



January 20, 2000

L-2000-006  
10 CFR 50 Appendix E

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Re: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Emergency Plan Implementing Procedure

In accordance with 10 CFR 50 Appendix E, enclosed is a copy of a revised procedure that implements the Emergency Plan as listed below.

| <u>Number</u> | <u>Title</u>  | <u>Revision</u> | <u>Implementation Date</u> |
|---------------|---|-----------------|----------------------------|
| COP-06.11     | Establishing Remote Laboratory For Analyses Of Accident Samples | 0A              | December 21, 1999          |

COP-06.11 Revision OA replaced references to C-46 with COP-01.07.

Please contact us if there are any questions regarding this procedure.

Very truly yours,

J. A. Stall  
Vice President  
St. Lucie Plant

JAS/tlt

Enclosure

cc: Regional Administrator, Region II, USNRC (2 copies)  
Senior Resident Inspector, USNRC, St. Lucie Plant (w/o)

A045



**FPL**

# ST. LUCIE PLANT

## CHEMISTRY OPERATING PROCEDURE

SAFETY RELATED

Procedure No.

**COP-06.11**

Current Revision No.

**0A**

Effective Date

**12/21/99**

Title:

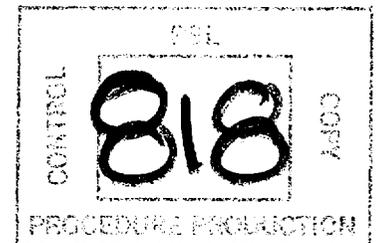
# ESTABLISHING REMOTE LABORATORY FOR ANALYSES OF ACCIDENT SAMPLES

Responsible Department: **CHEMISTRY**

### REVISION SUMMARY:

**REVISION 0A** – Replaced references to C-46 with COP-01.07. Replaced reference to C-46 with COP-01.07 on page 10 of 12. FRG reviewed this minor correction on 01/11/00. The PGM's name was added to cover page. The cover page and page 10 were reissued. (David Valentine, 12/03/99)

**REVISION 0** – *Previously issued as C-111.* This procedure provides instruction for the Operational Support Center (OSC) Chemistry Supervisor to establish remote laboratories at the location(s) specified by the Technical Support Center (TSC) Chemistry Supervisor. (Russ Cox, 05/27/99)



|                       |                                    |   |                                  |           |
|-----------------------|------------------------------------|---|----------------------------------|-----------|
| Revision<br><u>0</u>  | FRG Review Date<br><u>05/27/99</u> | Approved By<br><u>R. G. West</u><br>Plant General Manager | Approval Date<br><u>05/27/99</u> | S__OPS    |
| Revision<br><u>0A</u> | FRG Review Date<br><u>01/11/00</u> | Approved By<br><u>R. G. West</u><br>Plant General Manager | Approval Date<br><u>01/11/00</u> | DATE      |
|                       |                                    | <u>E. S. Katzman</u><br>Designated Approver               | <u>12/03/99</u>                  | DOCT      |
|                       |                                    |   |                                  | DOCN      |
|                       |                                    |   |                                  | SYS       |
|                       |                                    |   |                                  | COM       |
|                       |                                    |   |                                  | ITM       |
|                       |                                    |   |                                  | PROCEDURE |
|                       |                                    |   |                                  | COP-06.11 |
|                       |                                    |   |                                  | COMPLETED |
|                       |                                    |   |                                  | 0A        |

|                             |   |                  |
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## 1.0 PURPOSE

- 1.1 This procedure provides instruction for the Operational Support Center (OSC) Chemistry Supervisor to establish remote laboratories at the location(s) specified by the Technical Support Center (TSC) Chemistry Supervisor.
- 1.2 To identify the minimum analyses equipment required for initial Accident Conditions.

