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MAY 15 1997

ENGINEERING DATA TRANSMITTAL

Page 1 of 1
 1. EDT No **610598**

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				10. System/Bldg./Facility: 241-C-106	
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1	HNF-SD-W320-ATR-014	All	0	C-106 Tank Sluicer Control System	SQ	1	N/A	N/A

16. KEY		
Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, O, 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) Dis p.	(J) Name	(K) Signature (M) MSIN	(L) Date	(G) Reason	(H) Disp.	(J) Name	(K) Signature (M) MSIN	(L) Date
1	1	Design Authority	<i>[Signature]</i>	S2-48 5/13/97	1	1	R.R. Bevins	S2-48	5/17/97
1	1	Design Agent	<i>[Signature]</i>	S1-97 5-12-97	3	1	K.B. Ferlan	S2-48	
1	1	Cog. Eng.	<i>[Signature]</i>	S2-48 5-13-97	3	1	Project Files	R1-29	
1	1	Cog. Mgr.	<i>[Signature]</i>	S2-48 5/13/97	3		Central Files	A3-88	
1	1	QA	<i>[Signature]</i>	5-14-97					
1	1	Safety	<i>[Signature]</i>	S5-12 5/13/97					
		Env.							

18. R.R. Bevins <i>[Signature]</i> 5/13/97 Signature of EDT Originator Date		19. N/A Authorized Representative for Receiving Organization Date		20. <i>[Signature]</i> J.W. Bailey 5/13/97 Design Authority/Cognizant Manager Date		21. DOE APPROVAL (if required) Ctrl. No. <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments	
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C-106 Tank Sluicer Control System

J. R. Bellomy

SGN Eurisys Services Corporation (SESC), Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

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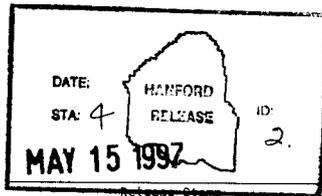
Abstract: Acceptance Test Report for the Sluicer Control System,
Project W-320

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J. R. Bellomy
Release/Approval

5/15/97
Date



Approved for Public Release

HNF ATR 5/12/97
WHC-SD-W320-ATR-014

ACCEPTANCE TEST PROCEDURE _____

TEST TITLE C-106 TANK SLUICER CONTROL SYSTEM

LOCATION C-FARM

PROJECT NUMBER W-320 WORK ORDER ER6159

PROJECT TITLE W-320 Tank 241-C-106 Sluicing

Prepared By
ICF Kaiser Hanford Company
Richland, Washington

For Westinghouse Hanford Company
Subcontract WHC-380393

PROCEDURE APPROVAL

ICF KAISER HANFORD COMPANY (ICF KH)

David A. White 7/11/96 Shirley Bryan 7-10-96
Author Date Technical Documents Date

Hk Choudhry 7/11/96 [Signature] 7-11-96
Checker Date Safety Date

David Lyle Fort 7/11/96 N/A -
Environmental Date Quality Engineering Date

[Signature] 7/11/96
Project Management Date

Westinghouse Hanford Company (WHC)

[Signature] 7-15-96 CE [Signature] 7-15-96
Projects Department Date Quality Assurance Date

N/A Paul [Signature] 7-16-96
Safety Date Operations Date

EXECUTION AND TEST APPROVAL

EXECUTED BY

<u><i>David J. Roman</i></u> Test Director/Organization	<u>4-18-97</u> Date	<u><i>Ronald M. Murphy</i></u> Test Operator/Organization	<u>4-18-97</u> Date
<u><i>Lloyd Smith / EDNW</i></u> Recorder/Organization	<u>3/14/97</u> Date		

WITNESSES

<u>NA</u> Witness/Organization	<u> </u> Date	<u><i>Lloyd Smith / EDNW</i></u> Title III Inspector	<u>3/14/97</u> Date
<u>NA</u> Witness/Organization	<u> </u> Date	<u>NA</u> Witness/Organization	<u> </u> Date

A-E APPROVAL

ICF Kaiser Hanford Company (ICF KH)

Without exceptions With exceptions resolved X With exceptions outstanding

<u><i>Karl J. Jensen</i></u> Acceptance Inspection	<u>4/10/97</u> Date	<u><i>Jh Choudhry</i></u> Design Engineer	<u>4/22/97</u> Date
<u><i>Kerry J. Allen</i></u> Project Manager	<u>4/22/97</u> Date		

TEST APPROVAL AND ACCEPTANCE

Westinghouse Hanford Company

Without exceptions With exceptions resolved X With exceptions outstanding

<u><i>J.R. Ballou</i></u> LEAD TEST ENGINEER (Title or Department) <i>R.R. Benson</i>	<u>1-30-97</u> Date	<u><i>Paul W. Leather</i></u> W-320 PROJECT MGR. (Title or Department)	<u>4-30-97</u> Date
<u>START-UP MANAGER</u> (Title or Department)	<u>5/5/97</u> Date	<u><i>J. J. Bennett</i></u> PROJECT QA (Title or Department)	<u> </u> Date

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NOTE: At completion of test, enter pages added during performance of test to this Table of Contents.

