MIDAS SUMMARY
MIDAS Users Group

Marion, MA
August 18, 2016

Presented by:
Mike Richard

TELEDYNE TEST SERVICES
Everywhereyoulook™

MIDAS Agenda Topics: Summary

1. Letter to Utilities
2. Calculations versus Datasheets
3. MIDAS V&V Documentation
4. Spreadsheets from 2015
5. MIDAS Standardization Topics
6. MIDASTEST Standardization Topics
7. Miscellaneous Topics
8. New Features – Toolbars in MIDAS and MIDASTEST

- Graphical review of Exelon versus FENOC process
- Graphical review of setting the Essential List of parameters

MIDAS Agenda Topic 1: Letter to Utilities

- Revise to include terminology for nuclear promise, knowledge transfer and knowledge retention
- Revise to clarify deliverables. There was some questions on whether database upgrade were included.
- Review fee structure. Exelon represents 10 or more sites. Consider discount for early bird participation. Consider other fees for delayed participation.
- Consider adding a section for MIDAS training to be offered at the TTS facility in Marion.
- Continue to discuss whether to include terminology for MIDAS compliance with ASME code.
- Who to address letter to? Need contact info.
- Issue letter in a timely manner

MIDAS Agenda Topic 2: Calculations versus Datasheets

- MOV calculation process prevent utilities from using MIDAS.
- Exelon considers MOV related calculations as datasheets. Former Constellation plants moved from calculations to datasheets
  - Datasheet printout from MIDAS submitted to records management
- Lengthy discussion of how to promote the datasheet process throughout the industry using the nuclear promise as a driving force
- “External” data feeding MIDAS will still require the calculation process (i.e MCC voltages or system pressures)
- “Internal” data feeding MIDAS will only require the datasheet process. (i.e Measurement equipment and related errors, valve factors, etc)

MIDAS Agenda Topic 3: MIDAS V&V Documentation

I put all of the MIDAS paper SQA documentation for Exelon on a table in the meeting room for the group to see the organization and effort that has gone into these documents over the past 20 years. This presentation may not been realized when receiving a CD containing PDF's.

Item	Document	Rev	Title	Date
1	TTS-CC-117	7	MIDAS Software User's Manual: MOV Thrust / Torque Calculations	10/14/15
2	TTS-CC-117.1	7	Program MIDAS Software Verification & Validation Report	10/14/15
3	TTS-CC-127	3	MOV Software Limitorque Lookup Data Tables Verification & Validation Report	01/14/15
4	TTS-CC-128	4	MOV Software BWROG DC Methodology Module Verification & Validation Report	06/26/15
5	TTS-CC-129	2	MOV Software EPRI Butterfly Methodology Module Verification & Validation Report	06/18/15
6	TTS-CC-130	3	MOV Software JOG PV Methodology Module Verification & Validation Report	06/18/15
7	TTS-CC-137	4	MOV Software ComED AC Methodology Module Verification & Validation Report	01/14/15
8	TTS-CC-171	0	MOV Software MIDAS Interface Module Verification & Validation Report	06/18/15

MIDAS Agenda Topic 4: Spreadsheets from 2015

- In 2015,TTS prepared MIDAS V&V spreadsheets for comparison.
  - Exelon versus FENOC
  - FENOC versus PGN (Duke)
  - FENOC versus SNC
- Upon initial review in 2015, there appeared to be some unexplained differences in margin calculations.
- In 2016, TTS suggested investing some more time in these spreadsheets to resolve the unexplained differences.
- The group suggested to wait on this action items in lieu of other action items

MIDAS Agenda 5: MIDAS Standardization Topics

- Process standardization
  - Exelon versus FENOC
  - TTS selected the Exelon process where error related terms cannot be changed in MIDATEST
- Margin standardization (review one at a time)
  - Min Requirements
  - Max Limitations (contributing terms)
  - Error Combinations
  - Essential margins versus non-essential
- Terminology standardization. Briefly discussed
- Report(s) standardization. Removal of custom reports in lieu of datasheet report
- Documentation standardization. Investigate permission to distribute Exelon documents.

