ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN	654979
Proj. ECN	

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [] Direct Revision [X] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	Mel R. Adams, Requirements Planning and Support, R2-12, 373-6167	[] Yes [X] No	06/21/99

6. Project Title/No./Work Order No.	7. Bldg./Sys./Fac. No.	8. Approval Designator
Standard Electronic Format Specification	N/A	N/A

9. Document Numbers Changed by this ECN (includes sheet no. and rev.)	10. Related ECN No(s).	11. Related PO No.
HNF-3638, Rev. 0-A	ECN-653559	N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[] Yes (fill out Blk. 12b) [X] No (NA Blks. 12b, 12c, 12d)	N/A	N/A Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change   **13b. Design Baseline Document?** [] Yes [X] No

This ECN has been generated to accomodate a complete revision to enable transfer of physical properties data.

14a. Justification (mark one)

Criteria Change [X]	Design Improvement []	Environmental []	Facility Deactivation []
As-Found []	Facilitate Const []	Const. Error/Omission []	Design Error/Omission []

14b. Justification Details

Revision was required to enable transfer of physical properties data.

15. Distribution (include name, MSIN, and no. of copies)

See attached distribution.

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DATE:

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ID: 0

JUN 29 1999

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[ ] Yes	Additional [ ] $		Additional [ ] $		Improvement [ ]	
[X] No	Savings [ ] $		Savings [ ] $		Delay [ ]	

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[ ]	Seismic/Stress Analysis	[ ]	Tank Calibration Manual	[ ]
Functional Design Criteria	[ ]	Stress/Design Report	[ ]	Health Physics Procedure	[ ]
Operating Specification	[ ]	Interface Control Drawing	[ ]	Spares Multiple Unit Listing	[ ]
Criticality Specification	[ ]	Calibration Procedure	[ ]	Test Procedures/Specification	[ ]
Conceptual Design Report	[ ]	Installation Procedure	[ ]	Component Index	[ ]
Equipment Spec.	[ ]	Maintenance Procedure	[ ]	ASME Coded Item	[ ]
Const. Spec.	[ ]	Engineering Procedure	[ ]	Human Factor Consideration	[ ]
Procurement Spec.	[ ]	Operating Instruction	[ ]	Computer Software	[ ]
Vendor Information	[ ]	Operating Procedure	[ ]	Electric Circuit Schedule	[ ]
OM Manual	[ ]	Operational Safety Requirement	[ ]	ICRS Procedure	[ ]
FSAR/SAR	[ ]	IEFD Drawing	[ ]	Process Control Manual/Plan	[ ]
Safety Equipment List	[ ]	Cell Arrangement Drawing	[ ]	Process Flow Chart	[ ]
Radiation Work Permit	[ ]	Essential Material Specification	[ ]	Purchase Requisition	[ ]
Environmental Impact Statement	[ ]	Fac. Proc. Samp. Schedule	[ ]	Tickler File	[ ]
Environmental Report	[ ]	Inspection Plan	[ ]		[ ]
Environmental Permit	[ ]	Inventory Adjustment Request	[ ]		[ ]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision   Document Number/Revision   Document Number Revision

N/A

21. Approvals

	Signature	Date		Signature	Date
Design Authority			Design Agent		
Cog. Eng. M.R. Adams	*MR Adams*	6/21/99	PE		
Cog. Mgr. J.W. Hunt	*[signature]*	6/21/99	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other K.M. Hall	*Kathleen m Hall*	6/28/99	Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

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Standard Electronic Format Specification for Tank Characterization Data Loader: Version 3.0

Mel R. Adams
Lockheed Martin Hanford Corp., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

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Key Words: Standard Electronic Format, Electronic Format, Specification, Tank Characterization Data, TCD, Data Loader, Data
Abstract: N/A

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Approved for Public Release

A-6400-073 (01/97) GEF321

(2) Title

Standard Electronic Format Specification for Tank Characterization Data Loader: Version 2.4

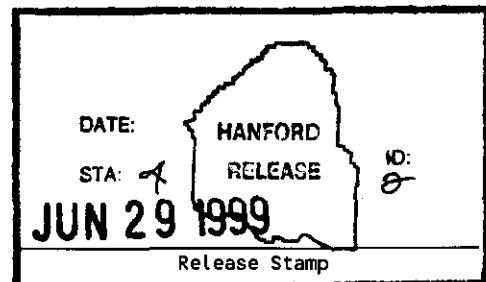| CHANGE CONTROL RECORD				
(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release		
		(5) Cog. Engr.	(6) Cog. Mgr.	Date
0	(7) Initially released 12/09/98 on EDT-622494.	M. R. Adams	J. W. Hunt	
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		M/ Adam.	Hunt	9/27/99
1 RS	Incorporate per ECN-654979.	M.R. Adams	J.W. Hunt	
		M/ Adam		6/21/99

STANDARD ELECTRONIC FORMAT SPECIFICATION FOR TANK CHARACTERIZATION DATA LOADER: VERSION 3.0

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Date Published
June 1999

Modification History:

Version 1.0	Sept 30, 1993	Original document
Version 1.1	March 18, 1994	Use '|' delimited ASCII file format instead of Spreadsheet format.
		Add tank farm, tank ID, core, lab, file name, SEF version ID to first line in file.
		Increased CAS Code field length to 15.
		Updated Tables 4-7 and Appendix A (CAS Codes) with codes used to date.
Version 1.2	April 15, 1994	Add Analytical Method Identifier and TCD Sample Number fields to Table 1, Header Record (Columns M and N, respectively). Several field size corrections are made to Table 1.
Version 2.0	June 16, 1994	Added Sections 3 through 5 for definition of sample description files, sample relationship files, and sample cross-reference files.
		Updated all tables.
		Reformatted tables to eliminate print problems.
Version 2.1	July 7, 1994	Added Section 2.7 for uncertainty units.
Version 2.2	February 27, 1995	Added segment level units, appearance, and recovery percent to tank core segment, tank supernate sample and tank surface sample
		Added device type to tank supernate sample
		Added begin and end dates to supernate sample
		Added reporting day to sample
		Removed sample type from sample description record.
		Updated tables to reflect last 6 months of change.
Version 2.3	May 19, 1995	Added qa_type, agg_level and comp_name to sample.
		Remove relationships from relationship table.
		Remove sample cross_reference section
Version 2.4	September 6, 1995	Added rules to sample description to force data integrity in the denormalization process.
		Combined Section 4 into Section 3.
		Simplified sampling event delivery from LABCORE.
Version 2.4 Revised	November 20, 1998	Examples in tables have been updated. No changes were made to the file format.
Version 3.0	June 7, 1999	Rules were added to support composite samples, sample attributes, multi-dimensional results for physical property data, projects, and the ability to assign names to a set of analysis conditions. Outdated sections describing file conventions were removed

