVNIM	SOLUTION B FLOW IND.
6	FY23941	GALLONS	DRN TOTL	500.0	0.0	REGPVNIM	DRAIN FLOW INDICATOR
7	FV121941	A FEED	A FEED			DICMPNIM	SOL A FEED VALVE

If you use the Doc Tool (on the Honeywell TPS System) to create a Tag Load Data File, you may find that the Doc Tool returns many different nomenclatures for the same engineering unit.

Examples: B, BBL, BBLs, Bbl  
C, DegreesC, DEG C, DEGC

There is a screen in the Tag Load process that deals with these differences.



# Tag Load Interface Configuration Form - Units

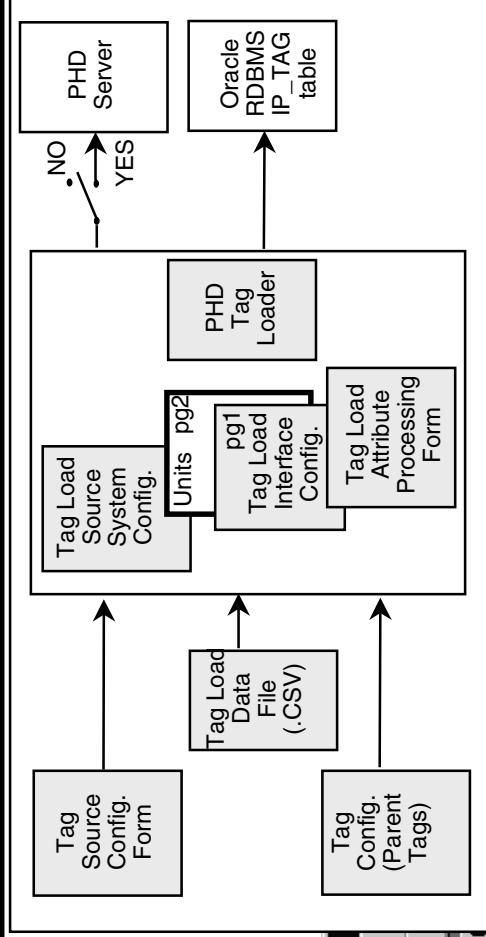
Interface Configuration

Interface Type: TRAINING\_LXS Source System: TDC\_LXS

Unit: Unit

Source Units	PHD Units
C	DEGC
DegreesC	DEGC
DEG C	DEGC

Record: 1 of 1



The Units page of the Interface Configuration Form maps source engineering units to PHD units.

*Errors on this form cause the most Tag Load problems; that is, units in the Tag Load Data File that are not defined in the Units page of interface configuration.*

# More on Engineering Units

There are really two ways to handle different nomenclatures for the same engineering unit:

- Method A - Use the Interface Configuration Form to map each different nomenclature to the correct PHD units.
- or
- Method B - Massage the Tag Load Data File so that the units are consistent with PHD units.

Use Method B if you know it is going to be a one-time Tag Load. There is not a lot of database volatility on the DCS, so you know you will not be doing more Tag Loads in the future, other than to add a small number of tags periodically.

If you plan to do mass Tag Loads in the future, you probably want to use Method A, where the engineering unit mapping is done in the Interface Configuration form.

	A	B	C	D	E	F	G
1	ENTITY	EUDISC	KEYWORD	PVEUHI	PVEULO	ENT_TYPE	PTDESC
2	FIC21941	KLBIHR	STM. FLO	60.0	0.0	REGCLNIM	STEAM FLOW CONTROL
3	TIC21941	DEG. C	STM TEMP	150.0	0.0	REGCLNIM	STEAM TEMP. CONTROL
4	FY21941	GALLONS	A TOTAL	250.0	0.0	REGPVNIM	SOLUTION A FLOW IND.
5	FY22941	GALLONS	B TOTAL	250.0	0.0	REGPVNIM	SOLUTION B FLOW IND.
6	FY23941	GALLONS	DRN TOTL	500.0	0.0	REGPVNIM	DRAIN FLOW INDICATOR
7	FVL21941		A FEED			DICMPNIM	SOL. A FEED VALVE
8	FVL22941		B FEED			DICMPNIM	SOL. B FEED VALVE
9	DVL23941		DRAIN			DICMPNIM	TANK DRAIN VALVE
10	AG24941	AGITATOR	MOTOR			DICMPNIM	AGITATOR MOTOR
11	INGA941	GALLONS	SOLTN A			NUMERNIM	INGREDIENT A
12	INGB941	GALLONS	SOLTN B			NUMERNIM	INGREDIENT B
13	FULMT941		FULL/EMT			FLAGNIM	REACTOR FULL OR EMPTY
14	CLNDT941		CLND/DRY			FLAGNIM	REACTOR CLEAN OR DIRTY
15	STATE941		CLN&EMPTY			FLAGNIM	REACTOR EMPTY & CLEAN
16	AGTIM941		AGTIMER			TIMERNIM	AGITATOR TIME
17	L124941	GALLONS	LVL. GAL	500.0	0.0	ANINNIM	REACTOR LEVEL INDICATOR
18							

# More on Engineering Units

---

If you have engineering units that are not available in PHD, you can do one of the following:

- Select one of the PHD units that is meaningful.  
or
- Add new engineering units:

From the Main Menu, select Fixed Plant Databook.  
Lookup Value

Enter a Query for Lookup Type Like UNITS.

At the end of the form, enter the new units

Depending on what units you add, PHD may or may not find a pattern it recognizes and may or may not be able to do conversions for the new units. (For more information, refer to the *PHD User Guide*, PHD Engineering Units.)

## DO NOT CHANGE THE EXISTING UNITS LOOKUP VALUES!

PHD uses this table to do its conversions. There are dangerous ramifications if you change existing values in the table.

You can add to the list, but do not change any existing values.

# LX\$ High/Low Range Limits

Should you use PVEUHI/PVEULO or PVEXEUHI/PVEXEULO in PHD?

PHD uses the high and low limits as part of the algorithm for compression/decompression:

- If the limit is zero and PHD reads a value of -10, it pegs the value at zero and gives it a zero confidence.
- If the limit is 150 and PHD reads a value of 300, it pegs the value at 150 and gives it a zero confidence.
- If PHD reads NaN (not a number; that is, lower than the low extreme or higher than the high extreme), it pegs the value at the high or the low limit, depending on what value it read prior to NaN.

You may want to use the normal limits if the value is for an engineering application where you have data reconciliation. The extended limits allow values that can cause an undesirable skew in the numbers.

