OPERATIONS DIVISION

OD/SOP 08.06: Personnel Qualification

System DATE: August 31, 2018

PURPOSE
The purpose of this Operations Division Standard Operating Procedure (OD/SOP) is to set forth procedures for administration of the Utilities Personnel Qualification System (PQS). PQS serves to establish the guidelines, standards, and knowledge level required to operate campus building automation system environmental controls, and operate the campus utility plants safely, reliably, and efficiently to our customers through training and advancement of our employees following principles of continuous improvement.

REVIEW
This OD/SOP will be reviewed in August of each year by the Director of Utilities and recommendations forwarded to the Assistant Vice President – Operations.

PROCEDURE
1. Definitions
   a. Advancement: A promotion to a higher level of qualification.
      (1) Advancement is normally accompanied by a minimum increase in salary as listed in the Utilities Operator Pay Plan Chart below. Personnel, who complete a level of qualification before the allotted time and/or demonstrate exceptional performance, may be awarded higher levels of starting pay within the next qualification pay grade with the approval of Operations Division upper management and the Assistant Vice President of Operations.

<table>
<thead>
<tr>
<th>Title</th>
<th>Pay Grade</th>
<th>Minimum Starting Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities Trainee</td>
<td>507</td>
<td>14.17</td>
</tr>
<tr>
<td>UO I</td>
<td>508</td>
<td>15.10</td>
</tr>
<tr>
<td>UO II</td>
<td>509</td>
<td>17.18</td>
</tr>
<tr>
<td>UO III</td>
<td>510</td>
<td>18.31</td>
</tr>
<tr>
<td>UO IV</td>
<td>511</td>
<td>19.77</td>
</tr>
<tr>
<td>Lead UO</td>
<td>512</td>
<td>20.84</td>
</tr>
<tr>
<td>(EMO I) Specialist IV</td>
<td>508</td>
<td>14.03</td>
</tr>
<tr>
<td>(EMO II) Senior Specialist</td>
<td>509</td>
<td>15.07</td>
</tr>
<tr>
<td>(EMLO) Lead Operator</td>
<td>510</td>
<td>16.63</td>
</tr>
</tbody>
</table>

(2) Completion of the PQS book alone does not guarantee promotion. An open position must exist, funding available, and the appropriate supervisors must recommend an employee for advancement. This promotion will be based upon verified improvement in job performance and acceptance of increased responsibility.
(3) The duties and responsibilities of Utility (UO) and Emergency Maintenance Operators (EMO) pay grades are described in the respective Position Description. The pay grades and levels of qualifications are listed in the Texas Tech University, Texas Tech University Health Sciences Center Pay Plan.

b. Assistant or “B” Operator: Individual designated as the junior member of operating shift; assistant to the lead operator in safely efficiently and reliably operating the assigned utility plant, and duties assigned in the respective Position Description.

c. Emergency Maintenance Operator: Individual designated as responsible for operating and monitoring campus building automation system environmental controls, dispatching technicians to conduct after hours and emergency repairs, and duties assigned in the respective Position Description.

d. Lead or “A” Operator:

(1) Utility Plant Lead Operator: Individual designated as responsible for an operating shift; under normal circumstances a Utility Operator II or higher.

(2) Emergency Maintenance Shift Lead Operator: Individual designated as responsible for an operating shift; under normal circumstances an Emergency Maintenance Operator II or higher.

e. Oral Board / Interview Board: A formal oral or practical examination of an individual’s knowledge, typically lasting one and one-half hours or as needed to evaluate the employee’s knowledge level. The Training Coordinator is responsible for scheduling and assigning board members. Board members have a responsibility to report to the board with a minimum of five prepared questions.

   Representation on the board is listed below, but it must be understood that operational requirements may preclude this:

   (1) Level I: To consist of a minimum of five (5) qualified lead operators who are senior in qualification to the examinee. No maximum number of members for the board has been set, but it should be representative of all plants. The Training Coordinator will act as non-voting recording secretary.

   (2) Level II: To consist of a minimum of five (5) members of Utilities management from an Assistant Director, Associate Director, the Director of Utilities, Managers, Training Coordinator, Supervisors/Foreman, and Instrumentation Specialists. Board members should be representative of all plants. The Training Coordinator may act as a voting board member and recording secretary.