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TERMS

AA	atomic absorption
ASTM	American Society for Testing and Materials
CAS	Chemical Abstract Services
EPA	U.S. Environmental Protection Agency
GC/MS	Gas Chromatography/Mass Spectrometry
GEA	Gamma energy analysis
ICP	inductively coupled plasma
ID	identification
IRG	Inorganics
lab	laboratory
QA	quality assurance
REL	Sample Relationship
SVO	Semi-Volatile Organics
SEF	Standard Electronic Format
TCD	Tank Characterization Database
TCLP	Toxicity Characterization Leaching Procedure
TIC	total inorganic carbon
TOC	total organic carbon

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1.0 INTRODUCTION

The purpose of this document is to describe the standard electronic format for data files that will be sent for entry into the Tank Characterization Database (TCD). There are 2 different file types needed for each data load:

- Analytical Results
- Sample Descriptions

The first record of each file must be a header record. The content of the first 5 fields is ignored. They were used previously to satisfy historic requirements that are no longer applicable. The sixth field of the header record must contain the Standard Electronic Format (SEF) version ID (SEF3.0). The remaining records will be formatted as specified below. Fields within a record will be separated using the "|" symbol. The "|" symbol must not appear anywhere in the file except when used as a delimiter.

1.1 FILE NAMING CONVENTIONS

Previous file naming and disk labeling conventions no longer apply.

1.2 DATA TYPE DESCRIPTIONS

Character fields   All character fields will contain standard ASCII characters and must be left-justified.

Date fields   All dates will be represented by:

DD-MMM-YY HH:MM:SS where

DD = Day
MMM = Month
YY = year
HH = Hour (24 hour clock)
MM = Minutes
SS = Seconds

Number fields   A number may be entered as an integer, real, or using scientific notation. A format specification of (10,3) is interpreted as 10 total positions. Six positions precede the decimal point, one position is used for the decimal point, and three positions follow the decimal point. The position of the decimal point itself is not assumed and must be included. Similarly, any leading negative sign will require one of the positions to the left of the decimal point. Example: -9999.99 would be represented as (8.2). All numeric fields are to be right justified.

If no specification follows the word 'Number', any of the following methods may be used:

- Integer (0)
- Real (0.00)
- Scientific notation (0.00E+00)

Rounding   Rounding will be to the specified number of decimal places permitted for that field following the "round up if odd, round down if even" principle on the next to last digit if the last digit is 5. Using the format (9,3), the value 6.2335 will be rounded to 6.234 and 6.2325 will be rounded to 6.232.

1.3 FILE FORMAT

The first line of each file must contain the SEF version ID (for example, SEF3.0) as shown in Table 1-1.

Table 1-1. File Identification Record

Field Number	Field Name	Type (Size)	Required?	Contents	Field Rules
A	none	none	No	none	none
B	none	none	No	none	none
C	none	none	No	none	none
D	none	none	No	none	none
E	none	none	No	none	none
F	SEF Version	Character (20)	Yes	SEF Version Example: SEF3.0	"SEF3.0"

2.0 ANALYTICAL RESULTS FILE: HEADER AND DETAIL RECORDS

For each analysis record there may be multiple result records - one for each constituent analyzed. Result records must be preceded by an analysis record. Following each analysis (header record), all records will be assumed to be result data (detail records) for that analysis until a line of 5 asterisks occurs in the first cell of a row. Each record with asterisks will be followed by an analysis record until the end of the file is reached.

Tables 2-1 and 2-2 describe all data records that follow the first line of the file. Full descriptions of all fields are found in Section 2.1 and example files will be found in Appendix B. Table 2-1 describes the header or analysis description record and Table 2-2 the supporting detail or result records.

The total length of any field must not exceed 255 characters.

Analytical Result Detail Record

Include one record describing each analysis done.

Table 2-1. Analytical Result Header Record (2 Sheets)

Field Number	Field Name	Type (Size)	Required?	Contents	Field Rules
A	Lab Sample ID	Character(12)	Yes	Lab sample identifier	None
B	Dilution Factor	Number(15,7)	No	Example: 100 for 1:100 or .1 for 10:1	Numeric and greater than zero
C	Lab Analysis Procedure	Character(15)	Yes	Procedure used for the analysis. Example: PNL-ALO-211	Must be a valid procedure in the *analysis-method* table.
D	Primary Sample Preparation	Character(15)	Yes	Example: PNL-ALO-101 or NA	Must be a valid preparation in the *analysis_method* table.
E	Secondary Sample Preparation	Character(15)	No	Example: PNL-ALO-103	Must be a valid preparation in the *analysis_method* table.
F	Sample Preparation Date/Time	Character(18)	No	Example: 09-JUN-92 09:25:11	Date format.
G	Sample Analyst	Character(20)	No	Example: J D Smith	None
H	Batch Identifier	Character(20)	No	Example: 813	None
I	Reference	Character(150)	No	Example: CORE 36 DATA REPORT Tank 241-SST-C-112 September 30, 1992	None

Table 2-1. Analytical Result Header Record (2 Sheets)

Field Number	Field Name	Type (Size)	Required?	Contents	Field Rules
J	File Identifier	Character(240)	No	Lab generated identifier for the data file	None
K	Blank	Blank	Blank	Blank	None
L	Analysis Comment	Character(240)	No	Comment about the analysis.	None
M	Analysis Method Identifier	Character(10)	No	From TCD analysis_method table. Generated from Lab Analysis Procedure and Primary Sample Prep.	Must be a valid *analysis_method_id* in the *analysis_method* table
N	TCD Sample Number	Character(12)	Yes	A unique TCD-generated identifier for a sample.	Must be in the *tcd_sample* table

Analytical Result Detail Record

Include one record for each analysis result describing one constituent (0 to many results per laboratory analysis). Following the last detail record for an analysis header, a record is required with "*****" in column A.