When mapping the .CSV column headers of a file to the PHD fields (through the Source System Configuration form), you can map only one column header to the PHD low\_extreme and one to the PHD hi\_extreme for all tags in the file.



	A	B	C	D	E	F	G	H	I
1	PHDTAG	SRCTAG	TAGTYPE	PARAMETER	DESC	HIGH	LOW	UNITS	INDEX
2	03FI103	3FI103	R	PV	Flow Example	150.00	0.00	BBL	0
3	L1.03FI104.PV	3FI104	R	PV	Flow Example	150.00	0.00	BBL	0
4	L1.03FI104.SP	3FI104	R	SP	Flow Example	150.00	0.00	BBL	0
5	03M103	03M103	E	PV	Motor Example	0.00	0.00	MOTOR	0
6	03FY103	FY103	R	TANKLEV	CDS Example	10.00	0.00	INCHES	0
7	03YY103	YY103	C	STR16	Array Example	0.00	0.00	INCHES	0
8									

---

# Parent Tags

You may want to manually add a Parent Tag column to the Tag Load Data File. If using Parent Tags, they must be created in PHD before doing the Tag Load. At most sites, a parent class is built for each unique parameter type.

Typically, parents are used in two ways:

- **Parents for Tag Type** (ex: PVDIG, PVREAL, OPDIG, OPREAL)  
Build parents distinguishing between digital and real tag values. This is a good practice. It addresses high/low limits and quantums per tag type. You can do a Tag Load and get the tags up and running quickly, then address individual ranges and quantums later. It allows you to setup standards and ask the DCS engineers to use specific nomenclature for DCS tags. Use the parents to pass hi and low extreme values for controller outputs (.OP) which normally have 0-100 percent ranges.
- **Parents for Control Type** (ex: flow indicators, flow controllers, totalizers, temperature indicators, temperature controllers)  
Best use for Parent Tags. A system may have 40 or 50 parents. They are set up based on the instrumentation. It is a common practice to create a parent tag class for temperature tags, so that tag compression can be set differently (absolute) from flow and pressure tags, which are normally compressed on a percent of span basis (ex: 1% type or 2% type of instrumentation).

You will want some compression, so you can use the parents to adjust the compression parameter and dynamically change it for the entire class of tags.

The parents setup the high/low limits compression tolerance, compression, and quantums (ex. .5 degree, .1 unit).

You may want quantizing, but not compression if doing control through PHD and using PHD values to make control decisions.

# Tag Load Tips

---

- Do not turn on PHD data processing (gross error elimination, noise gating, smoothing, and compression) until after you have checked out the tags.

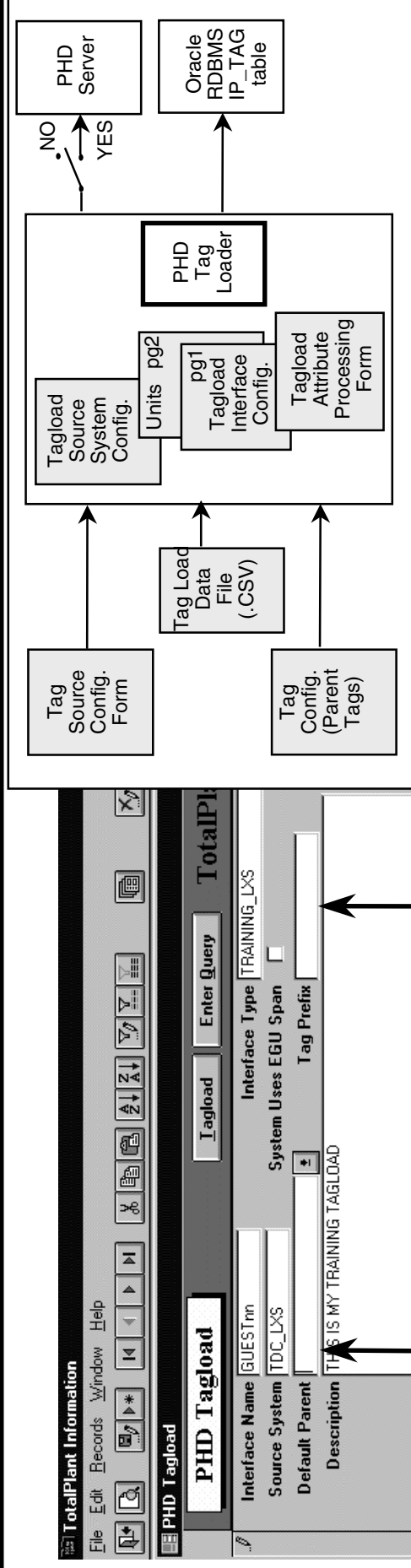
Set the quantums to -1, so the value the operator sees at the DCS should be the value you see at PHD. You can not verify that you are getting the correct value from the DCS if PHD is doing all of the data processing on the value.

After checking out the tags, you can turn on Store and start doing some compression.

After your system has been running for awhile, you will probably come up with some general rules for your compression. Further adjustments to the compression will most likely be on a tag by tag basis.

- You may want to setup a grandparent just to turn on the Store parameter for a class of tags.
- For polled interfaces (such as L<sup>x</sup>S), you may want to include the Scan Frequencies in the Parent Tags. In this case, you would not need to include the scan frequency in the Tag Load Data File, because it is being handled by the parent. Ex: You may want to read the temperature indicators only once a minute.
- Any more than two levels of parents is not a good idea. There is no useful information to be gotten from using more than one parent and one grandparent for a class of tags.
- Do not delete a Parent Tag without first removing the children from the parent!

# Tag Loader Form



Default Parent (optional)  
Specify the parent here  
if no parent is specified  
in the Tagload file and  
no parent is specified  
as a default in the  
Attribute Processing  
form.

Tag Prefix: If specifying a prefix, remember to include the  
dot ( . ) delimiter.  
Ex: LCN1.  
Ex: Prefix all of the area 3 tags with 03.  
  
Any tagname going to the PHD server must be unique.  
If your system already has unique tagnames, you may not  
want to use a tag prefix.

# Tag Loader Form, continued

---

## Any CM50 users attending the course?

### **Pre-process Tags**

Option that specifies that the information in the Input File is minimal. The remaining information is attained by querying the control system directly.

### **Confirm Existence of Parameters**

Option specifying that the control system is queried for the existence of a parameter before a new tag is created.

### **Output File**

If the *Pre-process Tags* option is set, identifies the file which the processed information is written to. If file is left NULL, the processed information is not written.

