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Public Service Labour Relations Act

Before a panel of the Public Service Labour Relations Board

BETWEEN

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS, LOCAL 2228

Applicant

and

TREASURY BOARD AND PUBLIC SERVICE ALLIANCE OF CANADA

Respondents

Indexed as
International Brotherhood of Electrical Workers, Local 2228 v. Treasury Board and Public Service Alliance of Canada

In the matter of an application, under section 58 of the *Public Service Labour Relations Act*, for a determination of membership of an employee or a class of employees in a bargaining unit

REASONS FOR DECISION

Before: David Olsen, a panel of the Public Service Labour Relations Board

For the Applicant: James Shields, counsel

For the Respondents: Christine Diguer, counsel for the Treasury Board, and Andrew Raven, counsel for the Public Service Alliance of Canada

Heard at Ottawa, Ontario,
October 2 to 4, 2012.

I. Application before the Board

[1] On March 18, 2010, the International Brotherhood of Electrical Workers, Local 2228 ("the IBEW-2228" or "the applicant"), filed an application pursuant to section 58 of the *Public Service Labour Relations Act* ("the *PSLRA*") seeking a determination that all positions in the Department of the Environment ("the department") with the title "Data Acquisition Technologist" that are currently included in the Technical Services Group are more properly included in the Electronics Group (EL), for which the IBEW-2228 is a certified bargaining agent.

[2] On March 30, 2010, the Public Service Alliance of Canada ("the PSAC"), as the current bargaining agent for the subject positions, requested party status. On April 8, 2010, the Chairperson of the Public Service Labour Relations Board ("the Board") granted the request.

[3] Both the department and the PSAC opposed the present application.

[4] At the commencement of the hearing, counsel for the applicant stated that the application concerned two data acquisition technologists who were employed in the air monitoring section of the department and who reported to the department's North Bay office, namely, Mr. Neil Diamond and Mr. Bruce Murray.

[5] The applicant filed four exhibits and called one witness to support its case. The department filed two exhibits and called two witnesses, and the respondent PSAC filed one exhibit and called no witnesses.

II. Summary of the facts

[6] The parties by way of background agreed to the following facts.

[7] The Treasury Board, exercising its power under the *Public Service Reform Act*, S.C. 1992, c. 54 (*PSRA*), specified and defined groups of employees employed in the public service for the purposes of collective bargaining. The groups of employees were specified and defined according to the duties and responsibilities of positions.

[8] The Treasury Board, pursuant to section 101 of the *PSRA*, specified and defined the occupational group known as the Electronics Group, effective March 18, 1999, notice of which was published in the *Canada Gazette* on March 27, 1999. The Public Service Staff Relations Board ("the former Board") certified the International Brotherhood of Electrical Workers, Local 2228, as the bargaining agent for all of the employees in the Electronics Group on May 11, 1999.

[9] Similarly, the Treasury Board, pursuant to section 101 of the *PSRA*, specified and defined the occupational group known as the Technical Services Group, effective March 18,

1999, notice of which was published in the *Canada Gazette* on March 27, 1999. The Technical Services Group was composed of six existing bargaining units, namely, Technical Inspection, Photography, Primary Products Inspection, General Technical, Engineering and Scientific Support, and Drafting and Illustration. The PSSRB, the "former" Board, in its decision dated June 10, 1999, amalgamated the six bargaining units into one bargaining unit, the Technical Services Group bargaining unit. The former Board in that decision confirmed the certification of the PSAC as the bargaining agent for the employees in the bargaining unit.

[10] The Treasury Board defined the occupational groups in the following manner:

Electronics Group definition:

> *The Electronics Group comprises positions that are primarily involved in the application of electronics technology to the design, construction, installation, inspection, maintenance and repair of electronic and associated equipment, systems and facilities and the development and enforcement of regulations and standards governing the use of such equipment.*
>
> *Inclusions*
>
> *Notwithstanding the generality of the foregoing, for greater certainty, it includes positions that have, as their primary purpose, responsibility for one or more of the following activities:*
>
> 1. *the inspection, certification and licensing of telecommunications, radio communications and broadcasting equipment installations;*
> 2. *the examination and certification of radio operators and related personnel;*
> 3. *the development and enforcement of international and domestic radio regulations, agreements and equipment standards, and the examination of related applications and technical briefs for radio and television stations;*
> 4. *the detection, investigation and suppression of radio and television interference;*
> 5. *the design, construction, installation, testing, inspection, maintenance, repair or modification of electronic equipment, systems or facilities, including the preparation of related standards;*
> 6. *the conduct of experimental, investigative or research and development projects in the field of electronics, under the leadership of an engineer or scientist;*
> 7. *the planning and delivery of a quality assurance program for electronic systems and equipment;*
> 8. *the development, direction and conduct of training in the above activities; and*