Table 2-2. Analytical Result Detail Record (2 Sheets)

Field Number	Field Name	Type(Size)	Required?	Field Description	Field Rules
A	Constituent Name	Character(50)	No - If this field is not included, the constituent ID is required.	Element name, or an abbreviation.	Must be in *constituent_synonym* table
B	Constituent ID	Character(15)	No - If the constituent ID is not included, the constituent name is required	Chemical Abstract Services code or constituent id as known in TCD. Example: 14265-44-2 or % water	Must be in *constituent* table.
C	Analysis Result	Number	No	Resulting measurement for one constituent. If blank, a result qualifier is required. Example: 581.6	Numeric. If blank, a result qualifier is required.
D	Analysis Result Type	Character(20)	Yes	What the analysis result represents. Example: DUPLICATE_RESULT	Must be a valid analysis result type.
E	Analysis Result Units	Character(10)	Yes	Engineering units associated with analysis result. Example: ug/L	Must be a valid unit.
F	Result Uncertainty	Number	No	Uncertainty associated with analysis result.	Numeric.
G	Result Uncertainty Units	Character(10)	No	Units associated with result uncertainty.	Must be a valid unit. Required if uncertainty value is entered.
H	Result Qualifiers	Character(6)	No	Up to 6 characters representing data qualifiers, report flags, validation flags. Example: U (indicating material was analyzed for but not detected).	None.

Table 2-2. Analytical Result Detail Record (2 Sheets)

Field Number	Field Name	Type(Size)	Required?	Field Description	Field Rules
I	Detection Limit	Number	No	Detection limit associated with the measured value. Example: 133.83	Numeric.
J	Detection Limit Units	Character(10)	No	Engineering units associated with the analysis result. Example: mg/kg	Must be a valid unit. Required if detection limits is entered.
K	Analysis Date/Time	Character(18)	No	The date and time the analysis was performed. Example: 10-JUL-92 11:42:14	Date format.
L	Result Comment	Character(240)	No	Comments about the analysis result.	None.

2.1 ANALYTICAL RESULTS FIELD DESCRIPTIONS

For descriptions of the data fields included in Tables 2-1 and 2-2 refer to this alphabetical listing of all fields.

Field Name   **Description**

Analysis Comment   Up to 240 characters of text may be entered to further comment on the analysis.

Analysis Date/Time   Date and time the sample was analyzed.

Analysis Method Identifier   A unique number assigned by TCD used to represent specific methods from standards such as EPA and ASTM, or lab-specific methods. This number is assigned to each unique combination of Laboratory Analysis Procedure and Primary Sample Preparation.

Analysis Result   The result associated with the analysis for one constituent. If the measurement was detectable, this field is required. If the measurement was below the detection limit, this field may be blank and that fact will be coded into the Result Qualifiers field.

Analysis Result Type   Indication of what the numeric value in the Analysis Result field represents. (See Section 2.4)

Field Name	Description
Analysis Result Units	Engineering units associated with the Analysis Result. (See Section 2.5)
Batch Identifier	An identifier for a group of laboratory samples that have something in common such as being analyzed as a group or having single calibration for the instrument used. This may be referred to as the 'run' number.
Constituent ID	Chemical Abstract Services (CAS) code or constituent id from TCD.
Constituent Name	Name for a specific chemical or radiological compound or physical property found during analysis. The elemental name or an abbreviation is used. (See Section 2.8)
Detection Limit	The detection limit associated with the measured Analysis Result.
Detection Limit Units	Engineering units associated with the Detection Limit. (Refer to Section 2.5)
Dilution Factor	If a sample has been diluted for analysis, Dilution Factor is the factor by which the raw analytical result was multiplied to determine the amount of the constituent in the sample. Enter the dilution factor as a single number, such as 100 for a 1 to 100 dilution of the sample. For a concentration of 10 to 1, enter 0.1. If a sample was not diluted enter 0.
File Identifier	A unique laboratory generated identifier used for internal tracking of data files - nominally the name of the electronic data deliverable file. If a customer needs certain data files sent again, the customer can provide the laboratory with the laboratory's own file identifier(s). This will enable the laboratory to more quickly retrieve the data files to satisfy the request.

Field Name	Description
Laboratory Analysis Procedure	Unique ID provided by laboratories to reference the procedure used for the analysis. This is the laboratory's identification of the analytical procedure used in obtaining the results of the specific constituent tested and is used to create the analytical method ID that will be stored in TCD. If any analysis procedures that are used for constituent processing change during the time period that the laboratory is providing analytical results to TCD, the laboratory should pass the new analysis procedure(s) and their identifiers to TCD. (See Section 2.3 for a partial list of procedure codes currently being used for TCD.)
Laboratory Sample ID	Internal laboratory identifier assigned by the laboratory that analyzed the sample.
Primary Sample Preparation	Types of sample preparation that may be useful in understanding the analysis and associated results. This unique identifier is provided by labs to reference the procedure used for the primary sample preparation and is required only if there was one. Otherwise, use 'NA'. Along with the laboratory analysis procedure, the sample preparation will be used to create the analytical method ID that will be stored in TCD. If any analysis procedures that are used for constituent processing change during the time period that the laboratory is providing analytical results to TCD, the laboratory should pass the new analysis procedure(s) and their identifiers to TCD. If Laboratory Procedure IDs are retired they should not be reassigned to a new analysis method. (See Section 2.3 for a list of possible Sample Preparation Codes.)
Reference	Indicates the laboratory document in which the sample and analysis result is documented. Included here should be the lab document number, title, and page number.
Result Comment	Comments about the analysis result. A maximum of 240 characters may be entered.

