



Improvement

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Objectives

- Definition of Improvement
- TNI Standard
- Lets Break it Down
- Improvements
- Examples of Improvements
- Audience Participation
- Conclusions





Definition of Improvement

- **getting or making better:** the process of making something better or of becoming better "an improvement on past performance"
- **change or addition:** a change or addition that makes something better
- **change that adds value:** a change or addition that increases value



TNI Standard V1M2

4.10 Improvement

(ISO/IEC 17025:2005)

The laboratory shall continually improve the effectiveness of its management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.



Lets Break it Down

The laboratory shall continually improve the effectiveness of its management system.....



Do these qualify as an improvement? Raise your hand

- Corrective Actions
- Root Cause Analysis



Do these qualify as an improvement? Raise your hand

- Preventive Actions
- Management Review



Do these qualify as an improvement? Raise your hand

- Non Conformance
- Internal Audits



Do these qualify as an improvement? Raise your hand

- Peer Review
- QC Data Review



Do these qualify as an improvement? Raise your hand

- Lower Detection Limits
- New Equipment/Instruments



Do these qualify as an improvement? Raise your hand

- More Employees
- Complaints and Customer Surveys



Confused Yet.....

What am I supposed to do?

What will assessors look for?

Let's Look Again



TNI Standard V1M2

4.10 Improvement

(ISO/IEC 17025:2005)

The laboratory shall continually improve the effectiveness of its management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.



TNI Standard V1M2

- **Quality Policy (4.2.2)**
- **Quality Objectives (4.2.2)**
- **Audit Results (4.14, 4.9, 4.11)**



TNI Standard V1M2

- **Analysis of Data (4.9, 5.9)**
- **Corrective Action (4.11)**



TNI Standard V1M2

- **Preventive Action (4.12)**

- **Management Review (4.15)**



Examples

**Here are some examples and
how they qualify as
improvements**



Example A

- ❖ **Analysis of Data (5.9)**
- ❖ **Preventive Action (4.12)**
- ✓ **Statistical Process Control (SPC)**



SPC

Statistical process control (SPC) is an effective method of monitoring a process through the use of control charts.



SPC

Control charts enable the use of objective criteria for distinguishing background variation from events of significance based on statistical techniques.



SPC

Much of its power lies in the ability to monitor both process center and its variation about that center.



SPC

Variations in the process that may affect the quality of the end product or service can be detected and corrected.