9. *the leadership of any of the above activities.*

Exclusions

Positions excluded from the Electronics Group are those whose primary purpose is included in the definition of any other group or those in which one or more of the following activities is of primary importance:

1. *the operation of electronic equipment for the purpose of monitoring radio aids to navigation;*

2. *the use of manual and trade skills in the manufacture, fabrication and assembly of equipment;*

3. *the electrical and electronics work performed as part of the repair, modification and refitting of naval vessels and their equipment; and*

4. *the testing or inspection of electronic equipment to ensure fair measurement.*

Technical Services Group definition:

The Technical Services Group comprises positions that are primarily involved in the performance, inspection and leadership of skilled technical activities.

Inclusions

Notwithstanding the generality of the foregoing, for greater certainty, it includes positions that have, as their primary purpose, responsibility for one or more of the following activities:

1. *the planning, design and making of maps, charts, drawings, illustrations and art work;*

2. *the design of three-dimensional exhibits or displays within a predetermined budget and pre-selected theme;*

3. *the conduct of analytical, experimental or investigative activities in the natural, physical and applied sciences; the preparation, inspection, measurement and analysis of biological, chemical and physical substances and materials; the design, construction, modification and assessment of technical systems and equipment or the calibration, maintenance and operation of instruments and apparatus used for these purposes; and the observation, calculation, recording and the interpretation, presentation and reporting of results of tests or analyses, including:*

(a) the performance of activities involving the application of the principles, methods, and techniques of engineering technology and a practical knowledge of the construction, application, properties, operation and limitations of engineering or surveying systems, processes, structures, building or materials, and machines or devices;

(b) the planning of approaches, the development or selection and application of methods and techniques, including computer software, to conduct analytical, experimental or investigative activities; the evaluation and interpretation of results; and the preparation of technical reports;

(c) the observation and recording of events and the analysis of information relating to such fields as meteorology, hydrography, or oceanography and the presentation of the results of such studies; and the provision of data and information relating to meteorology;

(d) the monitoring and investigating of environmental hazards or the provision of advice on those issues impacting upon compliance with public health legislation; and

(e) the design, development or application of tests, procedures and techniques in support of the diagnosis, treatment and prevention of human and animal diseases and physical conditions;

4. *the application of statutes, regulations and standards affecting agricultural, fishery and forest products;*

5. *the capture and development of images involving the operation and use of cameras, accessories and photographic processing and reproduction equipment;*

6. *the operation of television cameras and video recording systems and equipment;*

7. *the inspection and evaluation of quality assurance systems, processes, equipment, products, materials and associated components including electronic equipment used in trade measurement; the development, recommendation or enforcement of statutes, regulations, standards, specifications or quality assurance policies, procedures and techniques; and the investigation of accidents, defects and/or disputes;*

8. *the construction and repair of prostheses and or those;*

9. *the writing of standards, specifications, procedures or manuals related to the above activities;*

10. *the performance of other technical functions not included above; and*

11. *the planning, development and conduct of training in, or the leadership of, any of the above activities.*

Exclusions

Positions excluded from the Technical Services Group are those whose primary purpose is included in the definition of any other group or those in which one or more of the following activities is of primary importance:

1. *the planning, conduct or evaluation of control, mapping or charting surveys, and the planning or conduct of legal surveys of real property;*

2. *the planning, design, construction or maintenance of physical or chemical processes, systems, structures or equipment; and the development or application of engineering standards or procedures;*

3. *the performance of manual tasks such as cleaning laboratory equipment, assisting in morgue and autopsy tasks, and the care and feeding of laboratory animals;*

4. *the performance of administrative activities such as program, human resources or financial management and planning that do not require the application of principles outlined in the inclusions; and the administrative management of buildings, grounds and associated facilities;*

