



CLASSIFICATION STANDARD

**LIGHTKEEPERS**

**OPERATIONAL CATEGORY**

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## INTRODUCTION

This standard describes the rating plans to be used to evaluate positions allocated to the Light keepers Group. It consists of an introduction, general definitions of the Operational Category and the occupational group, organizational level definitions, point-rating scales to be applied to Head Light keeper positions, and the plan to be used to determine the level of other positions in the Light keepers Group.

Point rating is the technique used to evaluate positions of Head Light keeper. It is an analytical, quantitative method of determining the relativity of positions and is particularly suited to heterogeneous occupational groups in which positions consist of varied combinations of duties. Point-rating plans define the characteristics or factors common to the positions in the group and also the degrees of each factor. The total points for each position is the sum of the point-ratings of each factor.

All methods of job evaluation require the exercise of judgement and the orderly collection and analysis of information in order that consistent judgements can be made. The point-rating method facilitates rational discussion and resolution of differences in determining the relativity of positions.

### Factors Used to Evaluate Head Light keeper Positions

The combined factors do not necessarily describe all the characteristics of Head Light keeper positions but deal only with those characteristics that can be defined and distinguished and that are also useful in determining the relativity of positions.

Three of the four factors used in this plan are defined in terms of two or more related elements. Point

### Weighting and Distribution

The point weighting of each factor reflects its relative importance. Similarly, points are distributed to the degrees of the factors or elements in an arithmetic progression.

However, when the work has no special requirement with regard to some elements, no minimum value is assigned (see rating plan).

Rating Plan

In the rating plan for Head Lightkeepers positions, the point weighting and distribution is shown in the table below:

| Factor                               | Element   | Percentage of | Point Weighting |         |
|--------------------------------------|---|---------------|-----------------|---------|
|                                      |   | Total Points  | Minimum         | Maximum |
| Work Complexity                      |   | 45            | 90              | 450     |
|                                      | Variety<br>Skill and Knowledge  |               |                 |         |
| Charge Responsibility                |   | 15            | 30              | 150     |
| Working Conditions                   |   | 20            |                 |         |
|                                      | Engine and Motor Operation<br>Hoists, Aerial Tramways<br>and Derricks |               | -               | 30      |
|                                      | Small Boat Operation  |               | 8               | 40      |
|                                      | Travel<br>Landing (at Station)  |               |                 |         |
|                                      | Fog Alarm   |               | -               | 20      |
|                                      | Height of Tower   |               | 5               | 25      |
|                                      | Weather and Terrain   |               | 4               | 20      |
|                                      | Limitation on Outdoor Activity  |               | -               | 45      |
| Difficulty of Access<br>to Community |   | 20            |                 |         |
|                                      | Difficulty of Regular Access  |               | -               | 150     |
|                                      | Emergency Travel Time   |               | 5               | 50      |
|                                      |   | 100           | 142             | 1,000   |

Use of the Standard

There are six steps in the application of this classification standard to Head Light keeper positions.

1. Allocation of the position to the category and the group is confirmed by reference to the definitions and the descriptions of inclusions and exclusions.
2. The description of duties is studied to ensure understanding of the position as a whole and of each factor and to confirm that the position being rated is that of a Head Light keeper.
3. The identification of the position as a Head Light keeper is confirmed by reference to the definitions of organizational level of positions at light-stations.
4. The tentative degree of each factor or element in the duties being rated is determined by comparison with degree definitions in the rating scales. Uniform application of degree definitions requires frequent reference to the descriptions of factors, elements and the notes to raters.
5. The points for all factors and elements are totaled to determine the tentative rating.
6. The position being rated is compared as a whole to positions to which similar total points have been assigned, as a check on the validity of the total rating.

Determination of Levels

The ultimate objective of job evaluation is to determine the relativity of positions in each occupational group. Head Light keeper positions that fall within designated point boundaries are considered equal and consequently will have the same level. The boundaries are shown below.