Exceptions

Appendix A

1 PURPOSE

This Acceptance Test Procedure (ATP) has been prepared to demonstrate that the C-Farm tank C-106 sluicer functions as required by the design criteria.

2 REFERENCES

2.1 DRAWINGS

H-2-818523, Sh 1, Rev 0	Sluice Pit C-06C Plan, Sections & Details
H-2-818559, Sh 2, Rev 0	Project W-320 P & ID Tank 241-C-106
H-2-818680, Sh 1, Rev 0	C-Farm One-Line Diagram
H-2-818681, Sh 1-3, Rev 0	C-Farm Elect Equip Skid Details
H-2-818591, Sh 1-4, Rev 1	Sluicing Cabinet CB-01
H-2-818674, Sh 1-2, Rev 0	C-Farm Conduit Plan
H-2-818675, Sh 6, Rev 0	C-Farm Elem Diagrams
H-2-818702, Sh 1-2, Rev 0	C-Farm Sluice Pit DETAILS

2.2 SPECIFICATIONS

Construction Specification W-320-C5, Rev 0

2.3 ENGINEERING CHANGE NOTICES (ECNs)

Prior to final test approval, mark up the controlled copy of this ATP with all of the ECNs written against it.

2.4 VENDOR INFORMATION

Vendor Information #22668, W-320-P20: SLUICER, HYDRAULIC DRIVE AND CONTROLS, Olympic Tool & Engineering

3 RESPONSIBILITIES

3.1 GENERAL

Each company or organization participating in this ATP will designate personnel to assume the responsibilities and duties as defined herein for their respective roles. The designees shall become familiar with this ATP and the systems involved to the extent that they can perform their assigned duties.

3.2 WHC PROJECT ENGINEER

3.2.1 Signs Execution and Test Approval page when test is complete and accepted.

3.2.2 Provides a distribution list for the approved and accepted ATP.

3.3 ICF KH PROJECT MANAGER

3.3.1 Designates a Test Director.

3.3.2 Signs Execution and Test Approval page when test is complete and accepted.

3.3.3 Signs exception form when all exceptions have been resolved.

3.4 TEST DIRECTOR

3.4.1 Coordinates and directs acceptance testing.

3.4.2 Coordinates testing with ICF KH Utilities.

3.4.3 Coordinates testing with ICF KH Craft.

3.4.4 Before start of test, obtains all outstanding ECNs against referenced documents of Section 2, and distributes the approved testing schedule to ICF KH Project Manager and WHC Project Engineer.

3.4.5 Notifies concerned parties (includes ICF KH Project Manager, ICF KH Principal Lead Engineer, and WHC Project Engineer) when a change is made in the testing schedule.

3.4.6 Schedules and conducts a pretest kickoff meeting with test participants when necessary.

3.4.7 Confirms that field testing and inspection of the system or portion of the system to be tested has been completed.

3.4.8 Stops any test which, in his or her judgement, may cause damage to the system until the problem has been resolved.

3.4.9 After verifying there is no adverse impact, may alter the sequence in which systems or subsystems are tested.

3.4.10 If a test is to be suspended for a period of time, ensures that the system is left in a safe mode.

3.4.11 Before restarting suspended test, reverifies the test prerequisites.

3.4.12 Initiates ECNs to document required changes to the ATP.

3.4.13 Reviews recorded data, discrepancies, and exceptions.

3.4.14 Signs Execution and Test Approval page when test has been performed.

3.4.15 Takes necessary actions to clear exceptions to the test, and signs exception form when exceptions have been resolved.

