# JOB DESCRIPTION

**POSITION NUMBER:** 00027168
**BUSINESS TITLE:** EWS Thermal Plant Assistant Chief Engineer
**EMPLOYMENT GROUP:** IUOE 115
**JOB FAMILY:** IUOE 115 Trades
**JOB CODE:** 320116 - Assistant Chief Engineer
**VP/FACULTY:** VP Finance and Operations
**DEPARTMENT:** EWS - Eng & Util - Thermal Uti
**PAY GRADE:** 09
**SALARY LEVEL:**

## JOB SUMMARY

UBC Energy and Water Services oversees the overall management of energy and water at the UBC Vancouver Campus, working within a mandate of fiscal efficiency, operational excellence, environmental sustainability and innovative demonstrations. EWS thermal plants are comprised of multiple thermal energy systems, ranging from conventional gas-and-oil-fired thermal boilers to biomass thermal boilers involving wood gasification technology and conventional wood-burning thermal boilers.

Under the direction of the People and Process Manager, Plant Operations (the Plant Chief Engineer) and other Management Supervision, the Assistant Chief Engineer allocates and organizes the work of the power engineers within UBC's Energy and Water Services department.

The Assistant Chief Engineer ensures the safe and efficient operation of UBC EWS Thermal Energy Plants, including maintenance, service, and repair of all thermal energy assets (boilers, auxiliary equipment, etc.). Equipment within their operational expertise and responsibility include fuel material handling systems, boilers systems and related auxiliary systems, combustions and process controls, power generation through internal combustion engines and power synchronization systems, ash handling and disposal systems, compressed gas systems, hydraulic systems, water treatment systems, flue gas conditioning systems and emission control systems.

## ORGANIZATIONAL STATUS

The Assistant Chief Engineer reports to the UBC Energy and Water Services People and Process Manager, Thermal Plants (the Plant Chief Engineer). The Assistant Chief Engineer provides supervision, guidance and mentorship to Thermal Energy Plant power engineers along with the People and Process Manager, Plant Operations (the Plant Chief Engineer). If there is a lack of required coverage at any UBC Energy and Water Services Thermal Energy Plant, the Assistant Chief Engineer may be required to provide coverage.

## WORK PERFORMED

1. Oversees the daily operation of Energy and Water Thermal Plants on behalf of the People and Process Manager – Thermal Plants (the Chief Operating Engineer). Supervises, participates with, and provides operational and technical direction and work assignments to all thermal plant staff.

Ensures Shift Team Leaders are performing their inspections, operations, and maintenance of the equipment and that the Shift Team Leaders are running EWS Thermal Plant assets and systems on target or at peak performance. Where performance is lagging, reviews operation protocol and makes changes to operating protocols as approved by the Chief Operating Engineer.

2. Responsible for scheduling staffing requirements. Administers attendance records, approves and submits time card records, as well as reviews, provides preliminary approval, and submits staff vacation requests for final management approval.

3. Leads response, investigation and resolution of trouble, service and emergency calls for the EWS Thermal plant related mechanical equipment and systems.

4. Ensures the safe start-up, shutdown, and lockout of thermal equipment for maintenance or repair related to the operation and maintenance of the thermal plant.

5. Responsible for maintaining safe working environment by ensuring all plant steam related mechanical equipment and systems comply with all applicable acts, codes, regulations, policies and standards; including WorkSafeBC and the Technical Safety BC. Ensures operational safety and compliance with applicable codes and regulations by reviewing and maintaining all associated written and computerized records, log sheets and books. Ensures safety and regulator checks related to the plant are being performed and documented appropriately.

6. In partnership with, and on behalf of, the Chief Operating Engineer, schedules and coordinates multi-trade work activities, service outages for emergency repairs, equipment preventative maintenance and modification work. Coordinates and supervises all equipment and process shut downs, lockouts and startups related to the operation of the plants.

7. Performs skilled hands on work on all plant related mechanical equipment and systems as required. Demonstrates safe and effective maintenance practices to all Thermal Plant Operations staff and is a supervisor for maintenance and operation activities.

8. Effectively communicates and responds to emails, phone calls, and text messages as required. Using communication devices (radios, cell phones, etc.) as required. Responds to after-hours phone calls from Thermal Plant operators in regards to process upsets and emergencies.

9. Provides and/or coordinates training and orientation to staff including mandatory UBC-wide training as well as plant operations and maintenance of equipment training. Maintaining computerized records of mandatory training requirements for each staff member.

10. Documents and assesses current processes and procedures and recommends appropriate changes or replacements to equipment, operating methods, materials or maintenance.

11. Creates, maintains and updates operational standards, lockouts and procedures. Aids in the design, evaluation and writing of process and equipment specifications. Works in conjunction with the Chief Engineer for the commissioning of new or renewed mechanical equipment and systems associated with renovation or new construction work.

12. Monitors and updates the plant preventative maintenance programs. Reviews documentation and ensures schedules are met. Initiates and reviews work orders for accuracy and completion.

13. Sources, purchases and maintains supplies, materials, equipment and tools for the operational viability of the both plants.