The level of other positions at the light-station is established in relation to that of the Head Light keeper by reference to the plan for determining the level of positions other than Head Light keeper.

CLASSIFICATION LEVELS POINT BOUNDARIES

| POINTS          | LEVEL |
|-----------------|-------|
| Minimum-maximum |       |
| 100-170         | 1     |
| 171-260         | 2     |
| 261-350         | 3     |
| 351-440         | 4     |
| 441-530         | 5     |
| 531-620         | 6     |
| 621-710         | 7     |
| 711-800         | 8     |
| 801-890         | 9     |

Light keepers

CATEGORY DEFINITION

Occupational categories were repealed by the Public Service Reform Act (PSRA), effective April 1, 1993. Therefore, the occupational category definitions have been deleted from the classification standards.

GROUP DEFINITION

For occupational group allocation, it is recommended that you use [the Occupational Group Definition Maps](#), which provide the 1999 group definition and their corresponding inclusion and exclusion statements. The maps explicitly link the relevant parts of the overall 1999 occupational group definition to each classification standard.

ORGANIZATIONAL LEVEL DEFINITIONS

The level of "Head Light keeper" has responsibility for the over-all operation of a light-station, including the supervision of the light-station staff, either directly or through subordinate supervisors. The term also applies to positions at one-person light-stations.

The level of "Assistant Head Light keeper" at a rotational light-station has responsibility for the operation of the light-station, including the supervision of the light-station staff, in the absence of the Head Light keeper for the period of duty.

The level of "Light keeper", under the general supervision of a Head Light keeper or Assistant Head Light keeper, has responsibility for watch keeping and other non-supervisory duties pertaining to the maintenance of the light-station and the maintenance and operation of its equipment.

"Rotational light-station" refers to a light-station where the staff is relieved at specified intervals by other employees who take over the duties. For example, at a two-person rotational light-station the Head Light keeper and one assistant comprise the staff for a period of work, at the end of which they are relieved by the Assistant Head Light keeper and one assistant.

WORK COMPLEXITY

This factor is used to evaluate the duties of a position in terms of the variety of the work and the skill and knowledge required to perform these duties.

Definitions

"Variety" refers to the number of sets of duties required to be performed in the position. These are listed on page 8.

"Operation" includes the requirement to switch on lights; start engines; manipulate hand controls; drive vehicles or take charge of a boat under way; keep watch to ensure that the equipment is operating at all times, or as scheduled, or when visibility is below limits, as appropriate.

"Routine Maintenance" includes the requirement to top up fuel, oil and water; tighten connections; replace filters; lubricate equipment; clean engine rooms; paint buildings; maintain grounds.

"Emergency Minor Repairs" includes the requirement to replace gaskets; clean, gap and replace spark-plugs; repair fuel lines; adjust timing; change carburetors, small motors and similar components.

"Major Repairs" refers to work required to make equipment fully operational after breakdown and includes preventive maintenance overhaul. This work is performed by qualified technicians with assistance provided, as required, by the light station staff.

Notes to Raters

The Degree of Variety is determined as follows:

1. The variety in the job is determined by comparison of the duties of the position with the "sets of duties" listed on page 8 under the Variety element of the Work Complexity factor. Consequently specific and individual tasks involved in the operation, maintenance or repair of auxiliary or standby equipment are evaluated as part of a set of duties.
2. If the operation, routine maintenance or emergency minor repair of auxiliary or standby equipment falls within two or more "sets of duties" not already included in the assessment of the duties, then the work resulting from the use of the standby equipment is to be treated as one additional set of duties.
3. In establishing the number of "sets of duties", equipment is not to be divided into its component parts. For example, a motorized boat 16 feet/4.87 metres and longer, as shown in the seventh set of duties is not to be considered in the sixth set of duties as well if it is powered by an outboard motor.
4. The degree definitions are then applied.