Field Name	Description
Result Qualifiers	Codes used to further explain lab analysis results. These codes can include data qualifiers, report flags, and validation flags. This field may hold up to six characters from the list in Section 26. For example 'UD', in the field would indicate that the analysis was performed on a diluted sample but measurement was below the detection limit. No associated value would appear in the result field. The codes may appear in any order in the field.
Result Uncertainty	Primary measure of uncertainty associated with the analysis result value represented as a number with a maximum of 4 decimal places.
Result Uncertainty Units	Type of the uncertainty quantifier. (See Section 2.7 for examples of types that have been entered into the database)
Sample Analyst	First and middle initials and last name of the person who analyzed the sample.
Sample Preparation Date/Time	Date and time the sample was prepped.
Secondary Sample Preparation	Types of sample preparation that may be useful in understanding the analysis and associated results. This field is used only if a preparation is done in addition to the Primary Sample Preparation. (See the definition for Primary Sample Preparation for further information and Section 2.3 for a list of possible sample preparation codes.)
TCD Sample Number	A unique TCD-generated identifier for a sample.

2.2 LABORATORY ANALYSIS PROCEDURES

The following shows a partial list of both 222-S and 325 laboratory's analytical procedures used in obtaining results. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Laboratory Analysis Procedure.

Procedure Name	Lab	Procedure
HALIDES		
PNL-ALO-320	325	Method for Extractable Organic Halides (EOX) in Solids
HISTORICAL		
HIST-CARB	222-S	Historical TIC/TOC Procedure
HIST-GEA	222-S	Historical GEA Procedure
HIST-ICP	325	Historical ICP Procedure
INORGANICS		
LA-265-101	222-S	Hexavalent Chromium
LA-324-103	222-S	Mercury Atomic Absorption Solids
LA-325-102	222-S	Mercury Analysis by Atomic Absorption (Manual Cold Vapor Technique)
LA-325-103	222-S	Mercury Atomic Absorption Solids
LA-325-104	222-S	Mercury Analysis by Atomic Absorption (Manual Cold Vapor Technique) CLP

2.3 SAMPLE PREPARATION PROCEDURES

The following is a partial list of laboratory sample preparation codes. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the fields Primary Sample Preparation and Secondary Sample Preparation.

Sample Prep	Lab	Preparation
LA-504-101	222-S	Tank Core Water Soluble Solids
LA-505-159	222-S	Acid Digestion of Sediments, Sludges, and Soils for ICP and AA Analysis
LA-549-141	222-S	Fusion With Alkali Metal Hydroxide
PNL-ALO-101	325	Acid Digestion for Metals Analysis
PNL-ALO-102	325	Fusion of Hanford Tank Waste Solids
PNL-ALO-103	325	Water Leach of Sludges, Soils, Other Solid Samples
PNL-ALO-110	325	Toxicity Characterization Leaching Procedure (TCLP) Extraction for Inorganic Contaminants
PNL-ALO-344	325	Procedure for the Sample Preparation of Samples for GC/MS Analysis for Semivolative Organic Compounds

2.4 ANALYSIS RESULT TYPE CODES

The following is a partial list of Result Type codes. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Analysis Result Type.

Result Type Code	Result Description
DUPLICATE_RESULT	Duplicate analysis result value
MATRIX_SPIKE	Matrix spike result value
METHOD_BLANK	Method blank result value
PRIMARY_RESULT	Primary analysis result value
RETENTION_TIME	Retention time
SPIKE_RECOVERY	Spike recovery result value
STANDARD_RECOVERY	Standard recovery measured as a percentage

2.5 ENGINEERING UNITS

The following is a partial list of units in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Analysis Result Units.

Units Code	Code Translation
%	Percent
DEG C	Degrees Celsius
J/g	Joules per gram
uCi/g	Microcuries per gram
uCi/mL	Microcuries per milliliter
ug/g	Micrograms per gram
ug/L	Micrograms per Liter
unitless	Unitless value

2.6 ANALYSIS RESULT QUALIFIERS

The following is a partial list of qualifiers in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Result Qualifiers.

Qualifier	Definition
B	Indicates compound was found in the blank.
EXO	Exothermic -- no result value reported
J	Indicates an estimated value for target and tentatively identified compounds, spectra meet criteria but response is below Contract Required Quantitation Limit for the target compounds.
N	Material was not analyzed for since the sample preparation made such measurement not appropriate (e.g., Potassium in KOH/Ni Fusion preparation).
NEXO	Not exothermic -- no result value reported
U	Indicates the compound was analyzed for but not detected, the U-flagged concentration is the Contract Required Quantitation Limit.

2.7 TYPES OF UNCERTAINTY

The following is a partial list of uncertainty types in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Result Uncertainty Units.

Type	Definition
%	Percentage uncertainty
STD DEV	Standard deviation

2.8 CONSTITUENTS

The following is a partial list of constituents in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the fields Constituent Identifier or Constituent Name.

Constituent ID	Constituent Long Name
%WATER	Percent water (mostly liquid sample)
100-01-6	4-Nitroaniline
100-02-7	4-Nitrophenol
13966-00-2	Potassium-40
13966-06-8	Tin-113
13966-29-5	Uranium-234
7429-90-5	Aluminum
7429-91-6	Dysprosium
7439-89-6	Iron
7440-22-4	Silver
7440-23-5	Sodium
7440-24-6	Strontium
7440-61-1	Uranium
BULK DENSITY	Bulk density
PH	pH Measurement
TIC	Total inorganic carbon
TOC	Total organic carbon

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3.0 SAMPLE DESCRIPTION FILE

TCD sample numbers are needed for each of the following:

- Every supernate, or surface sample must have a TCD sample number.
- Every core segment must be assigned a TCD sample number.
- Every separate analysis must have a TCD sample number.

For each TCD sample number there must be one description record.

Tables 3-1 through 3-6 describe all data records. Full descriptions of all fields are found in Section 3.1.

Table 3-1 describes the project record. Project records must precede any sample description records that belong to the project..

Table 3-2 describes the records that create a name for a set (i.e. group) of attributes. Records that create a name for a set of attributes must precede any sample description records that refer to the set by name. These records may be omitted from the file if there is no attribute set name.

Table 3-3 describes Sampling Event Records. These records must precede any sample description records that refer to the event.

Table 3-4 describes Sample Description Records.   Sample Description Records must follow any records they refer to, such as a project, name of an attribute set, or a sampling event. They must precede any attribute records or sample relationship records that refer to them.

Table 3-5 describes Sample Relationship Records. All sample relation records must follow any sample description records they refer to.

Table 3-6 describes Sample Attribute records. Sample Attribute Records must follow any records they refer to, such as a name of an attribute set, or a sample description record.

The total length of any field must not exceed 255 characters

Project Record

Each sample must be associated with a project. The project record must precede any samples that refer to it.