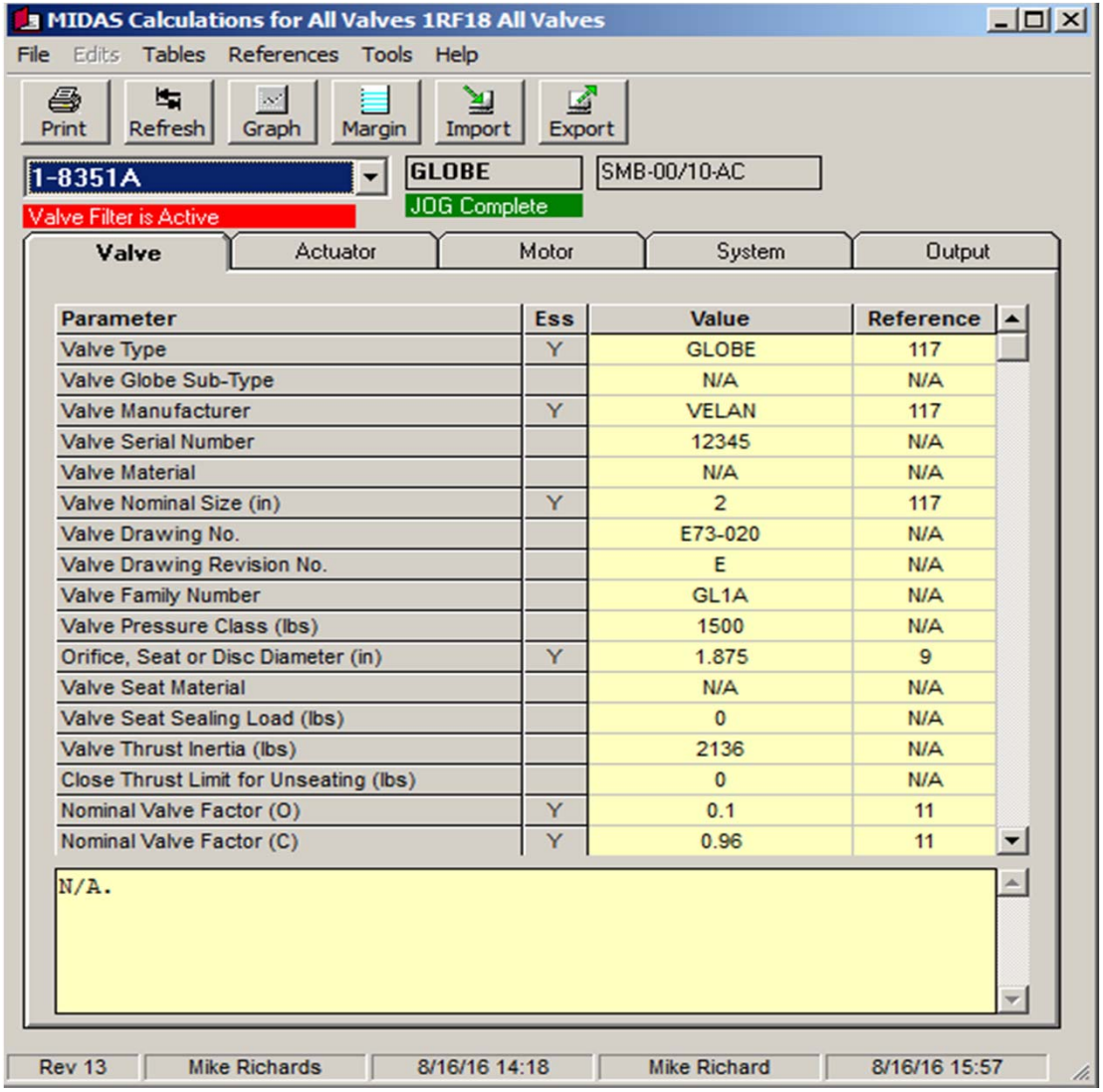
MIDAS Agenda 6: MIDAS-TEST Standardization