### **PHD Server**

The server to connect to for the pre-processing of tag information and confirmation of parameters. This field is required if either the *Pre-process Tags* or *Confirm Existence of Parameters* options are specified.

### **CG #**

Specific to the underlying interface. In the case of a TDC CM50 interface, identifies the channel to request the information.

## **Interface Processing (CM50 Only)**



# Tag Loader Form, continued

---

## Delete Tags before Load

Deletes all tags as defined within the database. This option is enabled for Honeywell personnel only .

## Flag update of RDI data

Do nothing with the existing tags before the load and flag the tag so that its Real-time Data Interface data is updated in PHD if it also exists in the input file.

## Leave existing tags as is

Does nothing with the existing tags before the load and does not modify any tags that already exist if listed in the data file. This option is used mostly when adding new collection points to PHD.

## Update existing tags

Do nothing with the existing tags before the load and update the tag if it also exists within the input data file.

**Select Taglist File**

Input File: C:\TEMP\GUESTnm.CSV

Collector Name: GUESTnm

Interface Processing

☒ Pre-process Tags ☐ Confirm Existence of Parameters

Output File: C:\TEMP\TAGOUT.CSV

PHD Server: [Dropdown]

CG #: [Text Box]

Tag Processing

☐ Delete tags before load ☒ Leave existing tags as is ☐ Flag update of RDI data

☒ Update existing tags ☐ Update existing tags

The input file MUST be in CSV format with the double quotes as a text delimiter. The first line of the file must contain the column headings for the interface as defined on the tagload form.

OK Close

# Tag Load Error and Log File

---

PHD records all successfully loaded tags and provides error messages for several types of errors, such as engineering units and quantums that are not valid.

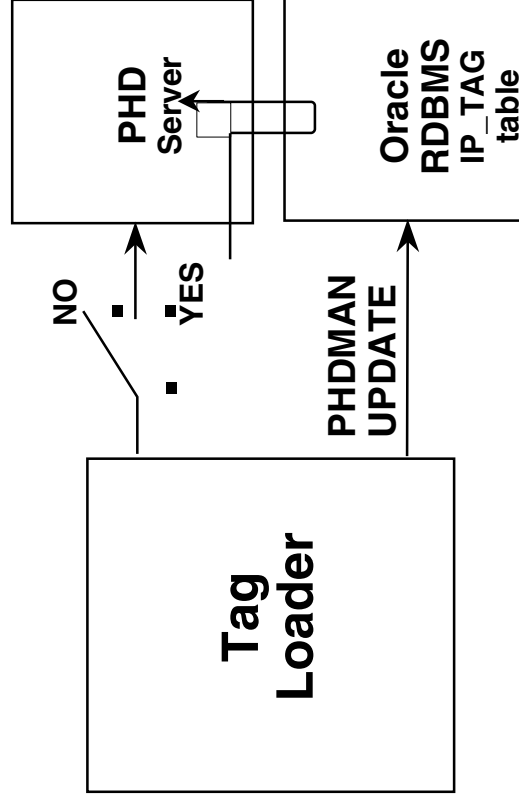
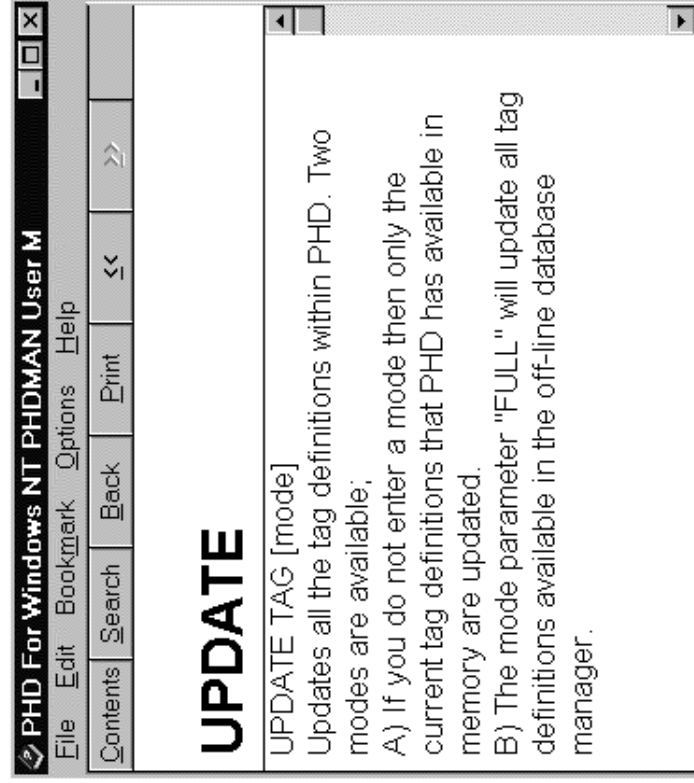
Tag Load log file on the server machine: C:\temp\tagload.log

# PHDMAN UPDATE Command

---

After performing a Tag Load to Oracle and correcting any errors, use the PHDMAN UPDATE command to cause the PHD Server to go to Oracle and get the tags.

PHDMAN> UPDATE TAG FULL



# Small Tag Loads

After the initial bulk Tag Load, you can do subsequent Tag Loads using either of these methods:

