

AMERICAN ELECTIC POWER COMPANY
DONALD C. COOK NUCLEAR PLANT

MAY 02 2000

EMERGENCY PLAN PROCEDURES

CONTROLLED
DOCUMENT

IDENTIFICATION NUMBER	TITLE	REVISION AND DATE	COMMENTS
PMP 2081 EPP.201 (PORTIONS OF THIS PROCEDURE REPLACE PMP 2081 EPP.021)	ACTIVATION OF THE OPERATIONS STAGING AREA	REV. 2 06-30-98	
PMP 2081 EPP.202 (REPLACES PORTIONS OF PMP 2081 EPP.021)	OPERATION OF THE OPERATIONS STAGING AREA	REV. 2 05-04-93	CS-1
PMP 2081 EPP.203 (REPLACES PORTIONS OF:PMP 2081 EPP.006, PMP 2081 EPP.010 & PMP 2081 EPP.030)	ACTIVATION OF EMERGENCY RESPONSE TEAMS	REV. 5 06-30-98	
PMP 2081 EPP.204 (REPLACES PORTIONS OF PMP 2081 EPP.030)	DAMAGE CONTROL	REV. 0 01-06-87	
PMP 2081 EPP.205 (REPLACES PORTIONS OF: PMP 2081 EPP.006 & PMP 2081 EPP.008)	REENTRY AND RESCUE	REV. 1 05-21-92	
PMP 2081 EPP.207 (REPLACES ALL OF PMP 2081 EPP.002)	BARRING OF THE PABX	REV. 2 08-07-92	
PMP 2081 EPP.208 (REPLACES ALL OF PMP 2081 EPP.009 & PORTIONS OF PMP 2081 EPP.026 & PMP 2082 EPP.001)	EMERGENCY RADIATION PROTECTION	REV. 3 06-30-98	
PMP 2081 EPP.209 (REPLACES PORTIONS OF PMP 2081 EPP.010 & ALL OF PMP 2081 EPP.011)	ONSITE RADIOLOGICAL MONITORING	REV. 1 08-07-92	
PMP 2081 EPP.210 (REPLACES THE ORIGINAL ISSUE OF PMP 2081 EPP.027)	UNIT VENT SAMPLING	REV. 2 05-02-00	
PMP 2081 EPP.211 (REPLACES PORTIONS OF PMP 2081 EPP.031)	SECONDARY SYSTEMS SAMPLING	REV. 1 12-07-98	

REVIEW AND APPROVAL TRACKING FORM

Procedure Information:

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: UNIT VENT SAMPLING

Category:

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| <input type="checkbox"/> Change (Full Procedure) with Review of Change Only | <input type="checkbox"/> Correction (Full Procedure) |
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Required Reviews:

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| <input type="checkbox"/> Design Engineering | <input type="checkbox"/> Surveillance Section | |
| <input type="checkbox"/> Plant Engineering | <input type="checkbox"/> Performance Assurance | |
| <input checked="" type="checkbox"/> Chemistry/RP | <input checked="" type="checkbox"/> Business Services Procedure Group | |
| <input type="checkbox"/> Other: (Includes Technical Reviewer Determined Reviews) | | |

NUCLEAR RECORDS
MANAGEMENT SECTION

MAY 02 2000

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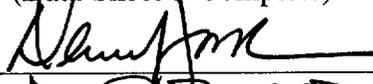
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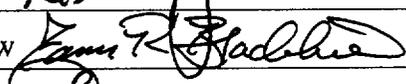
Revision Summary attached? Yes

Safety Screening complete? SS/SE Tracking No: 2000-0892-00 Yes Exempt N/A

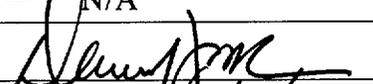
Implementation Plan developed? (Ref. Step 3.4.17) Yes N/A

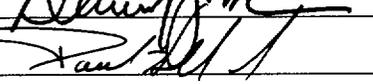
Periodic Review conducted? (Data Sheet 5 Complete) Yes No

Cognizant Org Review: Dennis Loope  Date: 4/17/00

Technical Review: Jim Bradshaw  Date: 4/18/00

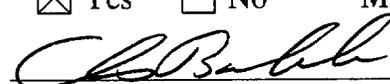
Ops Mgr Concurrence: N/A Date: 1/1

Owner Concurrence: Dennis Loope  Date: 4/18/00

Writer Review: Paul Holland  Date: 4/19/00

Approvals:

PORC Review Required: Yes No Mtg. No.: 3692

Approval Authority Review/Approval:  Date: 5/2/00

Effective Date: 5/2/00

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This form is derived from the information in PMP-2010.PRC.002, Procedure Correction, Change, and Review, Rev. 5, Data Sheet 1, Review and Approval Tracking Form.

REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
Entire Procedure GENERAL	<p>Change: Entire Procedure reformatted to new procedure requirements of PMP-2010-PRC.001</p> <p>Reason: To comply with procedure writing requirements for format and to streamline the procedure, these changes are corrections by definition, per PMP-2010-PRC.002, paragraph 3.1.6. (a) 11.</p> <p>Many changes were made to the procedure which are strictly sentence structure or writing style changes to make the procedure more streamlined, these are sentence structure improvements per 3.1.6.(a)1.</p> <p>CHANGES ARE NOT MARGIN MARKED due to the entire procedure being rewritten.</p> <p>Since the entire procedure has been re-written/re-formatted, following is a summary of the procedure changes by new procedure sections. The changes to the procedure do not affect what is accomplished by the procedure, or how it is accomplished unless designated as such in the following change descriptions:</p>
1 Purpose and Scope	<p>Change: This is a new section that describes the purpose of the procedure and that its use is limited to emergency conditions. This replaces the Objective section of the previous revision. This change does not affect the intent of the procedure, or how or what the procedure accomplishes, it simply states the purpose & scope of use.</p> <p>Reason: New procedure format requirement.</p>
2 Definitions & Abbreviations Section	<p>Change: This is a new section in the procedure, it provides definitions for three acronyms used within the procedure. GSP-1S the grab sample pallet model number, and two emergency operating facility abbreviations, TSC (Technical Support Center) and OSA (Operations Staging Area).</p> <p>Reason: Required by new procedure format, this is a correction per PMP-2010-PRC.002, 3.1.6.(a) 7.</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: UNIT VENT SAMPLING

Section or Step	Change/Reason For Change
3 Details	<p>Change: Deleted the previous procedures Responsibilities section. This is not required by the current formatting, and provided no value added to the procedure. The current Purpose & Scope defines its use as during emergency conditions only, therefore, it obviously would be directed by the emergency response organization.</p> <p>Reason: Not required by current format, This change deleted no action steps and did not alter intent or method of performing the procedure,</p>
3 Details	<p>Change: Deleted previous Precautions & Limitations section. This is not required by current formatting. This did not delete any action steps. There were three paragraphs previously:</p> <p>The first paragraph deleted, stated the provisions of PMP-2081-EPP.209 (On-Site Radiological Monitoring) including its precautions & limitations applied to the procedure use. This is still in effect without need to duplicate its statement here. The procedure is a PMP and its purpose and scope state its requirements are in effect within the owner controlled area during an emergency, deleting it in this procedure does not change that.</p> <p>The second paragraph deleted provided a warning of increased external radiological exposure. A single bullet in current paragraph 3.1.1 & 3.2.1 provide warning of increase dose rates while sampling during emergency conditions.</p> <p>The third paragraph deleted provided a warning that grab samples pose significant contamination sources, and described using ventilated laboratory hoods. This prescribes normally used sampling methods. It was deemed unnecessary.</p> <p>Reason: Extraneous words in procedure, deletion does not change what is accomplished by procedure, or method of performing sampling.</p>

REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
3.1 & 3.2	<p>Change: Deleted previous Prerequisites section (4 paragraphs) and replaced with details sections 3.1 for grab samples, and 3.2 for continuous samples. Sections 3.1 & 3.2 provide pre-job (or pre-task) briefing elements. These sections effectively replace the previous prerequisites and precautions & limitations sections.</p> <p>Reason: These sections provide; more accurate information regarding the sampling configurations and effects on unit vent SPING (Special Particulate Iodine Noble Gas Monitor) flow paths, warnings of increased dose rates, locations and types of sampling equipment, and directs attachment use for the respective sample type (grab or continuous). These steps and changes do not direct any action statements for performing the actual sampling, and do not affect methodology or outcome of what procedure is accomplishing.</p>
4 Final Conditions	<p>Change: This section states conditions after procedure actions have been taken. They are reworded from the previous procedure section 4.7 (Final Conditions), however, are essentially the same and do not change intent or how or what procedure accomplishes.</p> <p>Reason: This is a procedure correction as defined by PMP-2010-PRC.002, 3.1.6. (a) 11 & 18.</p>
5 References	<p>Change: References were updated</p> <p>Reason: Changes here do not affect any procedure actions, intent or outcome, they are corrections as defined by PMP-2010-PRC.002, 3.1.6.(a) 15.</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
DELETION (removed previous exhibit a)	<p>Change: Deleted previous procedure revision's exhibit a. This was used to record sample data, start/stop times/dates. Any references to completing this exhibit in the previous revisions section 4.5 & 4.6 were also deleted in attachment 1 and 2 which replaces sections 4.5 & 4.6 in the revision.</p> <p>Reason: Sampling data is recorded on sample envelopes provided. RP normally records all data on these envelopes which contain all necessary data. The previous data sheet (exhibit a) required duplication of work.</p>
Attachment 1	<p>Change: This attachment contains the instructions for completing a grab sample and replaces the previous procedure revision's steps in section 4.5. Following is a summary of changes:</p> <p>(Information only) The attachments are designated "Continuous use", whereas the body of the procedure is designated "Information use".</p> <p>Deleted previous procedure notes (two) in section 4.5, they do not provide any actions required to complete activity or warnings, they were simply statements of fact regarding system configurations.</p> <p>Deleted the following procedure steps from previous revision:</p> <ul style="list-style-type: none"> 4.5.7 (collect sample for time specified in briefing). 4.5.13 (complete air sample envelope per normal procedure) 4.5.14 (disassemble sample assembly and place iodine and particulate filter media in shielded sample container and attach air sample envelope) 4.5.15 (deliver sample to location specified in team briefing) 4.5.16 (return to OSA in accordance withEPP.209) <p>Changes were made on attachment to correct for changes in the valve numbering on the Unit 1 and Unit 2 Vent Stack Eberline Grab Sample Pallets (GSP-1) located on the 650' elevation of the Auxiliary Building. These are corrections as defined by PMP 2010 PRC.002, 3.1.6.(a)12.</p> <p>The previous revisions Section 4.5, Obtaining Grab Sample,</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0

Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
<p>Attachment 1 (cont)</p>	<p>has references to valve numbers that were supplied by the vendor, Eberline Instrument Corporation. These are the generic valve numbers that come on all GSP-1 's. The sample pallet valve numbers have been replaced by the valve numbers on the Cook Plant Drawings. These new numbers can be found on drawings OP-1-5104F-33 and OP-2-5104F-34.</p> <p>SM-61 was changed to SM-280 and SM-62 was changed to SM-281.</p> <p>The previous revision did not account for ensuring proper system alignment and did not account for the positions of SM-279, SM-277, or SM-278. These were added to this revision's attachment.</p> <p>Section 4.5, step 4.5.9 was also changed. The final position of the NORMAL/MANUAL/AUTO switch was changed from NORMAL to AUTO. Placing this switch to NORMAL forces VRS-1500 or VRS-2500, Unit Vent SPING's, to return to their normal sampling configuration. The normal configuration has air passing through the lower and middle range channels. Doing so, with high levels of activity in the system (which is likely to occur during emergency conditions), will place the low and middle range detectors at a high risk of failure. The normal configuration overrides the intended function of the system. Placing the switch to AUTO, which is the usual position of this switch, allows the system trip functions to determine the correct sample flow alignment. This was verified by reviewing ECP1-2-V3-02 and discussions with the design engineer. The order of performing steps was changed to be more effective in accomplishing the sample activity.</p> <p>Reason: Attachments were made for these instructions to reduce time spent in sampling area and to minimize possible exposure due to reading and rifling through thicker procedure. Unneeded procedure steps and notes were deleted, again to reduce time. Equipment nomenclature had changed in plant, updated to current scheme. Revised order of steps to increase efficiency, the reorder does not affect outcome or results of procedure.</p>

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Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: UNIT VENT SAMPLING

Section or Step	Change/Reason For Change
Attachment 2	<p>Change: Developed to replace the previous procedure revision's section 4.6. Deleted the notes (three) in previous section 4.6, the first note simply said do this when directed by... and this sections function is..., the second note was a warning that is now included in the pre-activity briefing, that dose rates may be high. The third note (step 4.6.2) stated where replacement sample assembly was located. (this was determined to be skill of trade. The notes were deleted to reduce time spent in sample area reading unnecessary information).</p> <p>The following steps were deleted in their entirety from the previous revision:</p> <p>4.6.1.1 (proceed to the location of the sampling pallet) 4.6.1.4 (return to OSA & provide sample to RAC in TSC) 4.6.2.1 (proceed to sample pallet at location...) 4.6.2.3 (measure the contact dose rate of SA-16 & record) 4.6.2.6 (verify that the replacement SA-16 contains a particulate and iodine filter if not....) 4.6.2.10 (deliver the SA-16 to...) 4.6.2.12 (Return to the OSA and provide results to RAC).</p> <p>The deleted steps were instructions to go somewhere and/or where determined not required because it was skill of trade.</p> <p>Section 4.6, Unit Vent Continuous Sample, has references to valve numbers that were supplied by the vendor, Eberline Instrument Corporation. These are the generic valve numbers that come on all GSP-1 's. The sample pallet valve numbers have been replaced by the valve numbers on the Cook Plant Drawings. These new numbers can be found on drawings OP-1-5104F-33 and OP-2-5104F-34. These corrections meet the criteria of PMP-2010.PRC.002 step 3.1.6 (a).12 .</p> <p>V-3 was changed to SM-276. V-4 was changed to SM-277 V-5 was changed to SM-278.</p>

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REVISION SUMMARY

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Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
Attachment 2 (cont)	<p>Reason: Attachments were made for these instructions to reduce time spent in sampling area and to minimize possible exposure due to reading and rifling through thicker procedure. Unneeded procedure steps and notes were deleted, again to reduce time. Equipment nomenclature had changed in plant, updated to current scheme.</p> <p>NOTE: Change Sheets 1 & 2 incorporated.</p>

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 <small>AEP - America's Energy Partner</small>	PMP-2081.EPP.210	Rev. 2	Page 1 of 6
Unit Vent Sampling			
Multi-Use			Effective Date: <u>5/2/00</u>
<u>P. E. Holland</u> Writer	<u>D. C. Loope</u> Owner	<u>Site Protective Services</u> Cognizant Organization	

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Attachment 2: Continuous Unit Ventilation Sample Collection Using the Eberline GSP 6

1 PURPOSE AND SCOPE

- 1.1 The purpose of this procedure is to provide instructions for collection of grab or continuous air samples from the Eberline GSP-1S sample pallet for the Plant Unit Ventilation systems.
- 1.2 Use of this procedure is restricted to emergency conditions only. This procedure will take normally used sampling equipment off line.