3.4.16 Obtains required signatures on the ATP Master before reproduction and distribution.

3.5 WITNESSES (Provided by Participating Organizations. One witness shall be a Title III acceptance inspector.)

3.5.1 Witnesses the tests.

3.5.2 Reviews results of testing.

3.5.3 Assists the Test Director when requested.

- 3.5.4 Signs Execution and Test Approval page when test has been performed.
- 3.5.5 Signs exception form when exception has been resolved.
- 3.6 RECORDER (Provided by ICF KH)
 - 3.6.1 Prepares a field copy from the ATP Master.
 - 3.6.2 Records names of all designated personnel on field copy of ATP before start of testing.
 - 3.6.3 Records test instrument identification numbers and calibration expiration dates, as required.
 - 3.6.4 Initials and dates every test step on the field copy as it is completed next to the step number or on a Data Sheet, when provided. Records test data.
 - 3.6.5 Records exceptions on an exception form. Uses additional exception forms as needed. Notifies the Test Director at time the exception is made.
 - 3.6.6 Signs Execution and Test Approval page when test has been performed.
 - 3.6.7 After test is finished, assigns alpha numeric page numbers to added data sheets and exception forms. Records page numbers in the Table of Contents.
 - 3.6.8 Transfers field copy entries for each step to the Master in ink or type; signs, and dates. Transmits the completed Master to the Test Director for approval signature routing. Transmits the field copy to Construction Document Control for inclusion in the official project file.
 - 3.6.9 Signs exception form when exception has been resolved and transmits to Test Director.
- 3.7 TEST OPERATOR
 - 3.7.1 Performs test under direction of the Test Director.
 - 3.7.2 Provides labor, equipment, and test instruments required for performing tests which have not been designated as being provided by others.
 - 3.7.3 Confirms that all equipment required for performing test will be available at the start of testing.
 - 3.7.4 Signs the Execution and Test Approval page.
- 3.8 A-E ACCEPTANCE INSPECTION, DESIGN ENGINEER, AND PROJECT MANAGER
 - 3.8.1 Evaluates results.
 - 3.8.2 Signs for A-E Approval on Execution and Test Approval page.

4

CHANGE CONTROL

Required changes to this ATP must be processed on ECNs in accordance with company procedures. If a need for change is discovered in the course of running the test, the test shall be stopped until the ECN is approved. However, this does not prevent the running of another portion of the test unaffected by the change.

5 EXECUTION

5.1 OCCUPATIONAL SAFETY AND HEALTH

Individuals shall carry out their assigned work in a safe manner to protect themselves and others from hazards and to prevent damage to property and environment. Facility line managers shall ensure the safety of activities within their areas to prevent injury, property damage, or interruption of operation. Performance of test activities shall always include safety and health aspects.

These tests involve working near energized equipment, high pressure hydraulics, moving gears, and pistons. All procedural requirements for working near energized equipment shall be followed, and an Energized Electrical Work Permit (KEH-2211.00/WHC-A-6001-687) shall be completed.

5.2 PERFORMANCE

5.2.1 Conduct testing in accordance with ICF KH Procedure CON 3.5 (Performance and Recording of Acceptance Test Procedures).

5.2.2 Perform test following the steps and requirements of this procedure.

5.2.3 As each step in Sections 7 through 10 are completed, the person completing the steps in each Section shall initial and date in the space provided. After each Section is completed, initial and date in the space provided in Section 11.

6 EXCEPTIONS

6.1 GENERAL

Exceptions to the required test results are sequentially numbered and recorded on individual exception forms (KEH-428). This enables case-by-case resolution and approval of each exception.

Errors/exceptions in the ATP itself shall NOT be processed as test exceptions (see Section 4 CHANGE CONTROL).

6.2 RECORDING

6.2.1 Number each exception sequentially as it occurs and record it on an exception form.

6.2.2 Enter name and organization of the individual that identifies each exception.

6.2.3 Enter planned action to resolve each exception when such determination is made.

6.3 RETEST/RESOLUTION

Record the action taken to resolve each exception. Action taken may not be the same as planned action.

6.3.1 When action taken results in an acceptable retest, sign and date Retest Execution and Acceptance section of the exception form.

6.3.2 When action taken does not involve an acceptable retest, strike out the Retest Execution and Acceptance section of the exception form.

6.4 APPROVAL AND ACCEPTANCE

The Test Director provides final approval and acceptance of exceptions by checking one of the following on exception form:

6.4.1 Retest Approved and Accepted: Applicable when Retest Execution and Acceptance section is completed.

6.4.2 Exception Accepted-As-Is: Requires detailed explanation.

6.4.3 Other: Requires detailed explanation.

The Test Director signs and dates the exception form and obtains other approvals, if required.

6.5 DISTRIBUTION

A copy of the approved exception form is distributed to each participant. The signed original is attached to the ATP Master.

7 PREREQUISITES, EQUIPMENT/INSTRUMENTS, AND ABBREVIATIONS

7.1 PREREQUISITES

The following conditions shall exist at start of test.

