DISTRIBUTION SHEET

To Distribution	From PFP Environmental Engineering	Page 1 of 1
		Date May 11, 1995
Project Title/Work Order PFP Wastewater Sampling Facility, WHC-SD-CP-OTR-153, Rev. 0		EDT No. 155834
		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
MD Batterton	T5-04	X			
DM Burks	T5-04	X			
DR Hirzel (5 copies)	T5-54	X			
CM Kronvall	T5-53	X			
DJ McBride	T5-54	X			
DH Poynor	T4-15	X			
RD Redekopp	T5-50	X			
PJ Sullivan	T5-54	X			
MD Talbot	T5-52	X			
EC Vogt	T5-50	X			
<hr/>					
Central Files (2)	L8-04	X			
O.S.T-I. (2)	L8-07	X			

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

5

MAY 11 1995 ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 155834

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) PFP Environmental Engineering	4. Related EDT No.: 136007
5. Proj./Prog./Dept./Div.: W15540	6. Cog. Engr.: DR Hirzel	7. Purchase Order No.: N/A
8. Originator Remarks: Operability Test Report for testing of the PFP Wastewater Sampling Facility is routed for approval.		9. Equip./Component No.: N/A
		10. System/Bldg./Facility: 24A/225-WC/PFP
11. Receiver Remarks:		12. Major Assm. Dwg. No.:
		13. Permit/Permit Application No.:
		14. Required Response Date:

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-CP-OTR-153		0	PFP Wastewater Sampling Facility	NA	1,2	1	

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			
(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)								(G)	(H)
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
1	1	Cog.Eng. DR Hirzel	<i>[Signature]</i>	5/11/95	TS-54						
1	1	Cog. Mgr. DJ McBride	<i>[Signature]</i>	5-11-95	TS-54						
		QA									
		Safety									
		Env.									
1	1	OPS	<i>[Signature]</i>	5/11/95							

18. <i>[Signature]</i> Signature of EDT Originator 5-11-95 Date	19. Authorized Representative for Receiving Organization Date	20. <i>[Signature]</i> Cognizant Manager 5-11-95 Date	21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
---	--	---	---

RELEASE AUTHORIZATION

Document Number: WHC-SD-CP-OTR-153, REV 0

Document Title: PFP Wastewater Sampling Facility

Release Date: 5/11/95

**This document was reviewed following the
procedures described in WHC-CM-3-4 and is:**

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara M. Broz

May 11, 1995

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy. Available in paper copy and microfiche. Printed in the United States of America. Available to the U.S. Department of Energy and its contractors from:

U.S. Department of Energy
Office of Scientific and Technical Information (OSTI)
P.O. Box 62
Oak Ridge, TN 37831
Telephone: (615) 576-8401

Available to the public from: U.S. Department of Commerce
National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
Telephone: (703) 487-4650

SUPPORTING DOCUMENT		1. Total Pages 36
2. Title PFP Wastewater Sampling Facility	3. Number WHC-SD-CP-OTR-153	4. Rev No. 0
5. Key Words Wastewater Sampling TEDF PFP OTR 225-WC	6. Author Name: DR Hirzel Signature Organization/Charge Code 15540/K6014	
7. Abstract Document provides test report for completed operability testing of the PFP Wastewater Sampling Facility and its equipment.		
8. RELEASE STAMP <div data-bbox="1144 1549 1578 1780" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> OFFICIAL RELEASE BY WHC DATE MAY 11 1995 </div>		

TABLE OF CONTENTS

1.0	Introduction	2
2.0	Test Chronology	3
3.0	Test Result Discussion	4
	Appendix A	5

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 2 OF 35
----------------------------	-------------------------------------	---

D R A F T

1.0 Introduction

This test report documents the results obtained while conducting operational testing of the sampling equipment in the 225-WC building, the PFP Wastewater Sampling Facility. The test was performed with WHC-SD-CP-OTP-153, "Operability Test Procedure for PFP Wastewater Sampling Facility", in conjunction with Job Control System work package 95-00591. A complete test copy is included in appendix A.

The Wastewater Sampling Facility houses equipment to sample and monitor the PFP's liquid effluents before discharging the stream to the 200 Area Treated Effluent Disposal Facility (TEDF). The majority of the streams are not radioactive and discharges from the PFP Heating, Ventilation, and Air Conditioning (HVAC). The streams that might be contaminated are processed through the Low Level Waste Treatment Facility (LLWTF) before discharging to TEDF.

The sampling equipment consists of two flow-proportional composite samplers, an ultrasonic flowmeter, pH and conductivity monitors, chart recorder, and associated relays and current isolators to interconnect the equipment to allow proper operation. Data signals from the monitors are received in the 234-5Z Shift Office which contains a chart recorder and alarm annunciator panel. The data signals are also duplicated and sent to the TEDF control room through the Local Control Unit (LCU).

Performing the OTP has verified the operability of the PFP wastewater sampling system. This Operability Test Report documents the acceptance of the sampling system for use.

2.0 Test Chronology

Table 1 lists the dates and approximate test durations associated with important test items.