14. Provides input and may assist with the Isolation of DES valves throughout campus to ensure optimum operation of the thermal energy plants, following the appropriate safety procedures under the direction of the Chief Operating Engineer

15. Ensures the proper records and maintain daily, monthly and annual plant data which includes (but not limited to): fuel consumption, energy production, power production\consumption, water consumption, fuel inventory levels, plant efficiency, and greenhouse gas emissions.

16. Sets the standards of a safe work environment in respect to items such as chemical\fuel spills and to maintain a reasonable level of cleanliness within the Thermal Energy Plants. Housekeeping is a shared responsibility of all members of the plant team and the assistant chief engineer ensures all members of the team are contributing to the upkeep of the thermal plants.

17. Maintains certification and training in the operation of UBC Fleet Vehicles, forklifts, lifts, and other vehicles as required. UBC to provide specialized training where required.

18. Ensures the Thermal Plants maintain appropriate pressures and temperatures within the DES system by ensuring adequate pumps, boilers, and auxiliary equipment are in operation

19. May be required to conduct routine inspections of remote thermal energy plants, and or operate local plant equipment at the thermal energy plants, and/or the People and Process Manager – Thermal Plants (Chief Engineer).

20. Perform the role of Acting Chief Engineer when the Chief Operating Engineer is on vacation and is deemed unreachable or unable to provide direction for the operation of thermal energy plants. This includes becoming the Acting Chief Engineer and performing the Chief Operating Engineer's duties of conveying thermal plant information to senior management.

21. Trouble-shoots all process and instrumentation control pertaining to the operation of UBC EWS energy plants.

22. Assists the Chief Engineer with arranging inspections and work performed by contractors and Technical Safety BC.

23. Assists the Chief Engineer with the commissioning of new or heavily modified equipment and process systems that are being operated for the first time or are being returned to service after an extended shutdown.

24. May be required to perform additional duties related to the qualifications and requirements of the classification.

25. Ensuring directives and orders issued by the Chief Operating Engineer are effectively communicated to the thermal plant operators and that the directives and orders are being complied with.

## CONSEQUENCE OF ERROR

Relative to duties described above failure to utilize due diligence and follow proper procedures while on shift could have serious effects to campus heating system, cause death or dismemberment to UBC staff, faculty and students, and cause catastrophic damage to EWS Thermal Energy Assets.

Failure to follow proper procedure may result in EWS thermal energy plants not being code compliant and/or falling into a state of disrepair.

When performing duties as the Acting Chief Engineer, is looked upon to make sound decisions of the operation of thermal energy assets to ensure the reliable supply of thermal energy to the UBC Campus.

## SUPERVISION RECEIVED

Supervision and mentorship are given to the Assistant Chief Engineer by the Process Manager, Plant Operations (the Plant Chief Engineer) and the Senior Thermal Energy Manager.

## SUPERVISION GIVEN

The Assistant Chief Engineer supervises thermal plant staff in the safe, efficient, and effective operation of the thermal energy plants and district energy system, as per the BC Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation.

Direct and supervise thermal plant staff. Maintain order among any and all persons employed in the plant that are under their authority. Ensure operating procedures for the plant are understood, observed, and complied with. Ensure a watch is kept on the condition of all units and installations in the plant; take such measures as are necessary to prevent or alleviate any immediate danger to the plant; and report to the Process Manager, Plant Operations (the Plant Chief Engineer any condition that may jeopardize the safety of the plant. When required, make accurate records in the plant log book of any conditions that may affect the safety of the respective plant.

As relative to the position duties listed.

## QUALIFICATIONS

TSBC-Certified Second Class Power Engineer is required for this role, however should there be no qualified and suitable candidate with Second Class Power Engineer; the University will consider a conditional hire of a TSBC-Certified 3rd Class Power Engineer with the requirement that the successful candidate obtain a 2nd Class Power Engineer Certificate of qualification within 26 months from the date of hire.

A minimum two (2) years' experience in operating in a high-pressure power generating steam plant with an industrial process or equivalent experience.

Experience desired in solid fuel handling systems, electrical power generation and distributed control systems (DCS).

A demonstrated ability in mechanical and instrumentation skills related to plant maintenance is preferred.

Ability to maintain certification and training in the operation of UBC Fleet Vehicles, forklifts, lifts, and other vehicles as required. UBC to provide specialized training.

Ability to organize, allocate and supervise the work of power engineers.

Ability to coordinate the work of contractors and other trades and coordinate with the Head Maintenance Engineer.

Ability to maintain records and write reports.

Ability to use Windows based and Microsoft Office software. Experience and ability in the use of windows-based software. Experience gained with University computer applications may be considered as equivalent.

Ability to operate, or learn how to operate, smart phones and tablet computers.

A demonstrated ability to work independently.

A demonstrated initiative and attitude to improve the plant and the workplace.

Effective written and oral communication skills in English.

The dedication and commitment to self-improvement and remaining current in the Power Engineering craft.

A BC Class 5 Drivers License in good standing.