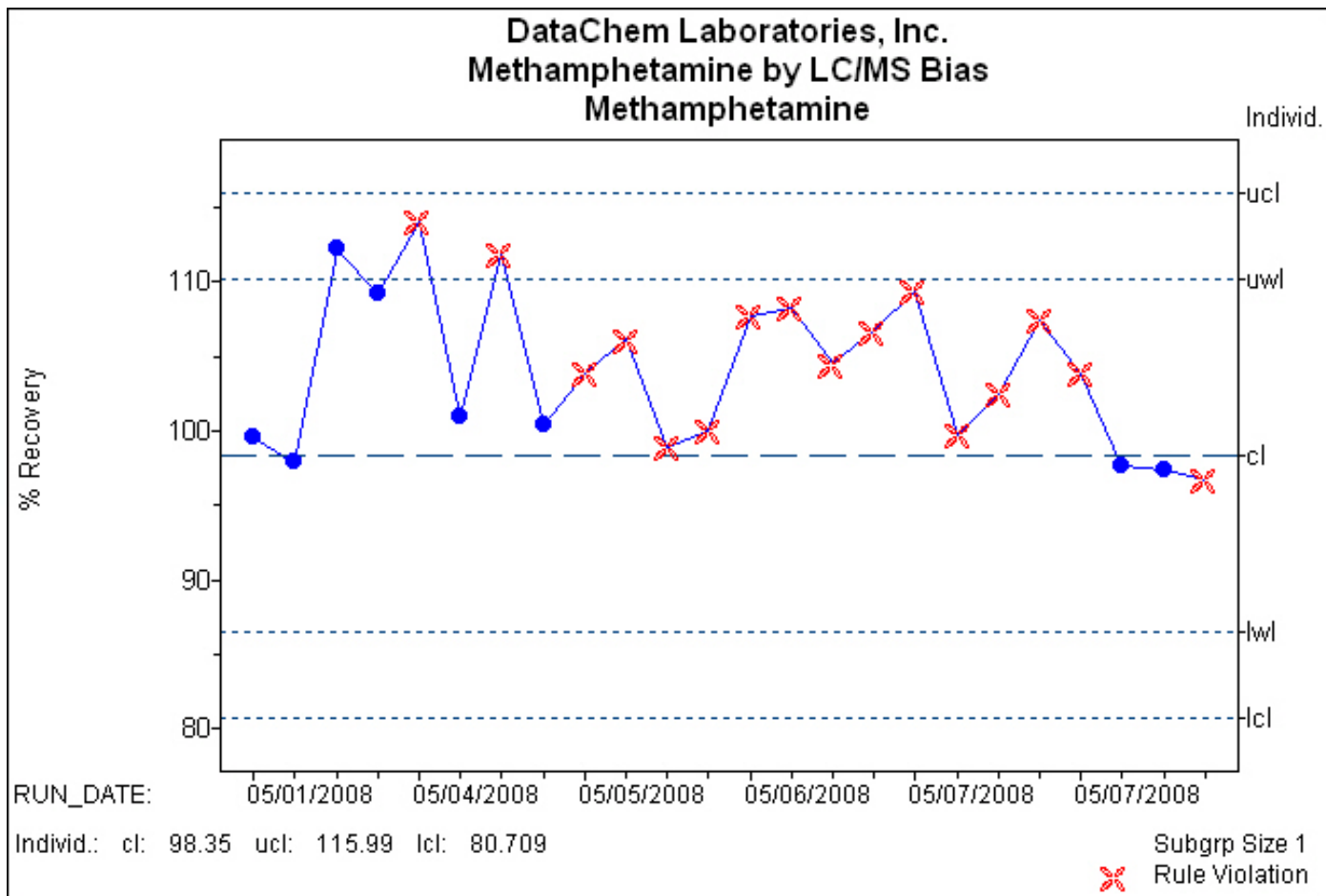


SPC

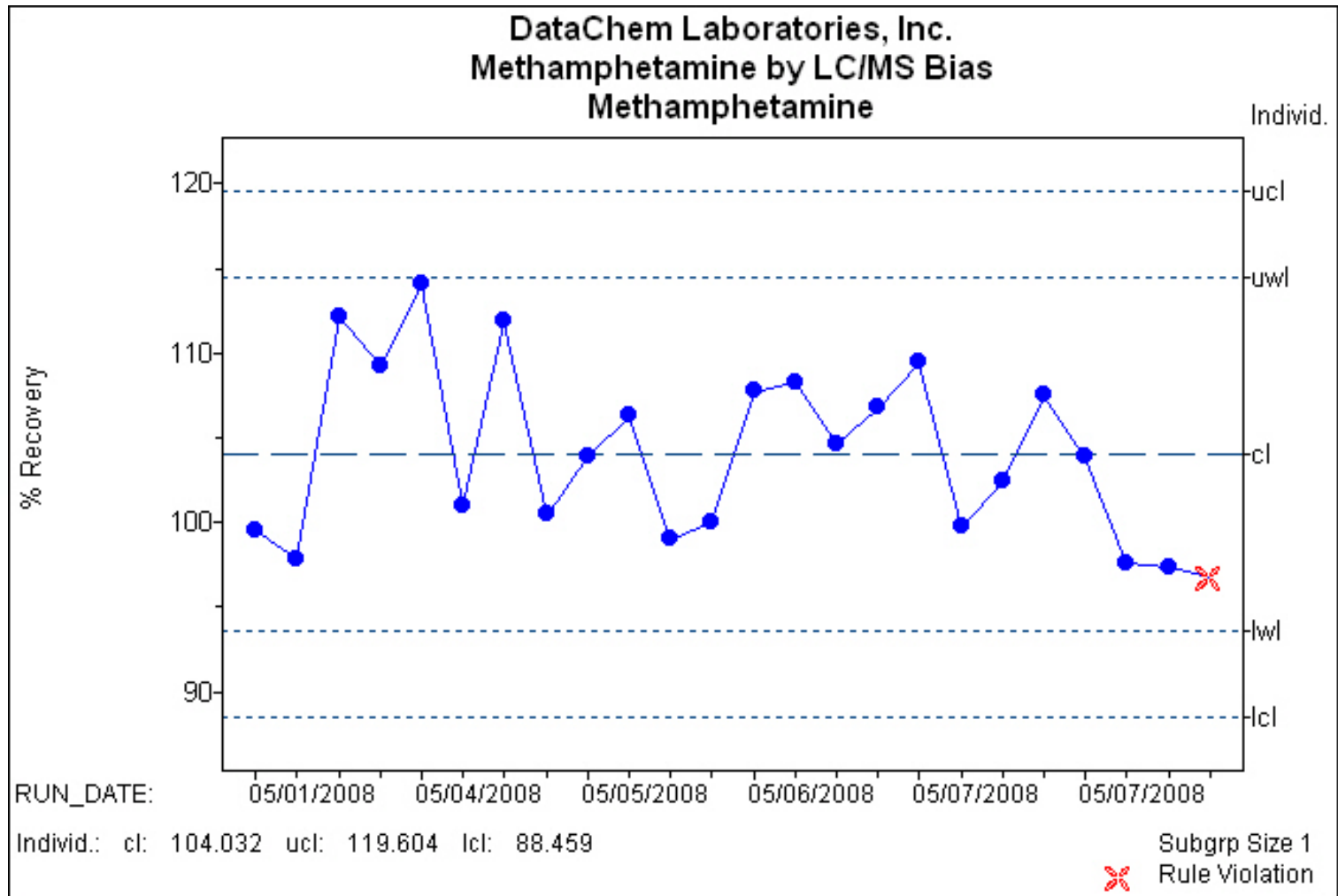
- Statistical Process Control
 - Changes to Mean and Standard Deviation
 - Trending (Real Time)



SPC



SPC



Example B

- ❖ **Quality Policy (4.2.2)**
 - ❖ **Preventive Action (4.12)**
 - ❖ **Management Review (4.15)**
- ✓ **LEAN**



