

## EXHIBIT V – OPERATING AND MAINTENANCE MANUALS

### 1 OPERATION AND MAINTENANCE (O&M) MANUALS

#### 1.1 NUMBER OF MANUALS

[REDACTED]

#### 1.2 CONTENT OF MANUALS

The O&M manuals shall be fully indexed, the content shall conform to the requirements described in this article and shall be complete and specific to all the systems, auxiliary systems and equipment supplied.

Material and information that does not contribute to the understanding of the design, operation and maintenance of the equipment shall be excluded from the manuals. Information that does not apply shall be removed from the manual or redacted. Drawings, diagrams, pictures or photographs shall be used to add to the understanding of the text. Where manufacturer's standard brochures are available in a suitable form and relating specifically to the equipment supplied, these may be used, provided the brochures are edited to remove irrelevant material and are integrated into the overall manual.

The manuals shall contain information suitable for personnel who have received a basic training and/or have a knowledge and experience of similar equipment.

The manuals shall alert the operating staff to any hazard inherent in the equipment or likely to arise in the implementation of operating or maintenance procedures.

The O&M manual shall be organized by sections, if the overall quantity of information is greater than a four (4) inch binder, the manual shall be organized in multiple volumes. The manual should be arranged to enable normal operation of the equipment without undue reference to other documents.

[REDACTED]

The O&M manuals shall contain the functional content as listed below, however the organization and format shall be in accordance with the Contractor's standard.

#### Operation

1. Table of contents for section
2. Overall system (or equipment) overview description, operating philosophy, and operating conditions
3. Detailed description of equipment
4. Detailed description of instrumentation & controls, interlocks, and alarms
5. Operational procedures, including:  
[REDACTED]

[REDACTED]

6. Details of software programs for all control and supervisory equipment, with adequate comments to enable their comprehension by programming engineers other than those originating the material
7. As-Built arrangement drawings, if available, pictures or photographs of major equipment items, piping and instrument diagrams, single line diagrams and block cable diagrams
8. Complete equipment lists, cable lists, piping lists, valve lists, instrument lists, and motor lists
9. Equipment performance and performance correction curves
10. Warranties and guarantees
11. Installation instructions

Maintenance [REDACTED]

12. Table of contents for section
13. Recommended routine maintenance activities and the frequency at which they should be performed
14. Preventative maintenance procedures, including:
  - List of tools and specialist required
  - Maintenance instructions
  - Settings, clearances and adjustment data
  - Re-commissioning instructions
  - Preservation instructions with procedures and precautions to be taken in the event of prolonged shutdown

[REDACTED]

18. [REDACTED]
19. Contact information for suppliers and instructions for ordering replacement parts
20. Contact information for nearest manufacturer authorized service centers

21. Any special handling or storage procedures required for spare parts.

Quality Documentation, Miscellaneous

22. Table of contents for section

23. Factory test and calibration certificates, test reports, and QA documentation.

24. Miscellaneous Documentation

Information listed above shall be bound into hard-back binders. Four (4) manuals are required, two (2) in heavy duty Bok-Hinge Split Prong or McBee Swing Hinge post type binders and two (2) in standard binders. Sheet size shall be 8-1/2" x 11". Binder color shall be black. Capacity shall be a minimum of 1-1/2 inches, but sufficient to contain and use sheets with ease.

Provide the following accessories:

- Label holder.
- Business card holder.
- Sheetlifters.
- Horizontal pockets.

The following information shall be imprinted, inserted, or affixed by label on the binder front cover: See Section 2 for details.

- Owner's name.
- Owner's facility or plant name.
- Equipment item name.
- Volume number (if applicable).
- Contract number.
- Manufacturer's name and address.

The following information shall be imprinted, inserted, or affixed by label on the binder spine:

- Equipment item name.
- Owner's name and Owner's facility or plant name.
- Manufacturer's name.
- Contract number.
- Volume number (if applicable).

Submit mockup of cover and spine for Owner's review.

**2 TYPICAL INSTRUCTION BOOK OR OPERATING MANUAL COVER AND SPINE LAYOUT**

<p><b>[ ]</b>  <b>EQUIPMENT</b></p>	<p><b>LG&amp;E</b></p>	<p><b>22</b></p>
<p><b>LG&amp;E</b></p>	<p><b>Cane Run [ ]</b></p>	<p><b>18</b></p>
<p><b>Cane Run [ ]</b></p>	<p><b>(Instruction Book) (Operating Manual)</b>  <b>for</b>  <b>[ ]</b></p>	<p><b>36</b></p>
<p><b>Contract    Number _____</b></p>	<p><b>Volume Number* _____</b></p>	<p><b>22</b></p>
<p><b>Volume    Number* _____</b></p>	<p><b>Contract Number _____</b></p>	<p><b>16</b></p>
	<p><b>Manufacturer's Name</b></p>	<p><b>22</b></p>
	<p><b>Manufacturer's Address</b></p>	<p><b>18</b></p>

NOTES:

1. Choose either "Instruction Book" or "Operating Manual."
2. All lettering shall be a block style font, imprinting color to contract with binder color specified.
3. Cover lettering shall be point sizes indicated in column to right of cover illustration.
4. Spine letter shall be 14-point minimum.
5. \*Volume number required only if instructions are contained in more than one volume.