VARIETY

Sets of Duties

1. Operation and routine maintenance of navigation lights and radiophones and the maintenance of buildings, grounds, and equipment, including walkways, skid ways, lawnmowers, dories and rowboats, heating, plumbing and electrical distribution systems, batteries and aerial tramways.
2. Operation and routine maintenance of electronic equipment such as radio beacons, remote control units.
3. Operation and routine maintenance or emergency minor repair of engines and associated power generators and control panels.
4. Routine maintenance or emergency minor repair of department-owned power pole line 500 feet/152.4 metres or more in length.
5. Operation, routine maintenance and emergency minor repair of air compressors and associated fog alarm systems, or of electronic fog alarms.
6. Operation, routine maintenance and emergency minor repair of equipment such as electric motors, battery-charging generators, firefighting equipment, haul-up engines, winches, outboard motors and snowmobiles.
7. Operation, routine maintenance and emergency minor repairs of mobile equipment such as motorized boats 16 feet/4.87 metres or longer (other than dories and rowboats), farm tractors, trailers and motor vehicles.

Degree Definitions

- |          |                              |
|----------|------------------------------|
| Degree A | Up to three sets of duties.  |
| Degree B | Four or five sets of duties. |
| Degree C | Six or seven sets of duties. |

SKILL & KNOWLEDGE

- |          |   |
|----------|---|
| Degree 1 | The work requires the performance of watch keeping duties, the routine maintenance of simple equipment and the provision of assistance to technicians who perform major repairs or overhauls to simple equipment. |
| Degree 2 | The work requires the performance of duties described at degree 1 and also emergency minor repairs to simple equipment.   |
| Degree 3 | The work requires the performance of watch keeping duties, routine maintenance to complex equipment, and the provision of assistance to technicians who perform major repairs of complex equipment.               |
| Degree 4 | The work requires the performance of duties described at degree 3 and also emergency minor repairs to complex equipment.  |

| SIMPLE EQUIPMENT                     | COMPLEX EQUIPMENT  |
|--------------------------------------|--|
| Batteries                            | Compressors and fog alarm systems  |
| Charging generators                  | Electronic remote control equipment and fog detectors                      |
| Dories and rowboats                  | Motorized boats 16 feet/4.87 metres and larger                             |
| Electric motors                      | Power lines and power distribution lines                                   |
| Firefighting equipment               | Radio beacons  |
| Furnaces and stoves                  | Light station power generators   |
| Hand tools                           | Tractors and motor vehicles  |
| Haul-up engines and winches          | Electronic fog alarms  |
| Navigation lights                    | Internal combustion engines other than those listed under simple equipment |
| Outboard and other two-stroke motors |  |
| Plumbing, piping                     |  |
| Pumps                                |  |
| Radiophones                          |  |

RATING SCALE - WORK COMPLEXITY

| Degree of Skill and Knowledge | Degree of Variety |     |     |
|-------------------------------|-------------------|-----|-----|
|                               | A                 | B   | C   |
| 1                             | 90                | 162 | 235 |
| 2                             | 161               | 234 | 307 |
| 3                             | 233               | 306 | 378 |
| 4                             | 305               | 377 | 450 |

CHARGE RESPONSIBILITY

This factor is used to measure the responsibility of the Head Light keeper for the overall operation of the light-station, including the supervision of the light-station staff.

Degrees of Responsibility

- Degree 1        As Head Light keeper for a one-person light-station,
- maintains equipment and buildings to meet the required standard,
  - maintains the records of operation of the light-station and prepares reports for the district office,
  - estimates and requisitions supplies, materials and fuel on an annual basis,
  - purchases local supplies on approval of the district office,
  - instructs replacement staff for periods of leave in the routine of the light-station, and collects and forwards documents such as insurance books to the district office, and
  - maintains the plant and equipment inventory.

