

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

## 1. SCOPE

- 1.1 The scope of this work plan is to implement wiring changes to correct indication on the spray additive tank flow controller 2YIC-926A on C01 in the control room and also to eliminate excess current of 145mA from flowing through the output meter and R72, exceeding the power rating of the resistor, which would damage the resistor.
- 1.2 The purpose of this modification is to eliminate excess current of 145mA flowing through the output meter and R72 and provide improved indications on the controller 2YIC-926A.
- 1.3 This approach of this installation is to remove 2YIC-926A from C01 and perform wiring changes within the controller. The work will be directed by this work plan.
- 1.4 This work is QA Scope.
- 1.5 Support Requirements
  - 1.5.1 Operations: Equipment isolation, tagouts
  - 1.5.2 I & C: Modification installation and testing

## 2. PRE-INSTALLATION REQUIREMENTS

### 2.1 References:

#### 2.1.1 Working Drawings:

A. Foxboro Alpha WE-5362, SH. 1, Rev. 5A

#### 2.1.2 Permanent Drawings:

A. P&ID Westinghouse 110E035 SH. 3, Rev. 36

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

## 2.1.3 Component Instruction Manual 8.4

Foxboro Composite Book 4 00623A4

Responsible engineer has assured that all references listed above are approved and are either with the installation group or attached and assigned to the installation group.

R.E. \_\_\_\_\_

27

Date

9/27/96

## 2.2

### Installation Preparation Activities:

- 2.2.1 In this installation, no material is required. If any additional wiring is needed, use wiring similar to the existing wiring in the controller.  
Record Quality Assurance Release(QAR) numbers on the work orders.

## 2.3

### Identification of Permits Required

- 2.3.1 The work order for this work plan has been written and submitted to CHAMPS. The WO number is 9604777.

## 2.4

### Operational Installation Prerequisites:

- 2.4.1 The plant condition required is cold shutdown or refueling.
- 2.4.2 The spray additive tank outlet valve, 2SI-831A must be tagged shut as the spray additive tank suction valve, 2SI-836A will be stroked following the installation of the modification per Operating Procedure 3C(OP-3C) "Hot Shutdown To Cold Shutdown."
- 2.4.3 Release For Installation

All of the above operational installation prerequisites have been met and it is acceptable to proceed with the installation.

For

Date

10/16/96

Time

2245

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

2.4.4 All other installation prerequisites have been met.

R.E. \_\_\_\_\_ Date / 05/30/96

## 3. INSTALLATION

### 3.1 QC Requirements

QC will be satisfied by the independent wire verification that will be performed at the completion of the installation.

### 3.2 Installation Description:

**NOTE:** *The following is a detailed step-by-step listing of the actions necessary to perform this IWP. These steps can be completed in any logical order. If any of the steps cannot be completed as written or a change is necessary to complete the task, work must stop and the situation must be discussed with the responsible engineer or the installation supervisor.*

3.2.1 Verify 2SI-831A is danger tagged shut.

222.25 Tag 18

OPS

3.2.2 Isolate power to the controller by unplugging the power at the controller.

T&C

3.2.3 Remove flow controller, 2YIC-926A, from C01, located in the control room.

T & C

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

- 3.2.4 Remove normal/off switch S7 from terminal board positions 6 and the negative side of the power supply, the parallel connection

            
I & C

- 3.2.5 Place the switch in series with output point 6 as shown per working drawing Foxboro WE-5362, SH. 1, Rev. 5A1.

            
I & C

- 3.2.6 Verify that wires listed in 3.2.4 and 3.2.5 have been moved.

Verifier 's Initials            Date 11-2-96 Time 14:42

- 3.2.7 Refurbish box capacitors with QA'd capacitors if necessary.

*TAG #99165 PARTS NOT IN STOCK. MUR*  
*WRITTEN TO REFURB WHEN IN STOCK. 11-2-96*

            
I & C

- 3.2.8 QC inspector to perform a visual inspection of module internals for quality of work. Inspect for solder bridges and cold solder joints.

QC's Initials            Date 11-9-96 Time 14:25

- PAT -* 3.2.9 Bench test controller to verify proper wiring installation.

            
I & C

- 3.2.10 Insert flow controller 2YIC-926A into the control board, C01 then reconnect power to the controller.

            
I & C

- FME -* 3.2.11 Check to make sure debris is cleaned up around location of work, then installation is complete.

            
R.E./I.S.

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

## 3.3 As-Built Description

This IWP was installed by: \_\_\_\_\_ Date 11-09-96

The installation was performed in accordance with this IWP and working drawing Foxboro WE-5362, SH. 1, Rev. 5A1

Attach any additional documentation of this as-built description to this IWP.

The installation of this IWP is complete.

R.E. <sup>C</sup> \_\_\_\_\_ Date 11/11/96  
I.S. \_\_\_\_\_ Date 11/4/96

## 4. TESTING

### 4.1 Testing Prerequisites:

4.1.1 A stopwatch is needed for valve stroke testing.

### 4.2 Testing Information:

4.2.1 The intent of this testing is to verify the indicator on the controller indicates open when the switch is off. Also these wiring changes completed above should now eliminates excess current flowing through the R72 resistor.