TABLE 1			
Test item	Start Date	Finish Date	Duration
Chart Recorder UR-201	5/3/95	5/3/95	1/2 hour
Current Isolator IB-201	5/3/95	5/3/95	1/2 hour
Current Isolator IB-202	5/3/95	5/3/95	1/2 hour
Current Isolator IB-203	5/3/95	5/3/95	1/2 hour
Current Isolators IB-1 and IB-2	5/3/95	5/3/95	1/2 hour
Current Isolator IB-201B	5/4/95	5/4/95	1/2 hour
Current Isolator IB-201A	5/4/95	5/4/95	1/2 hour
Current Isolator IB-202A	5/4/95	5/4/95	1/2 hour
Time Delay Relays TDR1 and TDR3	5/3/95	5/3/95	1 hour
Sampler Unit 1 SMP-1	5/3/95	5/3/95	1 hour
Sampler Unit 2 SMP-2	5/3/95	5/3/95	1 hour
pH Transmitter AIT-201	5/4/95	5/4/95	5 hours
Conductivity Transmitter AIT-202	5/5/95	5/8/95	8 hours
Flow Computer FQ-301	5/5/95	5/9/95	14 hours
Digital Indicator FQ-201	5/10/95	5/10/95	2 hours
Chart Recorder AIR-202	5/10/95	5/10/95	1 hour

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 4 OF 35
----------------------------	-------------------------------------	---

3.0 Test Result Discussion

The performance of the wastewater sampling equipment was tested and exceptions to the test identified. Most of the exceptions were anomalies in the test procedure not identified during approval review. Minor anomalies were simply redlined into the procedure while major anomalies in the procedure were listed as exceptions. This section will briefly discuss these exceptions.

3.1 Chart Recorder for pH

The wrong chart recorder was called out to be used to check the output of the current isolator in the pH loop. The procedure was amended.

3.2 Current Isolators for LCU

Three current isolators that carry the data signals to the LCU were inadvertently not included into the test procedure. The correct this new sections 5.5A, 5.5B, and 5.5C were written and added to the procedure. The current isolators were then tested correctly.

3.3 Conductivity Transmitter not generating signal

The conductivity signal was not being received by the UR-201 chart recorder or the LCU. The trouble was with the transmitter. A built in computer parameter was not correctly set and was reducing the output signal to less than 4 milliamps. The parameter was reprogrammed into the transmitter correctly.

3.4 Flow Alarm triggered pH annunciator

A high flow signal from AIR-202 located in the 234-5Z Shift Office would trigger the pH alarm in the annunciator panel. Further investigation revealed that the Tigraph recorder could only generate one common alarm signal. To correct the situation the high flow alarm function in the recorder was turned off. The decision to do this is based on the fact that the pH alarm was of greater importance to the safety and operation of the PFP. A high flow alarm point of 500 GPM could only have been reached during a heavy precipitation when there is little to no practical alarm response available.

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 5 OF 35
----------------------------	-------------------------------------	---

APPENDIX A

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 6 OF 35
----------------------------	-------------------------------------	---

SUPPORTING DOCUMENT		1. Total Pages * 27
2. Title Operability Test Procedure for PFP Wastewater Sampling Facility	3. Number WHC-SD-CP-OTP-153	4. Rev No. 0
5. Key Words Wastewater Sampling TEDF PFP OTP 225-WC	6. Author Name: DR Hirzel <i>David Hirzel</i> Signature Organization/Charge Code 15540/K6014	
7. Abstract Document provides instructions for performing the Operability Test of the 225-WC Wastewater Sampling Station which monitors the discharge to the Treated Effluent Disposal Facility from the Plutonium Finishing Plant.		
		8. RELEASE STAMP OFFICIAL RELEASE BY WHC (5) DATE APR 27 1995 <i>sta. 4</i>

TABLE OF CONTENTS

1.0	Test Plan	2
2.0	Safety	3
3.0	Tools, Equipment, and Supplies	3
4.0	Quality Assurance and Pre-test Inspection Requirements	4
5.0	Procedure Steps	
5.1	Chart Recorder UR-201	5
5.2	Current Isolator IB-201	6
5.3	Current Isolator IB-202	7
5.4	Current Isolator IB-203	8
5.5	IB-1 and IB-2 Current Isolators	9
5.6	Time Delay Relays TDR1 and TDR3	10
5.7	Sampler Unit #1	11
5.8	Sampler Unit #2	12
5.9	pH Transmitter AIT-201	13
5.10	Conductivity Transmitter AIT-202	14
5.11	Flow Computer FQ-301	15
5.12	Digital Indicator FQ-201 in Room 104	16
5.13	Recorder AIR-202 in Room 104	17
6.0	Data Verification Sheets	20
Attachment 1	Exception List	24
Attachment 2	Acceptance Sheet	26

D R A F T

1.0 TEST PLAN

This Operability Test Procedure (OTP) has been prepared to verify correct configuration and performance of the PFP Wastewater sampling system installed in Building 225-WC located outside the perimeter fence southeast of the Plutonium Finishing Plant (PFP). The objective of this test is to ensure the equipment in the sampling facility operates in a safe and reliable manner.

The sampler consists of two Manning Model S-5000 units which are rate controlled by the Milltronics ultrasonic flowmeter at manhole #C4 and from a pH measuring system with the sensor in the stream adjacent to the sample point.

The intent of the dual sampling system is to utilize one unit to sample continuously at a rate proportional to the wastewater flow rate so that the aggregate tests are related to the overall flow and thereby eliminate isolated analyses. The second unit will only operate during a high or low pH excursion of the stream (hence the need for a pH control). The dual units are interconnected with a switch so that their "duty" (constant sampling during pH excursion) may be selected by selector switch actuation. This also permits back-up operation for the "constant" monitor in the event of failure or the servicing of one unit while the other continues to operate. Flow, pH and sample failure alarms are to be monitored in room 104, Building, 234-52 on a strip chart recorder and an annunciator. Digital readouts in room 104 will indicate flow rate and total flow.