5. *the conduct of experimental, investigative or research and development work in the field of electronics;*

6. *the leadership of activities related to maintenance and repair functions not requiring knowledge identified in the inclusions;*

7. *the operation of duplicating or reproduction machines, motion picture projection machines and accessories and process cameras in support of an offset printing or duplicating process;*

8. *the planning, development, installation and maintenance of information technology and processing systems to manage, administer or support government programs and activities; and*

9. *the application of electronics technology to the design, construction, installation, inspection, maintenance and repair of electronic and associated equipment, systems and facilities and the development and enforcement of regulations and standards governing the use of such equipment.*

   Also excluded are positions in which experience as an aircraft pilot and a valid pilot's license are mandatory.

III. Summary of the evidence

A. Mr. Neil Diamond

[11] Mr. Neil Diamond testified on behalf of the applicant. Mr. Diamond is employed as a data acquisition technologist by the Department of the Environment in its air monitoring section in Dorchester, Ontario. His position is classified as an EG-05 in the Technical Services Group. He has held this position for eight years.

[12] He was educated at Georgian College and completed a degree in electronic engineering technology. He was previously employed by the Department of Transport Aviation Division, at

the Sault Ste. Marie Airport, from 1985 until 1998. He was hired by the Department of the Environment in 1998 and was appointed to an EL-03 technical services position. He remained approximately three years in that position, at which time he progressed to an EL-04 electronics technologist position. He remained two years in the EL-04 position. He then was successful in a competition for an EG-05 position in the Technical Services Group and was successful in being appointed to the position.

[13] He reports to Mr. Conway L'Esperance, who is the supervisor of technical services specialists and who is physically located in Thunder Bay. Mr. Diamond goes to Thunder Bay approximately two to three times per year. He participates in a teleconference with his supervisor every Monday. He has some interaction with Mr. Bruce Murray, who works out of the North Bay office, as the department generally sends two technologists to a radar site for maintenance.

[14] He testified that his duties did not change from those that he performed in his previous position as an EL-04 electronics technologist. He described his day-to-day duties as inspecting, maintaining, calibrating and repairing various systems used by the department's Meteorological Service.

[15] He reviewed the work description provided by the department for his EG-05 position (Exhibit 2) and confirmed that he performs the key activities recited in the document. The client service results described in the document are the "inspection and maintenance of electronic data collection and dissemination systems for Environment Canada, other federal/provincial and private agencies." He stated that the second bullet listed under the title "client/service results" that refers to "atmospheric monitoring services for automated data acquisitions platforms" is ambiguous, and he did not see performance criteria to measure this goal against. He emphasized that the job description recites that the definition of the words "maintain or maintenance" as used in relation to meteorological equipment refers to the "tasks associated with the completion of preventive maintenance, emergency repairs of system components or a complete overhaul of the systems."

[16] The key activities recited in the work description are as follows:

> - *Inspects, monitors, installs, and performs routine and unscheduled maintenance and calibrates electronic meteorological equipment and complex electronic remote sensing systems such as weather radar and satellite communications systems.*
> - *Update the Station Information system (SIS) database and distribute Inspection Reports to clients.*
> - *Trains colleagues on specialized electronic systems, maintenance and upgrade procedures*

- *Inspects and maintains automatic weather station programs.*
- *Conduct quality assurance reviews of automatic weather station programs to determine adherence to standards and take corrective action where necessary.*
- *Analyzes system failures and responds in a timely manner to minimize system and component outages.*
- *Maintains knowledge and expertise in new related technologies through sponsored and self-directed education, especially in Meteorological Service of Canada monitoring systems and associated technology.*
- *Provides technical expertise and consultation to clients, colleagues and supervisors regarding meteorological site selection, installation of systems and equipment, data collection and dissemination and electronics.*

[17] Mr. Diamond referred to paragraphs under the title "Work Characteristics" in the work description that read as follows:

> *Participates in scheduled and unscheduled maintenance, inspections and quality assurance reviews of automatic or staffed weather stations and remote sensing systems to verify the accuracy of meteorological parameters that are being recorded. This information is used by meteorologists in the production of weather forecasts and warnings, by climatologists in the tracking of long term climate change and external clients; including aviation, marine and agricultural communities, federal departments, provincial and municipal governments, the media and the general public.*
>
> . . .
>
> *As an expert in the field of electronics (as it relates to remote sensing systems and the operation of meteorological equipment such as weather radar, satellite communication systems, automatic weather stations and remote camera systems), routinely provides technical advice to colleagues (both inside and outside of the Region), as well as managers. This information is used by managers to ensure that appropriate resources, (both human and fiscal) are available for the implementation and ongoing maintenance of new systems. The information is also used by other MSC staff to facilitate the maintenance of these systems.*

[18] Mr. Diamond disputed the accuracy of one of the work characteristics recited in the description, as he denied that he verified the accuracy of the meteorological data from automatic weather stations and systems; rather, he was responsible for the maintenance of the systems. That paragraph reads as follows:

> . . .
>
> *Verifies the accuracy of meteoroidal data from automatic weather stations and systems used by; Meteorologists in the production of weather forecasts and warnings, climatologists in the tracking of long term climate change, the aviation community for flight*

> *planning purposes and private industry for court cases and insurance claims.*
>
> . . .

[19] Mr. Diamond described in some detail the types of maintenance that he performed. Different systems have prescribed frequencies for inspection. Every system requires an annual inspection. Depending on the system, there are semi-annual inspections as well other systems that require quarterly or bimonthly inspections.

[20] In addition, he has to perform unscheduled maintenance, which occurs as a result of a failure or malfunction of a system.

[21] He described the preparations necessary to perform scheduled maintenance. He commences by making preparations the week before, which involve making hotel reservations, advising the national monitoring desk that he will be taking a system out of service and reviewing the maintenance procedures.

[22] He has to check the last maintenance log to see if there are any outstanding deficiencies or "to-do" items. He coordinates with colleagues, prepares a travel authority document and obtains travel funds.

[23] He described the different types of equipment upon which he performs scheduled maintenance, namely, weather radar, lightning detection systems, weather radio systems, and automatic weather stations.

1. <u>Weather radar</u>

[24] He described the components that make up the weather radar system. He described the power, monitoring and backup system, which is composed of a monitoring panel, a diesel generator and a battery backup system. This system feeds a computer control system, which operates the transmitter and the antenna drive unit. There is also a compressor that keeps moisture out of the receiver as well as a secondary computer monitoring system.

[25] The scheduled maintenance for the weather radar involves initially establishing the current operating conditions, through a visual and auditory inspection. The technologist looks for errors, red lights and anomalies and listens to the performance of the system, the sounds of the magnetron and the sounds of the antenna. He checks the tower for vibrations, the generator for excessive heat and the system overall for oil spills.

[26] He advises the monitoring desk that a technologist is on site and requests to take control of the system. The technologist follows the maintenance procedure manual for the system. There is a trigger generator in the system that supports the timing of the radar pulse.

He uses an oscilloscope to check the pulse to ensure that the width and shape of the pulse are within specification and, if not, to adjust it. He also checks the power level of the pulse and adjusts it, if required. He described the systems as being electronic systems. There are also potentiometers for width and power. Power levels are checked using a microwave monitor. Once the technologist ensures that the pulse width and shape are within specification and that the power level is correct, he checks to ensure that the transmission levels and reflected power levels are also within specification.

[27] The technologist then proceeds to the receiver. Using a signal generator, he injects a signal into the receiver. He uses a dual-direction coupler to generate and test the signal and as well to calibrate the receiver, if necessary.

[28] The technologist next verifies the antenna system.

[29] Directional pulses of microwaves, generated by the magnetron, are sent to a parabolic dish through a waveguide, which is a hollow rectangular tube. These components constitute the antenna system. The parabolic dish focuses energy into a pencil beam, which is then transmitted.

[30] Maintenance to the antenna involves ensuring that both rotary joints are fully functional and that the antenna operates to command within tolerance, so that pointing accuracy is correct. The technologist also ensures that lubrication levels are sufficient on the system.

[31] To ensure that the rotary joints are fully functional, the technologist physically removes them from the system and manually inspects them for wear, looseness and noise, following which they are reassembled into the system.

