

Which Came First?

“Certification or Training”

Operator Training Committee of Ohio

**“Procrastinator's Workshop”**

December 11, 2015

# In Ohio, Certification Dates Back to the late 1930s early 1940's

- ▶ The Ohio Water and Sewage Treatment certification program dates back to about 1937 by the Ohio Public Health Council
- ▶ Though Ohio was turning out certified operators, their knowledge of their respective fields was somewhat marginal at best
- ▶ In the 1948 it was determined by ODH that Operator Certification alone was of very little value unless operators were educated in the operation of their respective facilities
- ▶ 1 week long Training Short Schools were developed to bring the operators to one location (Columbus) where training was presented by ODH staff to experienced operators. This training was an annual training event.
- ▶ Thus the early start of OTCO

# Early OTCO (Early 1960s)

- ▶ The early days of OTCO was actually very informal
- ▶ Educators (Teachers) were hired to teach water and wastewater treatment to Operators
- ▶ Not very effective, and actually failed miserably
- ▶ Later we moved to having training conducted by experienced peers
- ▶ It was much more effective
- ▶ In 1964 OTCO was incorporated as the Operator Training Committee of Ohio, Inc.
- ▶ The first Executive Director of OTCO was the Professor of Water Resources at Ohio State University – Waldron D. Sheets (W. D. Sheets)
- ▶ There have been a total of four Executive Directors of OTCO

# Who were the first four Executive Directors of OTCO

1. W. D. Sheets
2. Richard F. Melich
3. John McCreight
4. Curtis L. Truss

# Why This History Lesson

- ▶ Ohio has always been a leader in both Operator Certification and Operator Training
- ▶ Ohio was instrumental in the formation of the Association of Boards of Certification (ABC)
- ▶ ABC was formed to be a reciprocity board which could help other states standardize their Certification programs
- ▶ If Operators were to pass the ABC examinations, they would be assumed to be capable of passing other State Certifications, and reciprocate their Certification to participating states
- ▶ Not all states participate in reciprocity

# Ohio's Influence Worldwide

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- ▶ I have been fortunate enough to serve on an Operator Certification Advisory Committee in Egypt where Operator Certification was unheard of and I really believe not wanted
- ▶ The United States Agency for International Development



- ▶ “The purpose of developing a Water and Wastewater Treatment Certification program is to improve the level of treatment plant operator competency through training and certification, to ultimately improve water quality for the citizens of Egypt.”
- ▶ When we were asked to assist in putting together an Operator Certification program for another country, my thoughts were
  - ✓ “What can I do to get them to where we are in Ohio?” so they don’t have to start where we started in the 1940s

# Operators of the following Egypt w/ww treatment plants (approximate number) will be eligible for certification:

- ▶ 150 Publically owned Water Treatment Plants
- ▶ 480 Compact Water Treatment Plants
- ▶ 1,200 Wells
- ▶ 180 Wastewater Treatment Plants

It estimated the approximate number of operators is 10,000

# Ohio's Influence Worldwide

- ▶ 5 year project
- ▶ My knowledge of Water and Wastewater Certification programs were limited to the states where I have Certification; Ohio, Georgia, Florida, South Carolina, New Mexico, Arizona, Alberta, Michigan, Pennsylvania, Indiana, and ABC
- ▶ Our scope was to develop a Certification and provide Certification exams only
- ▶ Training was not in our Scope of Services. Training came under the Ministry of Housing, Utilities and Urban Development
- ▶ After all....a majority of the Egyptian operators are engineers



# What Were They Doing Before “Certification”

- ▶ The Egyptian Health Standards were much less advanced than our US Standards
- ▶ There is no EPA or any other regulatory agency
- ▶ Some regulations by WHO
- ▶ To them, Water Quality Standards are suggestions only
- ▶ Many municipalities and their water systems are in the Nile Delta
- ▶ Most ground water systems in the desert
- ▶ A few desalination plants. (Suez area)
- ▶ What I found most shocking...Turbidity limit “10 NTU”
- ▶ Many Operators are graduate Engineers