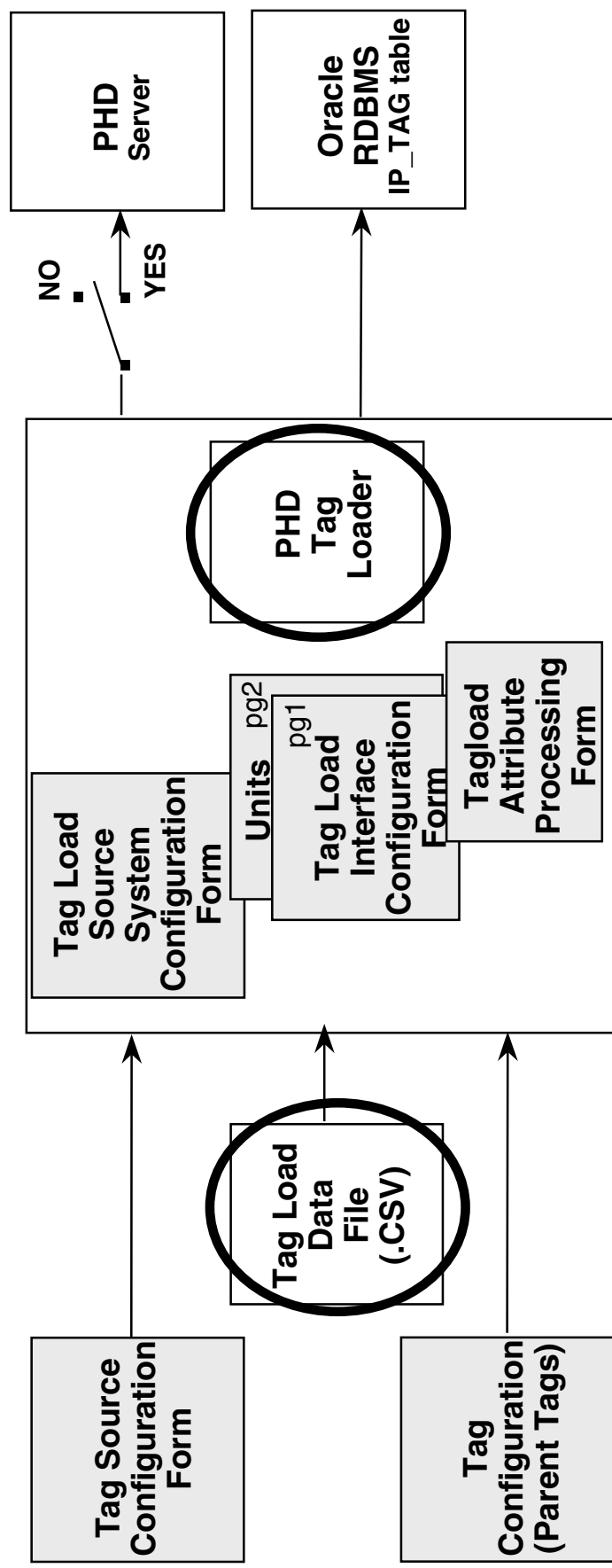
**Method A** - Create a Tag Load Data File of the tags to be loaded (using a template), then skip to the last Tag Load screen.

or

**Method B** - Add your new tags to one of the original Tag Load Data Files, then tell the PHD Tag Load Utility to process only the new tags in the file.

or

**Method C** - Manually enter all of the tag data through the Tag Configuration screens.

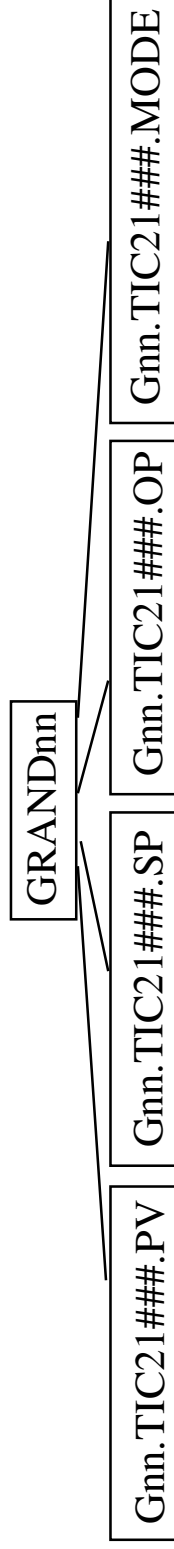


# Hands-On Exercises - Overview

---

## Exercise 1

Create a Tag Load data file that defines the PHD tags for a temperature controller (PV, SP, OP, and MODE of TIC21###, where ### is your assigned student partition number). Use a general parent tag and the minimum Tag Load attribute processing.



## Exercise 2

Create errors in the Tag Load data file to see how the Tag Loader handles them.

# Tag Load - Exercise 1

## Tag Load Exercise 1

*In this exercise, you load PHD tags for a temperature controller (PV, SP, OP, and MODE of TIC21###, where ### is your assigned student partition number). You will define the configuration through the Tag Load data file and a parent tag. Follow along at your machine as your instructor demonstrates the procedure. The tag load method used in this exercise is the simplest and most common approach.*

## Instructions

**Reference:** *PHD Tag Load User Guide*

### Tag Load Data File

1. Open a new Excel file and create column headings in the first row (upper case), followed by four rows of data.

The screenshot shows an Excel spreadsheet titled "Microsoft Excel - GUEST01.csv". The spreadsheet has columns labeled A through I. The data is as follows:

	A	B	C	D	E	F	G	H	I
	PHDTAG	SRCTAG	TYPE	PARAMETER	DESC	HIGH	LOW	INDEX	UNITS
2	G01.TIC21941.PV	TIC21941	R	PV	Reactor	150.00	0.00	0	DEGREES
3	G01.TIC21941.SP	TIC21941	R	SP	Reactor	150.00	0.00	0	DEGREES
4	G01.TIC21941.OP	TIC21941	R	OP	Reactor	107.00	-7.00	0	PERCENT
5	G01.TIC21941.MODE	TIC21941	E	MODE	Reactor	0.00	0.00		

Annotations:

- Box 1: "Add columns for QUANTUM and PARENT also." (points to column I)
- Box 2: "Set the quantums to -1 and the parent to GRANDnn, when nn is your machine number." (points to column I)
- Box 3: "These are not valid PHD units for conversion of real values; so, later in the exercise, we have to map them to PHD units." (points to the units column)
- Box 4: "Parameters should be upper case." (points to the parameter column)
- Box 5: "Gnn, where nn is your machine number." (points to the tag name in row 2)

# Tag Load - Exercise 1, continued

---

## Tag Load Data File, continued

2. Save the file as GUESTnn in .CSV format to the TEMP directory (C:\TEMP\GUESTnn).
3. Leave the file open after saving it.  
  
Minimize Excel.

# Tag Load - Exercise 1, continued

## Tag Source Configuration Form (not to be confused with Tag Load Source System Configuration)

1. From the Process History Main Menu, call up the Tag Source Configuration form.
2. Enter a QUERY for System Type Like TDC\_LXS.
3. Verify that the form contains all of the parameters (attributes) specified for collection in your Tag Load data file (MODE, OP, PV, SP).  
To SORT the attributes in alphabetical order, put the cursor in the attribute field and select the SORT button.

**TotalPlant Information**

File Edit Records Window Help

**Tag Source Configuration**

**TotalPlant**

Sort Ascending

Enter Query

System Type	Tag Type	Attribute	Data Type	Data Length
TDC_LXS	E	LENBST	C	8
TDC_LXS	O	ALM_IND	I	4
TDC_LXS	R	BLENDNO	F	4
TDC_LXS	R	CPUFREE	F	4
TDC_LXS	C	CTANK	C	40
TDC_LXS	R	DATAL	F	4



# Tag Load - Exercise 1, continued

---

## General Grandparent Tag

- Go to the Tag Configuration screen and create a general parent tag.  
Tagname GRANDnn (where nn is your machine number)  
Class X  
Description (your choice)  
Collection X  
(For this exercise, do not turn on Data Store yet.)