[32] The technologist measures the transmission power at the antenna with an RF power meter to calculate how much power is being lost from the transmitter to the antenna. A technologist takes a handheld controller up into the radome to check the response of the antenna. He manually commands the antenna through various speeds and varying degrees in elevation, looking for abnormal operation, jerkiness or noise. The pointing accuracy is checked using a computer. The antenna's power supplies are checked to ensure everything is working at nominal voltages using a digital voltmeter. All test equipment has to be calibrated by an ISO-certified lab.

[33] The technologist checks the various relays in the system to ensure they are working and that safety functions are working. The technologist ensures monitoring sensors and computers are detecting abnormalities. The battery backup system, the diesel generator and the power transfer switch are load tested to ensure that backup power is immediately available. The air-handling system is serviced if required, and the filters are cleaned, if necessary.

[34] The technologist fills in the electronic checklist online and completes a log report, which is also online.

[35] If a problem is found in the radar pulse, maintenance is stopped, and troubleshooting is performed by the technologist to determine where the fault is located. The problem could be in the pulse-forming network or in the high-voltage power supply in the magnetron or in the sensors of the waveguide. Mr. Diamond testified that, using his skill and intuition, he locates the fault and then orders up a replacement part from the radar support group. He would remove the faulty unit and install a new unit and then set up the appropriate voltages.

[36] He explained that the radar system is built in modular form in order that technologists can perform field repairs in a timely manner.

[37] Bimonthly and annual maintenance is performed on the weather radar.

[38] The purpose of the weather radar is to detect moisture in clouds that is moving or falling to the ground. Mr. Diamond was asked whether he is concerned with that data or the performance of the equipment. He stated that the data goes to the Canadian Meteorological Centre in Dorval, Quebec, where it is disseminated to forecast offices and clients. He was asked whether he analyzed any of that information and stated that, as part of the maintenance function, he downloads the data to see if the system is functioning properly.

[39] He was asked if it was necessary for him to apply electronic technology, and he answered yes and that it is an ingrained part of what he does.

[40] In troubleshooting and repairs, technologist training comes strongly into play in evaluating potential causes for a problem.

2. <u>Lightning detection system</u>

[41] There is annual scheduled maintenance on the lightning detection system as well as unscheduled maintenance. Scheduled maintenance involves preparation by contacting the central monitoring point for lightning data in Tucson, Arizona. It is necessary to coordinate with them to advise them that the system would be taken out of service. They also perform a test in the system to determine reliability and to coordinate the return to service with the operator. The computer is needed to diagnose problems with the lighting detection system.

3. <u>Weather radio</u>

[42] Annual maintenance is performed on the weather radio system. When staff levels permit, semi-annual maintenance is performed. The battery backup system is subjected to load tests.

[43] Power supply checks involve visual inspections. Batteries are the backup for the transmitter. A UPS is the backup for the voice generator. The incoming alternating current power is shut off, and the batteries are put under load to test and monitor their performance, utilizing a voltmeter.

[44] The output power for the transmitter is checked with a wattmeter to measure the forward power and the reflective power. If there is a change in the reflective power, it could be indicative of a physical problem with the cable.

[45] Carrier frequency and audio levels that are transmitted on the weather radio system have to be within tolerances and specifications. These are measured with a communication analyzer and are adjusted if required.

[46] Some communications analyzers have the ability to be a spectrum analyzer for radio frequencies. Radio frequencies are licensed by Industry Canada. Part of the licensing requirements is that the Department of the Environment not interfere with other broadcasts. When a frequency degrades, it can produce spurious transmissions. If the frequency causes interference with other broadcasts, the equipment has to be replaced. The power supply is checked with a voltmeter. An ammeter is used to measure the current level. An indication of a degrading transmitter is a high current draw.

[47] Unscheduled maintenance used to be performed frequently. However, approximately 5 years ago, a very robust system was installed, and consequently, there has been little demand for unscheduled maintenance since that time.

4. Automatic weather system

[48] The maintenance on the automatic weather system (AWOS) was the responsibility of the data acquisition technologists up to 2007. Some responsibility for the maintenance of a number of AWOS systems is in the process of being resumed by the departmental technologists.

[49] Maintenance on that system involves checking barometers and various other sensors using national manuals and a specialized test kit. A digital voltmeter is included in the specialized test kit.

[50] The visibility sensor is tested with a laser cytometer. Specialized equipment is used for measuring wind speed and direction. The wind sensor is lowered from the wind tower. Test equipment is connected to the speed sensor to verify it is accurately indicating the wind speed. A direction jig is used to ensure that the direction sensor is accurately reporting wind direction.