- Process standardization
  - Exelon versus FENOC
  - TTS selected the Exelon process where error related terms cannot be changed in MIDATEST
- Pre-Test Setup Window standardization
  - Brief review of report formats for Exelon and Comanche Peak
- Post-Test Analysis standardization
  - Brief review of report formats for Exelon and Comanche Peak
- Trending standardization
  - Brief review of feedback process in Exelon model
- Auxiliary features standardization
  - Rotor and Limit Switch settings
  - Lift/Lead settings

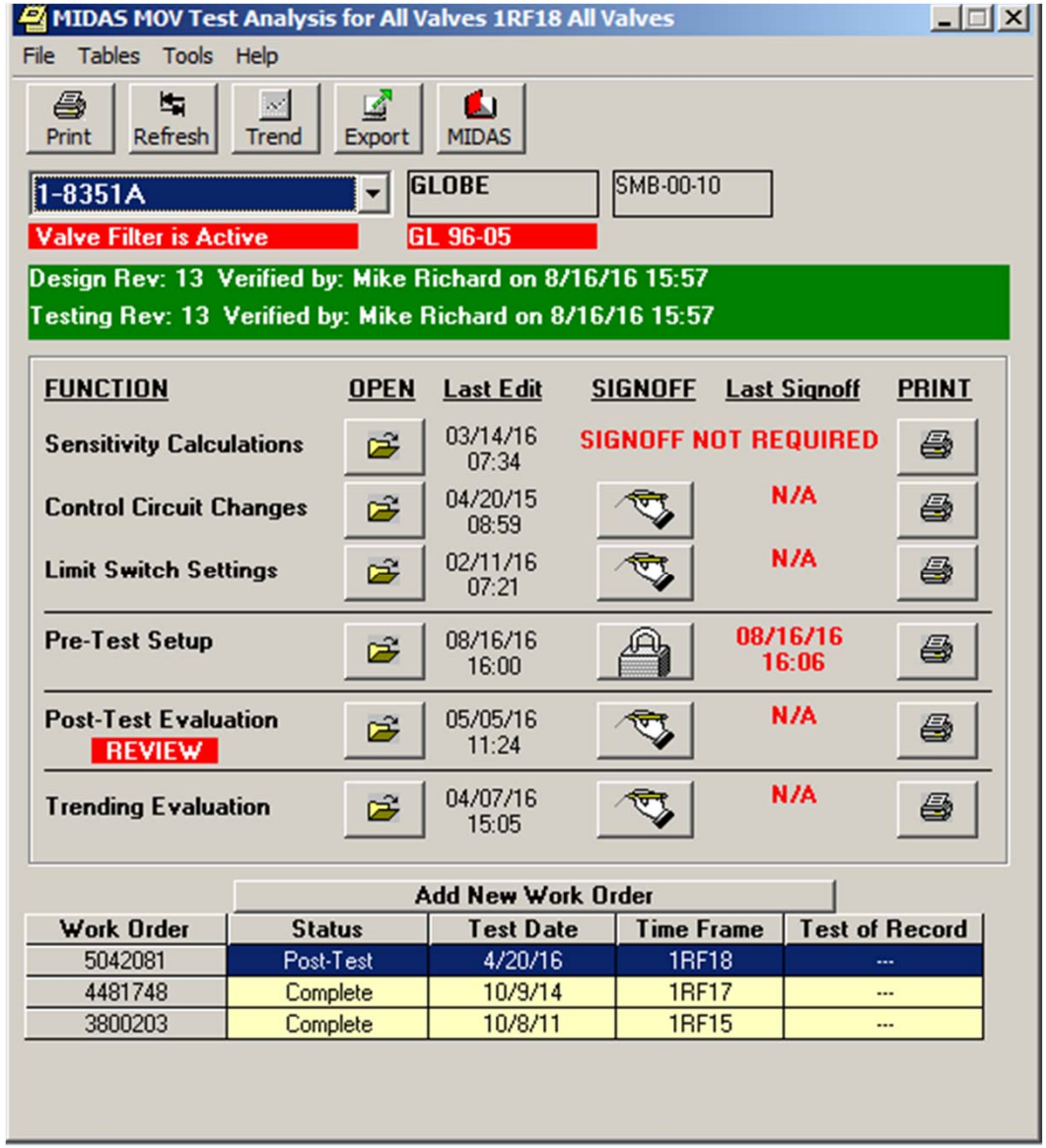
MIDAS Agenda 7: Miscellaneous Topics

- MIDAS Software Classification (Class A/B)
  - Review industry procedures
  - Prepare common response
- Nuclear Software Acceptance process
  - Review industry procedures
  - Prepare common response
- New MIDAS/MIDATEST Feature
  - Investigate communication between MIDAS and MIDATEST that allows for notification of changes while working on a particular valve
    - Changing design data while using MIDATEST
    - Changing test data while using MIDAS