## 2.0 REFERENCES

### NOTE

One or more of the following symbols may be used in this procedure:

- § Indicates a Regulatory commitment made by Technical Specifications, Condition of License, Audit, LER, Bulletin, Operating Experience, etc. and shall NOT be revised without Facility Review Group review and Plant General Manager approval.
- ¶ Indicates a management directive, vendor recommendation, plant practice or other non-regulatory commitment that should NOT be revised without consultation with the plant staff.
- Ψ Indicates a step that requires a sign off on an attachment.

## 2.1 Plant Procedures

- EPIP-05, Activation and Operation of the Operational Support Center
- ADM-17.09, Invoking 10 CFR 50.54 (X)
- COP-06.06, Guidelines for Collecting Post Accident Samples
- COP-07.10, Determination of Boron Manual Titration
- COP-07-15, Determination of Boron Using the Mettler Titrator
- COP-65.01, Ortec Multichannel Analyzers
- COP-01.04, Determination of Gross Beta Gamma and Tritium with LS6500 Liquid Scintillation Counter
- COP-01.07, Determination of Gross Alpha Radioactivity

|                                    |  |                         |
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**3.0 PREREQUISITES**

**3.1** Power from 110 volt AC outlets available.

**4.0 PRECAUTIONS / LIMITATIONS**

**4.1** Standard Health Physics precautions shall be observed while handling all Accident samples.

**4.2** ADM-17.09, Invoking 10 CFR 50.54(X), addresses the suspension of some Technical Specifications Surveillances when the Reactor Coolant System (RCS) is declared Out of Service. ADM-17.09 should be reviewed if the RCS is declared out of service as a result of accident conditions.

**4.3** P-10 Gas is FLAMMABLE and under high pressure in the bottle.

**5.0 RECORDS REQUIRED**

**5.1** As per routine requirements of the applicable procedures regulating the systems and sampling, etc., as per Chemistry LIMs data base computer, records for Accident Sample Inventory and Tracking as per Results Templates P1\_PAS\_INV for Unit 1, and P2\_PAS\_INV for Unit 2, or shall be maintained in the plant files in accordance with QI-17-PSL-1, Quality Assurance Records.

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**6.0 INSTRUCTIONS** Date/Time    Initials

**6.1** The OSC Chemistry Supervisor shall establish the operation of Remote Laboratories as follows:

1. The OSC Chemistry Supervisor shall contact the TSC Chemistry Supervisor to assess the location of the Remote Lab(s) based on the affected Reactor Unit and safe location to locate the lab(s).

Check the appropriate choices:

Accident affected Reactor is \_\_\_\_\_ Unit 1

OR \_\_\_\_\_ Unit 2

Boron analysis Remote Lab is:

\_\_\_\_\_ Unit 1 Hot Lab

\_\_\_\_\_ Unit 2 Hot Lab

\_\_\_\_\_ Unit 1 Cold Lab

\_\_\_\_\_ Other Location: \_\_\_\_\_ / \_\_\_\_\_

pha analysis Remote Lab is:

\_\_\_\_\_ Unit 1 Hot Lab

\_\_\_\_\_ Unit 2 Hot Lab

\_\_\_\_\_ Unit 1 Cold Lab

\_\_\_\_\_ Other Location: \_\_\_\_\_ / \_\_\_\_\_

2. As soon as possible, the OSC Chemistry Supervisor shall assess and/or direct that the following minimum analyses equipment is set up in the designated Remote Lab(s), and ENTER the location of the test stand(s).