[51] A specialized set of test gear is used to verify the reporting accuracy of the automatic weather station observations. The power supply is checked using a digital voltmeter. Voltage and ripple reference voltage must be measured.

[52] The precipitation sensor is checked with a police radar gun. The sensor is divided into a transmitter and receiver. The transmitter projects a beam of RF energy and looks for reflected moving energy; i.e., Doppler radar. Radio frequency absorbent foam is used to cover the transmitter and receiver, and a computer program is used to calibrate the sensor when it is covered.

[53] The rain gauge on the system needs to be inspected for physical deterioration. The gauge is calibrated using a set of weights and is prepared for reuse using a chemical mixture that will keep the collected precipitation from freezing or evaporating.

[54] The barometry sensor is observed through a series of ratings against a regional barometer in a lab setting. It is calibrated to a national standard.

[55] The temperature sensor, which is measured electronically, is checked against a glass thermometer. Dew cell sensors are replaced on a quarterly basis.

[56] Mr. Diamond testified that he was involved in the installation of electronic equipment and in particular the installation of a laser cyclometer at Egbert, Ontario. This installation involves sighting, trenching, cable laying, grounding, and sensor installation and verification. He had not been involved in installing other electronics equipment since becoming an EG.

[57] It was suggested to Mr. Diamond in cross-examination that the Ontario region was no longer responsible for the maintenance of the weather radio system. He stated that that was incorrect and clarified that, although full support by the Ontario region was withdrawn in May 2012, it was on the proviso that the Ontario region would provide support and maintenance until such time as contracts for that maintenance were put in place. He did acknowledge that he was not getting called as frequently as in the past.

[58] He acknowledged that most of the work he had described was carried out in accordance with established procedures and documentation, although a small percentage of the work was not performed in that way. He stated, however, that 40% of his time was involved in non-scheduled maintenance rather than follow-up troubleshooting and logistics.

[59] He acknowledged that he had access to a support group of electronics experts. It was suggested to him that other trades, such as general mechanics and refrigerator mechanics, used oscilloscopes, ammeters and voltmeters to perform their work. He stated that only people who

are electronics experts use oscilloscopes. Others, such as refrigerator technologists, may use ammeters, but not oscilloscopes. He acknowledged using a computer in his job.

[60] He acknowledged that part of his job was to ensure the security of the radar sites through visual observation and equipment. He also acknowledged that it was necessary to assess the heating and ventilation of the site.

[61] With respect to the radar tower, the technologist ensures that the tower ground is not compromised. He has to check the fluid levels in the pedestal and the slip rings; that involves some general mechanical duties. There is also a requirement to check belts. There is also a need to check the fan on the backup generator.

[62] He was asked what training he had had since being appointed to the EG-05 position. He stated that, recently, he had AWOS and lightning refresher courses. He had attended a radar course since his appointment, a workshop on inspection and a short course on meteorology observation techniques.

[63] He stated that he used computers to validate remedial steps on the various systems he described. Not all remedial actions required the use of electronic technology; there was a degree of mechanical technology.

[64] The closest radar site from Mr. Diamond's workplace was approximately a four-hour drive, while the longest took between six and 6½ hours.

[65] It was suggested to him that his supervisor would say that his work over the last year on radar-related duties was less than 40% of his work time and at present it was less than 30%. Mr. Diamond thought it was closer to 50/50.

[66] With respect to troubleshooting on the radar system, if any component needs significant repair, the issue is raised to headquarters, who will send a new component. However, on the lightning system, technologists try and fix it themselves. If not, it goes to the supplier for a new component.

[67] He stated that there are centres responsible for ensuring the availability of components. There is a centre for radar and a manufacturer who supplies components for the lightning system. Generally speaking, however, repairs are done elsewhere and not on site. However, it is not always a component that is at fault.

[68] Given his three-year degree in electronics from Georgian College, he was asked whether he was one of the more knowledgeable technologists in electronics, as compared to his colleagues. He stated that he was competent in that area.

[69] He was asked how his job had changed over the past eight years. He stated that a lot of the equipment was now computer controlled as opposed to having gauges and dials.

[70] He was asked whether he was including computers in the category of electronic technology. He answered no and stated that computers were used a lot.