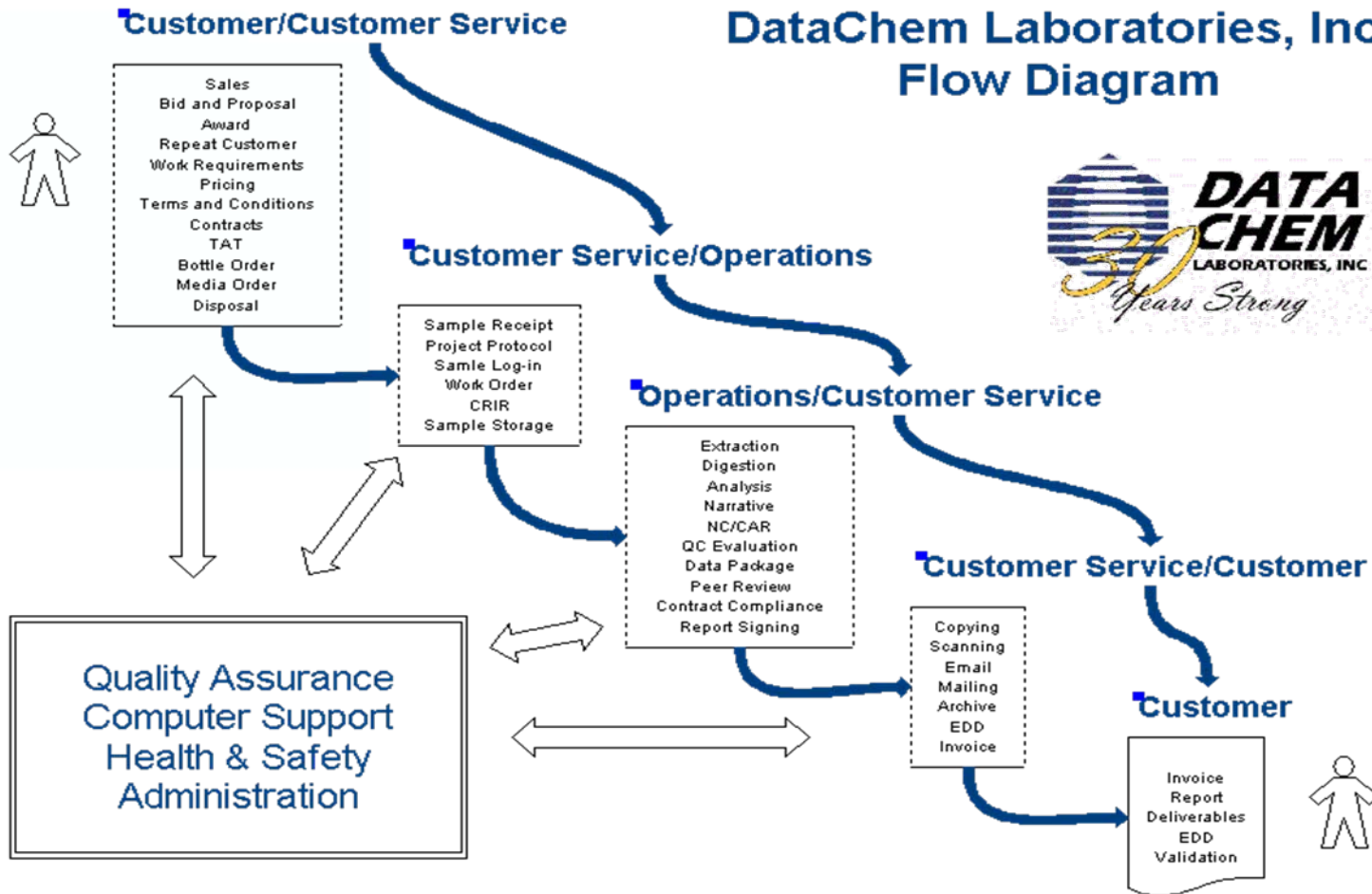
LEAN

- ❖ Understand your Process
- ❖ Reduce Waste
- ❖ Apply Resources were needed
- ❖ Do It Now