MIDAS Agenda 8: New Features – Toolbars in MIDAS

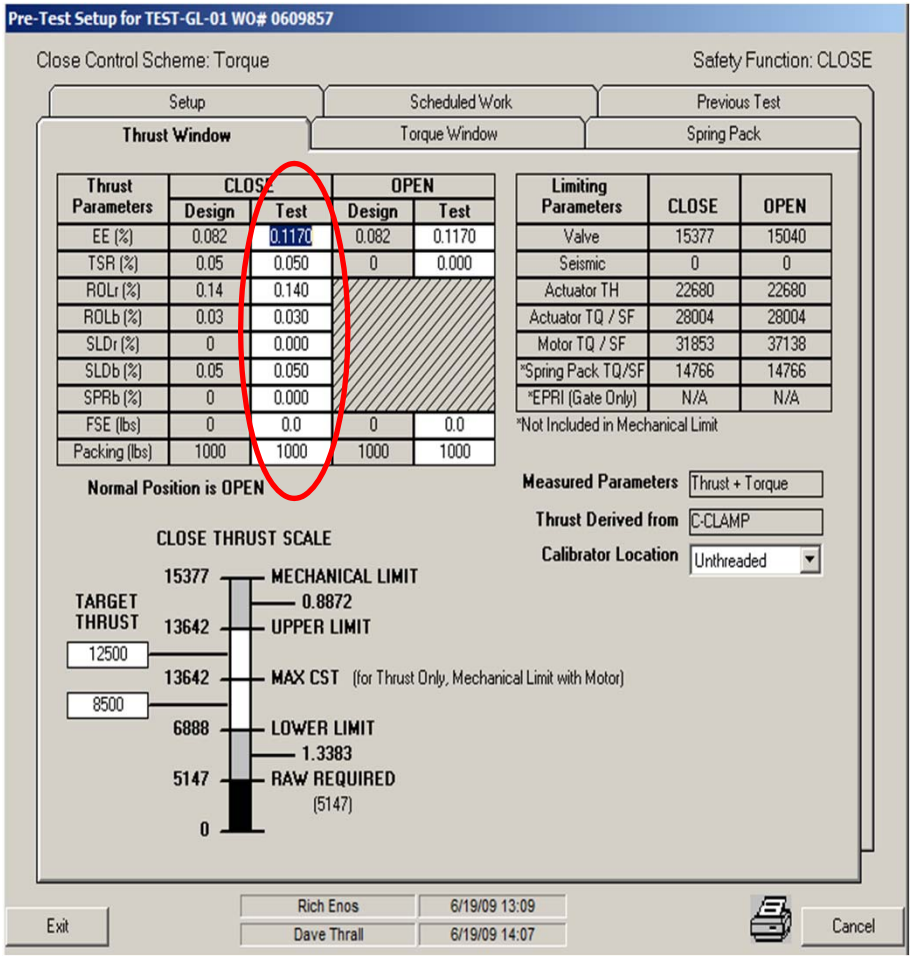