   (3) Requalification board: To consist of a minimum of five (5) members: Two (2) qualified lead operators who are the same grade or senior in qualification to the examinee and two (2) members of Utilities management. No maximum number of members for the board has been set, but it should be representative of all plants. The Training Coordinator may act as voting board member and recording secretary.

   (4) Interview board: To consist of a minimum of one (1) Emergency Maintenance
supervisor, two (2) members of Utilities management from an Assistant Director, Associate Director, Director, Managers, Supervisors/Foreman. BM&C Directors, Managers, Supervisors/Foremen may substitute. The Training Coordinator will act as the recording secretary.

f. Watch Standing Review: A detail review/testing process in which an employee is graded by several assigned board members who are the same grade or senior in qualification to the examinee as to their proficiency. The review will include Systems, General, and Basic Engineering Casualty Control Exercises (BECCE). The review process will normally last no more than 12 hours total in a 7-day shift rotation watch. It may be conducted in lieu of an Oral Board at the request of the employee.

g. PQS Books: Written manuals, which include a User’s Guide and Qualification Sign-Off Books for Utility Operator I through Lead Utility Operator, Emergency Maintenance Operator I through Emergency Maintenance Lead Operator, and Dual Plant Qualification. The User’s Guide and the Emergency Maintenance sign-off booklet are standard booklets containing the minimum questions that must be answered and performance items that must be performed. The Qualification Sign-Off Book includes areas required for advancement to the next higher level of qualification. Each level of qualification (or pay grade) has a Qualification Sign-Off Book.

h. Personnel Qualification System (PQS): A training program implemented to ensure the safe, reliable, and efficient day-to-day operations of the central heating & cooling plants (CHACP’s), and campus building automation system environmental controls. The program provides minimum standards for employees to qualify as Utility and Emergency Maintenance Operators. PQS is a compilation of engineering fundamentals, plant operating systems, building automation system environmental controls and casualty control procedures for which adequate knowledge and understanding must be demonstrated through checkouts or by actual performance. A point system is used to monitor the employee’s monthly progress and is maintained by the Training Coordinator.

i. Point System: A point value assigned to each sign-off task. Overall progress is determined by the number of points accrued.

j. Dual Plant Qualification: Once Utility Plant Operators have qualified for Lead Utility Operator in their assigned (primary) plant, they may request to become Dual Plant Qualified by completing the requirements at the other plant (non-primary plant).

k. PQS Program Pace: Progress toward advancement and staying current with required points is the responsibility of each individual. Progress toward advancement can be performed in a more expedient manner, but at a minimum will meet the following:

i. Each PQS level will be completed in no more than 18 months and no less than 6 months including completion of the oral board.

ii. Individuals must attain the minimum required points for their PQS level, remaining at least 0% ahead or 0 days ahead at all times.

l. Signature Authorization: Employees authorized to sign-off areas of expertise are listed in the PQS Sign-Off List posted at each central plant, and in the emergency maintenance office.
Individuals will be tested on their knowledge of a specific area before being placed on this list. The Training Coordinator is responsible for ensuring this list is updated quarterly. No employee shall sign off an area for which they are not authorized via the PQS sign-off list. Individuals qualified Lead Utility Operator/Emergency Maintenance Lead Operator and above may sign off any area in which they deem themselves technically proficient unless specific individuals are designated on the list for those areas. Personnel authorized to sign line items will do so on the top and bottom signature areas at a minimum. Between these signatures the signer’s initials are acceptable. Date fields are allowed to have a date on the top and bottom fields with a vertical line connecting them.

m. **Examination:** A formal examination that will be administered prior to an oral board/Interview board.

n. **Lead Utility Operator/Emergency Maintenance Lead Operator:** A senior plant/emergency maintenance operator that possesses expertise of practical plant or campus building automation system environmental controls knowledge, operations, and leadership skills. Ability to fill in as the supervisor when assigned.

o. **Requalify:**

Requalification is required to ensure a minimum knowledge level is maintained. Requalification requirements are as follows:

1. All Utility Plant Operators, UO II, UO III, UO IV, and Emergency Maintenance Senior Specialist (EMO II), are required to requalify at their current level of qualification every 12 months unless they are actively enrolled and not delinquent in the PQS program.
2. Personnel who hold dual-plant qualification are required to requalify on their non-primary plant every 12 months to ensure knowledge level is maintained.
3. Requalification for UO I or Specialist IV is not allowed per this OD/SOP.
4. Director of Utilities may grant specific exemptions for requalification.

