STANDARD OPERATING PROCEDURE – Processing Plant Computer System

INTRODUCTION

The computer system that controls all of the dairy processing equipment was custom designed for the Berkey Creamery. Some of the normal routine computer functions, such as starting up, shutting down, backing up data to the server and recovering from a computer failure are unique.

SYSTEM CONFIGURATION

1. There are two personal computer (PC) based systems that run simultaneously. The one labeled "SOFTLOGICS" controls mechanical devices such as pumps and valves. The one labeled "RSVIEW HMI" controls the touch screens located throughout the plant. The RSVIEW HMI computer is the only one capable of communicating externally.
2. Each computer has a USB memory stick that contains licensing information. These memory sticks must be plugged in at all times. **During a reboot, the USB memory stick should be left unplugged until the first windows XP screen is seen.**

ROUTINE COMPUTER FUNCTIONS

1. Start both the SOFTLOGICS and the RSVIEW HMI computers as you would a normal PC. All of the processing plant operations will automatically begin functioning when the computers are started.
2. Shut down both the SOFTLOGICS and the RSVIEW HMI computers as you would a normal PC by selecting the "Start" box in the lower left corner, followed by the "Shut Down" box. Do NOT use the "X" in the upper right corner to shut down the computers. As a precaution against accidentally selecting the "X" box, it is safer to minimize and maximize images using the boxes located at the bottom of the screen.
3. Both computers should be re-started periodically. A suggested interval is bimonthly. This would be accomplished utilizing steps 1 and 2 as stated above.
4. If a reboot is necessary, follow the sequence below:
    a. Shut down both computers.
    b. Unplug both USB memory sticks.
    c. Turn on the SOFTLOGICS computer and allow it to complete its start-up sequence, plugging the USB memory stick in when the first Windows XP screen is visible.
    d. Wait five minutes.
    e. Turn on the REVIEW HMI computer and allow it to complete its start-up sequence, plugging the USB memory stick in when the first Windows XP screen is visible.
5. In the event of computer failure, follow the sequence below:
    a. Shut down the faulty computer and unplug it from the power supply.
    b. Remove the memory stick and plug it in the USB port of the new computer, tagged as the same computer as the one that failed.
    c. Carefully label each connection to the Ethernet before unplugging it and transferring it to the new computer. Note the order of the ports.
    d. Move the mouse, keyboard and monitor to the new computer.
    e. Start the new computer.

COPYING INFORMATION TO THE CREAMERY OFFICE SERVER

1. Vital information stored on the RSVIEW HMI computer should be periodically copied to the server located in the creamery office. The data on the Creamery server is backed up daily. A suggested interval for copying data is bimonthly.

2. As an example, to copy CIP records onto the server, follow the sequence below:
    a. select “Local Disk (C)”
    b. select “Program Files”
    c. select “Ecolab”
    d. select “Graphxx”
    e. select “Local”
    f. highlight the desired files
    g. select “Copy”
    h. Press the “page back” arrow until you return to the “My computer” page
    i. select “Creamery_CIP_data (Y)”
    j. enter the password for the Creamery server
    k. select “Paste”

CLIENT SOFTWARE

1. Client software allows the touch screens to interface with the RSVIEW HMI computer.
2. The computer used to load the client software into the RSVIEW HMI computer is located inside the HTST control terminal, mounted behind the touch screen.
3. To load the software follow the sequence below:
    a. Windows must be running
    b. Place the client software compact disk into the computer inside the HTST terminal
    c. Select “Connect to RSVIEW” on the RSVIEW computer.
    d. Select “Display Client”.
    e. Remove the client software compact disk.

TOUCH SCREENS

1. The touch screens located throughout the processing plant use client software and there are only a limited number of floating licenses available for the simultaneous use of this software. Therefore, when an operator is finished at a work station, they should shut down the client software, thus freeing a license for use elsewhere.
2. To shut down the client software, DO NOT use the Microsoft “X” located in the upper right hand corner of the screen. Instead, touch the “Close Display” selection on the main screen. A red banner will appear on the screen asking if you are sure. Touch “Yes”.
3. A screen saver program will initiate when a touch screen hasn’t been used in a pre-set period of time. To deactivate the screen saver, touch the upper left hand corner of the screen.

REPLACEMENT OF A TOUCH SCREEN

1. Verify the internet address 50.0.1.nn
2. Copy the following files to the new touch screen:
   C:\WINDOWS/SYSTEM32/fm20.dll
   C:\TEMP/PennState.dst
   C:\desktop/Short cut to radstation32
3. Load “Active display #7.1 Client” from a disk in the computer room onto the new touch screen.
4. Go to Start – network connections, then highlight the first identified connection – right click properties, select tcpip, then right click properties – set network IP address.
5. Go to start – select control panel, then administrative tools, then component services, then under console root – select component services, then computers, then my computer, then expand the selection – highlight “distributed transaction coordinator” on the upper tool bar there is a computer icon at the end of the row – a drop down box with 6 flaps will appear after the computer icon has been selected – select the “com security”, this will display 4 flaps, “edit limits” and “edit default”. Select each of these and add “anonymous” to each selection, then give permission to allow each action for every flap.
6. Shut down windows and reboot the computer.
7. Start the machine, wait for it to complete booting.
8. Start the short cut on the desktop to initiate RSview32.

The following individual is responsible for implementation of this SOP and has overall authority on-site:

Name: _____ Title: _____ Date: _____