The major items in this OTP include testing of the Manning Sampler System and associated equipment including the pH measuring and control system, the conductivity monitor, and the flow meter.

Acceptance of this OTP will require an Operations representative to initial each step that is satisfactorily completed. The Quality Control (QC) representative will initial, date, and/or stamp each section after it has been completed, and a representative from Environmental engineering will also initial and date each section. Operation of the system within the given parameters described in this OTP will constitute satisfactory test results. If any of the procedure steps outlined in this OTP can not be performed, Operations management and Environmental Engineering shall be contacted.

An Acceptance Test Procedure (ATP) has been previously performed on this system by construction forces during installation.

2.0 SAFETY

Individuals shall carry out their assigned work in a safe manner to protect themselves and others from undue hazards and to prevent damage to property and environment. Facility line managers shall assure the safety of all activities within their areas to prevent injury, property damage, or interruption of operation.

A pre-job safety meeting will be held.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- ✓ Two DVM's (Example: Fluke 8060A)
- ✓ One stop watch.
- Temperature reading device (Example: temp/transmation)
- One adjustable current generator - 0-20 mA minimum range $\pm 2\%$, capable of driving 1,000 ohms impedance. (Example: Transmation)
- ✓ Two containers with several gallons of demineralized water.
- ✓ Beaker - 1,000 milliliters nominal size with graduation increments of 10 ml or less.
- ✓ Jumpers, common
- ✓ Fischer and Porter Instruction Manual - Model 52FT1000 Rev. 1, page 14.
- ✓ Manning S-5000 Instruction Manual - Section III.
- ✓ Tigraph chart recorder Model 200 Users Manual.
- ✓ Rosemount Operators Manual for model 1054A pH transmitter.
- ✓ Rosemount Operators Manual for model 1054A C transmitter.
- ✓ pH standards (4, 7, & 10)
- ✓ Conductivity standards (100 and 500 $\mu\text{S}/\text{cm}$)
- ✓ Calibration/Functional Stickers

OPERABILITY TEST REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 10 OF 35

4.0 QUALITY ASSURANCE AND PRE-TEST INSPECTION REQUIREMENTS

1. Verify all supplies required to perform this OTP are available.
2. Verify all required personnel are present. (2 Instrument Techs, Env. Eng. and QC)
3. Verify test equipment is within calibration.

Initial/ Date	Equipment Type	M&TE No.	Cal. Due
JK 5-3-95	DMM - Fluke 8000A	840-45-08-048	5/26/95
JK 5-3-95	DMM - Fluke 8000A	840-45-08-057	6/9/95
JK 5-3-95	Temp./Transmotion	777-13-20-009	6/13/95
JK 5-3-95	Transmotion	840-13-20-013	10/13/95
JK 5-3-95	Temp./Transmotion	840-13-20-14	8/29/95

SECTION 4.0 COMPLETE

Environmental Engineer David King Date 5/3/95

Quality Control DH Poynter Stamp PFPQC Date 5-3-95

5.0 PROCEDURE STEPS

- Testing will be conducted by Operations personnel with Quality Control and Environmental Engineering sign-off.
- If test circumstances require red-lining, Operations management may make written procedural changes, with approval in accordance with WHC-CM-3-5, 2.7.
- If equipment is faulty, the OTP will be discontinued until the problem is solved.
- Discrepancies must be written down on the provided Exceptions List located in Attachment 1.
- Persons performing calibration and measurements must initial each step when completed.

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 4 of 26
--------------	-----------------------------------	--------------	-----------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 11 OF 35

5.1 Chart Recorder UR-201 (Tigraph)

Refer to Section 6.4, Chart Recorder UR-201 Data Sheet.

- ✓ 1. Test operability of chart recorder according to instruction manual.

Perform the following steps to test the recorder operation using the instruction manual.

- ✓ 2. Turn power switch ON.
- ✓ 3. Set Date/Time.
- ✓ 4. Set channels A, B, and C to "ON" and channels D-F to "OFF".
- ✓ 5. Set the following scale limits:
- Channel A: Low = 0, High = 695
Channel B: Low = 0, High = 14
Channel C: Low = 0, High = 500
- ✓ 6. Print out chart status and verify parameters.
- ✓ 7. Check out and program recorder to come up on record mode when power is applied.
- ✓ 8. Restore recorder to operational status.

SECTION 5.1 COMPLETE

Environmental Engineer

[Signature]

Date

5/3/95

Quality Control

[Signature]

Stamp

PFPQC

Date

5-3-95

Release Date

Document No.

WHC-SD-CP-OTP-153

Rev/Mod

0

Page

5 of 26

5.2 Current Isolator IB-201 (Moore Industries)

1. Disconnect input leads from IB-201.
2. Attach the current generator to IB-201 input terminals.
Attach (+) to (+) and (-) to (-).
3. Disconnect the (+) output lead from IB-201 and install a milliammeter in series with the output terminal and the lead disconnected.
4. Turn on a-c power to UR-201, ^{PRH 5/3/95} ~~FI-201~~, IB-201, IB-203, and FQ-301.
5. Set current generator input to IB-201 to 4 mA.
6. Adjust "zero" control on IB-201 for 4 mA ± 0.1 display on meter hooked in series in Step 5.2.3.
7. Set 20 mA on input to IB-201 and adjust "span" control for 20 mA ± 0.1 output as above.
8. Repeat steps 5.2.5 thru 5.2.7 until no further adjustments are necessary.
9. Connect output leads to IB-201.
10. Check existing recorder UR-201 for proper operation (to 100% full span) at 4 mA and 20 mA (± 0.1) input to IB-201.