# Where Do We Start?

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- ▶ Remember, Training was not in our scope of services. However they asked that we recommend training materials
- ▶ Without a formalized training program, we suggested that the CSUS Training Courses be used as a training course
- ▶ We asked that (the late) Dr. Ken Kerri, Professor Emeritus of CSUS Office of Water Programs meet us in Cairo and discuss the use of the CSUS Courses translated to Arabic
- ▶ We developed a “Needs to Know” analysis for Water Treatment, Wastewater Treatment, Water Distribution, and Sewer Collection
- ▶ We had a lot of back and forth discussions on these
- ▶ Remember the Egyptian Operators were Engineers and were pushing back at the suggestion of Operation Certification....after they were engineers

# Our Issues as we see them

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- ▶ Remember we only had 5 years to develop and implement a Certification program
- ▶ Grandfather licenses
- ▶ Instead of I, II, III, and IV, they wanted IV, III, II, I
- ▶ They did not feel that the highest level should be a fourth class operator
- ▶ They wanted all engineers to receive licenses without testing
- ▶ They wanted a copy of the tests provided to the trainers
- ▶ Did not want questions on treatment standards
- ▶ Did not want questions on any processes not used in Egypt
- ▶ Wanted passing to be 50%
- ▶ Move Training to be under the Ministry of Education

# Their Issues as they see them

- ▶ Should certification be mandatory or voluntary?
- ▶ How can financial incentives be created for certification?
- ▶ Do certification exams have to be taken in sequence?
- ▶ Will fees be charged for taking certification examinations and, if so, at what level?
- ▶ Should re-certification be required and after what period?
- ▶ Who will administer the certification exams?
- ▶ How will the training program which supports the operator certification program be developed?
- ▶ Can candidates take certification examinations without taking the training course?
- ▶ How can the Egypt program benefit from the USAID Jordan OMT project?
- ▶ Do we want to grandfather operators?
- ▶ Will the number of operators certified be an issue in the EWRA licensing of utilities?

# Our Approach

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- ▶ Develop a “Need to Know” analysis for each level of certification
- ▶ Determine the types of treatment methodology provided in Egypt
- ▶ Prepare three years of examinations in each Certification level
- ▶ Examinations would be prepared in English and Translated Arabic
- ▶ Classify all WTPs, WWTPs, WDSs, and SCSs based on size and complexity of treatment
- ▶ Grandfather certification would be permitted to OICs for five years
- ▶ Mathematics and Theory would be one exam
- ▶ Passing score was to be 70%

# Components of an Operator Certification Program:

- ▶ Identification of who is to be certified
- ▶ System of qualification for certification
- ▶ Facility certification classifications
- ▶ Operator certification classifications
- ▶ Administrative procedures
- ▶ Core competencies
- ▶ Examination system

# The Examinations

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- ▶ First examinations
  - ✓ 65 Operators Tested
  - ✓ 0 Passed
- ▶ Second Examinations
  - ✓ 45 Operators Tested
  - ✓ 8 Passed

# Our Suggestions

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- ▶ Offer Operator Training along with the Operator Certification program
  - ✓ They support each other
- ▶ Make Operator Certification mandatory
  - ✓ Do they really need Certification
- ▶ Get the buy in of Management
  - ✓ Management support



# How Did Ohio Impact This Effort

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- ▶ Ohio Certification programs
  - ✓ A Leading Certification program
- ▶ Ohio Training programs
  - ✓ A Leading Training program
- ▶ ABC programs
  - ✓ An Accepted Certification program
- ▶ CSUS training programs
  - ✓ An accepted Training program

# Where Are They Today?

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- ▶ Due to all the political strife that has occurred in North Africa and Egypt over the past few years, my sources have advised me that the USAID Certification program has taken the deep six
- ▶ There is still no Training program as we know it
- ▶ There still remains no one to Champion there programs
- ▶ Let's hope we never get to that point

# Which Came First?

## “Certification or Training”

### Questions!