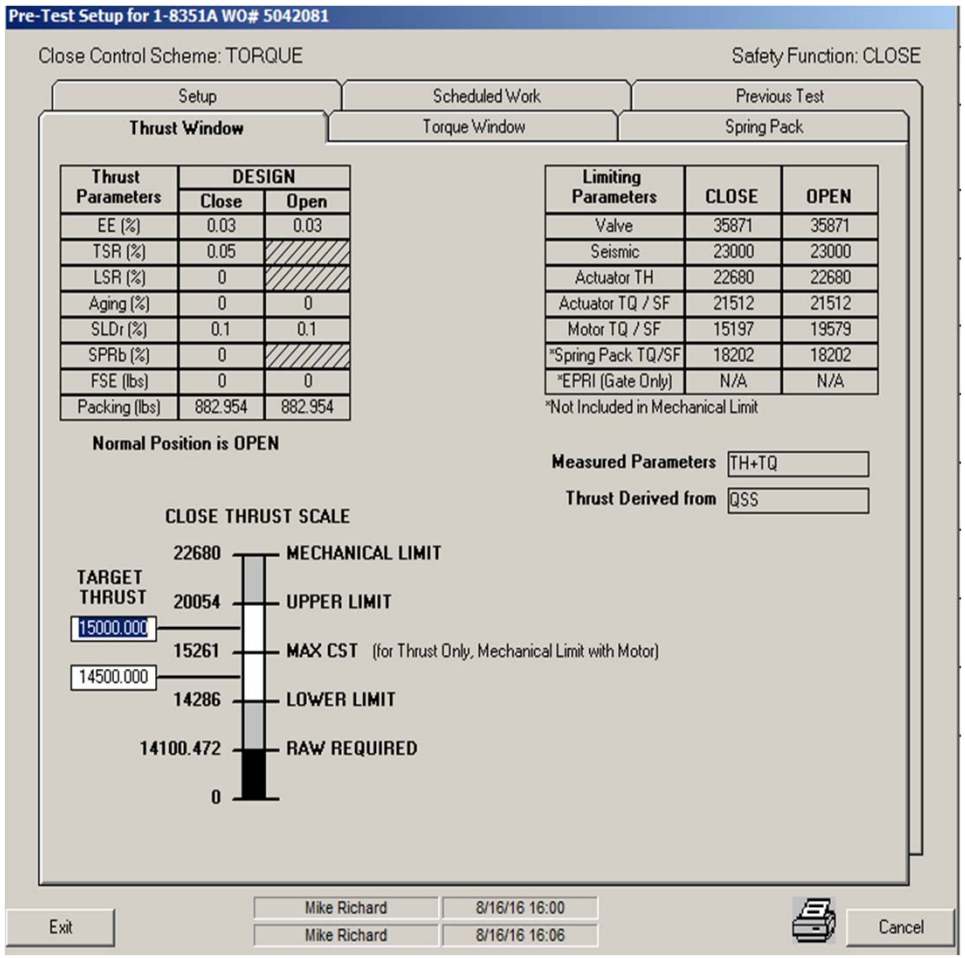
MIDAS Agenda 8: New Features – Toolbars in Midatest