Table 3-1. Project Record

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
A	Record Type	Character(5)	Yes	Record type	"PROJ"
B	Project Short Name	Character(20)	Yes	Project Name	Must be a unique project name
C	Project Long Name	Character(255)	No	Description of Project	none
D	Document Short Name	Character(20)	No	ID of Controlling Document	Must be a unique document name
E	Document Long Name	Character(255)	No	Title of Controlling Document	none
F	Document Date	Date	No	Date Controlling Document was released	none
G	Project Type	Character(40)	Yes	Type of Project	See description below

There are only two allowed project types.

Characterization   "Pure" undiluted samples from a single tank.
Mixed   Not part of the Characterization project.

Records That Give A Name For A Set Of Attributes

These records allow a name to be assigned to a set (i.e., group) of sample attributes, which will typically be specified in a controlling document for the project. A sample may then use this name to associate itself with a set of attributes. These names must be loaded before they are referenced by a sample or by the attributes they are associated with. These records may be omitted from the file if there is no attribute set name.

Table 3-2. Records that Give a Name for a Set of Attributes

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
A	Record Type	Character(5)	Yes	Record type	Must be "SETID"
B	Set Short Name	Character(40)	Yes	Name for a set of attributes	Must be a unique Set Name
C	Set Long Name	Character(255)	No	Long name	none

Sampling Event Records

Each sample must be associated with a Sampling Event. The Sampling Event record must precede any samples that refer to it.

Table 3-3. Sampling Event Records

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
A	Record Type	Character(5)	Yes	Record type	Must be "SEG", "SUPN", or "SURF"
B	Tank Farm ID	Character(3)	Yes	Tank Farm Example: S	Combination of *tank_farm_id* and *tank_id* must be in the *waste_tank* table
C	Tank ID	Integer(3)	Yes	Tank ID Example: 104	Combination of *tank_farm_id* and *tank_id* must be in the *waste_tank* table.
D	Sampling Event ID	Character(12)	Yes	Core ID, supernate sample ID, or surface sample ID Example: 42, 95AUG001, G713	Must be unique to this tank.
E	Sample Number	Character(12)	Yes	TCD sample number assigned to the segment Example: B08GG1	Must be in *sample_number_master* table and not already used.
F	Tank Segment ID	Character(12)	Yes, if record type is "SEG"	Segment ID Example: 12	Cannot be a duplicate.
G	Appearance	Character(180)	No	Appearance of the segment -- color, consistency, etc.	None.

Sample Description Record

Include one record describing each sample. This record must follow Project and Sampling Event records that are associated with the sample, as well any record specifying the Name of an Attribute Set that is associated with the Sample.

Table 3-4. Sample Description Record (2 Sheets)

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
A	Record Type	Character(5)	Yes	"SAMP"	Must be "SAMP".
B	Sample Number	Character(12)	Yes	TCD Sample Number assigned to the Sample Example: B08GG1	Must be in *sample_number_ master* table and unique to the *tcd_sample* table.
C	Phase	Character(6)	Yes	Phase of the sample (i.e., Liquid, Solid, etc.) Example: LIQUID	Must be a valid phase.
D	Subdivision ID	Character(20)	Yes	Portion of the segment represented by the sample. Example: TOTAL	Must be a valid sample subdivision id.
E	Sample Description	Character(150)	Yes	Description of the sample. See discussion in Section 3.6 for rules in constructing the description. Example: Core 45 Segment 1	None.
F	Parent Table	Character(30)	Yes	Parent table for the sample Example: TANK_CORE_SEGMENT	Must be a valid parent table name or "NONE".
G	Sample Date Time	Character(18)	No	Date sample created Example: 03-JUN-94 17:14:33	Date format must be less than or equal to Lab Received Date (if entered). No future dates.
H	Lab Received Date	Character(18)	No	Date sample received at lab Example: 03-JUN-94 17:14:33	Date format must be greater than or equal to Sample Date (if entered).
I	Log Page	Character(10)	No	Page of the log book Example: A142	None.
J	Log ID	Character(20)	No	Log identification Example: Log-117	None.

Table 3-4. Sample Description Record (2 Sheets)

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
K	Sampler	Character(20)	No	Name of the person gathering the sample (e.g. from waste site): Example: J J Jones	None.
L	Document Location	Character(150)	No	Document containing the data Example: WHC-SP-DP-048	None.
M	Sample Comment	Character(255)	No	Comments about the sample.	None.
N	Reporting Day	Character(15)	No, but strongly recommended	Reporting day for the sample (i.e., 45, 90,216)	None.
O	Aggregation Level	Character(20)	Yes	Aggregation level for the sample Example: CORE COMPOSITE	Select from a list of acceptable choices.
P	QA Type	Character(20)	Yes	QA type of the sample Example: HOT CELL BLANK	Select from a list of choices.
Q	Composite Name	Character(20)	Yes, if aggregation level is TANK COMPOSITE or CORE COMPOSITE and QA type is NONE	Composite name of the sample Example: Core Composite 2	None.
R	Project Short Name	Character(20)	Yes	Name of Project	Name must be a Project previously loaded into TCD (See 3.1).
S	Set Short Name	Character(40)	No	Name of associated Attribute Set	Name must be a Set previously loaded into TCD (see 3.2).
	ADDITIONAL RULE				If the parent table is NONE, the sample must be used at least once as a related sample number.

Table 3-5 Sample Relationship Record

Sample Relationship records cannot precede the Sample Description records of the samples they reference.

Table 3-5. Sample Relationship Record

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
A	Record Type	Character(5)	Yes	"REL"	Must be "REL"
B	Input Sample Number	Character(12)	Yes	TCD Sample Number From the parent sample Example: B08FF4	Must be in the sample table. Combination of input sample number and output sample number must be unique. Parent table must be something other than NONE
C	Output Sample Number	Character(12)	Yes	TCD Sample Number from the child sample Example: B08GJ1	Must be in the sample table. Combination of input sample number and output sample number must be unique. Parent type must be NONE. If there is more than one record with this related sample number and the qa type is NONE, then the aggregation level in the sample description record must be CORE COMPOSITE or TANK COMPOSITE.
D	Parent Amount	Number	No	Amount of Parent (Input) Sample that was used to create the Child	none
E	Parent Amount Units	Character(10)	No	Example: ug	Must be units recognized by TCD.