2 DEFINITIONS AND ABBREVIATIONS

Term	Meaning
GSP-1S	Model Number given to the Eberline grab sample pallet
OSA	Operations Staging Area
TSC	Technical Support Center

3 DETAILS

3.1 Unit Ventilation Grab Samples

- 3.1.1 Prior to releasing the sample team from the OSA, perform a pre-job brief which includes but is not limited to the following:
 - This procedure will force the Unit Ventilation SPING flow path to its accident configuration. It will return to its previous configuration when sampling is complete.
 - Sample flow rates will be approximately 4 lpm. Determine the total sample volume prior to releasing the team from the OSA.
 - Sample heads, 47 mm Particulate Filters, Silver Xeolite Cartridges and Sample Envelopes are located in the emergency sampling box stored in the turbine side Radiation Protection Counting Room.
 - Dose rates can increase rapidly during sampling in emergency conditions.

Unit VENT Sampling

- Determine the sample delivery location prior to releasing the team from the OSA.

3.1.2 Use Attachment 1 for sample collection instructions.

3.2 Unit Ventilation Continuous Sampling

3.2.1 Prior to releasing the sample team from the OSA, perform a pre-job brief which includes but is not limited to the following:

- Continuous sampling will only occur if the Unit Ventilation SPING flow path is in its accident configuration.
- Continuous sampling starts automatically when the Unit Ventilation SPING flow path is in its accident configuration. Obtain the initial sample start time from the TSC.
- 2.5 inch (63.5 mm) Particulate Filters, Silver Zeolite Cartridges and Sample Envelopes are located in the emergency sampling box stored in the turbine side Radiation Protection Counting Room.
- Determine the location of the replacement SA - 16 sample holder prior to releasing the team from the OSA. Initially it will be located at the GSP-1S sample pallet. It probably has been moved if previous sample changes have occurred.
- Decontamination of the SA - 16 may be necessary prior to its re-use.
- Dose rates can increase rapidly during sampling in emergency conditions.
- Transport samples in the SA - 16 sample holder to reduce radiation exposure.
- Determine the sample delivery location prior to releasing the team from the OSA.

3.2.2 Use Attachment 2 for sample collection instructions.

4 FINAL CONDITIONS

4.1 The samples have been collected and delivered.

Unit VENT Sampling

4.2 The sample team has returned to the OSA.

5 REFERENCES

5.1 Use Reference:

5.1.1 None

5.2 Writing References:

5.2.1 Source References:

- a. Drawing Number OP-1-5104F-33
- b. Drawing Number OP-2-5104F-34
- c. ECP # 1-2-V3-02 Revision 6 "Unit Vent Effluent Radiation Monitoring", Section I, sheet 11 of 15 and Calculation # 5

5.2.2 General Reference

- a. Eberline Model AXM-1 "Accident Range Monitor Technical Manual" Revision 1, July 1985, Section 12
- b. Technical Specification 6.8.3 Item b.

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Unit VENT Sampling			
Attachment 1	Continuous Unit Ventilation Grab Sample Collection Using the Eberline GSP		Page: 5

NOTE: The Unit designators have not been included on the valve indicators. The valve numbers are the same on both units.

1. Place the LOCAL / REMOTE switch to LOCAL.
2. Place the valves to the indicated positions:
 - 2.1 OPEN SM-279 - Bypass Gas Sample Return Line Shutoff
 - 2.2 CLOSE SM-280 - Bypass Gas Return Sample Shutoff
 - 2.3 CLOSE SM-281 - Bypass Gas Supply Sample Shutoff
 - 2.4 CLOSE SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 2.5 CLOSE SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
3. Place the NORMAL / MANUAL / AUTO switch to MANUAL.
4. Attach the inlet of the sample assembly to SM-281 - Bypass Gas Supply Sample Shutoff.
5. Attach the outlet of the sample assembly to SM-280 - Bypass Gas Return Sample Shutoff.
6. To initiate sampling:
 - 6.1 OPEN SM-280 - Bypass Gas Return Sample Shutoff
 - 6.2 OPEN SM-281 - Bypass Gas Supply Sample Shutoff
 - 6.3 CLOSE SM-279 - Bypass Gas Sample Return Line Shutoff
7. Record the sample start Date/Time.
8. Record the Sample Flow Rate in lpm from VFI-1524 for Unit 1 or VFI-2524 for Unit 2.
9. To terminate sampling:
 - 9.1 OPEN SM-279 - Bypass Gas Sample Return Line Shutoff
 - 9.2 CLOSE SM-280 - Bypass Gas Return Sample Shutoff
 - 9.3 CLOSE SM-281 - Bypass Gas Supply Sample Shutoff
 - 9.4 OPEN SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 9.5 OPEN SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
10. Record the sample stop Date/Time.
11. Place the NORMAL / MANUAL / AUTO switch to AUTO.
12. Place the LOCAL / REMOTE switch to REMOTE.