SECTION 5.2 COMPLETE

Environmental Engineer

Date

5/3/95

Quality Control

Stamp

PFPOC

Date 5-3-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 6 of 26
--------------	-----------------------------------	--------------	-----------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 13 OF 35

5.3 Current Isolator IB-202 (Moore Industries)

1. Disconnect input leads from IB-202.
2. Attach the current generator to IB-202 input terminals.
Attach (+) to (+) and (-) to (-).
3. Disconnect the (+) output lead from IB-202 and install a milliammeter in series with the output terminal and the lead disconnected.
4. Turn on a-c power to IB-202, UR-201, AIT-201, and AIR-202.
5. Set current generator input to IB-202 to 4 mA.
6. Adjust "zero" control on IB-202 for 4 mA ± 0.1 display on meter hooked in series in Step 5.3.3.
7. Set 20 mA on input to IB-202 and adjust "span" control for 20 mA ± 0.1 output as above.
8. Repeat steps 5.3.5 thru 5.3.7 until no further adjustment is necessary.
9. Connect output leads to IB-202.
10. Check existing recorder UR-201 for proper operation (to 100% full span) at 4 mA and 20 mA (± 0.1) input to IB-202.

SECTION 5.3 COMPLETE

Environmental Engineer

Date

Quality Control

Stamp

PFPQC

Date 5-3-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 7 of 26
--------------	-----------------------------------	--------------	-----------------

5.4 Current Isolator IB-203 (Moore Industries)

- OK 1. Disconnect input leads from IB-203.
- OK 2. Attach the current generator to IB-203 input terminals.
Attach (+) to (+) and (-) to (-).
- OK 3. Disconnect the (+) output lead from IB-203 and install a milliammeter in series with the output terminal and the lead disconnected.
- OK 4. Turn on a-c power to IB-1, IB-2, UR-201, ~~FI-201~~ ^{MAN 5.3.5}, AIR-202, IB-201, IB-203, and FQ-201.
- OK 5. Set current generator input to IB-203 to 4 mA.
- OK 6. Adjust "zero" control on IB-203 for 4 mA ± 0.1 display on meter hooked in series in Step 5.3.3.
- OK 7. Set 20 mA on input to IB-203 and adjust "span" control for 20 mA ± 0.1 output as above.
- OK 8. Repeat steps 5.4.5 thru 5.4.7 until no further adjustment is necessary.
- OK 9. Connect output leads to IB-203. ^{5.3.5}
- OK 10. Check existing recorder ~~UR-201~~ ^{UR-202} for proper operation (to 100% full span) at 4 mA and 20 mA (± 0.1) input to IB-203.

SECTION 5.4 COMPLETE

Environmental Engineer David Skind Date 5/3/95
Quality Control [Signature] Stamp PFPQC Date 5-3-95

5.5 IB-1 and IB-2 Current Isolator (Action Instruments)

These isolators are necessary because of grounded inputs to each of the Manning samplers and the current cannot be input in series.

5.5.1 Testing IB-1

1. Disconnect input leads to sampler unit #1 and 2 and connect milliammeter to leads instead.
2. Apply 4 mA to input of IB-203.
3. Turn sampler selector switch to position #1.
4. Adjust #1 to 4 mA output with zero control.
5. Verify input to sampler #2 reads 4 mA ± 0.1 .
6. Apply 20 mA to input of IB-203.
7. Set span control of IB-1 to 20 mA output on meter.
8. Verify input to sampler #2 reads 20 mA ± 0.1 .
9. Repeat steps 5.5.1.2 through 5.5.1.7 as necessary until no further adjustment is needed.
10. Turn sampler selector switch to position #2 to test IB-2.

5.5.2 Testing IB-2

1. Adjust #2 to 4 mA output with zero control.
2. Verify input to sampler #1 reads 4 mA ± 0.1 .
3. Apply 20 mA to input of IB-203.
4. Verify input to sampler #1 reads 20 mA ± 0.1 .
5. Set span control of IB-2 to 20 mA output on meter.
6. Repeat steps 5.5.2.1 through 5.5.2.5 as necessary until no further adjustment is needed.

SECTION 5.5 COMPLETE

Environmental Engineer David Hagedorn Date 5/2/95
Quality Control [Signature] Stamp BFPCC Date 5-3-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 9 of 26
--------------	-----------------------------------	--------------	-----------------

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 16 OF 35
----------------------------	-------------------------------------	--

5.5A Current Isolator IB-201B (Action Pak) ^{PFP-4-95}

- 9/11 1. Attach DVM to output leads on IB-201B.
- 9/11 2. Generate a 4 mA signal from FQ-301.
- 9/11 3. Adjust "zero" control on IB-201B for 4 mA ± 0.1 display on meter. ^{PFP-4-95}
- 9/11 4. Generate a 20 mA signal from FQ-301.
- 9/11 5. Adjust "span" control for 20 mA ± 0.1 output as above.
- 9/11 6. Repeat steps 5.5A.2 thru 5.5A.5 until no further adjustment is necessary.
- 9/11 8? 7. Generate a 12 mA signal from FQ-301 to verify mid-range output signal from IB-201B. ^{PFP-4-95}
- 9/11 10? 8. Restore to operation status.