#### NOTE 1:

*The valve stroke open time is defined as the elapsed time when the valve controller is positioned to the maximum open speed position in the manual mode and the time that the valve open light is received on the active status board.*

#### NOTE 2:

*The valve stroke closed time is defined as the elapsed time when the valve controller is positioned to the maximum closed speed position in the manual mode and the time that the valve ceases motion in the closed direction by local observation.*

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

4.2.2 Place the switch in the manual position, and open 2SI-836A.

Record the time to open. 9.53

Check Local VPI that it indicates full open. -

Check 2SI-836A active status panel light is on. -

OPS

4.2.3 Close 2SI-836A.

Record the time to close. 12.36 7.88 12.36 <sup>①</sup>

Check Local VPI that it indicates full close -

Check 2SI-836A active status panel light is off. -

① AFTER 1ST TIMING (12.36), THE OPERATOR REPORTED HE HAD  
INCORRECTLY CLOSED VALVE IN "MANUAL" INSTEAD OF PLACING  
CONTROLLER IN "AUTO" TO SHUT VALVE. 2ND TIMING (7.88)  
WAS INITIATED IN "AUTO" BEFORE FURTHER INVESTIGATION AND  
READING OF IT-06 REVEALED THAT FIRST TIMING WAS CORRECT.

OPS

4.2.4 Place the switch in the auto position, or as directed by the DSS.

OPS

4.2.5 Check valve operability by comparing the valve data with the limits in  
the IST Acceptance Criteria binder.

OPS

4.2.6 Place 2SI-836A controller's normal/off switch to the off position.  
Verify that the valve goes open and the controller indication reads  
open as well.

OPS

4.2.7 Place 2SI-836A controller's normal/off switch to the normal position.  
Verify that the valve goes closed and the controller indication reads  
closed as well.

OPS

\* WITH CONTROLLER IN MANUAL PER DSS DIRECTION WHEN SWITCH WAS  
PLACED IN "NORMAL", VALVE BOUNDED OFF OF SHUT POSITION (LOCALLY AND CONTROLLER)  
AND RETURNED TO ~20% OPEN POSITION. WHEN TEST WAS REPEATED WITH  
CONTROLLER IN AUTO, VALVE WENT TO FULL SHUT WHEN SWITCH WAS PLACED  
IN "NORMAL". (THIS WAS FOUND TO BE A NORMAL OPERATION BY IYC. A CORRECT  
OPERATION.)



# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

## 4.3 Testing Results:

- 4.3.1 The testing of the installation has been completed and the results are described below:

Testing completed satisfactory in all areas.

- 4.3.2 The testing is completed and adequately tests the modification and the associated installation:

Testing \_\_\_\_\_ Date 11-30-96  
R.E. \_\_\_\_\_ ES Date 11-30-96

## 5.0 Restoration:

### 5.1 Pre-Acceptance:

- 5.1.1 The following items need to be completed prior to acceptance:

A. All ECRs have final approvals.

All items that need to be completed prior to acceptance have been completed.

R.E. \_\_\_\_\_ Date 12/3/96

### 5.2 System Restoration:

- 5.2.1 Realign system as required for normal operations/per DSS. System ready for release.

DSS \_\_\_\_\_ Date 12-15-96 Time 1757

# WO WORK PLAN

Change Wiring of Flow Controllers 2YIC-926A For  
Spray Additive Tank System on C01 In The Control  
Room  
UNIT 2

IWP 95-035-01  
May 30, 1996

## 6.0 Restoration:

### 6.1 Conditional Acceptance

- 6.1.1 The following items cannot be accepted and require resolution of the listed conditions. Interim operating conditions are also listed below(attach additional documentation as necessary).

---

---

---

---

#### 6.1.2 Concurrence with Conditional Acceptance

Mgr of Acceptance Group/DSS \_\_\_\_\_ Date 12-14-96

### 6.2 Final Acceptance

- 5.2.1 Realign system as required for normal operations/per DSS. System ready for release.

Mgr of Acceptance Group/DSS \_\_\_\_\_ ate 12-15-96

**RETURN THE COMPLETED IWP AND MODIFICATION REQUEST TO  
RESPONSIBLE ENGINEER**



## INSTALLATION WORK PLAN

#### PBNP MINOR PROCEDURE

☐

# RECORD

Check As  
Applicable

WORK ORDER

☒

FOR MODIFICATION# 95-035 W 4604770

INSTALLATION WORK PLAN TITLE

SPRAY ADDITIVE TANK FLOW CONTROLLER VIC - 9268

UNIT 2

☒ QA-SCOPE☐ NON QA-SCOPE

Originator \_\_\_\_\_

Date 6/3/96

Reviewer \_\_\_\_\_

Date 7/23/96

Final Desir  
Group He

Date 7/29/98

Quality Engineer \_\_\_\_\_

Date B/13/76

Installation  
Group Head

Date 8/5/95

Manager -                       
Operations or DSS                     

Date 8/20/96

NOTE: Changes to this work plan must be done with the concurrence of the responsible or team engineer and the installation supervisor, or as delineated within the IWP.

DG-G02.5  
Revision 0