The screenshot shows the 'Tag Configuration' window in the 'TotalPlant' application. The window has a title bar with standard OS controls. Below the title bar is a menu bar with 'Tag Config' selected. To the right of the menu bar are buttons for 'Enable', 'Collect', 'Process', 'General', 'Alarm', 'Enter Query', and 'Send Changes to PHD'. Below these buttons are 'Tag No' (36) and 'Parent Tag No' (empty) fields. The main area is divided into two sections: 'Effective' and 'Inherited'. The 'Effective' section has a 'Tagname' field with 'GRAND01', a 'Units' field with a dropdown arrow, a 'Parent Tag' field with a dropdown arrow, and a 'Description' field with 'Grand Parent Tag'. The 'Inherited' section has a 'Class' field with a dropdown arrow and a checked 'X' icon. Below these are two columns of checkboxes: 'Effective' and 'Inherited'. The 'Effective' column has checkboxes for 'Collection', 'Demand Calc', 'Manual Input', 'Put Download', 'Data Store', 'Data Edit', and 'Arc Resample'. The 'Inherited' column has checkboxes for the same options. The 'Collection' checkbox in the 'Effective' column is checked.

Effective	Inherited
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

# Tag Load - Exercise 1, continued

## General Grandparent Tag, continued

- System Type

Collector Name
- TDC\_LXS
- TDC1 (Assumes that an RDI named TDC1 has been configured.)  
(If you had multiple RDIs, you might not want to put the collector name in the Grandparent tag.)
- Scan Seconds

Tolerance
- 60
- (Do not set the compression yet. After the Tag Load, you can come back to the Grandparent and/or individual tags and set the compression.)

Tag Configuration

Tag Config

Enable

Collect

Process

General

Alarm

Enter Query

TotalPlant

Tagname GRAND01

Tag No 36

Send Changes to PHD

↕

Data Collection

Source Tag Spec

Source Tag Index A

System Type

Tag Type

Attribute

Convert From Units

Collector Name

Scan Seconds

Tolerance, Type

B

TDC\_LXS

TDC1

60

C

60

D

# Tag Load - Exercise 1, continued

## General Grandparent Tag, continued

Gr Err Sigma Limit

(Do not set any Data Processing yet, such as gross error elimination and smoothing. In order to do tag checkout, you need the exact DCS value brought in to PHD.)

...  
Min Compr Toler

High Extreme 1000000

(Even though this grandparent is going to be used for real and enumerated tags, go ahead and enter high and low values to get started. They have no affect on tags other than reals.)

Lo Extreme -1000000.

Quantum -1

(should always put -1 as starting value)

Tag Configuration

Tagname GRAND01 Tag No 36 Send Changes to PHD

**Tag Config** Enable Collect Process General Alarm Enter Query

**Data Processing**

Gr Err Sigma Limit		
Gr Err Samples		
Smoothing Constant		
Noise Gate Level		
Compr Toler Factor		
Min Compr Toler		
Scale High Extreme	1000000	
Low Extreme	-1000000	
Quantum	-1	

### Quantum:

*If the parent sets the quantum, but the .CSV file provides hi/low extreme values, PHD calculates a new quantum, which may not be desirable.*

*You must include the quantum in the .CSV file or specify Attribute Processing to override a calculated quantum.*

# Tag Load - Exercise 1, continued

## General Grandparent Tag, continued

Extrapolation Damping      1      (extrapolates last value)  
Interpolation Method      (leave at default, Linear)

(**Extrapolation Damping** affects requests for data that go into the future. The default is zero for “extrapolate on last known slope” which may not be appropriate. With last slope, PHD looks at the last samples in the queue and makes a general regression based on that. Ex: Where would the value be two hours from now? Tank farms may find this useful. In most other cases, you will want to use the last value collected.)

**TotalPlant Information - [Tag Configuration]**

File Edit Records Window Help

Tagname: GRAND01 Tag No: 36 Send Changes to PHD

**Tag Config** Enable Collect Process General Alarm Enter Query TotalPlant

Data Type ☐ Data Length ☐

Spec Queue Size ☐ Resample Method ☐

Extrapolation Damping ☐ Interpolation Method ☐

Percent Rec Fill ☐

**General**

1

2. Click on the left column (referred to as the record marker) to enter the changes into Oracle.

# Tag Load - Exercise 1, continued

## Tag Load Source System Configuration Form

1. From the Process History Main Menu (Window/Menu), select the Tag Load Source System Configuration form.
2. For this exercise, you will modify the Tag Load Source System configuration for TDC\_LXS.

Enter the following configuration, including PARENT and QUANTUM to ensure that all of the column names in the Tag Load data file are mapped to a PHD Field Name in the Oracle IP\_TAG table.

TotalPlant Information - [Tag Load Source System Configuration]

File Edit Records Window Help

Tag Load Source System Configuration

Enter Query

System Uses EGU Span ☐

Source System TDC\_LXS

PHD Field Name

Source System Field Name

DESCR	DESC
HI_EXTREME	HIGH
LO_EXTREME	LOW
SRC_ATTRIB	PARAMETER
SRC_INDEXA	INDEX
SRC_TAGNAME	SRC_TAG
SRC_TAGTYPE	TYPE
TAGNAME	PHD_TAG
UNITS	UNITS
*	

Record: 1 of 9

Record: 1 of 1 (Filtered)

Source System field name

FLTR

SRC\_TAGNAME is mandatory in the Tag Load data file.

When the DCS tagname and the PHD tagname are going to be the same, you can put the same field name for SRC\_TAGNAME as you specified for TAGNAME.

In this exercise, we want the PHD tagname to be slightly different than the DCS tagname.

# Tag Load - Exercise 1, continued

## Tag Load Interface Configuration Form

*Even though your Tag Load data file contains all of the required data for your Tag Load, you must put at least one entry in this form to satisfy the Tag Load process.*

1. From the Process History Main Menu (Window/Menu), select the Tag Load Interface Configuration form.
2. Create your own interface type (template name) for your Tag Load: ITYPEnn (where nn is your machine name). In order to satisfy the Tag Load process, you must enter at least one condition on this form. We will enter a condition that creates one PHD Tagtype ID applying to all tags, then you can use that Tagtype ID in the next form to cause the Tag Loader to process all of the records in your file.

The condition we will use is

If the “DESC” field in the Tag Load data file is not blank

Then assign the tag to a PHD Tagtype ID named “ALLTAGS” and set its Tagtype to Real.

