ENCLOSURE 6

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REQUEST FOR LICENSE AMENDMENTS
CONTROL BUILDING EMERGENCY VENTILATION SYSTEM
(NRC TAC NOS. MA0112 AND MA0113)

PLANT PROCEDURE 0FPP-038,
"OPERATION OF THE SCBA REFILL SYSTEM"

PLANT OPERATING MANUAL

VOLUME XIX

FIRE PROTECTION PROCEDURE

UNIT
0

0FPP-038

OPERATION OF THE SCBA REFILL SYSTEM

REVISION 1

EFFECTIVE DATE
5-7-97

Sponsor _____ 4/23/97
Date

Approval *N/A (Word Conversion)*
Manager - Loss Prevention Unit

Date

REVISION SUMMARY

Clerical Revision due to conversion of procedure from WordPerfect 5.1 DOS to Microsoft Word 7.0.

LIST OF EFFECTIVE PAGES

Page(s)	Revision
1-12	1

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1.0 PURPOSE

The purpose of this procedure is to establish the Operational Guidelines for the SCBA Refill System.

2.0 REFERENCES

2.1 E&RC-0135, Sampling of Breathing Air to Meet Grade D Air Specifications

2.2 Instruction Manual, Baron II Fill System Model BAP20TC3

2.3 4000 Series Ecolyzer Carbon Monoxide Monitor Instruction Manual

2.4 50L Series Cartridge Type Breathing Air Purifier Manual

2.5 ECU Controls - Program 167A Manual

3.0 RESPONSIBILITIES

3.1 The Loss Prevention Unit (LPU) Shift Supervisor is responsible for the controlled usage of the SCBA Refill System through implementation of this procedure.

3.2 The LPU Shift Supervisor or designee is responsible to qualify and designate personnel to operate the SCBA air compressor. In addition, he is responsible to obtain and to connect a temporary electrical generator to supply power to the air compressor in the event of a loss of off-site power or obtain alternate use of Long Beach Fire Department compressor or portable cascade system.

4.0 DEFINITIONS/ABBREVIATIONS

4.1 ppm - parts per million

4.2 psi - pound per square inch

4.3 SCBA - self-contained breathing apparatus

4.4 SCFH - standard cubic feet per hour

4.5 LPU - Loss Prevention Unit

5.0 GENERAL

The SCBA Refill System should be operated to supply compressed air for BSEP breathing air equipment only. Local fire departments may use the SCBA Refill System with authorization from the LPU Shift Supervisor or designee.

6.0 PREREQUISITES

N/A

7.0 PRECAUTIONS AND LIMITATIONS

7.1 Precautions

Compressed air is very dangerous. Extreme care must be exercised at all times when operating the SCBA air compressor system and when handling SCBA bottles. Strict adherence to the procedural steps, as outlined in Section 10.0, is required by all personnel involved with the operation of the SCBA Refill System.

7.2 Limitations

7.2.1 Only personnel who have been designated by the LPU Shift Supervisor or designee as qualified operators shall be permitted to operate the air compressor in accordance with this procedure.

7.2.2 LPU personnel will be responsible for implementation of trouble tickets needed for the repair of the Baron II Model BAP20TC3 Air Compressor System.

7.2.3 The SCBA Refill System Use Log, Attachment A, should be completed prior to each use of the SCBA Refill System. Steps 10.1.6 to 10.1.9 should be performed at least every seventh operational day that the SCBA Refill System is in use. These steps involve checks for compressor motor oil level and vibration damage.

7.2.4 Breathing air compressors will be sampled whenever maintenance is performed that could affect the quality of the air, as determined by the RC Instrument Supervisor.

7.2.5 Sampling of the SCBA Refill System shall be performed quarterly or after maintenance in accordance with E&RC-0135.

7.2 Limitations

7.2.6 During operation of the SCBA Refill System, the carbon monoxide analyzer should be in service. The system may be operated without the monitor. An automatic high temperature shut-off is also part of the compressor safety features to guard against carbon monoxide.