12/24/97 7.1.1 WHC Project Engineer has been notified 24 hours prior to start of the testing.

1/4/97 7.1.2 Systems and components have been appropriately tagged, in accordance with Drawing H-2-818559, Sh 2 and inspected for compliance with construction documents.

12/24/97 7.1.3 Reference documents (including this ATP) have been verified for correct revision number and outstanding ECNs.

12/24/97 7.1.4 A Prejob Safety Analysis has been prepared and a Prejob Safety Meeting has been conducted.

12/24/97 7.1.5 Wiring for the power feeder to the sluicer hydraulic control skid, SHC-1361, has been continuity tested and meggered.

- 10/26/97 7.1.6 Grounding of the sluicer hydraulic power unit, S-1361, has been visually inspected and continuity tested.
- 11/20/97 7.1.7 The Sluicer Hydraulic Power Unit S-1361 Feeder Breaker MCC-N1/1FB, at Electrical Equipment Skid 241-C-51, is open (OFF position).
- 11/20/97 7.1.8 At the Sluicer Hydraulic Skid, the sluicer disconnect switch is open (OFF position).
- 12/24/97 7.1.9 Power is available to CB-01 in MO-211.
- 12/24/97 7.1.10 All worker safety equipment required to perform test is readily available.
- 1/26/98 7.1.11 Voice communications are available between Construction Trailer MO-211 and Sluice Pit 241-C-06C.
- 1/31/98 7.1.12 ATP WHC-SD-W320-ATP-015, C-FARM CCTV SYSTEM, has been completed and CCTV system is operating and focused to view Sluicer S-1361 pan/tilt movements. ~~OL TEMPORARY~~ CCTV SYSTEM IS INSTALLED. ECN 522 N
TEMPORARY
- 1/12/97 7.1.13 Tank C-106 sluicer instruments listed in Table 7.1.13 have been calibrated.

7.2 EQUIPMENT/INSTRUMENTS

Supplied by Test Operator unless otherwise noted.

- 7.2.1 Volt-ohmmeter (VOM): 120/240 to 277/480 V ac
Instrument No. PS4-45-08-005 Expiration Date 5/28/97
- 7.2.2 Phase Rotation Meter: No ID number or calibration required.

7.3 ABBREVIATIONS

- A A phase voltage or current
- B B phase voltage or current
- C C phase voltage or current
- CB Circuit Breaker
- ECN Engineering Change Notice
- VI Vendor Information
- VOM Volt-ohmmeter
- SHC Sluicer Hydraulic Control Unit
- MCC Motor Control Center

HNF
WHC-SD-W320-ATR-014
Rev 0
5/12/97 07/10/96

DATA SHEET 7.1.13

INITIAL & DATE	INSTRUMENT TAG NUMBER	VERIFY CALIBRATION	
		CALIBRATED	EXPIRATION
1/12/97	ZE/ZT-13613	6/21/96	6/21/97
1/12/97	ZE/ZT-13614	6/21/96	6/21/97
1/12/97	ZI-13613	6/21/96	6/21/97
1/12/97	ZI-13614/ZS-13614L/ ZS-13614R	6/21/96	6/21/97

END OF SECTION 7

8 SLUICER HYDRAULIC CONTROL UNIT SHC-1361 ELECTRICAL SERVICE

The following will check electrical services of the sluicer hydraulic power unit at Sluicer Hydraulic Control SHC-1361.

NOTE: If any of the following steps do not perform as stated, stop the test and notify the Test Director.

8.1 PREPARATION

3/25/97

APPLICABLE ECN 522 A

8.1.1 Verify prerequisites of Step 7.1 have been met.

CAUTION: Observe proper electrical safety precautions around energized equipment (reference WHC-CM-1-10, WKS 15).

8.2 SLUICER HYDRAULIC POWER UNIT ELECTRICAL SYSTEM CHECK

3/25/97

8.2.1 At CB-01 in MO-211, verify that power is available at the sluicer control panel.

3/25/97

8.2.2 At vicinity of Sluice Pit 241-C-06C and at the combination motor starter (MCC) in SHC-1361, connect the phase rotation meter on feed side of hydraulic pump.

3/25/97

8.2.3 At Bldg 241-C-51, close the Sluicer Feeder Breaker MCC-N1/1FB (ON position).

3/25/97

8.2.4 At SHC-1361, close the sluicer local disconnect switch (ON position).

4/15/97

EXCEPTION #1

8.2.5 Verify phase rotation is clockwise (for A,B,C). If not stop the test and notify the Test Director.

4/15/97

EXCEPTION #2

8.2.6 Using the VOM at the MCC measure and verify that all 3 phase-to-phase voltages (V_{AB} , V_{AC} , V_{BC}) are in the range of 480 to 504 V ac. If the voltage is not within the specified range, stop the test and notify the Test Director.