Interface Configuration

Enter Query

TotalPlant

Interface Type

ITYPENN

Source System

TDC\_LXS

Unit

Tag Type

Tagtype ID / Source Column Name	PHD Tagtype / Operator	Sequence / Match Value	PHD Format
ALLTAGS	R		<input type="checkbox"/>
DESC	Is Not	NULL	<input type="checkbox"/>
			<input type="checkbox"/>

Notice that entries from the previous form appear in the list box for Source Column Name.

# Tag Load - Exercise 1, continued

---

## Tag Load Interface Configuration Form , continued

- 3. Select the Unit tab on the Interface Configuration form.
- 4. Make the following entry to translate the units in the Tag Load data file to a valid PHD engineering units:

<u>Source Units</u>	<u>PHD Units</u>
DEGREESC	DEGC
PERCENT	%

The screenshot shows the 'Interface Configuration' window with the 'Unit' tab selected. The 'Interface Type' is set to 'ITYPENN' and the 'Source System' is 'TDC\_LXS'. The 'TotalPlant' label is in the top right corner. The 'Unit' section contains a table with 'Source Units' and 'PHD Units' columns. The first row shows 'DEGREESC' and 'DEGC'. The second row shows 'PERCENT' and '%'. A third row is partially visible with an asterisk '\*' in the 'Source Units' column.

Source Units	PHD Units
DEGREESC	DEGC
PERCENT	%
*	

# Tag Load - Exercise 1, continued

## Tag Loader

1. From the Process History Main Menu (Window/Menu), select the Tag Loader.
2. Make the entries to define this Tag Load as shown in the example below.  
Interface Name TDC1 (Normally, you use the name of the RDI/Collector here.)  
Interface Type ITYPENN (This is the name of your template for this Tag Load.)
3. Enter your changes.
4. Select the Tag Load button

*The assumption is that test tags were created earlier to verify that the RDI is working.*

The screenshot shows the 'TotalPlant Information - [PHD Tagload]' window. The 'PHD Tagload' section has the following fields: 'Interface Name' (INAMENN), 'Source System' (TDC\_LXS), 'Default Parent' (empty), and 'Description' (empty). The 'TotalPlant' section has a dropdown for 'Interface Type' (ITYPENN), a checkbox for 'System Uses EGU Span' (unchecked), and a 'Tag Prefix' field (empty). Buttons for 'Iagload' and 'Enter Query' are also present.



# Tag Load - Exercise 1, continued

---

## Tag Loader, continued

5. Make the following entries to initiate the Tag Load:

Input File	C:\TEMP\GUESTnn.CSV (name of your Tag Load data file)
Collector Name	TDC1 (This is case sensitive.)
Tag Processing	Leave existing tags as is

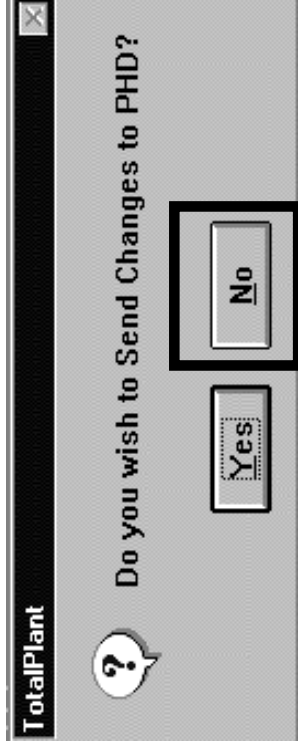
6. OK

# Tag Load - Exercise 1, continued

---

## Tag Loader, continued

7. You get an error message if your Tag Load data file is still open. Close the file and try again.
8. Do you wish to send changes to PHD? NO! Do not send them. You need to review a few of the tag configurations first, in case there were problems. **Do not** say yes, unless you do a very minor Tag Load.



# Tag Load - Exercise 1, continued

---

## Check Tags

1. Go to Tag Configuration (Window/Tag Configuration) and enter a query for all your tags (Tagname Like Gnn\*).
2. Carefully check each tag to verify that all of the entries went in as expected, such as  
Collector Name  
Definitions inherited from parent  
Source Tag  
High/Low Extreme  
Quantum
3. Make sure you understand where every data item in the tag configuration form came from.

As you check your tags, record their tag numbers. You will use them later with PHDMAN. The number appears in the upper right corner of the Tag Configuration screen.

MODE \_\_\_\_\_  
OP \_\_\_\_\_  
PV \_\_\_\_\_  
SP \_\_\_\_\_  
GRANDnn \_\_\_\_\_

# Tag Load - Exercise 1, continued

---

## Check Tags, continued

4. If there are errors in your tag configuration, correct the Excel file or the appropriate Tagload form, then run the Tag Loader again. Do this until the Tag Loader configures your tags correctly...just for practice.

**(Remember to refresh the Tag Configuration screen after re-running the Tag Load to see the latest configuration.)**

5. After your configuration is correct, go to PHDMAN and attempt to show the queue of one of your tags.

The tags do not exist because you have not sent the Oracle tag configurations to PHD yet.

---

PHD Tag Load	PHD 150	P51755.13	8/99	44
--------------	---------	-----------	------	----

# Tag Load - Exercise 1, continued

---

## Update PHD Database

1. Use PHDMAN to do the UPDATE command to synch the PHD database with the Oracle database.  

PHDMAN>UPDATE TAG FULL
2. Look at the screen messages to see if there were any errors in the update.
3. Look at the TAGUP.OUT file in the SITETEMP directory to see the results of the tag update.

## Check Tag Data

1. Return to PHDMAN and show the tag data queue again for one of your tags.

If you know the tag number, you can type SHO QUE nn (where nn is the tag number).

What do you see in the Raw Queue? \_\_\_\_\_

What do you see in the Data Queue? \_\_\_\_\_

(You should be seeing accurate values with a confidence of 100.)

*After an actual Tag Load, you would check with the control room operator to see if PHD is reading the same value as the DCS. If you did not see the same value, then you would need to make sure the parameter exists for that tag. If the parameter exists, you would check the tag addressing:*

*Source Tagname  
System Type  
Array Index  
Data Type*

# Tag Load - Exercise 1, continued

---

## Turn On Data Store

1. Go to the tag configuration and enter a query to get your Grandparent tag (GRANDnn).
2. Enable Data Store for GRANDnn.
3. Check one of your tags to verify that Data Store was passed forward from the parent (PHDMAN> SHO TAG).