SECTION 5.5A COMPLETE

Environmental Engineer *[Signature]* Date 5-4-95
 Quality Control *[Signature]* Stamp PFPQC Date 5-4-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 9A of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 17 OF 35

5.5B Current Isolator IB-201A (Action Pak)

- 9/11 1. Attach DVM to output leads on IB-201A.
- 9/11 2. Generate a 4 mA signal from AIT-201.
- 9/11 3. Adjust "zero" control on IB-201A for 4 mA ± 0.1 display on meter.
- 9/11 4. Generate a 20 mA signal from AIT-201.
- 9/11 5. Adjust "span" control for 20 mA ± 0.1 output as above.
- 9/11 6. Repeat steps 5.5B.2 thru 5.5B.5 until no further adjustment is necessary.
- 9/11 8? Generate a 12 mA signal from AIT-201 to verify mid-range output signal from IB-201A.
- 9/11 10^B Restore to operation status.

SECTION 5.5B COMPLETE

Environmental Engineer David H. H. H. Date 5-4-95
Quality Control [Signature] Stamp PFPQC Date 5-4-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 95 of 26
--------------	-----------------------------------	--------------	------------------

5.5C Current Isolator IB-201B (Action Pak)

- 9/1 1. Attach DVM to output leads on IB-201B.
- 9/1 2. Generate a 4 mA signal from AIT-202.
- 9/1 3. Adjust "zero" control on IB-201B for 4 mA ± 0.1 display on meter.
- 9/1 4. Generate a 20 mA signal from AIT-202.
- 9/1 5. Adjust "span" control for 20 mA ± 0.1 output as above.
- 9/1 6. Repeat steps 5.5C.2 thru 5.5C.5 until no further adjustment is necessary.
- 9/1 8? Generate a 12 mA signal from AIT-202 to verify mid-range output signal from IB-201B.
- 9/1 10? Restore to operation status.

SECTION 5.5CA COMPLETE

Environmental Engineer

Date

5-4-95

Quality Control

Stamp

PFPQ

Date

5.495

5.6 Time Delay Relays TDR1 and TDR3 (Potter-Brumfield)

- A 1. Set TDR1 to minimum setting (0 seconds).
- A 2. While 20 mA is applied to IB-205^{202 TDR 5/3/95} and Sampler Selector Switch is in position 2, short terminals 1 and 2 of AIT-201 at TB-1.
- AS 3. Check that milliammeter to Sampler #1 shows 20 mA.
- AS 4. Switch Sampler Selector Switch to position 1.
- AS 5. Check that milliammeter to Sampler 2 shows 20 mA.
- AS 6. Press reset button on Sampler Control panel to acknowledge LO pH alarm.
- AS 7. Set TDR3 to minimum setting (0 seconds).
- AS 8. While 20 mA is applied to IB-205^{202 DRH 5/3/95} and Sampler Selector Switch is in position 2, remove jumper from terminals 1 and 2 of AIT-201 and place across terminal 3 and 4 of AIT-201.
- AS 9. Check that milliammeter to Sampler #1 shows 20 mA.
- AS 10. Switch Sampler Selector Switch to position 1.
- AS 11. Check that milliammeter to Sampler #2 shows 20 mA.
- AS 12. Press reset button on Sampler Control panel to acknowledge HI pH alarm.
- AS 13. Remove jumper from AIT terminals 3 and 4 and reconnect leads to Sampler #1 and #2 inputs.

SECTION 5.6 COMPLETE

Environmental Engineer David H. Sigel Date 5/3/95Quality Control AS Stamp PFPQC Date 5-3-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 10 of 26
--------------	-----------------------------------	--------------	------------------

5.7 Sampler Unit #1 (Manning S-5000)

1. Turn function knob to OFF.
2. Check power switch to be ON.
3. Disconnect from riser and immerse open end of intake hose into container of water with end of hose resting on the bottom.
4. Make sure Sample Control Switch is positioned to PH No. 2 position.
5. Test for ability to calibrate at operating points by the following steps:
- a. Input 4 mA to IB-203.
- b. Turn underrange pot CCW until LED (light emitting diode) to the immediate right of the underrange pot, just goes out.
- c. Set milliamp source to 20 mA and turn overrange pot until the LED just goes out.
- d. Repeat steps 5.7.4.b and 5.7.4.c until no further adjustment is necessary. Refer to page 3 of Manning instructions.
6. Set the three digit screwdriver adjustment switch marked MAX FLOW INPUT to read a maximum of 695, which is set to read in gallons per minute. *DRH 5/2/95* *DRH 5/3/95*
7. *250* *5/3/95* Set rate switch at *8* and multiple switch at *10* to obtain a *150* ml sample for every *50* gal of waste. (about 9 gallons collected for a flowrate of 12000 gallons/day) *DRH 5/3/95* *5 395*
8. Obtain *150* ml sample and verify sampling cycle operates properly.