**Requalification Requirements:**

1. Requalification will be through either an exam administered by the Training Coordinator or an oral board/interview board.
2. The exam or oral board/interview board will be used as a guideline to measure adequate knowledge of the individual. If the exam or board is not passed, the employee will be given 30 days to prepare before a re-test or re-board is scheduled.
3. If not passed a second time, the Training Coordinator will communicate with supervisors to establish remedial training or other actions to improve job performance.
4. A continued failure to meet requalification requirements may result in disciplinary actions IAW established Operations and Texas Tech Operating Procedures.

2. **Rules**

a. All utility plant and emergency maintenance operators are subject to this standard operating procedure and are required to complete PQS through the level of UO II or EMO II and be designated as a qualified plant lead operator in the allotted time. Employees, UO II or EMO II
and above can choose to discontinue in the PQS program, however, the employee will not be allowed re-instatement in the program for 12 months without permission from the Director of Utilities. Employees who choose to re-enter PQS must do so with a written request thru their chain of command to the Director of Utilities. All employees actively enrolled in the PQS program must abide by all rules described in this OD/SOP.

b. Qualification Sign-Off Books will be turned in to the Training Coordinator at the monthly safety meeting. Failure to do so will result in zero progress points awarded for that period, and an entry documenting the occurrence will be entered in the employee’s personnel file. Supervisors will ensure the entry is made. Points will be totaled and recorded, and the Sign-Off Books will be returned to the employee(s) within three (3) working days. Each month, progress charts will be routed to all supervisors and posted in each central plant.

c. New Qualification Sign-Off Books will not be issued until all requirements are met for the present pay grade. This is to prevent an employee from working on two qualification levels at the same time. Once an employee is issued their next level of Qualification Sign-Off Book, they will not be required to attain any PQS points until the second monthly safety meeting following the date the book was issued.

d. Each section in the Qualification Sign-Off book requires two signatures. Employees authorized to sign-off specific areas will sign the signature lines only. Authorized employees (different from the one who signed the signature line), Lead Utility Operator, Emergency Maintenance Lead Operator, supervisor, and above are allowed to sign the signature or final qualification lines of any area. No employee may sign both the signature line and the final qualification line for a given topic.

e. Completion of all requirements for advancement does not automatically guarantee a promotion. An open position must exist, and a recommendation for promotion must be approved through the Director of Utilities and the Assistant Vice President for Operations. Overall job performance, i.e., attendance, reliability, leadership ability, behavior, and other disciplinary actions (or pending) will be considered. Required performance changes before promotion will be outlined IAW with TTUOP 70.31 and other establish procedures.

f. Re-qualifiers will be notified by the Training Coordinator at least one (1) month before the requalification deadline to begin a review process. The re-qualifier is responsible for scheduling the requalification exam. If the person requalifying fails to schedule a requalification exam, the exam or board will be administered as scheduled by the Training Coordinator.

3. Advancement (Minimum requirements for advancement to next pay grade)

a. From Utilities Trainee to Utility Operator I  
   1. Complete UO I PQS book  
   2. Be recommended by supervisors  
   3. Pass UO I exam  
   4. Pass a Level I oral board, or watch standing review  
   5. Complete a minimum of 40 hours proper watch standing *(assigned to the lead/assistant operator on shift)*
b. To Utility Operator II
   (1) Complete UO II PQS book
   (2) Be recommended by supervisors
   (3) Pass UO II exam
   (4) Pass a Level II oral board, or watch standing review
   (5) Complete one shift rotation (four [4] months) as an Assistant Operator