7.2.7 Do not operate the refill system if vehicles or internal combustion engines are running in or near the building, unless the carbon monoxide monitor is functional.

8.0 SPECIAL TOOLS AND EQUIPMENT

8.1 Baron II Model BAP20TC3 Air Compressor System

8.2 Ecolyzer 4000 Carbon Monoxide Analyzer

8.3 Ingersoll-Rand ECU with Vorne message display

8.4 Oil Type Mobile DTE or equivalent

9.0 ACCEPTANCE CRITERIA

9.1 Air quality shall meet or exceed Grade D air specifications as listed in E&RC-0135.

9.2 Charge limits on the SCBA bottles are:

	Minimum PSI	Maximum PSI
Scott II	2216	2500
Scott 4.5	4500	5000

SCBA bottles should read full after reaching this pressure.

9.3 SCBA cylinders must be inspected for damage and verified to have a current hydro test date (< 5 years for aluminum or steel cylinders and < 3 years for fiberglass wrapped cylinders).

10.0 PROCEDURE STEPS

10.1 Preoperational Checks

10.1.1 Record date, time, operator, and start hour meter reading on Attachment 1 or similar form.

10.1 Preoperational Checks

10.1.2 Turn "Master Switch" to ON position if found in OFF position. This is so the message display may be read for any possible adverse conditions.

10.1.3 Verify power is ON to the CO Monitor Ecolyzer 4000 (indicated by a green light) and to the compressor (indicator by message movement on the display of the refill system).

NOTE: If the power to the CO Monitor is found off, the sensor may require a warm-up of ≤ 8 hours. If the CO Monitor is off for < 8 hours, an equal amount of warm-up time is required.

10.1.4 Open the grill at the front of the compressor by loosening the two screws on the right-hand side.

10.1.5 If the following checks have been completed within the last seven operational days and the appropriate adjustments made, proceed to Step 10.1.10. (See Attachment 1 posted on compressor to verify when last completed.)

1 - Motor oil level

2 - Loose or missing hardware/vibration damage

10.1.6 Turn "Master Switch" to OFF position.

10.1.7 Check the compressor oil level and add oil if necessary. Any indication above low is satisfactory. Use MOBIL DTE oil or equivalent.

10.1.8 Turn "Master Switch" to ON position.

10.1.9 Inspect entire unit for vibration damage such as loose or missing hardware. Repair as needed. Enter date under "Oil/Vibr. Date" on Attachment 1.

10.1 Preoperational Checks

NOTE: If the compressor needs to be auto-started to complete a step, slightly open the "Drain" valve located on the lower right side of the refill system. The compressor will periodically run as pressure is reduced in the system. To stop compressor, close "Drain" valve. When enough pressure has built up, the unit will auto-stop.

10.1.10 If a "loss of power" message is on the display, reset by turning the "Master Switch" to the "OFF" position and back to the "ON" position.

10.1.11 Check message display. If the display reads any of the following at anytime, stop and notify LPU Shift Supervisor or designee immediately.

A) MOTOR OVERLOAD
B) CHECK OIL
C) HIGH MOISTURE
D) CARTRIDGE EXPIRED
E) HI AIR TEMP.
F) HIGH CO
G) MAINTENANCE 100 HR
H) OVERTIME TIMER

NOTE: Refer to Instruction Manual, ECU Controls Section, for explanation of display.

10.1.12 Auto-start compressor with the "Drain" valve slightly opened to ensure moisture is evacuated from the system if not done in previous step.

NOTE: Storage bank bottle drain valves should be opened long enough to evacuate moisture monthly.

10.1.13 While the compressor is running, adjust the yellow capped "Regulator" knob to 5 psi and the "Metering Valve" knob to 1.5 SCFH (ball behind red line) if needed.

10.1 Preoperational Checks

NOTE: If carbon monoxide monitor is not working, mark Attachment 1 CO Level (ppm), N/A, then check for the operation of any vehicles or internal combustion engines in or near the building. Do not operate this system if vehicles or engines are present and running.

