



Notre Dame Operations

Combined Heat and Power Facility
Serving over 10M+ gsf of facilities on 1200 acres in Northern
Indiana

Six boilers (Coal, Natural Gas & #2 Fuel Oil fired)
-approx. 350,000 pounds per hour peak demand

Five steam turbine and five diesel powered generators

- Produce approximately 50% of electricity (co-generation)
- Purchase balance of electricity from I&M
- Total demand approx. 27 Megawatts

Five steam-driven chillers & two electric-driven chillers
-15,000 tons of chilled water demand; 23,500-ton capacity

Water System consisting of seven potable water wells



Notre Dame Plant Personnel

- *Total Staff: Thirty Six (36)
- Supervision: Five (5), four (4) exempt, one (1) non-exempt
 - Power Plant Manager
 - Operations Supervisor
 - Maintenance Supervisor & Asst. Maint. Supervisor
 - I&C Supervisor
- *Operations: Eighteen (18) non-exempt
 - Three (3) Straight Shifts, each with a Shift Supervisor, "A" Operator and four "B" or "C" Operators
- *Maintenance: Eleven (11) non-exempt
 - Three (3) "A" Mechanics and Eight (8) "B" or "C" Mechanics
- * Instrumentation & Controls: Two (2) non-exempt
 - Two (2) Technicians

Notre Dame Plant Personnel Background

- Military Background 23 staff/64%
 - U.S. Navy 19 staff/ 53%
 - Boiler Technicians (BT's)
 - Nuclear Navy
 - Other Branches 4 staff/ 11%
 - Army, Air Force, Marines & Coast Guard
- ❖ -Other Sources 13 staff/ 36%



Reasons & Benefits for a Training & Certification Program

- Boiler operators are becoming more scarce
 - Fewer training grounds
 - U.S. Navy no longer using boilers
- Creates a consistent training regimen with predictable and measurable outcomes for both employees and employer
- Talent development, tiered approach allows for upward mobility within workforce based on a structured system
- Plant operations are broad, its not just boiler operations, it much more involved (turbines, compressors, refrigerants, potable water, electrical distribution)
- Certification provides employees with a tangible outcome
- Sets a base of knowledge expectation for your staff

Training Origins

- * Dating back to 1976 all new hires into operations went through a correspondence course training program (predecessor of current Penn Foster programs), which included an emphasis on math, science and operational fundamentals
- During early 2000's program expanded and was tailored to skills for maintenance and I&C positions as well as operations
- Program expanded as we sought out certifications applicable to our staff's work
- * 1996 we hired our first NAPE certified operator
- ❖ 1996-2000 two operators completed the requirements for certification under the NAPE Basic Boiler Operator course

Training Progress

- Starting in 2005 we selectively sent interested operators and mechanics to prep classes for the Basic Boiler Operator Certification
- * To date 27 out of 36 personnel (supervisors included) have achieved NAPE Basic Boiler Operator Certification.
- In 2013 we had our first operator interested in pursuing the Advance Boiler Operator Certification
- * In 2015 as part of an overall Vision Strategy we reviewed and updated our training regimens in all work categories to include various certifications and advanced training



Current Training Regimen - All Staff

Vision

Produce unsurpassed results for Notre Dame by advancing our legacy of safe, reliable, and sustainable utility and maintenance service through leadership, innovation, teamwork and trusting relationships that respect and embrace our Catholic values.

Soft Skills:

New employees receive the following training:

- Writing/Participating in the performance review process
- Be a Better Team Player

Existing Employees work with their direct supervisors to select and attend applicable course work.

Safety Training:

 Regular Training on a wide array of safety topics (LOTO, Confined Space, etc.) for all personnel

Current Training Regimen - Operations

B – Operator

The program is based on the following National Association of Power Engineers on-line curriculum. The training consists of four milestones, which include in order the following online courses and certifications:

- Steam Turbines (1)
- Water Treatment (2)
- Advanced Boiler Plant Operation (3)
- Refrigeration & Air Conditioning Plant Operations (4)
- EPA Section 608, Universal Refrigerant Certification (4)
- Advanced Boiler Operator Certification (4)
- Personal Qualification Standard for B Operators, Phase 1 (4)

Current Training Regimen - Operations

A - Operator

In order to be considered for this promotion, a B – Operator must have demonstrated advanced skills and leadership qualities. The following minimum requirements are to be successfully completed prior to or within 12 months of promotion:

- IDEM Water Works Operator Certification (WT-3/DSM)
- NAPE Advanced Boiler Operator Certification
- NAPE A/C Refrigeration Operator Certification
- Personal Qualification Standards for A Operator

Current Training Regimen - Mechanics

B – Mechanic

To achieve the B - Mechanic position the following training is required.