4/15/97

EXCEPTION #1

8.2.7 Using the VOM, measure the voltage across the secondary of control transformer, and verify the voltage is in the range of 104 to 127 V ac. If the voltage is not within the specified range, stop the test and notify the Test Director.

NOTE 1: The next step will require an independent person to observe hydraulic pump rotation.

NOTE 2: At SHC-1361, observe the hydraulic system and verify that no unusual noises and no hydraulic leaks are present in the next step. If unusual noises or hydraulic leaks are present, stop the test and notify the Test Director.

- 1 2/25/97 8.2.8 In trailer MO-211 and on panel CB-01, momentarily set Sluicer System Switch HS-13613 to ON position and then back to OFF position. At SHC-1361, verify that hydraulic pump rotates in the proper direction (clockwise as viewed from shaft end). If not, stop the test and notify the Test Director.
- 1 2/25/97 8.2.9 At 241-C-51, open Sluicer Feeder Breaker MCC-N1/1FB (OFF position).
- 1 2/25/97 8.2.10 Open the Sluicer Local Disconnect Switch (OFF position).
- 1 2/25/97 8.2.11 Disconnect and remove the phase rotation meter.
- 1 2/14/97 8.2.12 Close Sluicer Local Disconnect Switch (ON position).
- 1 2/14/97 8.2.13 Close Sluicer Feeder Breaker MCC-N1/1FB (ON position).

NOTE: Interlocks to instruments LSL-1362 and TSH-1362 have been previously tested by vendor as part of Factory Acceptance Test; therefore, no further checks are required.

END OF SECTION 8

9 SLICER PAN/TILT CONTROLS

The following will check the sluicer pan/tilt controls.

NOTE 1: If any of the following steps do not perform as stated, stop the test and notify the Test Director.

NOTE 2: At SHC-1361, observe the hydraulic system and verify that no unusual noises and no hydraulic leaks are present during the tests. If unusual noises or hydraulic leaks are present, stop the test and notify the Test Director.

NOTE 3: The tolerance for verification of pan and tilt indications is 1°.

9.1 PREPARATION

- 14/10/97 9.1.1 Verify that Section 8 has been completed. 14/12/97
SIGNOFF COMPLETED AFTER
EXCEPTION #2 / WBT COMPLETED.
- 1 26/1/97 9.1.2 On CB-01, in Trailer MO-211, and on Sluicer Control Panel, test panel lights using pushing to test and verify each light LIT when pressed.
- 1 31/1/97 9.1.3 At SHC-1361, verify hydraulic fluid level in the hydraulic reservoir is approximately half full.
- 1 31/1/97 9.1.4 Set Sluicer ON/OFF Switch HS-13613 to ON position. Verify Sluicer ON Light YL-13613A is LIT and OFF Light YL-13613B is NOT LIT.
- 1 31/1/97 9.1.5 Set Tilt ON/OFF Switch HS-1364 to OFF position. Verify that Tilt ON Light YL-13615A is NOT LIT and Tilt OFF Light YL-13615B is LIT.
- 1 31/1/97 9.1.6 Set MAN/AUTO Switch HS-13614 to MAN position. Verify that Auto Light YL-13614A is NOT LIT and MAN Light YL-13614B is LIT.
- 1 31/1/97 9.1.7 Verify that Tilt Indicator ZI-13613 indicates 0°. 214 1 31/1/97
- 1 31/1/97 9.1.8 Verify that Pan Indicator ZI-13614 indicates 0°. ~~214 - 6.0°~~ 31/1/97
- 1 26/1/97 9.1.9 On Pan Indicator ZI-13614, set left Limit Switch ZS-13614L to -95° and right Limit Switch ZS-13614R to 95°. 1 31/1/97

9.2 PAN MANUAL CONTROL

- 1 31/1/97 9.2.1 On CB-01, bump Joystick ZC-1361 to right and left, and verify sluicer nozzle responded accordingly by viewing from the CCTV ~~on~~
~~CP-02. rev 322 1~~

NOTE 1: Observe sluicer nozzle and assembly closely to see if any movement occurs in response to the movement of the joystick. This may take several operations of the joystick because of entrapped air in the hydraulic system which must be bled out by the inflow of hydraulic fluid.