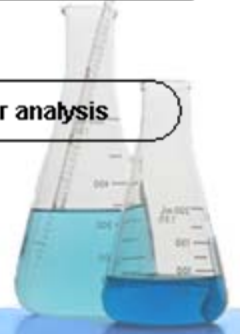
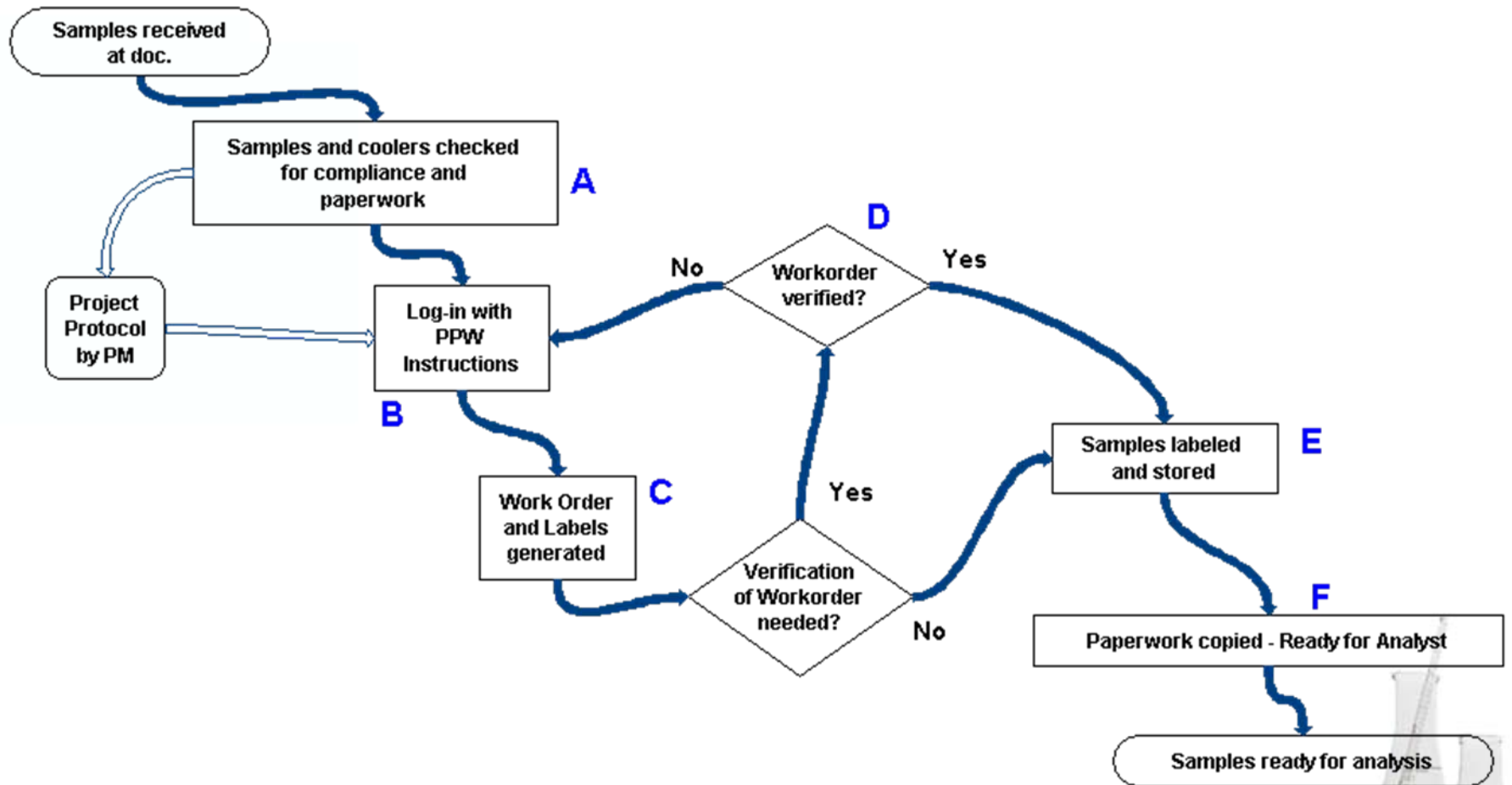


Flowcharts

DataChem Laboratories, Inc. Flow Diagram



Flowcharts



Reducing Waste

- All systems are made up of processes
- All processes are made up of tasks
- The slowest task governs the output of a process





Applying Resources

- Time = Waste
- Apply limited resources to slowest task in process



Example C

- ❖ **Preventive Action (4.12)**
- ❖ **Corrective Action (4.11)**
- ❖ **Management Review (4.15)**

- ✓ **Process Improvement**





Process Improvement

A series of actions taken by a Process Owner to identify, analyze and improve existing processes within an organization.





Process Improvement

Success = Champion,
Training on Expectations,
and Reward



Process Improvement

- Process Improvements are ways to:
 - Reduce Cost
 - Improve Quality
 - Reduce cycle times
 - Exceed Customer Expectations
 - Reduce Redundancy
 - Improve Financial Performance
 - Reduce TAT
 - Improve TAT Performance





Audience Participation

Laboratories and Assessors

Please come to the
microphone and share your
ideas on Improvement



Conclusion

“Think left and think right
and think low and think
high. Oh, the things you
can think up if only you
try!”

Dr Seuss