Sample Attributes Record

Sample Attribute records cannot precede Sample Description records of the samples they reference. Nor can they precede records that name Attribute Sets that they reference.

Table 3-6. Sample Attributes Record

Field Number	Field Name	Type(Size)	Required?	Contents	Field Rules
A	Record Type	Character(5)	Yes	Record Type	Must be "ATTR"
B	Sample Number	Character(12)	No. But this record must reference either a Sample Number or a Set Short Name	TCD Sample Number Example: B08FF4	Must be null or a *sample* number known to TCD.
C	Set Short Name	Character(40)	No. But this record must reference either a Sample Number or a Set Short Name	Name of the set this attribute belongs to (see Table 3.2), if any. If the attribute does not belong to a set, this must be a null value.	Must be a null value, or a set name known to TCD (see Table 3.2).
D	Attribute Short Name	Character(20)	Yes	A known attribute.	This must be a name known to TCD (see below).
E	Attribute Text Value	Character(255)	No	The value of the attribute, specified via text (optional).	None
F	Attribute Value	Number	No	The value of attribute, specified via a number (optional)	Null, or numeric.
G	Attribute Units	Character(10)	No	Example: ug/ml	Must be a null value or units recognized by TCD.

3-8

3.1 SAMPLE DESCRIPTION FIELD DESCRIPTIONS

For descriptions of the data fields included in Tables 3-1 through 3-6 refer to this alphabetical listing of all fields.

Field Name	Description
Aggregation Level	Aggregation level of the sample. Example values are: CORE COMPOSITE DL CORE COMPOSITE (drainable liquid core composite) DL TANK COMPOSITE (drainable liquid tank composite) DRAINABLE LIQUID SEGMENT SUBDIVISION TANK COMPOSITE TANK SAMPLE (used for surface and supernate samples only)
Appearance	Appearance of the sample. Include such things as color and consistency.
Attribute Short Name	The attribute identifier. Possible value are: CONTACT_TIME TEMPERATURE SETTLING_TIME DILUENT_AMOUNT DILUENT_TYPE
Attribute Text Value	The value of the attribute specified via text, such as "WATER" for diluent type.
Attribute Units	Engineering units associated with the attribute. (See Section 2.5).
Attribute Value	The numeric value of the attribute.
Composite Name	Name to identify the composite such as Core Composite Segments 2 through 7.
Document Date	Date the controlling document was released.
Document Location	Identifies any document that describes the test results.
Document Long Name	Title of the controlling document.
Document Short Name	Identifier of the controlling document.

Field Name	Description
Input Sample Number	Unique TCD-generated identifier for a sample. In this case, the sample number is in an input relationship to the related sample number.
Lab Received Date	Date sample was received at the laboratory.
Log ID	ID of the log book in which notes about this sample are recorded.
Log Page	Log book page on which notes about this sample are recorded.
Output Sample Number	Unique number to identify a sample that has a defined output relationship to another sample.
Parent Amount	The amount of parent sample that was used to create this sample. The amount can be specified in percent (of the child material), by weight, or by volume. The Parent Amount Units (see next definition) shows how the amount was specified.
Parent Amount Units	The units that apply to the parent amount. Parent Amount Units must be on the list of Engineering Units known to TCD (see Section 2.5 -- Engineering Units).
Parent Table	The only allowable values are: NONE TANK_CORE_SEGMENT TANK_SUPERNATE_SAMPLE TANK_SURFACE_SAMPLE
Project Long Name	Title of the project or program that drives the associated sampling and analysis effort.
Project Short Name	Identifier of the project or program that drives the associated sampling and analysis effort.
Project Type	The type of project or program that drives the associated sampling and analysis effort. Two possible values are: CHARACTERIZATION MIXED
Phase	Physical type of sample. The only current allowed values are: LIQUID SOLID

Field Name	**Description**
QA Type	QA type for the sample. Refer to Section 3.5.
Record Type	Identifies the type of record in the SEF table. The only allowable values are: ATTR PROJ REL SAMP SETID SEG SUPN SURF
Reporting Day	Reporting day for the sample. The only allowable values are: 136 14 216 45 60 90 FINAL
Sample Comment	Comment about the sample.
Sample Date Time	Date and time of sample collection.
Sample Description	Description of the sample. See Section 3.4 for instructions on the construction of a sample description.

Field Name	**Description**
Sample Number	Unique TCD-generated identifier for a sample
Sampler	First and middle initials and last name of the person who took or is responsible for taking the sample. For Mixed projects this would be the name of the person who created the sample.
Sampling Event ID	Unique ID for a core, supernate sample, or surface sample collected from a waste tank.
Set Long Name	Description of a set of test conditions -- that belong with each other and are assigned a short name and long name.
Set Short Name	Identifier of a set of test conditions – that belong with each other and are assigned a short name and long name.
Subdivision ID	Description of where the current sample was taken from the segment. (Refer to Section 3.3)
Tank Farm ID	Unique ID assigned to a tank farm. (Refer to Section 3.2)
Tank ID	Unique ID assigned to a waste storage tank within a tank farm. (Refer to Section 3.2)
Tank Segment ID	Unique ID for a tank segment. IDs start at one (1) for the first segment obtained from each tank core. A higher segment ID implies greater depth.

3.2 TANK IDENTIFICATIONS

The following is a partial list of tank farm/tank farm ID combinations in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the fields Tank Farm ID and Tank ID.

Tank Farm/Tank Farm Identifications

Tank Farm	Allowable Tank IDs
A	101, 102, 103, 104, 105, 106
AN	101, 102, 103, 104, 105, 106, 107
AP	101, 102, 103, 104, 105, 106, 107, 108
AW	101, 102, 103, 104, 105, 106
AX	101, 102, 103, 104
AY	101, 102
AZ	101, 102

3.3 SAMPLE SUBDIVISION IDENTIFICATIONS

The following is a partial list of subdivision IDs in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Sample Subdivision ID.