SECTION 5.7 COMPLETE

Environmental Engineer *David Elmer* Date *5-3-95*Quality Control *[Signature]* Stamp *PFPQC* Date *5-3-95*

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 11 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 21 OF 35

5.8 Sampler Unit #2 (Manning S-5000)

- QH 1. Turn function knob to OFF.
- QH 2. Check power switch to be ON.
- QH 3. Disconnect from riser and immerse open end of intake hose into container of water with end of hose resting on the bottom.
- QH 4. Make sure Sample Control Switch is positioned to PH No. 1 position.
5. Test for ability to calibrate at operating points by the following steps:
 - QH a. Input 4 mA to IB-203.
 - QH b. Turn underrange pot CCW until LED (light emitting diode) to the immediate right of the underrange pot, just goes out.
 - QH c. Set milliamp source to 20 mA and turn overrange pot until the LED just goes out.
 - QH d. Repeat steps 5.8.4.b and 5.8.4.c until no further adjustment is necessary. Refer to page 3 of Manning instructions.
- QH 6. Set the three digit screwdriver adjustment switch marked MAX FLOW INPUT to read a maximum of 695, which is set to read in gallons per minute. *per 5-3-95*
- QH 7. Set rate switch at *100* and multiple switch at *10* to obtain a *150* ml sample for every *60* gal of waste. (about 9 gallons collected for a flowrate of 12000 gallons/day) *per 5-3-95*
- QH 8. Obtain *150* ml sample and verify sampling cycle operates properly.

SECTION 5.8 COMPLETE

Environmental Engineer

Date

Quality Control

Stamp

Date

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 12 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 22 OF 35

5.9 pH Transmitter (Rosemount Model 1054A pH)

Reference Manufacturer's Instruction Manual, P/N 5101054AP

Refer to section 6.1, pH Data Sheet.

- 1 Place assembly in position to rinse with clean water and rinse probe thoroughly.
2. Program in alarm set points at 6.5 for low pH and 8.5 for high pH.
3. Verify Temperature Indicator is within tolerance as outlined in section 5.2 of vendor manual.
4. Calibrate system as outlined in section 5.3.1 of vendor manual.
5. Verify correct pH is being sent to Effluent Treatment Facility (ETF) Control Room. (phone # 373-7975)
6. Verify hi/lo pH alarms on transmitter.
7. Verify hi/lo pH alarms on Local Control Unit.
8. Set DELAY TIME ON to 10 seconds for both alarms.
9. Perform a integrated functional test of the pH sampling system:
 - a. Place pH probe into low pH buffer.
 - b. Alarm should sound 10 seconds later.
 - c. Manning Sampler #2 should switch on and collect a sample.
 - d. Acknowledge pH alarm.
10. Return pH and Manning samplers to operational status.

SECTION 5.9 COMPLETE

Environmental Engineer David King Date 5-4-95
Quality Control [Signature] Stamp PPQC Date 5-4-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 13 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 23 OF 35

5.10 Conductivity Transmitter (Rosemount model 1054A C)

Refer to Section 6.2, Conductivity Data Sheet.

- 9H 1. Place assembly in position to rinse with clean water and rinse probe thoroughly.
- 9H 2. Adjust Cell Constant Input to a value of 5.0 as outlined in step 7.4 of PSCP-5-036.
- 9H 3. Perform Temperature calibration as outlined in step 7.5 of PSCP-5-036.
- 9H 4. Perform conductivity calibration with buffer solutions as outlined in step 7.6 of PSCP-5-036.
- 9H 5. Verify correct conductivity is being sent to ETF Control Room.
- 9H 6. Set TIME DELAY ON to 10 seconds for alarm.
- 9H 7. Restore the transmitter to operational mode.

SECTION 5.10 COMPLETE

Environmental Engineer

David Hing

Date

5-8-95

Quality Control

[Signature]

Stamp

PFPQC

Date

5-8-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 14 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 24 OF 35
----------------------------	-------------------------------------	--

5.11 FQ-301 flow computer (Milltronics Multiranger Plus)

Reference: Multiranger Plus Programmable Level System Instruction Manual

Refer to Section 6.3, Flow Computer Data Sheet.

- CB* 1. Program in Operating Parameters as outlined in Vendor Manual.
- CB* 2. Calibrate for empty conditions as outlined in Vendor Manual.
- CB* 3. Calibrate for full conditions as outlined in Vendor Manual.
- CB* 4. Verify flow computer alarms at 500 GPM as outlined in Vendor Manual.
- CB* 5. Verify alarm on Local Control Unit.
- CB* 6. Verify correct flow data is being sent to ETF Control Room.

SECTION 5.11 COMPLETE

Environmental Engineer *David H. [Signature]* Date 5/9/95

Quality Control *[Signature]* Stamp PFPQ Date 5/9/95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 15 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 25 OF 35

5.12 Digital Indicator FQ-201 in Room 104 (Fischer-Porter)

1. Set totalizer digital indicator section of FQ-201 to proper range and check.
2. Calculate scale factor. $(6000 \times 60 \times 10) / 695 = 5180$
3. Verify totalizer scaling switches 4096, 1024, 32, 16, 8, and 4 to ON, all others to OFF.
4. Momentarily short circuit terminals M and N on display board to reading to zeros.
5. Apply 4 mA input to FQ-201 for a reading of "0" ± 7 counts. Adjust ZERO potentiometer R4 for "0" count if necessary.
6. Apply 20 mA input to FQ-201 for a reading of 695 counts ± 7 counts. Adjust span potentiometer R10 if necessary for appropriate readings.
7. Repeat steps 5.12.5 and 5.12.6 if necessary for appropriate readings.
8. Set millimeter to 4 mA output.
9. Reset scaler of FQ-201 to zero.
10. Observe totalized scale for 1 minutes. Reading shall be "0" ± 7 counts. (If more than 7 counts, check milliammeter for exact 4 mA and rerun.)
11. Set milliammeter to 20 mA. 60 5:10:95
Ded 5/10/95
12. Reset scales to zero and time exactly ¹~~10~~ minutes for a required count of 695 ± 7 counts.