10.1.14 While compressor is running, record carbon monoxide monitor reading on Attachment 1. If greater than 10 ppm, do not use the compressor. Contact LPU Shift Supervisor or designee for guidance.

10.1.15 Close the "Drain" valve.

10.2 Air Control Panel Lineup

10.2.1 Place fill mode selector in DRY position.

10.2.2 Turn FILL valve off, full clockwise position.

10.2.3 Turn BLEED valve to off, full clockwise position.

10.2.4 Turn AUX. FILL valve off, full clockwise position. Located on right side of compressor.

10.2.5 Pull down door at fill station. Raise handle between 2nd and 3rd tube to tilt tubes outward. Ensure charging whips are snug on their storage posts.

10.3 Filling Operation of Storage Banks

Storage bank filling is automatic.

10.4 Filling of SCBA Cylinders

10.4.1 Inspect cylinder for current hydro date (less than five years for aluminum or steel and less than three years for fiberglass wrapped) or physical damage. If outdated or damaged, do not use.

10.4 Filling of SCBA Cylinders

CAUTION

DO NOT mix cylinders of different pressure ratings. All cylinders being charged must be of same rated pressure.

DO NOT charge the Scott II bottles over 2500 psi.

10.4.2 Place cylinders inside rupture tubes.

10.4.3 Connect charging whips to all cylinders before opening cylinder valves.

10.4.4 Open cylinder valves slowly; pressure will equalize between cylinders.

10.4.5 Tip tubes/cylinders upright until locked in place.

10.4.6 Close door slowly.

10.4.7 Regulators are preset.

CAUTION

Do not press red button when charging Scott II bottles.

NOTE: Every time door is opened, unit will automatically reset to 2216 psi. To fill 4500 psi cylinders, depress red button between Supply gauge and Reg Press gauge after door is closed.

10.4.8 Slowly open fill valve to desired charging rate. Recommended charging rate is 1500 psi/min or less.

10.4.9 Once SCBA gauge indicates cylinders are full, close fill valve.

10.4.10 Open door, tip tubes/cylinders out, and close cylinder valves.

10.4.11 Slowly open bleed valve to relieve pressure on charging whips. Remove whips from cylinders and place on storage posts.

10.4 Filling of SCBA Cylinders

10.4.12 Close bleed valve.

10.4.13 Remove cylinders. Verify cylinder gauge is within the "Full" range. If so, place in storage rack. If not, place a Do Not Use tag on cylinder valve and return to rack. Notify LPU Shift Supervisor of any DO NOT USE cylinders.

10.4.14 Repeat Steps 10.4.1 through 10.4.13 as necessary.

10.4.15 If filling procedures cannot be completed due to problems with air compressor, notify the LPU Shift Supervisor or designee immediately.

10.5 Postoperational Checks

10.5.1 Place Fill Mode valve in DRY position.

10.5.2 Close FILL valve.

10.5.3 Close BLEED valve.

10.5.4 Close door.

10.5.5 Record hour meter reading in Stop location of Attachment 1 and calculate run time.

10.6 Record all results on Attachment 1. Post Attachment 1 on front of compressor. Completed originals shall be forwarded to the permanent records storage vault under the currently approved method. A completed copy of the current revision of the QA Records Transmittal/Receipt Form shall accompany any forms transmittals.

11.0 DIAGRAMS/ATTACHMENTS/CALCULATIONS

11.1 Diagrams

N/A

11.2 Attachments

Attachment 1 - SCBA Refill System USE Log (or similar form)

11.3 Calculations

N/A

ATTACHMENT 1
Page 1 of 1

SCBA Refill System Use Log

DATE	TIME	HOUR READING		RUN TIME (HOURS)	CO LEVEL (ppm)	OIL/VIBR.* DATE	COMMENTS
		START	STOP				

*To be done every seventh operational day