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ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 628337

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
Distribution	Plutonium Finishing Plant	N/A
5. Proj./Prog./Dept./Div.:	6. Design Authority/Design Agent/Cog. Engr.:	7. Purchase Order No.:
PFP Analytical Laboratory	ST Hurlbut	N/A
		9. Equip./Component No.: N/A
8. Originator Remarks: Initial Release and Distribution Key Words: SigmaPlot, moisture, water, analysis, supercritical fluid, FTIR		10. System/Bldg./Facility: PFP
		12. Major Assm. Dwg. No.: N/A
11. Receiver Remarks:	11A. Design Baseline Document? (●) Yes ( ) No	13. Permit/Permit Application No.: N/A
		14. Required Response Date: N/A

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	HNF-6994		0	Software Mgmt, Req, Design	Q	2		
2	HNF-6995		0	Software Test Plan	Q	2		
	dft for STH 9/18/00							

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D OR N/A (See WHC-CM-3-5, Sec. 12.7)	1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION
(See Approval Designator for required signatures)

(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
2	1	Design Authority ST Hurlbut	Samuel T Hurlbut	9/12/00	T5-06						
		Design Agent				3		Central Files			B1-07
		Cog. Eng.									
2	1	Cog. Mgr. EW Curfman	E W Curfman	9/13/00	T5-05						
2	1	QA DR Groth	D R Groth	9/13/00	T4-15						
		Safety									
		Env.									

18.	19.	20.	21. DOE APPROVAL (if required)
Samuel T Hurlbut 9/13/00 Signature of EDT Originator Date	Authorized Representative for Receiving Organization Date	E W Curfman 9/13/00 Design Authority/ Cognizant Manager Date	Ctrl No. _____ ( ) Approved ( ) Approved w/comments ( ) Disapproved w/comments

HNF-6994
Revision 0

SigmaPlot 2000, Version 6.00, SPSS Inc.

Computer Software Project Management, Requirements, and Design Document

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford
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Richland, Washington

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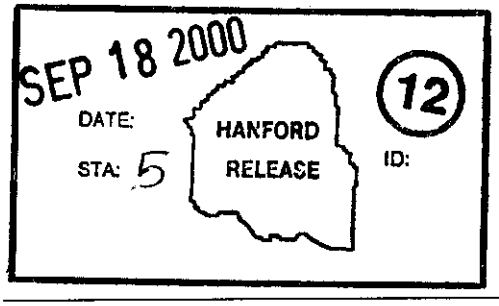

9/14/00

Release Approval | Date | Release Stamp

Approved for public release; further dissemination unlimited

Total Pages: 8

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PLUTONIUM FINISHING PLANT ANALYTICAL LABORATORY

SigmaPlot 2000, Version 6.00, SPSS, Inc. Computer Software Project Management, Requirements, and Design Document

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S. T. Hurlbut, Fluor Hanford, Inc. — Date 9/12/00

TABLE OF CONTENTS

1. PROJECT MANAGEMENT

1.1 Project Overview

SigmaPlot is a vendor software product that will be used to convert the area under an absorbance curve generated by a Fourier transform infrared spectrometer (FTIR) to a relative area. SigmaPlot will be used in conjunction with procedure ZA-565-301, "Determination of Moisture by Supercritical Fluid Extraction and Infrared Detection."

1.2 Product Perspective

SigmaPlot is a proprietary program provided by the SPSS, Inc. SigmaPlot performs a wide variety of functions; however this test only concerns its ability to convert spectral data to relative areas using the following equation, known as the trapezoidal rule. This function calculates the area of a rectangle and adds the area of a triangle stacked on top of it.

$$\sum_{n-1}^{0}\{(y_i)(x_{i+1}-x_i)+(1/2)(y_{i+1}-y_i)(x_{i+1}-x_i)\}$$

1.3 Configuration Management

1.3.1 Change Control

SigmaPlot is provided by the vendor as a finished product on compact disc (CD) and may not be changed in the field.

1.3.2 Documentation

Documentation in the form of a User's Guide is provided by SPSS, Inc.

1.3.3 Records Management

The CD and User's Guide will be maintained in the control of the cognizant scientist for the supercritical fluid extraction (SFE) system.

2. SYSTEM REQUIREMENTS AND DESIGN

2.1 User characteristics

The software will be used by Plutonium Finishing Plant Analytical Laboratory (PFPAL) personnel who have a need to use it and are trained on the associated analytical procedure.

2.2 Constraints

This software will only be tested in regards to its applicability to water determination per ZA-565-301, "Determination of Moisture by Supercritical Fluid Extraction and Infrared Detection."

2.3 Functional Requirements

SigmaPlot must install on the computer designated for operation of and interfaced with the FTIR. All functions pertaining to converting a text file containing infrared spectral data to a numeric area must operate in such a fashion that water can be measured in accordance with ZA-565-301, "Determination of Moisture by Supercritical Fluid Extraction and Infrared Detection."

2.4 Interface Requirements

SigmaPlot must be able to import and operate on a text file containing spectrophotometric absorbance data and time data in a reproducible manner.

2.5 Reliability and Recovery

There are no system impacts should the hard disk of the computer running this program become inoperable, as this software is not used to store data on the computer.

2.6 Standards Compliance

There are no standards or regulations that impose constraints on this program.

2.7 Transferability

The software license controls the number of copies that may be made.

3. REFERENCES

SigmaPlot User's Guide, SPSS, Inc., Chicago, IL

ZA-565-301, *Determination of Moisture by Supercritical Fluid Extraction and Infrared Detection*, Fluor Hanford, Inc., Richland, WA

HNF-PRO-052, *Corrective Action Management,* Fluor Hanford, Inc., Richland, WA

HNF-PRO-1748, *OCRWM Corrective Action and Stop Work,* Fluor Hanford, Richland, WA

HNF-PRO-210, *Records Management Program Standard,* Fluor Hanford, Richland, WA