MIDAS Process: Exelon versus FENOC: FENOC

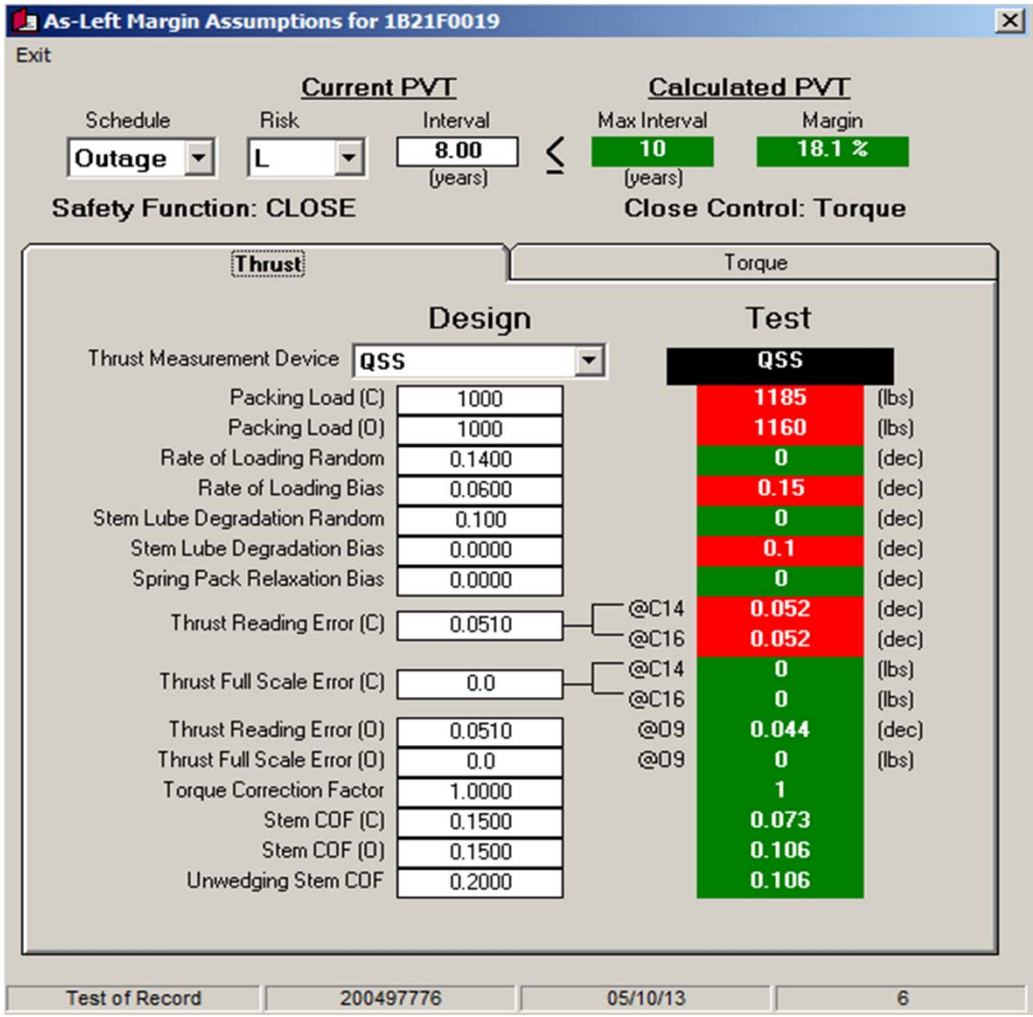
- Defines initial setup window in MIDAS.
- FETEST can be used to alter setup window.
- These features have been removed from the current version





