Frederick National Laboratory for Cancer Research, Frederick, MD

Biopharmaceutical Development Program

Standard Operating Procedure

Title: Use of WFI System Points of Use at the [redacted]

SOP Number: 19401

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Approval/Date:

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1.0 Purpose

This SOP describes the proper procedure for use of the WFI points of use (POU) in the A2 manufacturing areas of the [redacted]. Strict adherence to these procedures will maximize WFI quality and minimize the risk of cross contamination.

2.0 Scope

This SOP applies to the WFI use points in the [redacted] manufacturing areas of the [redacted].

3.0 Authority and Responsibility

3.1 The Director, Technical Operations, Late Process Sciences, Biopharmaceutical Development Program (BDP) has the authority to define this procedure.

3.2 BDP personnel are responsible for the implementation of this procedure.

3.3 Biopharmaceutical Quality Assurance (BQA) is responsible for quality oversight of this procedure.

This procedure is made available through federal funds from the National Cancer Institute, NIH, under contract [redacted].

4.0 Materials and Equipment

4.1 WFI System at the• .

4.2 Medical-grade Silicone tubing or BOP approved equivalent.

4.3 Smooth bore flex lines dedicated with tags for WFI use.

4.4 Diaphragm valve, 1½" sanitary connection.

4.5 1" or 1½" sanitary gaskets and end caps.

4.6 Cable ties.

4.7 Gloves (nitrile, neoprene, or latex).

5.0 Procedure

5.1 The WFI System consists of two loops that originate in the [redacted] run to all the use points in the [redacted] spaces , and return to the [redacted]. The system is under pressure and constantly flowing in order to deliver WFI and prevent microbiological contamination. Sanitary end caps are placed on each point of use in order to prevent accidental discharge of WFI onto the floor.

5.2 The system must be released for use by BQA Engineering.

5.3 The temperature of WFI at the use points varies from ambient to approximately 85°C depending on location and time of day. Operators must exercise caution to avoid being burned when drawing hot WFI (HWFI).

5.4 Usage of any WFI Point-Of-Use (POU) should be done while wearing gloves (nitrile, latex, neoprene) to reduce the risk of contamination to the POU. Also, any sanitary gaskets used for connecting to a POU should be new or dedicated to WFI system use and free of any potential contaminants. If at any time they fall on the floor or show signs of deterioration, a new or clean gasket should be used.

5.5 Verify the pneumatic valve is closed (LED on the valve body is blue). Attach a non-product contact stored appropriately to allow free draining and covered open ends) secondary diaphragm valve to the desired POU and then attach an appropriate length of new, unused medical-grade silicone tubing or a dedicated WFI flex line to the diaphragm valve, secure with a cable tie or sanitary gasket, and clamp as appropriate. When using silicone tubing record on the outside of the tubing the date attached.

NOTE: A secondary diaphragm valve is required to regulate the flow of water from the WFI POU. Not using a secondary valve could reduce the pressure in the loop too quickly and cause the loop to shut down on a low-pressure fault. This diaphragm valve must be clean and stored appropriately (open, vertical to allow free draining, ends covered) when not in use.

fil2!§,: Silicone tubing may be used for one day only. The dating on the tubing is to ensure that tubing is not inadvertently used again the next day. Dedicated WFI flex-lines are not to be marked with dates and are intended for repeated use.

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5.6 For all POUs not connected to dedicated equipment (vial washer, parts washer, CIP skid, etc.), the controls for the POU are located on the electrical panel on the same wall as the POU. There are two lights, green indicates the POU is available for use and red indicates the POU is not available (due to high temperature in the loop).

5.6.1 If the green light is illuminated, pressing the green button on the panel associated with the POU will open the pneumatic valve (LED light on the valve body will turn green) and allow the flow of water.

5.6.2 If the red light is illuminated, the loop is currently too hot for use. This is either due to an ongoing sanitization or the night setback. During normal working hours, if the red light is illuminated it is likely due to a sanitization and the Facilities Manager should be consulted prior to attempting to override the system. If outside of normal working hours, the system is in night setback mode. To override this, press the black button associated with the WFI POU. In a few minutes the loop will cool down for use and the green light will illuminate. At this point WFI may be used as in 5.6.1. This override lasts for one hour before the system returns to setback mode.

5.7 Flush the POU for 15-30 seconds.

5.8 Draw WFI as needed. Be careful not to allow the open end of the flex line/tubing to become contaminated by coming in contact with other surfaces, liquids, etc. WFI drawn and not sterile-filtered into a container for future use is good for one day per **SOP 19001 – Guidelines for Use of Water in Production Processes Used in the Biopharmaceutical Development Program**, after which it must be discarded and fresh WFI drawn.

5.9 If no more WFI is to be drawn for an hour or more, press the red button associated with the POU to close the pneumatic valve (LED will change to blue). Then disconnect the secondary valve and flex line/tubing, drain any water from the flex line/tubing and hang so that open ends are protected from contamination. Replace the sanitary end cap. Follow Steps 5.4 – 5.8 if the hose is needed later in the day to draw water.

5.10 At the end of the day, verify removal of tubing from each WFI use point and discard silicone tubing. Ensure the red button has been pressed and the pneumatic valve is closed before disconnecting the secondary valve. Ensure the sanitary end cap is replaced.

NOTE: Dedicated WFI flex-lines are not discarded but should have open ends covered at the end of the day after draining.

5.12 If elevated levels of contaminants are detected during routine water monitoring, typical responses to address the issue may include, but are not limited to: cleaning or autoclaving the secondary valve; cleaning, autoclaving, or replacing the sanitary gaskets or endcaps; chemical disinfection of the POU, and heat sanitization of the entire loop.

6.0 References and Related Documents

6.1 **SOP 19001** *Guidelines for Use of Water in Production Processes Used in the Biopharmaceutical Development Program*

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