**“*Addition of Navy Reports to Calibration Report Utility*”**

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# **REVISION LOG**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Revision: 1.0** | | **Effective Date:** | | |
| **Section** | **Justification** | | | **Changes** |
|  |  | | |  |
| **Impact of above change(s) on other documents:** | | |  | |

# **PROCEDURE STATUS**

Current Status is ***Draft***.

# **REFERENCES**

<https://mysite.jci.com/personal/ckingco_jci_com/Documents/Forms/All.aspx?e=5%3A77f7282bb6904346b51e62ff5a24c19f&sharingv2=true&fromShare=true&at=9&CID=1c1881ae%2D624f%2D4c80%2D938f%2D8138e2b85e1d&RootFolder=%2Fpersonal%2Fckingco%5Fjci%5Fcom%2FDocuments%2FDesktop%2FNavy%20Reports&FolderCTID=0x0120008D3279C5D6CF504DBE9B907E73704B91>

A diagram of a company

Description automatically generated

[https://leplb0040.upoint.ap.alight.com/ah-angular-afirst-web/ - /web/jci/homepage](https://leplb0040.upoint.ap.alight.com/ah-angular-afirst-web/#/web/jci/homepage)

# **PURPOSE**

To document the current process for creating a Navy Report and show the proposed changes to integrate the process into the current Calibration Report Utility.

# **SCOPE**

Scow current and future proposed Navy Report Process.

# **PERSONNEL TRAINING AND QUALIFICATION**

1. Excel Experience
2. Knowledge of Calibration Report Utility
3. Access to OneDrive
4. NI LabVIEW

# **APPARATUS AND EQUIPMENT**

1. Microsoft Excel
2. LabVIEW 2015 Runtime
3. Calibration Report Utility.exe
4. Microsoft One Drive
5. NI LabVIEW 2015 SP1

# **CURRENT PROCEDURE**

1. An email from someone, requesting a calibration report for instruments will come in.
   1. Example:

*Subject: FW: Labview TR Info - 570 Production TR24-0043*

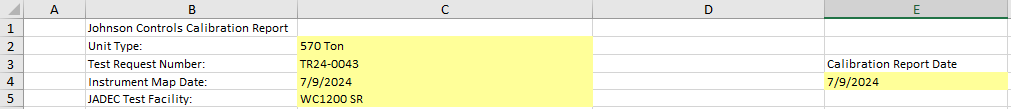
*Can I please get the instrumentation calibration report for the instruments on the attached map as well as the 1200 SR instruments. Please use TR 24-0043 and run 15.01 taken on 7/8/24.*

* 1. Important information is highlighted. This information will be used to get the proper information as well as build the header.
     1. Size of 570 Ton
     2. Test Request TR24-0043
     3. System 1200 SR
     4. Date of 07/08/2024

1. A computer screen with a video player

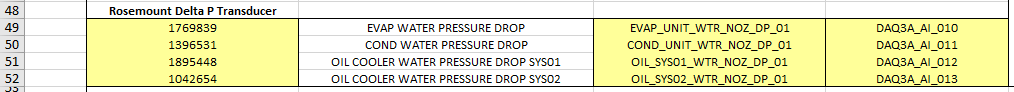
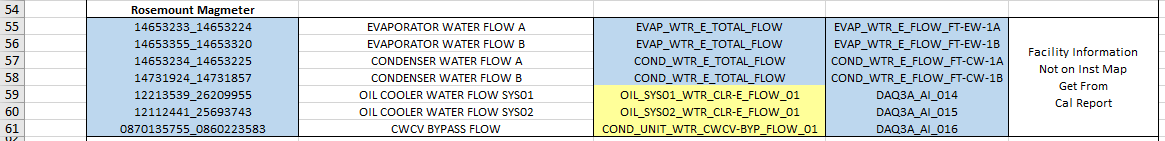
   Description automatically generatedRun Calibration Report Utility.exe 100-21-039 1.3.0.12
2. A screenshot of a computer