c. To Utility Operator III
   (1) Complete UO III PQS book
   (2) Have applied for or be enrolled in and remain current, or have completed PP Apprenticeship Program for Utility Plant Operator
   (3) Be recommended by supervisors
   (4) Pass UO III exam
   (5) Pass a Level I oral board, or watch standing review
   (6) Complete one shift rotation (four [4] months) as a lead
   (7) Requalification required every twelve (12) months

d. To Utility Operator IV
   (1) Complete UO IV PQS book
   (2) Be enrolled in and remain current, or have completed PP Apprenticeship Program for Utility Plant Operator
   (3) Be recommended by supervisors
   (4) Pass UO IV exam
   (5) Pass Level II oral board, or watch standing review
   (6) Requalification required every twelve (12) months

e. To Lead Utility Operator
   (1) Complete Lead Utility Operator PQS book
   (2) Be enrolled in and remain current, or have completed PP Apprenticeship Program for Utility Plant Operator
   (3) Be recommended by supervisors
   (4) Pass Lead Utility Operator exam
   (5) Pass Level II oral board, or watch standing review
   (6) Requalification not required
   (7) Be enrolled in or completed the Operations Division Supervisory Training Program

f. Specialist IV to Emergency Maintenance Operator I
   (1) Complete EMO I PQS book
   (2) Be recommended by supervisors
   (3) Pass EMO I exam
   (4) Pass the interview board

g. To Emergency Maintenance Operator II (Senior Specialist)
   (1) Complete EMO II PQS book
   (2) Be recommended by supervisors
   (3) Pass EMO II exam
   (4) Pass the interview board
h. To Emergency Maintenance Lead Operator (Lead Operator)
   (1) Complete EMO II PQS book
   (2) Be recommended by supervisors
   (3) Pass EMO II exam
   (4) Pass the interview board

i. Dual Plant Qualification
   (1) Participation in Dual Plant Qualification is voluntary.
   (2) Personnel shall be qualified as a Lead Utility Operator and have stood at least two (2) full
       four (4) month rotations in the past 18 – 24 months as a Lead Operator in their assigned
       plant prior to consideration for Dual Plant Qualification.
   (3) If a person wishes to participate in Dual Plant Qualification, they must submit a request to
       participate via the chain of command through the Training Coordinator to the Director of
       Utilities.
   (4) Once approval of the Director of Utilities is received, the Training Coordinator will issue a
       Dual Plant Qualification Book. There will be no tracking of progress toward completion;
       however, personnel should make every effort to complete the book in a timely manner not
       to exceed 18 months.
   (5) Once the person has received all required signatures in the Dual Plant Qualification book,
       they will be designated as Dual Plant Qualified. A letter to increase pay by $0.50/hour will
       be submitted for approval.
   (6) Dual Plant Qualified Personnel are required to requalify every twelve (12) months with a
       three (3) month grace period. Requalification will consist of one (1) watch of at least eight
       (8) hours at the non-primary plant with a discussion period of plant operations with the
       Operations Supervisor of the non-primary plant. Vacation and sick leave coverage in the
       past rolling 12 months can be considered by the Operations Supervisor for requalification
       watch time. Both Plant Operation Supervisors will be responsible to schedule the
       requalification watch time for each dual plant qualified operator.

4. Examination

   A minimum test score of 80 percent is required to successfully pass the exam. The Training
   Coordinator will maintain a library of questions from which advancement and requalification
   exams are compiled. A formal examination is administered prior to an oral board or practical
   examination. Advancement exams consist of 100 questions, of which approximately 75 percent
   will be multiple choice and matching, with the remaining 25 percent essay type questions.
   Questions will be derived from the current and previous levels of qualification. Time limit for
   advancement exams is 4 hours.

   a. An oral board/interview board will be a formal question-and-answer format. A practical
      examination will consist of a question and answer sessions with individual board members as
      well as in-plant demonstrations of plant knowledge, or building automation system processes
      and procedures. All questions will be derived from the current level of qualification
      advancement and below. The candidate should answer all questions to the best of his/her
      ability. Each board member will grade the candidate based on the examinee’s response to the
      question. If the board member is unsure or unclear of the subject or answer, no grade shall be
The grading scale will be 0 to 10 with 10 being excellent. A score below 8 will be rated as “C” (further study condition) and a score below 7 will be rated as “M” (mandatory further study), follow-up checkout by a board member is required.