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Unit VENT Sampling			
Attachment 2	Continuous Unit Ventilation Sample Collection Using the Eberline GSP		Page: 6

NOTE: The Unit designators have not been included on the valve indicators. The valve numbers are the same on both units.

1. Record the Sample Flow Rate in cc/m from VFI-1529 for Unit 1 or VFI-2529 for Unit 2.
2. To terminate sampling:
 - 2.1 CLOSE SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 2.2 CLOSE SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
3. Record the sample stop Date / Time.
4. Disconnect and remove the SA - 16 sample holder from the grab sample pallet.
5. DO NOT remove the samples from the SA - 16 sample holder.
6. Install and connect a replacement SA - 16 sample holder, inlet side towards valve SM-277.
7. To initiate sampling:
 - 7.1 OPEN SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 7.2 OPEN SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
8. Adjust SM - 276 - Bypass Gas Sample Ioskinetic Nozzle, to obtain a sample flow rate of 70 cc/m on VFI-1529 for Unit 1 or VFI-2529 for Unit 2.
9. Record the sample start Date / Time.
10. Transport the samples in the SA - 16 sample holder to reduce radiation exposure.

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Category:

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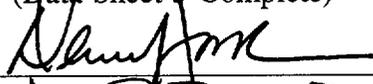
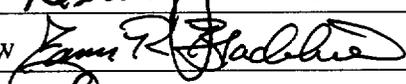
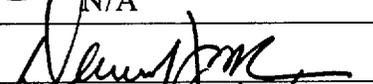
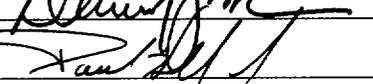
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| <input type="checkbox"/> Design Engineering | <input type="checkbox"/> Surveillance Section | |
| <input type="checkbox"/> Plant Engineering | <input type="checkbox"/> Performance Assurance | |
| <input checked="" type="checkbox"/> Chemistry/RP | <input checked="" type="checkbox"/> Business Services Procedure Group | |
| <input type="checkbox"/> Other: (Includes Technical Reviewer Determined Reviews) | | |

NUCLEAR RECORDS
MANAGEMENT SECTION

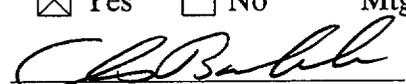
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CONTROLLED
DOCUMENT

Writer Task Reviews:

- Revision Summary attached? Yes
- Safety Screening complete? SS/SE Tracking No: 2000-0892-00 Yes Exempt N/A
- Implementation Plan developed? (Ref. Step 3.4.17) Yes N/A
- Periodic Review conducted? (Data Sheet 5 Complete) Yes No
- Cognizant Org Review: Dennis Loope  Date: 4/17/00
- Technical Review: Jim Bradshaw  Date: 4/18/00
- Ops Mgr Concurrence: N/A Date: 1/1
- Owner Concurrence: Dennis Loope  Date: 4/18/00
- Writer Review: Paul Holland  Date: 4/19/00

Approvals:

- PORC Review Required: Yes No Mtg. No.: 3692
- Approval Authority Review/Approval:  Date: 5/2/00
- Effective Date: 5/2/00

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This form is derived from the information in PMP-2010.PRC.002, Procedure Correction, Change, and Review, Rev. 5, Data Sheet 1, Review and Approval Tracking Form.

REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
Entire Procedure GENERAL	<p>Change: Entire Procedure reformatted to new procedure requirements of PMP-2010-PRC.001</p> <p>Reason: To comply with procedure writing requirements for format and to streamline the procedure, these changes are corrections by definition, per PMP-2010-PRC.002, paragraph 3.1.6. (a) 11.</p> <p>Many changes were made to the procedure which are strictly sentence structure or writing style changes to make the procedure more streamlined, these are sentence structure improvements per 3.1.6.(a)1.</p> <p>CHANGES ARE NOT MARGIN MARKED due to the entire procedure being rewritten.</p> <p>Since the entire procedure has been re-written/re-formatted, following is a summary of the procedure changes by new procedure sections. The changes to the procedure do not affect what is accomplished by the procedure, or how it is accomplished unless designated as such in the following change descriptions:</p>
1 Purpose and Scope	<p>Change: This is a new section that describes the purpose of the procedure and that its use is limited to emergency conditions. This replaces the Objective section of the previous revision. This change does not affect the intent of the procedure, or how or what the procedure accomplishes, it simply states the purpose & scope of use.</p> <p>Reason: New procedure format requirement.</p>
2 Definitions & Abbreviations Section	<p>Change: This is a new section in the procedure, it provides definitions for three acronyms used within the procedure. GSP-1S the grab sample pallet model number, and two emergency operating facility abbreviations, TSC (Technical Support Center) and OSA (Operations Staging Area).</p> <p>Reason: Required by new procedure format, this is a correction per PMP-2010-PRC.002, 3.1.6.(a) 7.</p>

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This is a free-form as called out in PMP-2010.PRC.002, Procedure Correction, Change, and Review, Rev. 5.

REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
3 Details	<p>Change: Deleted the previous procedures Responsibilities section. This is not required by the current formatting, and provided no value added to the procedure. The current Purpose & Scope defines its use as during emergency conditions only, therefore, it obviously would be directed by the emergency response organization.</p> <p>Reason: Not required by current format, This change deleted no action steps and did not alter intent or method of performing the procedure,</p>
3 Details	<p>Change: Deleted previous Precautions & Limitations section. This is not required by current formatting. This did not delete any action steps. There were three paragraphs previously:</p> <p>The first paragraph deleted, stated the provisions of PMP-2081-EPP.209 (On-Site Radiological Monitoring) including its precautions & limitations applied to the procedure use. This is still in effect without need to duplicate its statement here. The procedure is a PMP and its purpose and scope state its requirements are in effect within the owner controlled area during an emergency, deleting it in this procedure does not change that.</p> <p>The second paragraph deleted provided a warning of increased external radiological exposure. A single bullet in current paragraph 3.1.1 & 3.2.1 provide warning of increase dose rates while sampling during emergency conditions.</p> <p>The third paragraph deleted provided a warning that grab samples pose significant contamination sources, and described using ventilated laboratory hoods. This prescribes normally used sampling methods. It was deemed unnecessary.</p> <p>Reason: Extraneous words in procedure, deletion does not change what is accomplished by procedure, or method of performing sampling.</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
3.1 & 3.2	<p>Change: Deleted previous Prerequisites section (4 paragraphs) and replaced with details sections 3.1 for grab samples, and 3.2 for continuous samples. Sections 3.1 & 3.2 provide pre-job (or pre-task) briefing elements. These sections effectively replace the previous prerequisites and precautions & limitations sections.</p> <p>Reason: These sections provide; more accurate information regarding the sampling configurations and effects on unit vent SPING (Special Particulate Iodine Noble Gas Monitor) flow paths, warnings of increased dose rates, locations and types of sampling equipment, and directs attachment use for the respective sample type (grab or continuous). These steps and changes do not direct any action statements for performing the actual sampling, and do not affect methodology or outcome of what procedure is accomplishing.</p>
4 Final Conditions	<p>Change: This section states conditions after procedure actions have been taken. They are reworded from the previous procedure section 4.7 (Final Conditions), however, are essentially the same and do not change intent or how or what procedure accomplishes.</p> <p>Reason: This is a procedure correction as defined by PMP-2010-PRC.002, 3.1.6. (a) 11 & 18.</p>
5 References	<p>Change: References were updated</p> <p>Reason: Changes here do not affect any procedure actions, intent or outcome, they are corrections as defined by PMP-2010-PRC.002, 3.1.6.(a) 15.</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
<p>DELETION (removed previous exhibit a)</p>	<p>Change: Deleted previous procedure revision's exhibit a. This was used to record sample data, start/stop times/dates. Any references to completing this exhibit in the previous revisions section 4.5 & 4.6 were also deleted in attachment 1 and 2 which replaces sections 4.5 & 4.6 in the revision.</p> <p>Reason: Sampling data is recorded on sample envelopes provided. RP normally records all data on these envelopes which contain all necessary data. The previous data sheet (exhibit a) required duplication of work.</p>
<p>Attachment 1</p>	<p>Change: This attachment contains the instructions for completing a grab sample and replaces the previous procedure revision's steps in section 4.5. Following is a summary of changes:</p> <p>(Information only) The attachments are designated "Continuous use", whereas the body of the procedure is designated "Information use".</p> <p>Deleted previous procedure notes (two) in section 4.5, they do not provide any actions required to complete activity or warnings, they were simply statements of fact regarding system configurations.</p> <p>Deleted the following procedure steps from previous revision:</p> <p>4.5.7 (collect sample for time specified in briefing).</p> <p>4.5.13 (complete air sample envelope per normal procedure)</p> <p>4.5.14 (disassemble sample assembly and place iodine and particulate filter media in shielded sample container and attach air sample envelope)</p> <p>4.5.15 (deliver sample to location specified in team briefing)</p> <p>4.5.16 (return to OSA in accordance withEPP.209)</p> <p>Changes were made on attachment to correct for changes in the valve numbering on the Unit 1 and Unit 2 Vent Stack Eberline Grab Sample Pallets (GSP-1) located on the 650' elevation of the Auxiliary Building. These are corrections as defined by PMP 2010 PRC.002, 3.1.6.(a)12.</p> <p>The previous revisions Section 4.5, Obtaining Grab Sample,</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0