   Description automatically generatedLog in and load the system using the Unit specified in the email. In this case, the unit specified is *1200 SR* or WC1200. Also select the appropriate date. In this case the date of 07/08/2024 will be selected.
3. Next:
   1. Select “Combined Report”
   2. Check “Include Inactive HW Tags” & “Include Engineering Tags”
   3. A screenshot of a computer

      Description automatically generatedPress “Generate Cal Report”
4. This will generate a CSV report and open up the location in Windows explorer.
5. The report then can be opened in Microsoft Excel.
6. From this point there are templates that are used to create the report. Those templates can be found here: <https://mysite.jci.com/personal/ckingco_jci_com/Documents/Forms/All.aspx?e=5%3A77f7282bb6904346b51e62ff5a24c19f&sharingv2=true&fromShare=true&at=9&CID=1c1881ae%2D624f%2D4c80%2D938f%2D8138e2b85e1d&RootFolder=%2Fpersonal%2Fckingco%5Fjci%5Fcom%2FDocuments%2FDesktop%2FNavy%20Reports&FolderCTID=0x0120008D3279C5D6CF504DBE9B907E73704B91>
7. In this instance, the template will be 570 Ton. Open the “570 Ton” folder.
8. Create a new folder in this location and give it the date for the name. Place the generated CSV Report in this location.
9. In the “570 Ton” folder, is the template for the report, “570 Ton Production\_Template\_RevD” Place this file in the new folder created in the previous step. Rename it to “570 Ton Production\_***Date***”
10. The next step will be to open the modified report and add in data.
    1. Open, copy, and paste in the instrument map into the instrument map tab of the report.
    2. Open, copy, and paste in the generated combined report into CalReport tab of the report.
11. Next steps are to populate the “Report Worksheet”
    1. Select the “Report Worksheet” Tab.
    2. The 1st section to fill out is the header details.
       1. “Unit Type” 570 Ton
       2. “Test Request Number” TR24-0043
       3. “Instrument Map Date” ‘7/9/2024
       4. “JADEC Test Facility” WC1200 SR
       5. “Calibration Request Date” 7/9/2024
    3. Next the Serial Numbers for “DAQ2 RTD Temperatures” need to be found and populated.
       1. Use the “Instrument Map” to match up the “LabVIEW Tag Names” to the “ENG Tag Names”
       2. From here, the “DAQ Driver” and “DAQ Channel” can be found for the Tag.
       3. A screenshot of a computer

          Description automatically generated“DAQ Driver” and “DAQ Channel” and the “CalReport” Tab Data, match up and find the “Instrument Serial Number” and list it in the proper column.
    4. Repeat these steps for:
       1. A screenshot of a computer

          Description automatically generated“DAQ3 RTD Temperatures”
       2. A screenshot of a computer

          Description automatically generated“Omega Pressure Transducer”
       3. “Rosemount Delta P Transducer”
       4. “Rosemount Magmeter”
    5. For the “Xitron Power Analyzer” portion, the information can be found towards the top of the “CalReport”
       1. Copy in the “Serial Number” and the “System Name”
    6. Lastly, fil ouy “Prepared by” and “Date”
12. Verify the checks are all green on the right side of the “Report WorkSheet”
13. Switch to the “Report Template” Tab
14. The report should be fully filled out.
    1. A screenshot of a computer

       Description automatically generatedA screenshot of a computer

       Description automatically generatedFull Report

# **PROPOSED CHANGES**

## **Modification of DB Configuration Files.**

1. Check out of configuration files of various locations for modifications.
   1. C:\\_Projects\\_LV2015\TrendSafe\SDC\Configuration Data\ConfigurationDB.UDL
      1. Modify Option 1 Server Name to be j030m21d
      2. Modify Option 2 to “Use Windows NT Integrated security”
      3. A screenshot of a computer

         Description automatically generatedModify Option 3 to “SDC\_Configuration”
      4. A screenshot of a computer error

         Description automatically generatedConnection is Tested for success.
   2. C:\\_Projects\\_LV2015\TrendSafe\SDC\Configuration Data\StroageDB.UDL
      1. Modify Option 1 Server Name to be j030m21d
      2. Modify Option 2 to “Use Windows NT Integrated security”
      3. A screenshot of a computer

         Description automatically generatedModify Option 3 to “SDC\_Storage\_Federal”
      4. A screenshot of a computer error

         Description automatically generatedConnection is Tested for success.