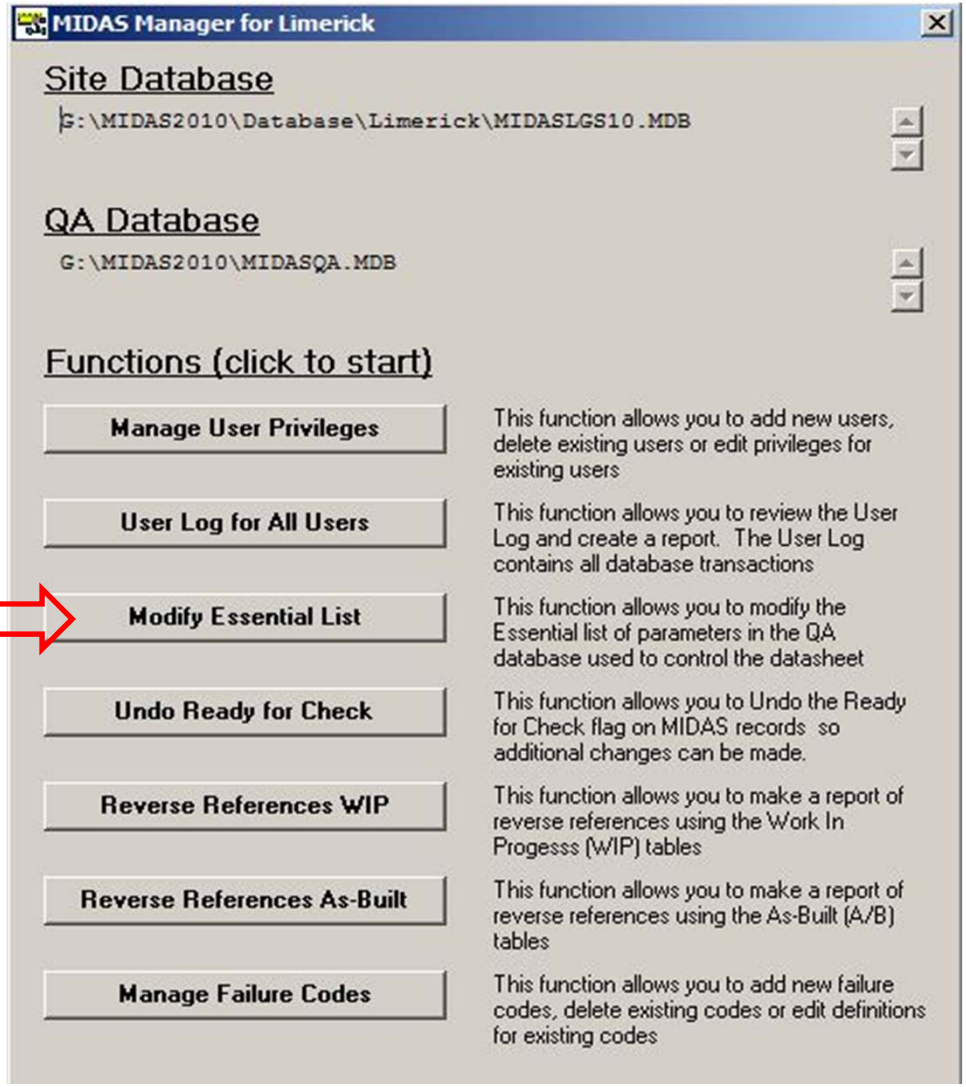
MIDAS Process: Exelon versus FENOC: FENOC

Any changes in FETEST must be resolved in MIDAS
This feature has been removed from the current version