Title: UNIT VENT SAMPLING

Section or Step	Change/Reason For Change
Attachment 1 (cont)	<p>has references to valve numbers that were supplied by the vendor, Eberline Instrument Corporation. These are the generic valve numbers that come on all GSP-1 's. The sample pallet valve numbers have been replaced by the valve numbers on the Cook Plant Drawings. These new numbers can be found on drawings OP-1-5104F-33 and OP-2-5104F-34.</p> <p>SM-61 was changed to SM-280 and SM-62 was changed to SM-281.</p> <p>The previous revision did not account for ensuring proper system alignment and did not account for the positions of SM-279, SM-277, or SM-278. These were added to this revision's attachment.</p> <p>Section 4.5, step 4.5.9 was also changed. The final position of the NORMAL/MANUAL/AUTO switch was changed from NORMAL to AUTO. Placing this switch to NORMAL forces VRS-1500 or VRS-2500, Unit Vent SPING's, to return to their normal sampling configuration. The normal configuration has air passing through the lower and middle range channels. Doing so, with high levels of activity in the system (which is likely to occur during emergency conditions), will place the low and middle range detectors at a high risk of failure. The normal configuration overrides the intended function of the system. Placing the switch to AUTO, which is the usual position of this switch, allows the system trip functions to determine the correct sample flow alignment. This was verified by reviewing ECP1-2-V3-02 and discussions with the design engineer. The order of performing steps was changed to be more effective in accomplishing the sample activity.</p> <p>Reason: Attachments were made for these instructions to reduce time spent in sampling area and to minimize possible exposure due to reading and rifling through thicker procedure. Unneeded procedure steps and notes were deleted, again to reduce time. Equipment nomenclature had changed in plant, updated to current scheme. Revised order of steps to increase efficiency, the reorder does not affect outcome or results of procedure.</p>

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REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
 Title: UNIT VENT SAMPLING

Section or Step	Change/Reason For Change
Attachment 2	<p>Change: Developed to replace the previous procedure revision's section 4.6. Deleted the notes (three) in previous section 4.6, the first note simply said do this when directed by... and this sections function is..., the second note was a warning that is now included in the pre-activity briefing, that dose rates may be high. The third note (step 4.6.2) stated where replacement sample assembly was located. (this was determined to be skill of trade. The notes were deleted to reduce time spent in sample area reading unnecessary information).</p> <p>The following steps were deleted in their entirety from the previous revision:</p> <p>4.6.1.1 (proceed to the location of the sampling pallet) 4.6.1.4 (return to OSA & provide sample to RAC in TSC) 4.6.2.1 (proceed to sample pallet at location...) 4.6.2.3 (measure the contact dose rate of SA-16 & record) 4.6.2.6 (verify that the replacement SA-16 contains a particulate and iodine filter if not...) 4.6.2.10 (deliver the SA-16 to...) 4.6.2.12 (Return to the OSA and provide results to RAC).</p> <p>The deleted steps were instructions to go somewhere and/or where determined not required because it was skill of trade.</p> <p>Section 4.6, Unit Vent Continuous Sample, has references to valve numbers that were supplied by the vendor, Eberline Instrument Corporation. These are the generic valve numbers that come on all GSP-1 's. The sample pallet valve numbers have been replaced by the valve numbers on the Cook Plant Drawings. These new numbers can be found on drawings OP-1-5104F-33 and OP-2-5104F-34. These corrections meet the criteria of PMP-2010.PRC.002 step 3.1.6 (a).12 .</p> <p>V-3 was changed to SM-276. V-4 was changed to SM-277 V-5 was changed to SM-278.</p>

REVISION SUMMARY

Number: PMP-2081-EPP.210 Revision: 2 Change: 0
Title: **UNIT VENT SAMPLING**

Section or Step	Change/Reason For Change
Attachment 2 (cont)	<p>Reason: Attachments were made for these instructions to reduce time spent in sampling area and to minimize possible exposure due to reading and rifling through thicker procedure. Unneeded procedure steps and notes were deleted, again to reduce time. Equipment nomenclature had changed in plant, updated to current scheme.</p> <p>NOTE: Change Sheets 1 & 2 incorporated.</p>

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Unit Vent Sampling			
Multi-Use			Effective Date: <u>5/2/00</u>
<u>P. E. Holland</u> Writer	<u>D. C. Loope</u> Owner	<u>Site Protective Services</u> Cognizant Organization	

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1 PURPOSE AND SCOPE

- 1.1 The purpose of this procedure is to provide instructions for collection of grab or continuous air samples from the Eberline GSP-1S sample pallet for the Plant Unit Ventilation systems.
- 1.2 Use of this procedure is restricted to emergency conditions only. This procedure will take normally used sampling equipment off line.

2 DEFINITIONS AND ABBREVIATIONS

Term	Meaning
GSP-1S	Model Number given to the Eberline grab sample pallet
OSA	Operations Staging Area
TSC	Technical Support Center

3 DETAILS

3.1 Unit Ventilation Grab Samples

3.1.1 Prior to releasing the sample team from the OSA, perform a pre-job brief which includes but is not limited to the following:

- This procedure will force the Unit Ventilation SPING flow path to its accident configuration. It will return to its previous configuration when sampling is complete.
- Sample flow rates will be approximately 4 lpm. Determine the total sample volume prior to releasing the team from the OSA.
- Sample heads, 47 mm Particulate Filters, Silver Xeolite Cartridges and Sample Envelopes are located in the emergency sampling box stored in the turbine side Radiation Protection Counting Room.
- Dose rates can increase rapidly during sampling in emergency conditions.

Unit VENT Sampling

- Determine the sample delivery location prior to releasing the team from the OSA.