Portion	Description
BOTTOM	Sample taken from the bottom of the segment or tank sample
HOMOGENIZED TEST 1	First sample taken for a homogenization test
HOMOGENIZED TEST 2	Second sample taken for a homogenization test
SUBSEG	Sample taken from an unnamed subsegment
TOP	Sample taken from the top of the segment or tank sample
TOTAL	Sample taken from the entire segment or tank sample

3.4 SAMPLE DESCRIPTIONS

The following standards apply to creating the sample descriptions. Upper and lower case should be applied as per the standards shown. This description should be entered in the Sample Description field.

Sample Description Standards

Sample Type	Standard

Core Segment

Core ID
Segment Number
Subsegment Number
"Homogenized" (if appropriate)
Preparation Method (use Subsample if preparation is direct)
Dilution or Rerun (as appropriate)

Examples: Core 24 Segment 1
Core 24 Segment 1 Subsegment A
Core 24 Segment 2 Subsample
Core 24 Segment 2 Homogenized
Core 24 Segment 3 Homogenized Subsample
Core 24 Segment 4 Homogenized Acid Dilution

Core Composite

Core ID
"Core Composite"
Core Composite Number
"Homogenized" (if appropriate)
Preparation Method (use Subsample if preparation is direct)
Dilution or Rerun (as appropriate)

Examples: Core 24 Core Composite
Core 24 Core Composite 2 Subsample
Core 24 Core Composite Homogenized Subsample

**Hot Cell Blanks/
Field Blanks**

Tank ID (if related to entire tank) or Core ID (if specific to a single core)
"Hot Cell Blank" or "Field Blank"
"Homogenized" (if appropriate)
Preparation Method (use Subsample if preparation is direct)
Dilution or Rerun (as appropriate)

Examples: Core 24 Hot Cell Blank
Core 24 Field Blank Homogenized Water
Tank B-202 Hot Cell Blank Homogenized

Sample Description Standards

Sample Type	**Standard**

Non-core Samples   Tank ID
Sample Identifier
"Homogenized" (if appropriate)
Preparation Method (use Subsample if preparation is direct)
Dilution or Rerun (as appropriate)

      Examples: AW-102 Sample 1
                    AW-102 Sample 1 Homogenized Fusion

3.5 QA TYPES

The following is a partial list of subdivision IDs in TCD. The complete list can be dynamic and, when needed, should be obtained by contacting the TCD staff. This data is used in the field Sample Subdivision ID.

Example values are:

              NONE
              BLIND
              STANDARD
              DIW_BLANK
              LAB_BLANK
              SYNTHETIC
              FIELD_BLANK
              HOT_CELL_BLANK
              TRIP_BLANK
              HYDROSTATIC_HEAD_FLUID
              LINER_LIQUID
              SERIAL_DILUTION

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APPENDIX A

EXAMPLES

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EXAMPLE 1 -- Analytical Results File

ASCII FILE FORMAT:

```
||||SEF3.0
92-6758a|1|PNL-ALO-211|PNL-ALO-101||6/20/92 10:08|A.B.Smith|896|CORE 35 Data Report Tank 241-SST-Z-314|ICP-325-601-
06/24/92||This could be an analysis comment.|286|B08DP3
Al||11612.6|PRIMARY_RESULT|ug/g|2|%||0.1829|ug/g|6/20/92|This is an example of a result comment.
As||67.6|PRIMARY_RESULT|ug/g|11|%||0.1829|ug/g|6/20/92|Result Comment
B||90.5|PRIMARY_RESULT|ug/g|5|%||0.1014|ug/g|6/20/92|Result Comment
Ba||58|PRIMARY_RESULT|ug/g|0|%||0.0596|ug/g|6/20/92|Result Comment
Be|||PRIMARY_RESULT|ug/g|2|%|U|0.008|ug/g|6/20/92|Result Comment
Ca||10.5|PRIMARY_RESULT|ug/g|1|%||0.0032|ug/g|6/20/92|Result Comment
*****
92-6758b|1|PNL-ALO-211|PNL-ALO-101||6/20/92 10:08|A.B.Smith|897|CORE 35 Data Report Tank 241-SST-Z-314|ICP-325-601-
06/24/92||This could be an analysis comment.|286|B08DN3
Al||10400.8|DUPLICATE_RESULT|ug/g|2|%||0.1829|ug/g|6/20/92|Result Comment
As||66.5|DUPLICATE_RESULT|ug/g|11|%||0.1829|ug/g|6/20/92|Result Comment
B||67|DUPLICATE_RESULT|ug/g|5|%||0.1014|ug/g|6/20/92|Result Comment
Ba||53.7|DUPLICATE_RESULT|ug/g|0|%||0.0596|ug/g|6/20/92|Result Comment
Be|||DUPLICATE_RESULT|ug/g|2|%|U|0.008|ug/g|6/20/92|Result Comment
Ca||9.3|DUPLICATE_RESULT|ug/g|1|%||0.0032|ug/g|6/20/92|This is an example of a result comment.
*****
```

EXAMPLE 2 -- Analytical Results File

ASCII FILE FORMAT:

|||||SEF3.0
92-06767-E1|1|PNL-ALO-345|PNL-ALO-344|||||CORE 35 Data Report Tank 241-SST-Z-314|>H0304||This could be an analysis comment.|286|B08DN5
|108-95-2|18000|PRIMARY_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|111-44-4|18000|PRIMARY_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|95-57-8|18000|PRIMARY_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|541-73-1|18000|PRIMARY_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|39638-32-9|18000|PRIMARY_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|67-72-1|90000|PRIMARY_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
*****
92-06767-E2|1|PNL-ALO-345|PNL-ALO-344||||897|CORE 35 Data Report Tank 241-SST-Z-314|>H0304||This could be an analysis comment.|286|B08DN7
|108-95-2|22000|DUPLICATE_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|111-44-4|22000|DUPLICATE_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|95-57-8|22000|DUPLICATE_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|541-73-1|22000|DUPLICATE_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|39638-32-9|22000|DUPLICATE_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
|67-72-1|22000|DUPLICATE_RESULT|ug\Kg|||U|||8/3/92|This is an example of a result comment.
*****

EXAMPLE 3 -- Sample Description File for Defining Projects

ASCII FILE FORMAT:

PROJ|SY-101 Comp|Composition Study on Samples Supporting 241-SY-101|74B50-99-011| LOI From Process Control|08-FEB-99|Mixed
PROJ|Project 2|||||Mixed
PROJ|C|This is a dummy project for characterization|Doc ID is optional|So it doc title||Characterization

EXAMPLE 4 -- Sample Description File for Defining Set Names

ASCII FILE FORMAT:

SETID|1SY-0/Tt/t1|241-SY-101 composite, tested at 47 C for 2-5 hours contact time
SETID|Set No 2|12 C with 10 hour contact time

EXAMPLE 5 – Sample Description File for Sampling Events

ASCII FILE FORMAT:

SEG|Z|314|34|B08SG1|1|green and lumpy
SEG|Z|314|34|B08SG2|2|brown and lumpy
SEG|Z|314|35|B08SG3|1|runny
SEG|Z|314|35|B08SG4|2|yellow; consistency of honey

EXAMPLE 6 -- Sample Description File for Core Segments

The example shown below will generate an error if TCD does not first receive the records shown in Example 3 and Example 4. As an alternative, those records could be placed at the beginning of this file.