## **Navy Report Drop Down Option.**

1. Check out of C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class\Stand Alone Calibration Report-UI.VI for Drop Down Modifications.
2. A screenshot of a computer

   Description automatically generatedCurrent Stand Alone Calibration Report-UI.VI look.
3. Current “Report Type” Options.
   1. Combined Report
   2. Module Report
   3. Sensor Report
   4. Power Analyzer Report

A screenshot of a computer

Description automatically generated

1. Proposed Addition of “Navy Report”
   1. Check out of C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class\CalReportType—Enum.ctl for addition of “Navy Report”
      1. Current Type Def Report Types
      2. Combined Report
      3. Module Report
      4. Sensor Report
      5. A screenshot of a computer

         Description automatically generatedPower Analyzer Report
      6. A screenshot of a computer

         Description automatically generatedModified Type Def Types
   2. Modification of Stand Alone Calibration Report-UI.VI Case Structure to add new “Report Type”
      1. A diagram of a system

         Description automatically generatedCurrent Case Structure
      2. A screenshot of a computer program

         Description automatically generatedTemporary Modified Case Structure
   3. A screenshot of a computer

      Description automatically generatedStand Alone Calibration Report-UI.VI after Type Def Update and addition of “Navy Report”

## **Unit Type Selection Prompt.**

1. Source for Unit Type selection for Unit Type Selection Prompt. Unit Type will be derived from filenames of configuration files in a folder location. This way when a report is added or removed, no code change is needed.
   1. Creation of “Navy Report” Folder in location C:\\_Projects\\_LV2015\TrendSafe\SDC\Configuration Data\JADEC\_CAL\_REPORT\_UTILITY
   2. Creation of “Unit Types” Folder in Location C:\\_Projects\\_LV2015\TrendSafe\SDC\Configuration Data\JADEC\_CAL\_REPORT\_UTILITY\Navy Reports
   3. Creation of “Unit Type” Configuration Files. File will be .ini
      1. 110 Ton.ini
      2. 200 Ton Tiper.ini
      3. 375 Ton HESC.ini
      4. 450 Ton.ini
      5. 500 Ton.ini
      6. 520 Ton.ini
      7. 570 Ton.ini
      8. A screenshot of a computer

         Description automatically generated1100 Ton.ini
   4. File Tytpe will need to:
      1. Hold Template information.
      2. Be able to easily add or remove data.
      3. Include the sections of the report.
      4. Include the data to search for.
      5. Include the data to insert.
   5. File Format

[Report Section 1]

“ENG Tag to Search For”=”Instrument Title

“ENG Tag to Search For”=”Instrument Title

“ENG Tag to Search For”=”Instrument Title

[Report Section 2]

“ENG Tag to Search For”=”Instrument Title

“ENG Tag to Search For”=”Instrument Title

“ENG Tag to Search For”=”Instrument Title

…”and So forth”

1. VI Creation for Unit Type Selection Prompt.
   1. Requirements
      1. Layout
         1. Drop down for Unt Type
         2. Okay Button
         3. Cancel/Exit Button
         4. VI Run Time Position of Centered on the Primary Monitor.
      2. Size
         1. Smaller than Stand Alone Calibration Report-UI.VI Front Panel.
      3. Color Scheme
         1. Match Stand Alone Calibration Report-UI.VI
      4. Operation
         1. Prompt will launch when “Generate Cal Report” is pressed on Stand Alone Calibration Report-UI.VI and Navy Report is selected as the “Report Type”
         2. User will be able to select the unit type and press “Continue” to proceed or “Exit” close out of the prompt and not proceed with the generation of the cal report.
         3. Only unit types from the folder are displayed and allowed.
2. Location of Selection Prompt.
   1. C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class
   2. A screenshot of a computer