## Review

1. In the blank boxes on the following pages, label the **source** of each tag configuration item. The possible tag load sources are
  - .CSV file (tagload data file)
  - Parent

---

PHD Tag Load	PHD 150	P51755.13	8/99	46
--------------	---------	-----------	------	----

---

**TotalPlant Information - [Tag Configuration]**

File Edit Records Window Help

Tag Config Enable Collect Process General Alarm Enter Query TotalPlant

Send Changes to PHD

Tagname G01.TIC21941.PV Tag No 154

Units DEGC Parent Tag GRAND01 Class

Description REACTOR Parent Tag No 133

Effective

	Effective	Enable Flags
Collection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Demand Calc	<input type="checkbox"/>	<input type="checkbox"/>
Manual Input	<input type="checkbox"/>	<input type="checkbox"/>
Put Download	<input type="checkbox"/>	<input type="checkbox"/>
Data Store	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Data Edit	<input type="checkbox"/>	<input type="checkbox"/>
Arc Resample	<input type="checkbox"/>	<input type="checkbox"/>

Record: 1 of 1

Enable collection?

**IP\_Tag Table Field Names**

tagname  
tagno  
active\_chk  
dscr  
parent\_tagname (Circle the items configured with this tagload.)  
parent\_tagno  
class\_tag  
units  
co\_enable (Collection)  
ca\_enable (Demand Calculation)  
mi\_enable (Manual Input)  
dl\_enable (Put Download)  
st\_enable (Data Store)  
eo\_enable (Data Edit)  
ar\_enable (Archive Resample)

# Tag Load - Exercise 1, continued

Review, continued

TotalPlant Information - [Tag Configuration]  
File Edit Records Window Help  
[Icons]  
**Tag Config** Enable Collect Process General  
Tagname [G01.TIC21941.PV] Tag No [19]  
**Data Collection**  
Source Tag Spec [TIC21941] B C  
Source Tag Index A [0]  
System Type [TDC\_LXS]  
Tag Type [R] TDC\_LXS  
Attribute [PV] PV  
Convert From Units [ ]  
Collector Name [TDC1] TDC1  
Scan Seconds [60] 60  
Tolerance, Type [ ]  
Record: 1 of 1  
Source index B (Usage is source dependent)?

## IP\_Tag Table Field Names

src\_tagname  
src\_indexa  
src\_system  
src\_tagtype  
src\_attribute  
src\_units  
src\_collector  
src\_scansecs  
tol  
toltype

(Circle the items  
configured with  
this tagload.)



**IP\_Tag Table  
Field Names**

(Circle the items  
configured with  
this tagload.)

sigma\_limit  
sigma\_secs  
filter\_const  
gate\_level  
comptol\_fctr  
src\_deadband  
hi\_extreme  
lo\_extreme  
quantum

TotalPlant Information - [Tag Configuration]			
File	Edit	Records	Window
Help			
Find	Print	Save	Delete
Copy	Paste	Undo	Redo
Zoom In	Zoom Out	Previous View	Next View
Full Screen	Exit	Refresh	Close
<b>Tag Config</b>			
Tagname G01.TIC21941.PV		Tag No.	
<b>Data Processing</b>			
Gr Err Sigma Limit			
Gr Err Samples			
Smoothing Constant			
Noise Gate Level			
Compr Toler Factor			
Min Compr Toler			
Scale High Extreme	150		150
Low Extreme	0		0
Quantum	-1		-1
Record: 1		of 1	
Gross error detect sigma (std. dev.) limit?			

Gr Err Sigma Limit	
Gr Err Samples	
Smoother Constant	
Noise Gate Level	
Compr Toler Factor	
Min Compr Toler	
Scale High Extreme	150
Low Extreme	0
Quantum	-1
<div> <div>Record: 1 of 1</div> <div> <div></div> <div></div> </div> </div>	
Gross error detect sigma (std. dev.) limit?	

# Tag Load - Exercise 1, continued

Review, continued

TotalPlant Information - [Tag Configuration]

File Edit Records Window Help

Tag Config

Enable Collect Process General A

Tagname [G00.TIC21941.PV] Tag No [81]

General

Data Type

F

Data Length

4

Spec Queue Size

Resample Method

Extrap Damping

1

Interpolation Method

Percent Rec Fill

spec\_size

resam\_method

extdamp\_int

interp\_method

pcnt\_full

Record: 1 of 1

FLTR

Unique tagname?

END OF EXERCISE 1

# Tag Load Errors- Exercise 2

*In this exercise, you create errors in your file to see how the Tag Loader handles them.*

## Instructions

### Tag Load Data File

1. Open your Tag Load data file named GUESTnn.CSV and save it in TEMP as 2GUESTnn.CSV.
2. Add a tag to the file whose source tagname does not exist on the DCS:

Gnn.BAD                    **BAD**                    E                    MODE                    Reactor                    0

3. Put a unit of measure that does not exist in PHD onto one of the real type tags:

Gnn.TIC21941.PV                    TIC21941                    R                    PV                    Reactor                    150                    0                    0                    **degr C**

2guest01.csv										
	A	B	C	D	E	F	G	H	I	
1	PHDTAG	SRCTAG	TYPE	PARAMETER	DESC	HIGH	LOW	INDEX	UNITS	
2	G01.TIC21941.PV	TIC21941	R	PV	Reactor	150	0	0	degr c	
3	G01.TIC21941.SP	TIC21941	R	SP	Reactor	150	0	0	DEGREESC	
4	G01.TIC21941.OP	TIC21941	R	OP	Reactor	106.9	-6.9	0	DEGREESC	
5	G01.TIC21941.MODE	TIC21941	E	MODE	Reactor	150	0	0	PERCENT	
6	G01.BAD	BAD	E	MODE	Reactor			0		
7										

# Tag Load Errors - Exercise 2, continued

---

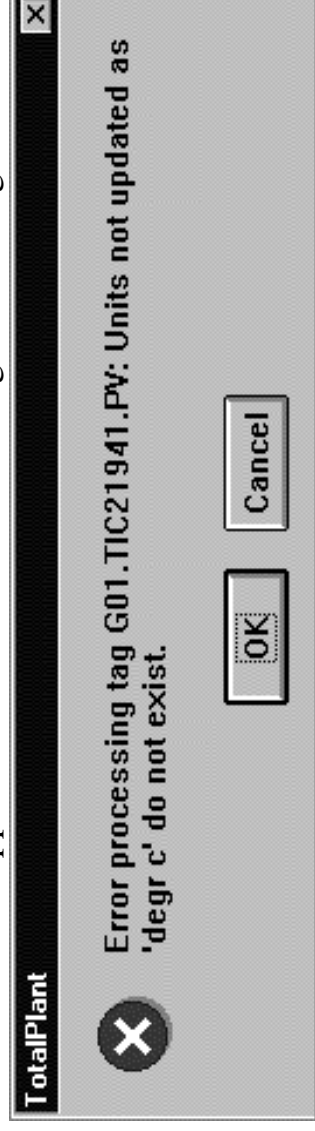
## Tag Loader

1. Do not change the configuration of your Tag Load forms.  
Call up the Tag Loader and query for your interface type ITYPEnn.
2. Make the following entries to define this Tag Load:

Interface Name	TDC1
Interface Type	ITYPEnn (The name of your template for this Tag Load.)
Source System	TDC_LXS
Description	(your choice to describe the Tag Load)
3. Select the Tag Load button.  
  