An Oral Board or Final Watch Standing Review Worksheet (Attachment A) will be provided to record and grade each question. All questions will be grouped into three (3) categories; Theory & Systems, Casualty Control, and General. Theory & Systems will include questions pertaining to plant operating systems and theory of operation. This category will account for 45 percent of the overall score at the UO I & UO II levels, and 30 percent of the overall score at the UO III – LUO levels. Casualty Control will include questions about casualties and/or abnormal conditions. This category will account for 45 percent of the overall score at the UO I & UO II levels, and 60 percent of the overall score at the UO III – LUO levels. General will include questions which have minimal impact on final score computation. This category will account for 10 percent of the overall score. For emergency maintenance interview boards, categories will include, (1) building automation systems, (2) fire alarm systems, door lock systems, and (3) recall procedures, general, notification procedures.

At the conclusion of the oral board, the board members will compile individual scores and a composite score will be an average of each member’s scores. The following scale will be used to determine the board results:

<table>
<thead>
<tr>
<th>Board Composite Score</th>
<th>Conditions</th>
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<tbody>
<tr>
<td>Equal or greater than</td>
<td>8</td>
</tr>
<tr>
<td>From</td>
<td>7 - 7.9</td>
</tr>
<tr>
<td>Less than</td>
<td>7</td>
</tr>
</tbody>
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Two (2) mandatory (M’s), or a total of five (5) combined look-ups (total of conditional + mandatory) as agreed upon by the entire board is an automatic failure.

Candidates who pass with conditions will be required to complete additional training and be certified by a board member before advancement is approved. This may include one-on-one instruction, review of trouble areas, or a mini-board with supervisors. Failure to complete the board’s requirements for advancement within 30 days will require the employee to re-board. The first board will be considered a failed board, and the second board will be scheduled as soon as possible, not to exceed 30 days, by the Training Coordinator. Failure of a second board will lead to disciplinary actions for poor job performance IAW with established TTUOPs.

Individuals who fail an oral or interview board will be required to re-board within 30 days. Failure to re-board within 30 days, or following a second board failure, the employee will will lead to disciplinary actions for poor job performance IAW with established TTUOPs.

Individuals who pass a second board will receive a minimum passing score of (7).

The Training Coordinator will forward to the candidate and supervisors, within three (3) working days, a worksheet detailing the results of the board, the composite score, and the area(s) required for improvement and development.

b. A Final Watch Standing Review (Attachment B) is an alternative to be offered for an Oral
Board should the candidate for advancement choose. The Final Watch Standing Review is a formal practical examination of an individual’s knowledge, which is the same function of an Oral Board; instead it is to be conducted in the operational spaces of the utility plant normally lasting no more than 12 hours total in a 7-day shift rotation watch.

5. Exceptions / Appeal

Any exceptions to the requirements to this OD/SOP must be approved by the Director of Utilities. The decision of the Director of Utilities is considered final.

Scores received on the written test and the oral board’s decision is considered binding. However, an employee may appeal as set forth in the following:

a. An individual having trouble with the test may request an oral exam. An oral or written request must be submitted with specific justification for the appeal. The request will be routed via the Training Coordinator through the Assistant/Associate Director to the Director of Utilities. Upon approval, an oral exam will be scheduled. All oral questions will be taken from a written advancement examination for the current level of qualification and below.

b. The following may apply for an individual who has failed an oral board:

(1) If a Level I board was failed, the individual may reschedule the board as described in section (4) b above or request a Level II board. If the individual fails the Level II board, this will be considered a second board failure and disciplinary actions may be taken IAW with established TTUOPs.

(2) If a Level II board was failed, the individual may re-board as described in section 4.b above.

c. Employees may appeal decisions pertaining to compliance with this OD/SOP at any time in accordance with TTU OP 70.10 – Non-faculty Employee Complaint Procedures.

6. Special Circumstances

a. An employee is required to advance to the pay grade of UO II or EMOII prior to being designated and assigned as a Utility Plant or Emergency Maintenance Shift Lead Operator.