ASCII FILE FORMAT:

SAMP|B08SM4|SOLID|TOTAL|Core 34 Segment 1 Homogenized Acid|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment.|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08SM5|SOLID|TOTAL|Core 34 Segment 1 Homogenized Fusion|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment.|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp|Set No 2
SAMP|B08SM6|SOLID|TOTAL|Core 34 Segment 2 Homogenized Acid|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment.| 45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08SM7|SOLID|TOTAL|Core 34 Segment 2 Homogenized Fusion|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment.| 45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08TM4|SOLID|TOTAL|Core 35 Segment 1 Homogenized Acid|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. |45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08TM5|SOLID|TOTAL|Core 35 Segment 1 Homogenized Fusion|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment.|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08TM6|SOLID|TOTAL|Core 35 Segment 2 Homogenized Acid|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. |45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08TM7|SOLID|TOTAL|Core 35 Segment 2 Homogenized Fusion|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. |45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
REL|B08SG1|B08SM4|50|Percent
REL|B08SG1|B08SM5|50|Percent
REL|B08SG1|B08SM6|33|Percent
REL|B08SG1|B08SM7|50|Percent
REL|B08SG2|B08TM4|50|Percent
REL|B08SG3|B08TM5|50|Percent
REL|B08SG4|B08TM6|33|Percent
REL|B08SG3|B08TM6|34|Percent
REL|B08SG4|B08TM7|50|Percent

EXAMPLE 7 -- Sample Description File for Supernate Samples

In this example, project and attribute set name data is loaded at the beginning of the file. Data showing the relationships between samples will presumably be loaded in at a later time in a different file.

ASCII FILE FORMAT:

PROJ|SY-101 Comp|Composition Study on Samples Supporting 241-SY-101|74B50-99-011| LOI From Process Control|08-FEB-99|Mixed
PROJ|Project 2|||||Mixed
PROJ|C|This is a dummy project for characterization|Doc ID is optional|So it doc title||Characterization
SETID|1SY-0/Tt/t1|241-SY-101 composite, tested at 47 C for 2-5 hours contact time
SETID|Set No 2|12 C with 10 hour contact time
SUPN|Z|314|G555|B08SQ1||green and lumpy
SAMP|B08TQ6|SOLID|TOTAL|LT504 RW1423 Homogenized Acid|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. .|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp|Set No 2
SAMP|B08TQ7|SOLID|TOTAL|LT504 RW1423 Homogenized Fusion|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. .|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp|Set No 2

EXAMPLE 8 -- Sample Description File for Surface Samples

This example assumes that the Project information was previously loaded per Example 3. Alternatively, Project data records could be placed at the beginning of this file.

The records shown in Example 4 are not required to precede the records shown in this example, because these samples do not reference any attribute set names.

ASCII FILE FORMAT:

SAMP|B08TW6|SOLID|TOTAL|LT504 SS1423 Homogenized Acid|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. .|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp
SAMP|B08TW7|SOLID|TOTAL|LT504 SS1423 Homogenized Fusion|NONE|03-JUN-94 17:14:33|03-JUL-94 07:16:00|||J J Jones||This is a comment. .|45,90,216|CORE COMPOSITE|HOT_CELL_BLANK|Core composite 2|SY-101 Comp

EXAMPLE 9 -- Sample Description File for Sample Relationships

This example assumes that Sample Description information was previously loaded per Example 7. Alternatively, Sample Description information could be placed at the beginning of this file, as shown in Example 6.

ASCII FILE FORMAT:

REL|B08SQ1|BO8TQ6|100|ml
REL|B08SQ1|B08TQ7|500|ml

EXAMPLE 10 -- Sample Description File for Sample Attributes

The example shown below will generate an error if TCD does not first receive the records shown in Examples 4 and 6. Those records could be placed at the beginning of this file as an alternative.

```
ATTR|B08SM4||Temperature||20|Celsius
ATTR|B08SM4||Contact Time||20|Hours
ATTR||Set No 2|Contact Time||55|minutes
ATTR||Set No 2|Amount Diluent||55|percent wt
```

DISTRIBUTION SHEET

To	From		
Distribution	Data Management/Requirements Planning and Support	**Page** 1 of 1	
		Date 06/21/99	

Project Title/Work Order		EDT No. N/A	
HNF-3638, Rev. 1, "Standard Electronic Format Specification for Tank Characterization Data Loader: Version 3.0"		ECN No. ECN-654979	

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
Office of River Protection					
DOE Reading Room	H2-53	X			
Fluor Daniel Hanford					
L. A. Diaz	T6-12	X			
S. K. Wollam	T6-12	X			
Lockheed Martin Hanford, Corp.					
M. R. Adams	R2-12	X			
R. A. Bechtold	K7-22	X			
J. G. Field	R2-12	X			
K. M. Hall	R2-12	X			
J. W. Hunt	R2-12	X			
T.C.S.R.C.	R1-10	X			
Lockheed Martin Services, Inc.					
Central Files	B1-07	X			
Pacific Northwest National Laboratory					
S. F. Bobrowski	K7-28	X			
S. J. Harris	K7-22	X			
L. Long	K7-28	X			
Waste Federal Services of Hanford					
R. E. Kerns	T6-51	X			
C. M. Seidel	S3-30	X			
G. B. Svancara	T6-03	X			

A-6000-135 (01/93) WEF067