The first module of the program is based on the Penn – Foster custom tailored on-line curriculum. In addition to the course work described B - Mechanic candidates will be required to achieve or pass the following:

- National Association of Power Engineers Basic Boiler Operator
 Course
- EPA Section 608 Universal Refrigerant License
- Underground Storage Tank Training
- Commercial Driver's License (as required for specific job duties)

Current Training Regimen - Mechanics

A - Mechanic

In order to be considered for this promotion, a B - Mechanic must have demonstrated advanced skills and leadership qualities. The following minimum requirements are to be successfully completed prior to or within 12 months of promotion:

- Penn Foster custom tailored A Mechanic course
- Smoke Stack VE Reading Certification
- Indiana Water Certification Class (WT-3/DSM)

Current Training Regimen - I&C

B - I&C Technician

To achieve the B-I&C Technician position the following training is required. The program is grounded in the International Society of Automation curriculum and supplemental Distributed Control System (DCS) training. The training will consist of four milestones, which include in order the following courses:

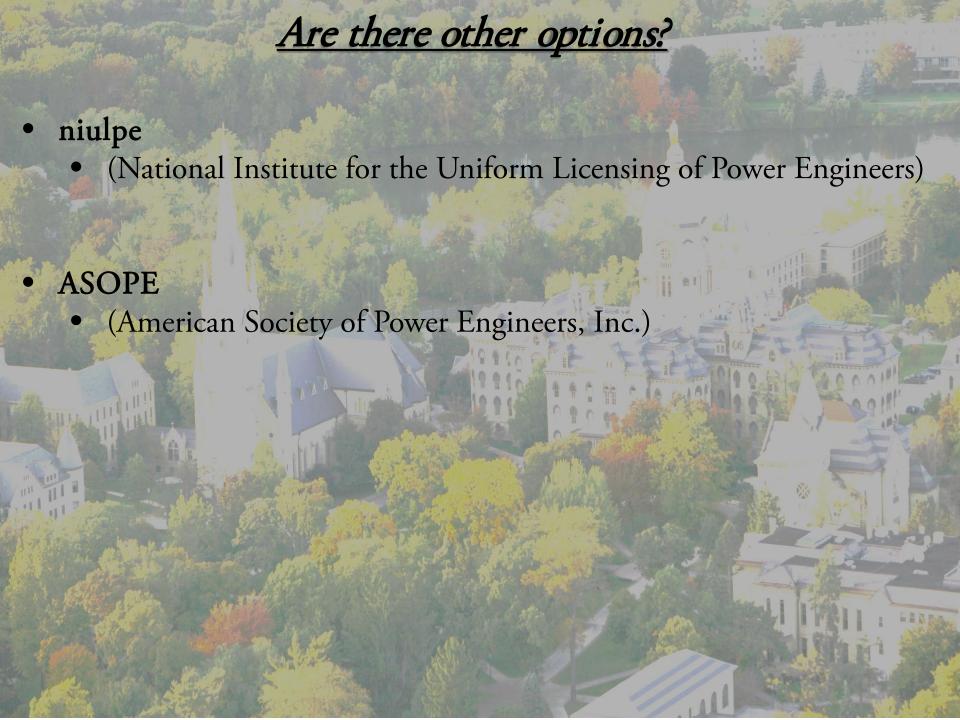
- ISA (International Society of Automation) training course entitled "Technician Training Boot Camp (TTBC)."
- DeltaV Hardware and Troubleshooting Course and EPA
 Section 608 Universal Refrigerant License
- DeltaV Implementation I Course
- CST Associate Exam administered by ISA

Current Training Regimen - I&C

A - I&C Technician

In order to be considered for this promotion, a B – I&C Technician must have demonstrated advanced skills and leadership qualities. This promotion is dependent upon a Supervisor's recommendation, approval of the departmental leadership, and the presence of an open position. The following minimum requirements are to be met previously or within 12 months of promotion:

- DeltaV Implementation II Course.
- Certification as a Level II Certified Control Systems Technician as awarded by the ISA.



Why we selected NAPE & other benefits

- Strong training programs that are kept current and evolve
- Self-paced online curriculum is convenient for employees
- Nationally recognized program and certifications
- Other Benefits:
 - Membership opportunities available beyond just training and certifications if desired
 - Quarterly publications and monthly newsletters
 - Potential for on-site training if needed or desired.
 - Networking and employment opportunities