SECTION 5.12 COMPLETE

Environmental Engineer David Stang Date 5/10/95

Quality Control Wald Stamp PPQC Date 5/10/95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 16 of 26
--------------	-----------------------------------	--------------	------------------

5.13 Recorder AIR-202 in Room 104 (Tigraph)

Refer to section 6.5, Chart Recorder AIR-202 Data Sheet.

The intent of this section is to sufficiently check out the TI recorder and its association with the annunciator -- not to necessarily set it up for operation but functionally checkout.

1. Test operability of paper drive according to Section 3.2 of instruction manual.

Perform the following steps to test the recorder operation using the instruction manual.

2. Turn power switch ON.

3. Set Date/Time.

4. Set channels A, B to "ON" and channels C-F "OFF".

5. ~~Set high point alarm on channel A at 72% of full scale. This represents 500 gpm.~~ *DPH 5/10/95*

6. Set low point alarm on channel B at 46%. This corresponds to pH=6.5.

7. Set high point alarm on channel B at 61%. This corresponds to pH=8.5.

8. Set the following scale limits:

Channel A: Low = 0, High = 695
Channel B: Low = 0, High = 14

Perform the following steps on channel B.

9. Set current generation to 12 mA. Clear annunciator pH light.

10. Gradually increase current until alarm occurs. Alarm should occur at approximately 13.7 mA (pH = 8.5). Tolerance on pH alarm = ± 0.1 .

11. Set current generator to 13 mA and clear annunciator.

12. Gradually decrease current until alarm occurs. Alarm should occur at approximately 11.4 mA (pH = 6.5). Tolerance on pH alarm = ± 0.1 .

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 27 OF 35

Perform the following steps on channel A.

13. ~~Set current generation to 12 mA.~~ *Reltc 5/10/95*
14. ~~Gradually increase current until alarm occurs. Alarm should occur at approximately 15.5 mA (flow = 500 GPM). Tolerance on flow alarm = ± 7 GPM.~~ *Reltc 5/10/95*
15. Remove generators and reconnect wire inputs. *5-10-95*
16. Print out chart status and verify parameters.
17. Check out and program recorder to come up on record mode when power is applied.

SECTION 5.13 COMPLETE

Environmental Engineer *[Signature]* Date 5/10/95

Quality Control *[Signature]* Stamp BFPQC Date 5-10-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 18 of 26
--------------	-----------------------------------	--------------	------------------

5.14 Reference Drawings

H-2-81331, Sh. 1, Rev 0:	TEDF Effluent Instr Arrangement Wiring & Details
H-2-81331, Sh. 2, Rev 0:	TEDF Effluent Instr Arrangement Relay Cabinet
H-2-81331, Sh. 3, Rev 0:	TEDF Effluent Instr Arrangement Details
H-2-81331, Sh. 4, Rev 0:	TEDF Effluent Instr Arrangement Wiring Diagram
H-2-99525, Sh. 1, Rev 0:	Engineering Flow Diagram - PFP Wastewater Effluent
H-2-99526, Sh. 1, Rev 0:	Piping Plan and Details - PFP Wastewater Effluent
H-2-99527, Sh. 1, Rev 0:	Piping Plan and Details - Sampler Rack #1
H-2-99527, Sh. 2, Rev 0:	Piping Plan and Details - Instr. Rack Assy
H-2-99527, Sh. 3, Rev 0:	Piping Plan and Details - Sampler Rack #1 Assy
H-2-140390, Sh.2, Rev 0:	Electrical/Instr Monitoring Sta Details
H-2-140391, Sh.1, Rev 0:	Electrical/Instr Installation Details TYP LCU Cabinet

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 29 OF 35
----------------------------	-------------------------------------	--

6.0 DATA VERIFICATION SHEET

6.1 pH Transmitter AIT-201

Tolerance for Output Display $\pm 2.5\%$
Tolerance for Chart Recorder $\pm 2.5\%$

	AS-FOUND		AS-LEFT		
BUFFER pH	OUTPUT DISPLAY	CHART RECORDER	OUTPUT DISPLAY	CHART RECORDER	ETF CONTROL ROOM
4	3.98	3.99	3.98	3.99	4.0 3.99
7	6.98	6.99	6.98	6.99	7.03
10	9.95	9.99	9.95	9.99	10.00

6.2 Conductivity Transmitter AIT-202

Tolerances $\pm 5\%$

	ASSIGNED VALUE	AS-FOUND	AS-LEFT	ETF CONTROL ROOM
Cell Constant	5.0	5.0	5.0	N/A
Temp DI water	measured 19°C	18°C	19°C N/A	N/A
Alarm #1 Setpoint	400 μ S	400 μ S	400 μ S	N/A
Buffer #1	100 μ S	93.6	100	100
Buffer #2	500 μ S	491	494	495

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 20 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST REPORT

PFP WASTEWATER SAMPLING FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 30 OF 35