- Degree 2        As Head Light keeper for a two-person non-rotational light-station,
- performs duties similar to those required at a one-person light-station, and in addition,
  - assigns duties, including watch keeping, maintenance and repair work, to one assistant,
  - instructs the assistant in his/her duties and ensures that work is performed in a satisfactory manner,
  - maintains records of attendance and shift differential, and
  - informs the district office of proposed leave schedules:

OR

- As Head Light keeper for a two-person rotational light-station,
- assigns work, including watch keeping, maintenance and repair of the light-station and light-station equipment,
  - maintains records of operation, inventory and the consumption of materials and supplies, and prepares reports for the district office, and
  - plans the yearly maintenance of the light-station and light-station equipment, estimates the yearly requirements of supplies and materials, and develops an outline of duties and tasks to be performed by the Assistant Head Light keeper during the tour of duty, to ensure that the light-station remains in operation in accordance with the required standard.

Degree 3 As Head Light keeper for a three-person or larger non rotational light-station including two or more assistants

OR

As Head Light keeper for a three-person or larger rotational light-station

- performs duties similar to those required under degree 2

RATING SCALE - CHARGE RESPONSIBILITY

| Degree of Responsibility | Points |
|--------------------------|--------|
| 1                        | 30     |
| 2                        | 90     |
| 3                        | 150    |

WORKING CONDITIONS

This factor is used to evaluate the conditions caused by:

- (a) the use of various types of equipment installed at light-stations,
- (b) the danger and discomfort involved in maintaining light-station structures and equipment, and (c) the restriction of movement about the light-station imposed by the limits of the land area.

ENGINE AND MOTOR OPERATION

This element is used to evaluate the exposure to danger, dirt, noise and heat associated with the operation of engines and motors in terms of the kind and numbers of engines and motors used at the light-station.

Notes to Raters

Conditions resulting from the operation of auxiliary or stand-by equipment will not be considered in applying this element.

No points are allowed for motors that are part of household equipment.

A combination of one light-station power generator and a fog alarm, each operated by an engine of less than 8 h.p. in the same room, will be rated at degree 2.

Two or more engines each of eight (8) or more horse power operated in a room would include generator and fog alarm equipment or two generators in parallel. This does not require that the two engines always be

operated simultaneously but the two engines must be the prime source of power. RATING

SCALE - ENGINE AND MOTOR OPERATION

|          | Degree Definitions  | Points |
|----------|---|--------|
| Degree 1 | Belt-driven equipment, electric motors, and/or engines under 8 h. p.                              | 6      |
| Degree 2 | One engine of 8 h. p. or greater.   | 18     |
| Degree 3 | Two or more engines of 8 h. p. or greater, which may be operated simultaneously in the same room. | 30     |

HOISTS, AERIAL TRAMWAYS AND DERRICKS

This element is used to measure the exposure to danger of falling objects in terms of equipment used at the light-station.

Twenty (20) points are allowed only where the work requires using one or more hoists, tramways or derricks.

SMALL BOAT OPERATION

This element is used to evaluate in terms of distance, exposure to open water and landing facilities the difficulty of operating small boats used for transportation to and from the light-station and in the performance of assigned duties.

Definition

"Sheltered harbors or bays" refers to locations where only major storms would prevent travel and where sea conditions would return to normal within a day or two of the passing of a storm.

Notes to Raters

Points are to be assigned only to positions in which incumbents use a boat as a primary means of transportation to obtain mail or supplies, or to perform work assignments.

Degree 3 is to be assigned where it is not possible to maintain a skid way economically. Conditions that may preclude such maintenance are continuous heavy seas, shore conditions such as continually shifting sand or boulders, or risk of severe damage by ice.