One Boron Analysis Stand per Step 6.2 is

OPERABLE at location: \_\_\_\_\_ / \_\_\_\_\_

One pha multi-channel analyzer per Step 6.3 is

OPERABLE at location: \_\_\_\_\_ / \_\_\_\_\_

|                             |   |                  |
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| 6.1 | The OSC Chemistry Supervisor shall establish the operation of the Remote Laboratories as follows:<br>(continued)  | <u>Date/Time</u> | <u>Initials</u> |
|-----|---|------------------|-----------------|
| 3.  | As accident time and manpower conditions permit, the OSC Chemistry Supervisor shall assess and/or direct that the following equipment / processes are set up in the designated Remote Lab(s). |                  |                 |
|     | One Tritium Analysis System per Step 6.4 is OPERABLE at location: _____   | ____/____        | _____           |
|     | One Alpha Analysis System per Step 6.5 is OPERABLE at location: _____   | ____/____        | _____           |
|     | A second pha Detector and 92X spectrum master in the Remote Lab per Step 6.3 if the Chemistry Counting Room cannot be used as a Remote Lab.   | ____/____        | _____           |
|     | One Sample Prescreening Process per Step 6.6  | ____/____        | _____           |
|     | Implement Accident Sample Inventory and Results Documentation Process for records required per Step 5.1   | ____/____        | _____           |

END OF SECTION 6.1

|                                    |  |                         |
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| <b>6.2</b> | <b>Set Up Boron Analysis Stand(s)</b>   | <u>Date/Time</u> | <u>Initials</u> |
|------------|---|------------------|-----------------|
| 1.         | ENSURE that a copy of COP-07.15, Determination of Boron Using the Mettler Titrator, <u>or</u> as a second choice, a copy of COP-07.10, Determination of Boron Manual Titration, is available for the Remote Lab location. | ____/____        | _____           |
| 2.         | ENSURE test stand equipment, standard and reagents are available in the Remote Lab per the applicable procedure above.  | ____/____        | _____           |
| 3.         | ENSURE a QC Boron Calibration Check is performed on the instrument test stand prior to use.   | ____/____        | _____           |

**END OF SECTION 6.2**

|                                    |  |                         |
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| <b>6.3</b> | <b>Set Up Gamma Pulse Height Analyzer(pha) System</b>  | <u>Date/Time</u> | <u>Initials</u> |
|------------|--|------------------|-----------------|
| <b>1.</b>  | <p>ENSURE that a pha system is available in the Remote Lab(s) consisting of:</p> <p>PC Computer "HOBBS", one 92X Spectrum Master, and Detector #1 and/or Detector #2.</p> <p style="text-align: center;">OR</p> <p>PC Computer "CALVIN", one 92X Spectrum Master, and Detector #3.</p>           | ____/____        | _____           |
| <b>2.</b>  | ENSURE that a copy of COP-65.01, Ortec Multichannel Analyzers, is available in the Remote Lab for the pha system(s).   | ____/____        | _____           |
| <b>3.</b>  | If the pha system(s) were moved from the Unit 1 Chemistry Counting Room <u>or</u> the Power to them was interrupted, <u>Then</u> VERIFY that the High Voltage Power Supply to the Detector(s) has been restored to the values displayed on the front panel of each Detector's 92X interface box. | ____/____        | _____           |
| <b>4.</b>  | ENSURE that a Quality Control Check Source is available <u>and</u> that an Activity Check is performed on the Detector(s) that are present, prior to use.  | ____/____        | _____           |

**END OF SECTION 6.3**

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| 6.4 | Set Up Tritium Analysis System  | <u>Date/Time</u> | <u>Initials</u> |
|-----|---|------------------|-----------------|
| 1.  | ENSURE that a Beckman LS 6500 Scintillator is available in a Remote Lab.  | ____/____        | _____           |
| 2.  | ENSURE that a copy of COP-01.04, Determination of Gross Beta Gamma and Tritium with LS6500 Liquid Scintillation Counter is available in the Remote Lab.               | ____/____        | _____           |
| 3.  | ENSURE that Quality Control Check Source(s) are available and that an Activity Check is performed on the User Program(s) for Tritium and/or 1 ml. Gross prior to use. | ____/____        | _____           |

END OF SECTION 6.4

|                             |   |                   |
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- | 6.5 Set Up Alpha Analysis System  | <u>Date/Time</u> | <u>Initials</u> |
|---|------------------|-----------------|
| 1. ENSURE that one Alpha Counter and counting assembly is available in a Remote Lab.                            | ____/____        | _____           |
| 2. ENSURE that a copy of COP-01.07, Determination of Gross Alpha Radioactivity, is available in the Remote Lab. | ____/____        | _____           |