(1) Needs of the department may necessitate assignment of a UO I or EMOI to this responsibility.

(2) If this individual is currently in the PQS program, this will warrant a temporary (for pay purposes only) promotion to UO II or EMOII. This will remain until the individual completes all requirements for advancement to UO II or EMOII, or is relieved of the responsibilities of Utility Plant or Emergency Maintenance Shift Lead Operator.

(3) Individuals will require specific approval by the Director of Utilities prior to this assignment.

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(4) If an individual is appointed as Lead Operator and is not current or in the PQS program, no pay increase will be granted until PQS progress is brought current for two (2) consecutive monthly point counts.

(5) Individuals who become delinquent while on temporary assignment as Lead Operator will have until the next point count to become current in PQS. Failure to become current may result in disciplinary action including removal from Lead Operator status and reduction of pay.

b. Occasionally, the department hires an individual who demonstrates prior knowledge and experience at an elevated pay grade (i.e., UO I, II, etc.). This prior knowledge may be determined by testing or by past work history.

(1) Employees in this category may be required to start the PQS program at a level junior to the level to which they were hired and complete all other qualification levels up to their current pay grade without any PQS based pay increase.

(2) Employees who meet this criterion may be hired in a “Trainee Status”, and will be given an allotted time to complete PQS qualification up to their hiring level. This allotted time should not normally exceed 12 months per TTU OP 70.14.

(3) Employees who fail to qualify in their allotted time may be subject to disciplinary action up to and including dismissal, for example, an individual may be hired as a “UO II Trainee” and be given six (6) months to complete qualification up to UO II. Failure to complete qualification in the allotted time could lead to disciplinary action up to and including dismissal.

c. Apprentice:

(1) Employees hired as an Apprentice must maintain positive job performance and complete the Apprentice PQS program prior to their six-month evaluation period.

(2) Upon completion of the Apprentice PQS program, and if qualified, an Apprentice may apply for available Utilities Trainee positions.

7. Disciplinary Action

Discipline will be conducted in accordance with TTUOP 70.31. Employee Conduct, Discipline, and Terminations, failure to maintain the required PQS advancement pace is an example of poor job performance and will result in disciplinary action up to and including dismissal. All employees subject to this standard operating procedure are required to advance to UO II / EMO II. Likewise, all operators in the PQS program are required to maintain minimum qualifications for their current pay grade. Each month the Training Coordinator will evaluate the PQS progress of all employees and distribute to the Director of Utilities, and supervisors, a Personnel Training Status Report. This report will include the training progress of all personnel active in PQS who:

a. Failed to remain current in their current PQS book at all times (below (0) zero days ahead).

b. Are delinquent in requalification.

c. Fail to qualify the next level of advancement within eighteen (18) months of beginning that level of qualification.

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Since operator qualifications are an essential core necessity and poor performance in PQS directly relates to unsatisfactory job performance, supervisors will act in accordance with TTUOP 70.31. Employee Conduct, Discipline, and Terminations.

The designated supervisor will issue all oral and written disciplinary actions, with another supervisor in attendance.

The Director of Utilities may, based upon mitigating circumstances, decide if any disciplinary action is required, and / or the extent of the disciplinary actions to be administered.

**Disciplinary actions pertaining to compliance of this OD/SOP will not carry over to the next level of qualification**

8. Employee at Will

Refer to Texas Tech University OP 70.31 Section 2.

Employment at Texas Tech is governed by the employment at will doctrine. Employment is for an indefinite duration and can be terminated at any time, with or without cause and with or without notice, by either Texas Tech or the employee. Nothing in this or any other Texas Tech operating policy and procedure constitutes an employment agreement, either expressed or implied, a contract, a contractual relationship, a guarantee of continued employment, or a property right. No one can execute a contract of employment except the Board of Regents acting as a whole, the chancellor, or the president of the university and any such contract must be within their legal authority and must be in writing.

9. Right to Change Standard Operating Procedure

Operations Division, Utilities reserves the rights to interpret, change, modify, amend, or rescind this procedure, in whole or in part, at any time without the consent of employees.