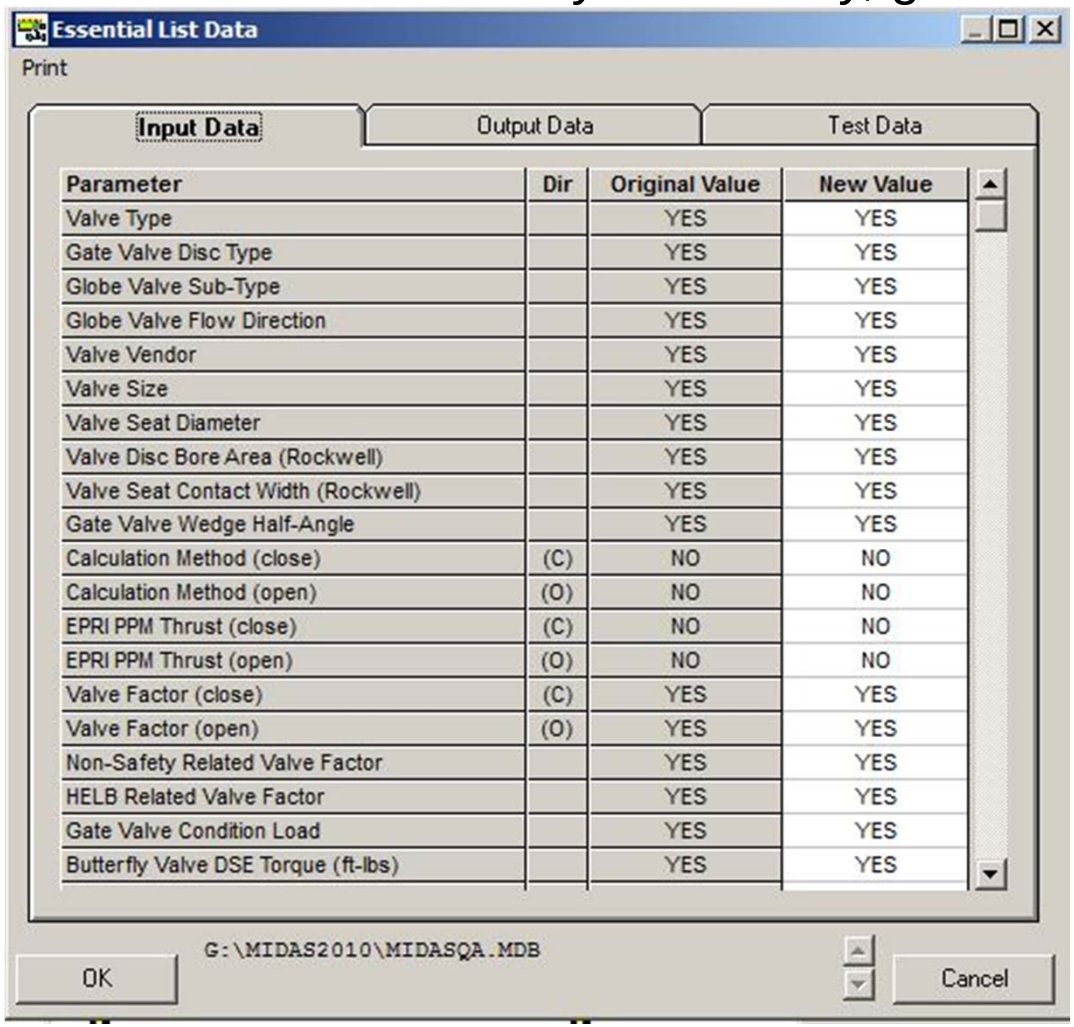
MIDAS Redirector

MIDAS Redirector – Main Form



MIDAS Redirector – Modify Essential List

Essential List used to control items printed out on Datasheet Report / Essential. Determined by each utility, governs all sites



Parameter	Dir	Original Value	New Value
Valve Type		YES	YES
Gate Valve Disc Type		YES	YES
Globe Valve Sub-Type		YES	YES
Globe Valve Flow Direction		YES	YES
Valve Vendor		YES	YES
Valve Size		YES	YES
Valve Seat Diameter		YES	YES
Valve Disc Bore Area (Rockwell)		YES	YES
Valve Seat Contact Width (Rockwell)		YES	YES
Gate Valve Wedge Half-Angle		YES	YES
Calculation Method (close)	(C)	NO	NO
Calculation Method (open)	(O)	NO	NO
EPRI PPM Thrust (close)	(C)	NO	NO
EPRI PPM Thrust (open)	(O)	NO	NO
Valve Factor (close)	(C)	YES	YES
Valve Factor (open)	(O)	YES	YES
Non-Safety Related Valve Factor		YES	YES
HELB Related Valve Factor		YES	YES
Gate Valve Condition Load		YES	YES
Butterfly Valve DSE Torque (ft-lbs)		YES	YES

Any Questions?

THANK YOU

TELEDYNE TEST SERVICES
Everywhereyoulook™