NOTE 2: For the succeeding steps of Section 9, observation of sluicer nozzle position shall be performed by viewing CCTV ~~07-CP-02~~. *ENC522*

CAUTION: Do not maintain joystick position in either position if the sluicer nozzle does not respond, because unexpected movement may result.

- 11/15/97 9.2.2 *EXCEPTION #2* With the sluicer nozzle tilt position at 0° (straight down), position Joystick ZC-1361 to the right; simultaneously verify the sluicer nozzle rotates to the right and stops, and the Position Indicator ZI-13614 reads incrementally from 0° to 5°, 10°, 30°, 60° and stops at 95°. Bump joystick position to the right several times. Verify that ZI-13614 and sluicer nozzle maintained its position at 95°.
- 11/15/97 9.2.3 *EXCEPTION #2* Release Joystick ZC-1361. Verify that Joystick ZC-1361 returns to center, ZI-13614 maintained its last reading of 95°, and the sluicer nozzle has maintained its last position to the right.
- 1 3/14/97 9.2.4 Position Joystick ZC-1361 to the left; simultaneously verify that sluicer nozzle rotates to the left and stops, and the Position Indicator ZI-13614 reads incrementally from 95° to 60°, 30°, 10°, 5°, 0°, -5°, -10°, -30°, -60° and stops at -95°. Bump joystick to the left position several times and verify that ZI-13614 and sluicer nozzle maintained its position at -95°.
- 1 3/14/97 9.2.5 Release joystick. Verify that joystick returns to center, ZI-13614 maintained its last reading of -95°, and the sluicer nozzle has maintained its last position to the left.

9.3 TILT CONTROL

- 1 3/14/97 9.3.1 On CB-01, move Joystick ZC-1361 up and down; verify that sluicer does not move.
- 1 3/14/97 9.3.2 Set sluicer Tilt Control ON/OFF Switch HS-1364 to ON position.
- 1 3/14/97 9.3.3 Verify that Tilt ON Light YL-13615A, is LIT and Tilt OFF Light YL-13615B is NOT LIT.
- 1 3/14/97 9.3.4 Bump Joystick ZC-1361 up and down, and verify sluicer nozzle responded accordingly.

NOTE: Observe sluicer nozzle and assembly closely to see if any movement occurs in response to the movement of the joystick. This may take several operations of the joystick because of entrapped air in the hydraulic system which must be bled out by the inflow of hydraulic fluid.

- 1 3/14/97 9.3.5 Position joystick upward (pulled back) and start stopwatch; simultaneously verify sluicer nozzle tilted upward from approximately 0° to and stopped at approximately 90° position,

CAUTION: Do not maintain joystick position in either position if the sluicer nozzle does not respond, because unexpected movement may result.

and the Position Indicator ZI-13613 reads incrementally from 0° to 20°, 50°, 75°, 85° and stops at 90° in approximately 15 seconds. Bump joystick to the up position several times. Verify that ZI-13613 and sluicer nozzle maintained its position at 90°.

1 3/14/97 9.3.6

Release joystick. Verify that joystick returns to center, ZI-13613 maintained its last reading of 90°, and the sluicer nozzle maintained its last position at 90°.

1 3/14/97 9.3.7

Position joystick downward and start stopwatch; simultaneously verify sluicer nozzle tilted downward from 90° horizontal position to and stopped at approximately -40°, and the Position Indicator ZI-13613 reads incrementally from 90° to 85°, 75°, 50°, 20°, 0°, -10°, -30° and stops at -40° in approximately 22 seconds. Bump joystick to the down position several times. Verify that ZI-13613 and sluicer nozzle maintained its position at -40°.

1 3/14/97 9.3.8

Release joystick. Verify that joystick returns to center, ZI-13613 maintained its last reading of -40°, and sluicer nozzle maintained its last position at -40°.

9.4 AUTOMATIC PAN CONTROL

1 3/14/97 9.4.1

On CB-01, set MAN/AUTO Switch HS-13614 to AUTO position; verify that AUTO Light YL-13614A is LIT and MAN Light YL-13614B is NOT LIT.

1 3/14/97 9.4.2

Verify simultaneously that ZI-13614 indicates a full sweep from -95° to 95° and back to -95°, and that the sluicer nozzle rotated from left position to right position and back to left position and continues to move.

1 3/14/97 9.4.3

Position Joystick ZC-1361 to the left and the right and verify that there is no affect upon the panning motion of the sluicer nozzle and Position Indicator ZI-13614.

1 3/14/97 9.4.4

Verify that the Tilt Control Switch HS-1364 is set to ON position, YL-13615A is NOT LIT, and YL-13615B is LIT.