TravelDegree Definitions

- |          |  |
|----------|--|
| Degree A | Small boat runs in sheltered harbors or bays where travel is rarely restricted.  |
| Degree B | Small boat runs in sheltered locations where current is severe, or in open water for a distance up to two miles/3.22 kilometres. |
| Degree C | Small boat runs in open water for a distance of more than two miles/3.22 kilometres.   |

Landing (at Station)Degree Definitions

- |          |  |
|----------|--|
| Degree 1 | Docking at jetty or wharf, either man-made or natural.   |
| Degree 2 | Landing on beach, skidway or marine railway.   |
| Degree 3 | Landing on rocky shore sufficiently rugged to prohibit construction or maintenance of a skidway. |

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RATING SCALE - SMALL BOAT OPERATION

| Degree of Landi ng | Degree of Travel |    |    |
|--------------------|------------------|----|----|
|                    | A                | B  | C  |
| 1                  | 8                | 18 | 28 |
| 2                  | 14               | 24 | 34 |
| 3                  | 20               | 30 | 40 |

FOG ALARM

This element is used to evaluate the discomfort resulting from the noise caused by the fog alarm in terms of the type of fog alarm and the number of hours it is normally in operation.

Notes to Raters

No points are to be allowed for manually operated alarms, including hand horns. RATING

SCALE - FOG ALARM

|          | Degree Defini tions  | Poi nts |
|----------|--|---------|
| Degree 1 | Electric, small air horn or gong - 1,200 or less fog hours annually.   | 4       |
| Degree 2 | Electric, small air horn or gong - more than 1,200 fog hours annually. | 12      |
| OR       |  |         |
|          | Diaphone or similar loud alarm - 1,200 or less fog hours annually.     |         |
| Degree 3 | Diaphone or similar loud alarm - more than 1,200 fog hours annually.   | 20      |

HEIGHT OF TOWER

This element is used to evaluate the physical effort in climbing towers and the dangers involved in maintaining the light-tower in terms of its height measured from the base to the balcony.

## RATING SCALE - HEIGHT OF TOWER

|          | Degree Definitions                          | Points |
|----------|---|--------|
| Degree 1 | 0 - 25 feet/0 - 7.62 metres                 | 5      |
| Degree 2 | Over 25 feet - 50 feet/7.63 - 15.24 metres  | 11     |
| Degree 3 | Over 50 feet - 75 feet/15.25 - 22.86 metres | 18     |
| Degree 4 | Over 75 feet/over 22.86 metres              | 25     |

WEATHER AND TERRAIN

This element is used to evaluate the risk of falls in terms of the requirement to work on rough terrain in inclement weather.

Notes to Raters

To be rated at degree 2, conditions at the light-station must be such that a Lightkeeper is required to be out of doors under adverse conditions, moving from one building to another by way of difficult walkways, catwalks or paths over rough or rocky terrain.

Adjacent rough shorelines or cliffs are not to be considered unless they materially affect normal movement about the light-station in the performance of the duties.

Rough terrain that affects only the delivery of supplies is not to be considered.

## RATING SCALE - WEATHER AND TERRAIN

|          | Degree Definitions  | Points |
|----------|---|--------|
| Degree 1 | Work requires being outdoors in inclement weather; terrain is normal with little risk of falls.                             | 4      |
| Degree 2 | Work requires being outdoors in inclement weather and moving over rough and difficult terrain with risk of slips and falls. | 20     |

LIMITATION ON OUTDOOR ACTIVITY

This element is used to evaluate the limitation on outdoor activity in terms of the area and nature of the site of the light-station.

Definition

"Area" includes not only the light-station property but the accessible surrounding land area as well. Notes to

Raters

No points are allowed where a light-station and surrounding accessible land area impose virtually no limitation on normal outdoor activity.

A light-station is rated Degree 3 if it is a pier type, is partially or completely surrounded by water or is situated on a sand bar or rock ledge of very limited area and the surrounding land area is not accessible under storm conditions.

RATING SCALE - LIMITATIONS ON OUTDOOR ACTIVITY

|          | Degree Definitions   | Points |
|----------|--|--------|
| Degree 1 | Light-station site and surroundings have an accessible land area of 10 acres/4.05 hectares or more and are usually detached from the mainland. | 9      |
| Degree 2 | Light-station site and surroundings have an accessible land area less than 10 acres/4.05 hectares.   | 27     |
| Degree 3 | Light-station site has little or no land area, e.g., tower in water.   | 45     |

DIFFICULTY OF ACCESS TO COMMUNITY

This factor is used to evaluate the degree to which the location of the light-station restricts access to the community and affects the availability of medical assistance in times of emergency.