      Description automatically generatedCreate a new VI by right clicking o CalibrationReport.lvclass 🡪New 🡪 VI
3. Using the requirements, an appropriate front panel is created.
4. A screenshot of a computer

   Description automatically generatedInitial draft of Selection Prompt for Unit Type.
5. Unit Type Selection Prompt with possible Unit Types.
6. An intial draft of a block diagram wil need to be created to allow test functionality. This functionality will:
   1. Pull in the config files to populate the drop down.
   2. A screenshot of a computer

      Description automatically generatedA computer screen shot of a computer program

      Description automatically generatedUse an event structure for output of the user selection or whether Exit is pressed.
7. Check Out of C:\\_Projects\\_LV2015\TrendSafe\SDC \JADEC-PC.lvproj to allow for addition of Unit Type Selection Prompt to be added to the project and CalibrationReport.lvclass library.

## **Navy Report Front Panel**

1. Open Create Sensor Calibration Report.vi and save a copy. Call the copy Create Navy Report.vi
2. Modify the front panel to resemble the Navy Report Document.
   1. Header
      1. Title – Johnson Controls Calibration Report.
      2. Unit Type – Derived from Unit Type Selection.
      3. Test Request Number – Derived from the Loaded System.
      4. Instrument Map Date – Derived from the Loaded System Date.
      5. JADEC Test Facility – Derived from the loaded System.
   2. Report Body
      1. Serial Number – Unit Serial Number.
      2. Instrument Title – Pulled from the .ini for the Unit Type and inserted upon finding the ENG Tag Name, also supplied by the .ini for the Unit Type.
      3. HW Tag Name – Unit HW Tag Name.
      4. Calibration Dates – Dates of Calibration.
         1. Next – Calibration Due Date.
         2. Last – When the Calibration was last done.
         3. Status – Compares the date and the next calibration to determine if the unit is within calibration.
3. A blank form with lines

   Description automatically generated with medium confidenceFinal Design Layout
4. Check out C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class\CalibrationReport.lvclass to allow addition of Create Navy Report.VI to the class library.

## **Report Value Population**

1. Stand Alone Calibration Report-UI.VI Modifications
   1. Add a new Case to the Case Structure in Stand Alone Calibration Report-UI.VI, under "", "smUserAction", and name the case Navy Report
   2. Add the Unit Type Selection Prompt inside the case, in line with error and use the unit type output to route to another case structure.
   3. Inside this case structure, create a case, “Exit” to be empty, in the event that Exit is pressed on the unit type selection prompt.
   4. The other Case will be the default case. In the default case, route in the GUI Loop Cluster and unbundle out:
      1. Active TR
      2. Reference Tag List
      3. System Name
      4. Time Stamp
   5. Route the unbundled values from the previous step to the newly created Create Navy Report.vi.
   6. A diagram of a navy report

      Description automatically generatedThe case should look like the following:
2. Create Navy Report.vi Modifications
   1. A screenshot of a computer program

      Description automatically generatedFullBlock Diagram modification is needed to obtain the desired report values.
   2. Message Cases
      1. A screenshot of a computer

         Description automatically generatedClear Report – sends a blank array to the table to clear the table.
      2. A screenshot of a computer

         Description automatically generatedPopulate – Populates Report Title, Date, Instrument Map Date, and Report.
      3. A screenshot of a computer

         Description automatically generatedGet Systems – Get Systems, obtains the systems and populates the shift register.
      4. A computer screen shot of a computer program

         Description automatically generatedObtain All Active Tags – Obtains the active tags from all systems.
      5. A computer screen shot of a computer program

         Description automatically generatedObtain Power Analyzer Info New – Obtains the info about the power analyzers.
      6. A computer screen shot of a computer