Make the following entries to initiate the Tag Load:

Input File	c:\TEMP\2GUESTnn.CSV (name of your new Tag Load data file)
Collector Name	TDC1
4. Select “Update Existing Tags.” OK.

5. An error for the invalid units should appear. Select OK to acknowledge the message.

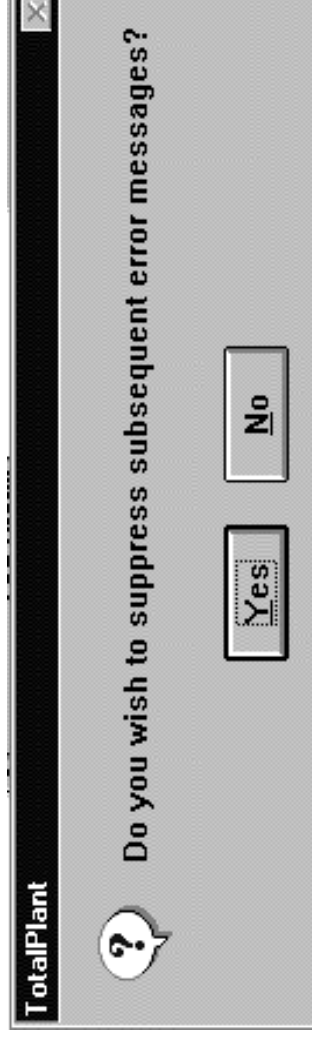


## Tag Load Errors - Exercise 2, continued

---

6. Do you want to suppress further messages? **NO**

(You could say yes, then look at the log after the Tag Load, completes, but experienced “Tag Loaders” prefer to see the errors as they go by and just write them down.)



7. Do you wish to send changes to PHD? **YES** (This was a minor tagload, so YES is OK in this unusual case.)

8. **OK**

# Tag Load Errors - Exercise 2, continued

---

## Check Tags

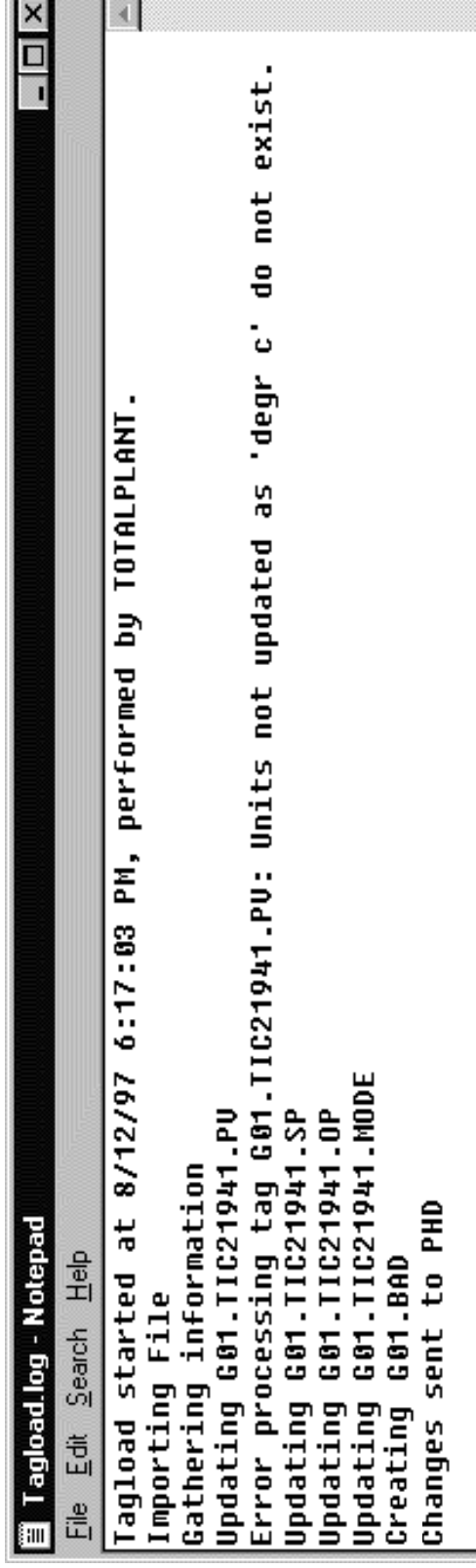
1. Return to the Tag Configuration and enter a query for your PV tag.
2. Check the temperature tag units field.  
(PHD updated the tag, but left the engineering unit field blank because it was not a valid PHD unit.)
3. Query for the tag Gnn.BAD. Record its tag number. \_\_\_\_  
(PHD put the tag into the system, although its source tag is not a valid tagname.)
4. Use PHDMAN SHO QUE to look at the data queue for the bad tag.  
What does the queue show? \_\_\_\_\_

# Tag Load Errors - Exercise 2, continued

---

## View Logs

1. Look at TAGLOAD.LOG in the TEMP directory to see the Tag Load results.



```
Tagload started at 8/12/97 6:17:03 PM, performed by TOTALPLANT.
Importing File
Gathering information
Updating G01.IIC21941.PU
Error processing tag G01.IIC21941.PU: Units not updated as 'degr c' do not exist.
Updating G01.IIC21941.SP
Updating G01.IIC21941.OP
Updating G01.IIC21941.MODE
Creating G01.BAD
Changes sent to PHD
```

2. Look at TAGUP.OUT in SITETEMP to see the update command results.
3. Look at PHD\_EVENT.LOG in NTSITE to see if the tag error is logged:

```
12-AUG-97 18:19:23 SYSTEM          : RDI_TDC1.exe
                                     Initialize error for tag G01.BAD
                                     <DA: entity name error>
```

END OF EXERCISE 2

# Honeywell

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