DIFFICULTY OF REGULAR ACCESSDefinition

"Community" is the location that is the most convenient to the light-station and to which the light-station staff most frequently travel.

Notes to Raters

Conditions that restrict travel must occur during periods that the light-station is manned by the light-keeping staff.

No points are allowed where a light-station is in or adjacent to the community and where regular access is virtually unrestricted.

The restriction on boat travel described in degree 4 would usually be the result of the presence of ice.

RATING SCALE - DIFFICULTY OF REGULAR ACCESS

|          | Degree Definitions  | Points |
|----------|---|--------|
| Degree 1 | Community can be reached by motor vehicles at any time the light-station is in operation as an aid to navigation except for occasional short periods of up to three days when roads are impassable by vehicle.                        | 15     |
| Degree 2 | Community can be reached twice a week or more often throughout the period of light-station operation only by using the light-station boat for part or all of the journey;   | 42     |
|          | OR  |        |
|          | Community can be reached by motor vehicles at any time the light-station is in operation as an aid to navigation except for continuous periods of more than three days but less than one month, when roads are impassable by vehicle. |        |
| Degree 3 | Community can be reached once a month or more often throughout the period of light-station operation only by using the light-station boat for part or all of the journey;   | 69     |
|          | OR  |        |
|          | Community can be reached by motor vehicles, but roads are impassable by vehicle for continuous periods of one month or more.  |        |
| Degree 4 | Community can only be reached by using the light-station boat for part or all of the journey in waters where passage is normally not possible for a continuous period of one month or more.   | 96     |
| Degree 5 | Community cannot be reached by road or by means of a small boat or launch of the type normally supplied to light-stations.  | 150    |

EMERGENCY TRAVEL TIME

This element is used to evaluate the minimum time required to transport an employee to a nursing station, doctor or hospital when emergency medical assistance is required.

Notes to Raters

The definitions of the five degrees of this element are to be applied to the minimum number of hours that would elapse, under normal conditions, between the time transportation is summoned and the arrival of the person requiring medical assistance at the place where it is available. The number of hours is to be calculated for the fastest form of transportation normally available, traveling during daylight hours and under conditions that permit the use of a ship or aircraft where these are the fastest form of transportation normally available.

RATING SCALE - EMERGENCY TRAVEL TIME

|          | Degree Definitions                | Points |
|----------|-----------------------------------|--------|
| Degree 1 | 1 hour or less.                   | 5      |
| Degree 2 | More than 1 hour but less than 3. | 16     |
| Degree 3 | 3 hours or more but less than 6.  | 27     |
| Degree 4 | 6 hours or more but less than 12. | 38     |
| Degree 5 | 12 hours or more.                 | 50     |

CLASSIFICATION PLAN - OTHER POSITIONS

The level of the Head Light keeper position at light-stations is determined by the point-rating plan described in this standard. The level of other positions at light-stations is determined, in relation to that of the Head Light keeper, by using the following classification plan:

Assistant Head Light keeper positions are to be classified one level below that of the Head Light keeper at the light-station.

Light keeper positions are to be classified three levels below that of the Head Light keeper at the light-station.

See page 6 for definitions of these positions.

The assignment of levels of classification in relation to the level of the Head Light keeper is shown in the table below.

| Level of<br>Head Light keeper | Level of Other Positions    |              |
|-------------------------------|-----------------------------|--------------|
|                               | Assistant Head Light keeper | Light keeper |
| 1                             | -                           | -            |
| 2                             | -                           | -            |
| 3                             | -                           | -            |
| 4                             | 3                           | 1            |
| 5                             | 4                           | 2            |
| 6                             | 5                           | 3            |
| 7                             | 6                           | 4            |
| 8                             | 7                           | 5            |
| 9                             | 8                           | 6            |