1 3/14/97 9.4.5

Position Joystick ZC-1361 upward. Simultaneously verify ZI-13613 reads incrementally from -40° to -30°, -10°, 0°, 20°, 50°, 75°, 85° and stops at 90°, and the sluicer nozzle tilts from approximately -40° to approximately 90° and has no affect upon the panning motion.

1 3/14/97 9.4.6

Set the Tilt Control Switch HS-1364 to OFF position and verify Light YL-13615A is LIT and YL-13615B is NOT LIT.

1/31/97 9.4.7

Position Joystick ZC-1361 in full circular motion and verify that there is no affect upon the panning and tilt motion of the sluicer nozzle and the Position Indicators ZI-13613 and ZI-13614.

pg 16 CHANGE steps 9.4.8-9.4.10 to read as follows:

1/31/97 9.4.8 On CB-01, set Man/Auto Switch HS-13614 to Man position.

1/31/97 9.4.9 Verify the current sluicer nozzle position is reading between -60° and 60°. If not, manually adjust the sluicer nozzle position between -60° and 60°.

1/31/97 9.4.10 On ZI-13614, adjust setpoint limits ZS-13614L to -60° and ZS-13614R to 60°.

pg 16 ADD steps 9.4.11-9.4.17 to read as follows:

1/31/97 9.4.11 On CB-01, set Man/Auto switch HS-13614 to Auto position. Verify that ZI-13614 and sluicer nozzle rotates continuously from left to right position between -60° and 60°.

1/31/97 9.4.12 On CB-01, set Man/Auto Switch HS-13614 to Man position.

1/31/97 9.4.13 Verify the current sluicer nozzle position is reading between -30° and 30°. If not, manually adjust the sluicer nozzle position between -30° and 30°.

1/31/97 9.4.14 On ZI-13614, adjust setpoint limits ZS-13614L to -30° and ZS-13614R to 30°.

1/31/97 9.4.15 On CB-01, set Man/Auto switch HS-13614 to Auto position. Verify that ZI-13614 and sluicer nozzle rotates continuously from left to right position between -30° and 30°.

1/31/97 9.4.16 On CB-01, set Man/Auto Switch HS-13614 to Man position.

1/31/97 9.4.17 On ZI-13614, reset Limit Switches ZS-13614L to -95° and ZS-13614R to 95°.

4R

10 RESTORATION

10.1 SLUICER RESTORATION

- 1 3/14/97 10.1.1 Set MAN/AUTO Switch HS-13614 to MAN position.
- 1 3/14/97 10.1.2 Verify "MAN" Light YL-13614B is LIT.
- 1 3/14/97 10.1.3 Set Sluicer ON/OFF Switch HS-13613 to OFF position.
- 1 3/14/97 10.1.4 Verify "OFF" Light YL-13613B is LIT.
- 1 3/14/97 10.1.5 At 241-C-51, open Sluicer Feeder Breaker MCC-N1/1FB (OFF position).
- 1 3/14/97 10.1.6 Open sluicer Local Disconnect Switch (OFF position).

END OF SECTION 10

11 TEST SECTION COMPLETION

Upon completion of the testing steps in each Section, initial and date in the space provided.

TEST COMPLETION WHC-SD-W320-ATP-011			
PERFORM		INITIAL	DATE
7	PREREQUISITES	<i>J</i>	<i>4/18/97</i>
8	SLUICER HYDRAULIC CONTROL UNIT SHC-1361 ELECTRICAL SERVICE	<i>J</i>	<i>4/18/97</i>
9	SLUICER PAN/TILT CONTROLS	<i>J</i>	<i>4/18/97</i>
10	RESTORATION	<i>J</i>	<i>4/18/97</i>