         Description automatically generatedGet Config File Data – Opens the Unit Type Config File and obtains the information.
      7. A computer screen shot of a computer program

         Description automatically generatedBuild Report – Searches the active tags and power analyzer info, using the config file data, to obtain the data needed. Then the data is put into the report.
      8. A screenshot of a computer

         Description automatically generatedFormat Report – Sizes the table to the report size and moves the created by and date to the bottom of the table.
      9. A screenshot of a computer

         Description automatically generatedPrint Report – Priints the front panel.
      10. A screenshot of a computer

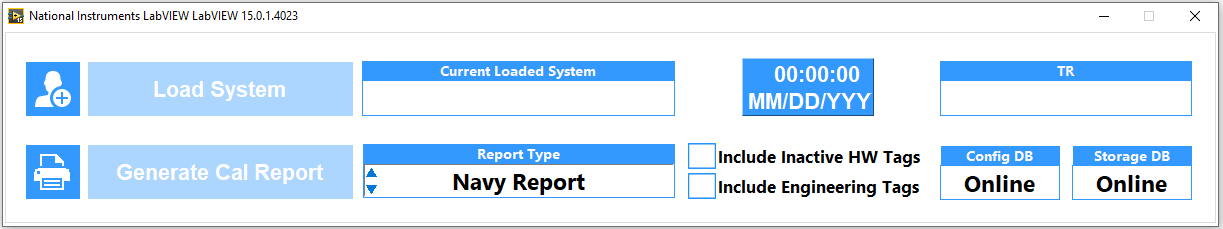
          Description automatically generatedExit – closes the message handling loop.
      11. A screenshot of a computer

          Description automatically generatedError, Default – Handles Errors.

## **List of Checked Out Files**

1. C:\\_Projects\\_LV2015\TrendSafe\SDC\Configuration Data\ConfigurationDB.UDL
2. C:\\_Projects\\_LV2015\TrendSafe\SDC\Configuration Data\StroageDB.UDL
3. C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class\Stand Alone Calibration Report-UI.VI
4. C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class\CalReportType—Enum.ctl
5. C:\\_Projects\\_LV2015\TrendSafe\SDC \JADEC-PC.lvproj
6. C:\\_Projects\\_LV2015\TrendSafe\SDC\GUI\Classes\CalibrationReport\_class\CalibrationReport.lvclass

# **NEW PROCEDURE**

1. Run “Calibration Report Launcher.vi”
2. This will open the calibration report launcher.
3. A screenshot of a computer

   Description automatically generatedA screenshot of a computer

   Description automatically generatedUse the Icon on the upper left to Log In.
4. A black text on a white background

   Description automatically generatedCheck “Include Inactive HW Tags” and “Include Engineering Tags”
5. A screenshot of a computer

   Description automatically generatedClick “Load System”
6. A screenshot of a computer

   Description automatically generatedThis will open the “System Selection”
7. A screenshot of a computer

   Description automatically generatedSelect the desired system, Date, and the press okay. For this example, we will use WC1200 and the current Date and Time.
8. A screenshot of a computer

   Description automatically generatedThe system will then load the selected system.
9. A screenshot of a report

   Description automatically generatedSelect “Navy Report” From the Report Type drop down.
10. A screenshot of a computer

    Description automatically generatedClick “Generate Cal Report”
11. A screenshot of a computer

    Description automatically generatedThe Unit Type Selection will display. Select the Unit Type from the drop down and then select Continue.
12. A screenshot of a calibration report

    Description automatically generatedThis will then bring up the Navy Calibration Report Window with the Report. From here, the “Print” button can be used to print the report of the “x” can be used to close the report, without printing.
13. A screenshot of a computer

    Description automatically generatedPrint Option will bring up a “Save Print Output As” Prompt. From here, a location can be selected to save the PDF Report File.
14. This report file can then be opened with a PDF viewer. A table of data with numbers and letters

    Description automatically generated with medium confidence