**CAUTION**  
P-10 gas is FLAMMABLE.

- |  |           |       |
|--|-----------|-------|
| 3. ENSURE that a P-10 gas bottle is available to supply the instrument at the Remote Lab location.   | ____/____ | _____ |
| 4. <u>If</u> a P-10 bottle and temporary tubing have to be set up in a Remote Lab (other than the Chemistry Unit 1 Counting Room), <u>Then</u> the bottle connections and instrument tubing connections should be checked for gas leaks. | ____/____ | _____ |
| 5. ENSURE that a Quality Control Check Source is available and that an Activity Check is performed prior to use.   | ____/____ | _____ |

**END OF SECTION 6.5**

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| <b>6.6</b> | <b>Set Up Sample Prescreening Process in Remote Lab</b>   | <u>Date/Time</u> | <u>Initials</u> |
|------------|---|------------------|-----------------|
| <b>1.</b>  | <b>OBTAIN</b> a Health Physics General Area Survey Meter for the Remote Lab. <u>If available, Then</u> the survey meter should have OPEN and CLOSED window capability.                                    | ____/____        | _____           |
| <b>2.</b>  | <b>VERIFY</b> that the Survey Meter is calibrated per the affixed calibration sticker.  | ____/____        | _____           |
| <b>3.</b>  | <b>CHECK</b> the Survey Meter's Battery Check is satisfactory.  | ____/____        | _____           |
| <b>4.</b>  | The Survey Meter should be used to measure contact readings on accident samples prior to counting.  | ____/____        | _____           |
| <b>5.</b>  | For long-term accident recovery, Figure 1 should be filled out to provide guidance for the maximum sample radiation reading(s) that can be tolerated for counting without sample pretreatment (dilution). | ____/____        | _____           |

**END OF SECTION 6.6**

|                             |   |                   |
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**FIGURE 1**  
**MAXIMUM ALLOWABLE RADIATION READING ON SAMPLE FOR AVOIDING**  
**EXCESSIVE ANALYSIS DEAD TIME**

(Page 1 of 1)

| For GAMMA Analysis Without Pre-Dilution                                 |                                   |   |                           |
|---|-----------------------------------|---|---------------------------|
| Sample TYPE and Container   | Analysis System                   | HP Survey Meter Maximum Allowable Contact Reading | Specify Engineering Units |
| Gas in ~30 cc glass sphere  | pha on Shelf #1                   |   |                           |
| Gas in 1250 cc mari beaker  | pha on Face                       |   |                           |
| Liquid in 16 ml vial geometry   | pha on Shelf #1                   |   |                           |
| Liquid in 4000 ml mari beaker   | pha on Face                       |   |                           |
| Iodine in TEDA II cartridge   | pha on Shelf #1<br>(flip counted) |   |                           |
| Particulate Filter in Whirlpak on Shelf # 0 (zero) on Detector 1 (or 2) | pha on Shelf #0 (zero)            |   |                           |
| Particulate Filter in Whirlpak on Shelf #1 on Detector 3                | pha on Shelf #1                   |   |                           |
| Evaporated Liquid in planchet   | pha on appropriate shelf          |   |                           |

| For Alpha and Tritium Analysis Without Pre-Dilution |                       |   |                           |
|---|-----------------------|---|---------------------------|
| Sample TYPE and Container                           | Analysis System       | HP Survey Meter Maximum Allowable Contact Reading: Specify Open Window (OW) or Closed Window (CW) | Specify Engineering Units |
| Tritium in Liquid Sample                            | Beckman LS6500        |   |                           |
| Tritium in Gas Sparger Sample                       | Beckman LS6500        |   |                           |
| Alpha in Evaporated Liquid Sample In Planchet       | Alpha Counting System |   |                           |
| Alpha Filter Sample in Planchet                     | Alpha Counting System |   |                           |