END OF SECTION 11

HNF

2/12/97

WHC-SD-W320-ATR-014 Rev. 0

C-106 TANK SLUICER CONTROL SYSTEM

APPENDIX A

EXCEPTIONS

EXCEPTION NO. 1		Project No. W-320		ATP No. <u>W-320-ATP-012</u>		Rev. 0	
Recorded by F.L. Szymuel			Organization FDNW		Date Recorded 2/25/97		ATP Page No. 11
Step No. 8.2.5, 6, 7		Requirement POWER PHASE ROTATION AND ACTUAL VOLTAGE					
Description of Problem 8.2.5. REQUIRED PHASE ROTATION TO BE CLOCKWISE ACTUAL WAS COUNTER CLOCKWISE. 8.2.6 PHASE TO PHASE VOLTAGES RANGES TO BE 490 TO 50V, ACTUAL A-C 500, AB 503, BC 507 8.2.7 SECONDARY VOLTAGE AT CONTROL TRANSFORMER TO BE 104-127 AC, ACTUAL 128.9 AC NOTE LINE IN PHASE RED, YELLOW, BLUE. DISC TO MOTOR BROWN, ORANGE, YELLOW. ROTATION MOTOR COUNTERCLOCKWISE RED YELLOW BLUE							
Objector 1 (Name/Organization) MIKE RAMOS / FDNW				Objector 2 (Name/Organization) F.L. SZYMUEL / FDNW			
Planned Action 8.2.5 CORRECTED COLOR CODE AND WIRING AND RETEST. 8.2.6 None required, accept as is. See attached secondary page for explanation 8.2.7 None required, accept as is. See attached secondary page for explanation							
Action Taken 8.2.5 RETEST AFTER CONNECTIONS MADE (CW ROTATION) AND MOTOR ROTATION ^{4/27/97} 4/27/97 8.2.6 None 8.2.7 None							
RETEST EXECUTION AND ACCEPTANCE							
Retest Installation Contractor Ronald McMurphy		Date 4-15-97		Recorder Alexandra Szymuel		Date 4-15-97	
Witness 1 (Name/Organization) NA		Date		Witness 2 (Name/Organization) NA		Date	
Field Engineering NA		Date		Test Director (Name/Organization) Mike Ramos / FDNW		Date 4/10/97	
Design Engineering (Author of ATP) J. K. ...		Date 4/10/97		A-E Project Engineer K.F. ...		Date 4/10/97	
APPROVAL AND ACCEPTANCE - OPERATING CONTRACTOR							
<input type="checkbox"/> Retest Approved and Accepted		<input checked="" type="checkbox"/> Exception Accepted-as-is*				<input type="checkbox"/> Other*	
* Explanation SEE ATTACHED SECONDARY PAGE							
Approver 1 [Signature]		Date 5-1-97		Approver 2		Date	
Approver 3 [Signature]		Date 5-1-97		Approver 4		Date	

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EXCLUSION NO. 2	Project No. W-320	ATP No. W-320-ATR-014	Rev. 0
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Recorded by F.L. Snyder	Organization FDNW	Date Recorded 3/14/97	ATP Page No. 14
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Step No. 9.2.2 & 9.2.3	Requirement LIMIT READING OF 95° WHEN SLUCION IS RUN TO LIMIT TO THE RIGHT
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DESCRIPTION OF PROBLEM
WHEN SLUCION NOZZLE IS RUN TO THE RIGHT TO THE PRESET LIMIT
IT STOPS AT 97.92. IT REMAINS AT THIS POSITION AS REQUIRED WITHIN TOLERANCE (1°)
(end of hydraulic travel)

Objector 1 (Name/Organization) F.L. Snyder / FDNW	Objector 2 (Name/Organization) MIKE RAMOS / FDNW
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Planned Action
NONE - ACCEPT-AS-IS - THE TRAVEL TO THE MANUAL STOP IS NOT ELECTRONICALLY ADJUSTABLE. THE ADDED TRAVEL DOES NOT EFFECT THE FUNCTION OF THE SLUCION.

Action Taken
NONE

RETEST EXECUTION AND ACCEPTANCE

Retest Installation Contractor Ronald McMurphy	Date 4-15-97	Recorder Alley	Date 4/2/97
Witness 1 (Name/Organization) NA	Date	Witness 2 (Name/Organization) NA	Date
Field Engineering NA	Date	Test Director (Name/Organization) Mike Ramos	Date 4/10/97
Design Engineering (Author of ATP) Danny J. Evans	Date 4/9/97	A-E Project Engineer K.S. Allis	Date 4/10/97

APPROVAL AND ACCEPTANCE - OPERATING CONTRACTOR

Retest Approved and Accepted
 Exception Accepted-as-is*
 Other*

* Explanation
THE ADDED TRAVEL DOES NOT EFFECT THE FUNCTION OF THE SLUCION.

Approver 1 [Signature]	Date 5-1-97	Approver 2	Date
Approver 3 [Signature]	Date 5-1-97	Approver 4	Date

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Continuation of Planned Action

8.2.6 Excessive voltage measure on one phase of three phase system will not adversely effect or damage equipment. Electrical Utilities Dept. sets voltage levels for Hanford power distribution system.

8.2.7 A recorded high secondary side voltage on the slicer Hydraulic control transformer will not effect or damage equipment. A high secondary side voltage was due to the excessive voltage reading measured on one phase in step 8.2.6.