

Participants will have an opportunity to see the base material required for the OE-2 License in a format that will help them organize their study time and efforts more efficiently. To that end, the material will be presented with a guide to the specific references outlined in the OE-2 DCP application including but not limited to: boiler theory, operation, maintenance.

**Instructor:**

Jonathan VanDine: Chief Engineer Motor & Steam Plants – Unlimited Horse Power

As the founding member of Building Performance Engineering, LLC, Jonathan has spent much time training plant personnel the fundamentals of mechanical, electrical and control engineering theory and application as it pertains to equipment and plant systems. Jonathan is 1984 graduate of the U. S. Merchant Marine Academy and specializes in plant and facility automation, controls and personnel training.

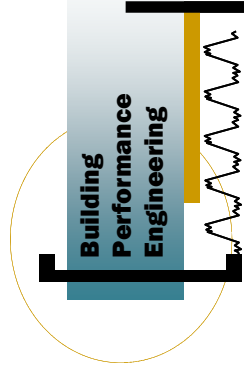
**Past Clients include:**

- Loomis Chaffee School
- Pratt & Whitney
- St. Francis Hospital
- Universal Building Controls
- Construction Institute
- Pfizer
- Aetna
- Sikorsky Aircraft

*for information  
or facility scheduling*

contact **Jonathan VanDine @  
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860-305-1561**

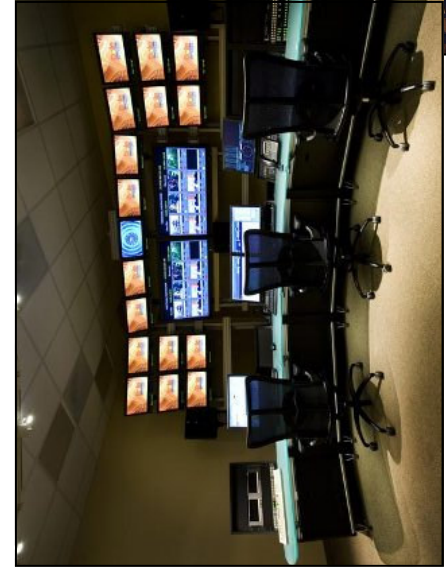


P.O. Box 9541  
Bolton, CT 06043

The state of Connecticut requires that anyone who operates a boiler over 15 PSI and or a chiller 50 Tons have an appropriate License. At the current time, the License accepted is either an S-1, an S-2 or an OE-2.



**CT OE-2 LICENSE REVIEW**



**Building**



**Performance  
Engineering**

### DAY 1: BOILERS (4 HOURS)

- Introduction / Review Syllabus and Course Description
- Exam taking approach including PSI application
- Study preparation approach
- OE2 License – What is it? New Laws Examining Board Minutes, Past Boiler Regulations
- Pre-assessment - 15 questions
- Boiler definitions and theory
- Heat transfer
- Work, energy, power units and math
- Thermodynamics, steam tables

Boiler fittings, structure, function & layout

### DAY 2: BOILERS (4 HOURS)

- Boiler question review, (from previous session)
- Pre-assessment - 15 questions
- Boiler Operations and Equipment
- Operational guidelines & safety
- Fuel combustion and boiler control
- Boiler water testing, treatment and blow downs
- Boiler feed water system & control
- Boiler safety valves
- National boiler regulations

Boiler and pressurized vessel regulations

### DAY 3: BOILERS (4 HOURS)

- Boiler question review, (from previous session)
- Pre-assessment - 15 questions
- Boiler Operations and Equipment
- Peripheral boiler plant systems and equipment
- Mechanical system fittings (valves, traps, pressurized vessels etc.)
- Fuel saving equipment
- Steam system equipment
- Pumps
- Turbines

### DAY 4: REFRIGERATION (4 HOURS)

- Boiler question review, (from previous session)
- Pre-assessment - 15 questions
- Refrigeration definitions and theory
- Cooling & heat transfer
- Work, energy transfer & power units and math
- Thermodynamics, refrigeration tables
- Refrigeration cycle / Basic refrigeration controls

Operational guidelines & safety

### DAY 5: REFRIGERATION (4 HOURS)

- Refrigeration review, (from previous session)
- Pre-assessment - 15 questions
- Refrigeration definitions and theory
- Operational guidelines & safety
- Centrifugal compressors and systems
- Absorption chillers and refrigeration systems

HVAC cooling & heat transfer

### DAY 6: ELECTRICAL (4 HOURS)

- Refrigeration review, (from previous session)
- Pre-assessment - 15 questions
- Electrical Fundamentals
- Electrical – Magnetic fundamentals definitions and theory
- Circuit fundamentals
- Electrical magnetic relationship
- Electrical power
- Circuit protection
- Electrical Motors
- Types of motors
- Motor starting, speed, windings & relationships
- Motor protection
- Motor and motor speed control
- Controller diagrams
- Control fundamentals

### DAY 7: REVIEW and ASSESSMENTS (4 HOURS)

- Final Assessment 50 questions
- Completion Certificates Distributed



# CT OPERATING ENGINEER (OE-2) LICENSE REVIEW AND TEST PREPARATION

## **CLASS SCHEDULE (7 Dates):**

Friday, May 31, 2013	3:00-7:00pm
Friday, June 7, 14, 21, 2013	3:00-7:00pm
Thursday, June 27, 2013	3:00-7:00pm
Friday, July 12, 19, 2013	3:00-7:00pm

## **CLASS TO BE HELD AT:**

**Candle Wood Grill**, Cabela's  
475 East Hartford Blvd. East Hartford, CT

**COST: \$425—includes Study Binder**



# 860-305-1561

for information