3.1.2 Use Attachment 1 for sample collection instructions.

3.2 Unit Ventilation Continuous Sampling

3.2.1 Prior to releasing the sample team from the OSA, perform a pre-job brief which includes but is not limited to the following:

- Continuous sampling will only occur if the Unit Ventilation SPING flow path is in its accident configuration.
- Continuous sampling starts automatically when the Unit Ventilation SPING flow path is in its accident configuration. Obtain the initial sample start time from the TSC.
- 2.5 inch (63.5 mm) Particulate Filters, Silver Xeolite Cartridges and Sample Envelopes are located in the emergency sampling box stored in the turbine side Radiation Protection Counting Room.
- Determine the location of the replacement SA - 16 sample holder prior to releasing the team from the OSA. Initially it will be located at the GSP-1S sample pallet. It probably has been moved if previous sample changes have occurred.
- Decontamination of the SA - 16 may be necessary prior to its re-use.
- Dose rates can increase rapidly during sampling in emergency conditions.
- Transport samples in the SA - 16 sample holder to reduce radiation exposure.
- Determine the sample delivery location prior to releasing the team from the OSA.

3.2.2 Use Attachment 2 for sample collection instructions.

4 FINAL CONDITIONS

4.1 The samples have been collected and delivered.

Unit VENT Sampling

4.2 The sample team has returned to the OSA.

5 REFERENCES

5.1 Use Reference:

5.1.1 None

5.2 Writing References:

5.2.1 Source References:

- a. Drawing Number OP-1-5104F-33
- b. Drawing Number OP-2-5104F-34
- c. ECP # 1-2-V3-02 Revision 6 "Unit Vent Effluent Radiation Monitoring", Section I, sheet 11 of 15 and Calculation # 5

5.2.2 General Reference

- a. Eberline Model AXM-1 "Accident Range Monitor Technical Manual" Revision 1, July 1985, Section 12
- b. Technical Specification 6.8.3 Item b.

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Unit VENT Sampling			
Attachment 1	Continuous Unit Ventilation Grab Sample Collection Using the Eberline GSP		Page: 5

NOTE: The Unit designators have not been included on the valve indicators. The valve numbers are the same on both units.

1. Place the LOCAL / REMOTE switch to LOCAL.
2. Place the valves to the indicated positions:
 - 2.1 OPEN SM-279 - Bypass Gas Sample Return Line Shutoff
 - 2.2 CLOSE SM-280 - Bypass Gas Return Sample Shutoff
 - 2.3 CLOSE SM-281 - Bypass Gas Supply Sample Shutoff
 - 2.4 CLOSE SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 2.5 CLOSE SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
3. Place the NORMAL / MANUAL / AUTO switch to MANUAL.
4. Attach the inlet of the sample assembly to SM-281 - Bypass Gas Supply Sample Shutoff.
5. Attach the outlet of the sample assembly to SM-280 - Bypass Gas Return Sample Shutoff.
6. To initiate sampling:
 - 6.1 OPEN SM-280 - Bypass Gas Return Sample Shutoff
 - 6.2 OPEN SM-281 - Bypass Gas Supply Sample Shutoff
 - 6.3 CLOSE SM-279 - Bypass Gas Sample Return Line Shutoff
7. Record the sample start Date/Time.
8. Record the Sample Flow Rate in lpm from VFI-1524 for Unit 1 or VFI-2524 for Unit 2.
9. To terminate sampling:
 - 9.1 OPEN SM-279 - Bypass Gas Sample Return Line Shutoff
 - 9.2 CLOSE SM-280 - Bypass Gas Return Sample Shutoff
 - 9.3 CLOSE SM-281 - Bypass Gas Supply Sample Shutoff
 - 9.4 OPEN SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 9.5 OPEN SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
10. Record the sample stop Date/Time.
11. Place the NORMAL / MANUAL / AUTO switch to AUTO.
12. Place the LOCAL / REMOTE switch to REMOTE.

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Unit VENT Sampling			
Attachment 2	Continuous Unit Ventilation Sample Collection Using the Eberline GSP		Page: 6

NOTE: The Unit designators have not been included on the valve indicators. The valve numbers are the same on both units.

1. Record the Sample Flow Rate in cc/m from VFI-1529 for Unit 1 or VFI-2529 for Unit 2.
2. To terminate sampling:
 - 2.1 CLOSE SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 2.2 CLOSE SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
3. Record the sample stop Date / Time.
4. Disconnect and remove the SA - 16 sample holder from the grab sample pallet.
5. DO NOT remove the samples from the SA - 16 sample holder.
6. Install and connect a replacement SA - 16 sample holder, inlet side towards valve SM-277.
7. To initiate sampling:
 - 7.1 OPEN SM-277 - Bypass Gas Sample Particulate Iodine Filter Inlet Shutoff
 - 7.2 OPEN SM-278 - Bypass Gas Sample Particulate Iodine Filter Outlet Shutoff
8. Adjust SM - 276 - Bypass Gas Sample Isokinetic Nozzle, to obtain a sample flow rate of 70 cc/m on VFI-1529 for Unit 1 or VFI-2529 for Unit 2.
9. Record the sample start Date / Time.
10. Transport the samples in the SA - 16 sample holder to reduce radiation exposure.