6.0 DATA VERIFICATION SHEET (Cont.)

6.3 Flow Computer FQ-301

Tolerances $\pm 5\%$ 0.02 feet ^{old} ~~new~~

PARAMETER	ASSIGNED VALUE	AS FOUND	AS LEFT	PARAMETER	ASSIGNED VALUE	AS FOUND	AS LEFT
P-1	3	3	3	P-45	1	1	1
P-2	5	5	5	P-46	694.8	694.8	694.8
P-3	2	2	2	P-48	0	0	0
P-4	1	1	1	P-49	1	1	1
P-5	1	1	1	P-50	2	2	2
P-6	2	2	2	P-52	0	0	0
P-7	2	1	2	P-53	2	2	2
P-8	0	0	0	P-54	.00	10.49	0
P-11	0	0	0	P-55	00	756.7	0
P-14	0	0	0	P-56	0	0	0
P-17	0	0	0	P-68	10	10	10
P-20	0	0	0	P-69	10	10	10
P-23	0	0	0	P-71	1	1	1
P-38	0	0	0	P-72	1	1	1
P-39	4	4	4	P-73	0	0	0
P-40	1	1	1	P-74	1	1	1
P-41	1	1	1	P-75	.5	0.5	0.5
P-42	2.6363	2.636	2.636				
P-43	1	1	1				

Release Date

Document No.
WHC-SD-CP-OTP-153

Rev/Mod
0

Page
21 of 26

OPERABILITY TEST
REPORT

PFP WASTEWATER SAMPLING
FACILITY

WHC-SD-CP-OTR-153, REV. 0
PAGE 31 OF 35

6.0 DATA VERIFICATION SHEET (Cont.)

6.4 Chart Recorder UR-201

Tolerances for channel A $\pm 1\%$
Tolerances for channel B $\pm 2.5\%$
Tolerances for channel A $\pm 5\%$

TIGRAPH 200 STATUS

CHANNEL	A	B	C	D	E	F
HI SETPOINT %	72	61	80	0	0	0
LO SETPOINT %	0	46	0	0	0	0
CHANNEL SELECT	ON	ON	ON	OFF	OFF	OFF
CHART MODULE	P1D	P2E	P3F	NONE	NONE	NONE
SCALE HI END	695	14	500	100	100	100
SCALE LO END	0000	0	0	0	0	0
SCALE UNITS	FLOW	PH	COND			
LO PASS FILTER	OUT	OUT	OUT	OUT	OUT	OUT
CHART SPEED	1 IN/HOUR					
JUMP SPEED	OFF IN/HOUR					
TIME FORMAT	MONTH - DAYS, HOURS : MINUTES					
TIME						
GRIDS ORDERED	BY CHANNEL			LINE SYNC 60 HZ.		

Release Date

Document No.
WHC-SD-CP-OTP-153

Rev/Mod
0

Page
22 of 26

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 32 OF 35
----------------------------	-------------------------------------	--

6.0 DATA VERIFICATION SHEET (Cont.)

6.5 Chart Recorder AIR-201 (in Room 104)

Tolerances for channel A $\pm 1\%$ $\pm 7.4\text{PM}$ *PH data*
Tolerances for channel B $\pm 2.5\%$ *51095*

51095
TIGRAPH 200 STATUS

CHANNEL	A <i>PH</i>	B	C	D	E	F
HI SETPOINT %	<i>72.49</i>	61	0	0	0	0
LO SETPOINT %	0	46	0	0	0	0
CHANNEL SELECT	ON	ON	OFF	OFF	OFF	OFF
CHART MODULE	P1D	P2E	NONE	NONE	NONE	NONE
SCALE HI END	695	14	100	100	100	100
SCALE LO END	0000	0	0	0	0	0
SCALE UNITS	FLOW	PH				
LO PASS FILTER	OUT	OUT	OUT	OUT	OUT	OUT
CHART SPEED	1 IN/HOUR					
JUMP SPEED	OFF IN/HOUR					
TIME FORMAT	MONTH - DAYS, HOURS : MINUTES					
TIME						
GRIDS ORDERED	BY CHANNEL			LINE SYNC 60 HZ.		

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 23 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 33 OF 35
----------------------------	-------------------------------------	--

ATTACHMENT 1

EXCEPTION LIST

STEP	EXCEPTION	RESOLUTION	INITIALS
5.4.9	Chart Recorder UR-201 is wired to input of IB-203, not output. AIR-202 is wired to output.	check AIR-202 instead of UR-201.	TRH 5/3/95 5395
5.4.10	see above	see above	TRH 5/3/95 5395
5.5 A, B, C	3 current isolators for the LCU were previously not covered under this OTP. was supposed to be covered under wavy OT.	Add 3 new procedure steps for the current isolators.	5/3/95 5395
5.10	No signal from Cond. Transmitter to UR-201. only 0.012mA detected.	Reset proportional flow function in conductivity transmitter.	TRH 5-8-95 5895
5.13.5 5.13.13 5.13.14	Tisgraph in Room 104 only supports 1 alarm output.	Remove Flow Alarm capabilities from Recorder.	TRH 5-10-95 57095

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 24 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 34 OF 35
----------------------------	-------------------------------------	--

ATTACHMENT 1

EXCEPTION LIST

STEP	EXCEPTION	RESOLUTION	INITIALS

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 25 of 26
--------------	-----------------------------------	--------------	------------------

OPERABILITY TEST REPORT	PFP WASTEWATER SAMPLING FACILITY	WHC-SD-CP-OTR-153, REV. 0 PAGE 35 OF 35
----------------------------	-------------------------------------	--

ATTACHMENT 2

ACCEPTANCE SHEET

The undersigned concur that the OTP was successfully completed.

David Elmer
PFP Liquid Effluent Cognizant Engineer

5/10/95
Date

DUBON
PFP Operations Manager

5/10/95
Date

QC PFPQC

5-10-95
Date

[Signature]

5-10-95

Release Date	Document No. WHC-SD-CP-OTP-153	Rev/Mod 0	Page 26 of 26
--------------	-----------------------------------	--------------	------------------