[71] In the past, the various systems could be repaired on site, and he gave the example of vacuum tubes; however, today the electronics were solid state and could not be fixed on site.

[72] It was and fairly common that, when it was detected that a piece of operating equipment was broken, the component was sent back to the manufacturer for replacement.

[73] Another change he acknowledged was that the whole weather radio system was being contracted out. In addition, the radio frequency work was currently being contracted out, leaving only the AWOS and weather radar systems to be maintained.

[74] If a technologist suspected a malfunction in a system and was troubleshooting, he did not exclusively use electronic equipment; mechanical equipment was used some of the time. He acknowledged having to oil and grease equipment and rotator parts once a year.

[75] He acknowledged using his senses to diagnose equipment and acknowledged that that was not electronic equipment. He maintained that the oscilloscope can only be used in diagnosing electronic problems.

[76] The wind test kit for AWOS measures revolutions in wind speed in knots. He considered that test kit to be electromechanical as opposed to purely electronic. The wind jig that is used to calibrate the wind vane was totally mechanical.

[77] The management structure at the department is much decentralized. Direct supervision is a thing of the past. There is a much greater use of computers using software on the laptop. A technologist can login to any radar in Canada and can diagnose problems. The increased use of computers has resulted in a reduction of manpower. Mr. Diamond acknowledged using his computer every day. However, the computer was not necessarily connected to the test equipment.

[78] He did not design any of the equipment or construct it.

[79] He was asked whether there were any other third-party agencies that help maintain the weather radar network other than the National Resource Centre. He advised that Vaisala, a company that produces meteorological observation and measurement products, assists in maintaining the network.

[80] Also contracted out was the maintenance of air conditioners.

5. Re-examination

[81] Mr. Diamond advised that approximately 10 minutes was dedicated to surveying the radar sites while on the tower. Of approximately one week devoted to his other responsibilities in maintaining the radar network, he stated that the changing of fluids on the antenna took approximately one half-hour.

[82] He was asked what skills were involved in changing plug-and-play modules in the various systems. He replied that one needs to be able to isolate faults for poor performance.

[83] He stated that his work at the Department of Transport was very much the same as his work at Department of the Environment, except the equipment was different. He uses all of the same troubleshooting and repair techniques.

[84] The information that he collects as a result of scheduled maintenance is filled out online, and the results are evaluated.

[85] He acknowledged that he used very little electronics in diagnosing problems with respect to the lightning system.

B. Mr. Todd Mitchell Benko

[86] Mr. Todd Mitchell Benko testified on behalf of the department.

[87] Mr. Benko works in Downsview, Ontario, and is employed by the Department of the Environment. He is acting as the chief of the national radar operation. He completed two years of electrical engineering studies at the University of Saskatchewan and earned an industrial electronics technologist certificate and a diploma at the Kelsey Institute of Applied Arts and Sciences in Saskatoon.

[88] He commenced employment with the Department of Environment in 1989 as a surface weather observer. His position was classified as EG. After additional training, he became an aerological technologist, performing meteorological observations, all in the EG group. In these positions, he was responsible for the installation and maintenance of meteorological systems, including radar, AWOS and climate stations, among others.

[89] In 1991, he was appointed to an EL position. In 1995, he was appointed to a position as an electronics supervisor as an EL-05 in Calgary, where he set up a regional technical service office. In addition, he was responsible for the management of staff and the maintenance of meteorological equipment, including radar, AWOS, climate and weather radio for the Southern

Alberta district. From 2003 until the present, he held the position of senior radar technologist at the EL-06 level, where he provides technical support for the national radar system. In this role, he also supervises regional technologists in the installation, maintenance and calibration of radar systems.

[90] Mr. Benko described the history of the national radar system. The Department of Environment initially acquired two Curtiss-Wright radar systems. Subsequently, it purchased four radar systems developed by Radeon. In 1981, it purchased 15 radar systems from Entysine Electronics Corporation.

[91] In the period 1995 to 1998, the Department of Environment embarked on a process of converting its conventional radar to Doppler weather radar (the national radar project). This was at the same time as the public service was going through a downsizing. It was proposed that the technical servicing of the new radar system be done in-house as opposed to being outsourced.

[92] Mr. Benko described the significant technological changes in the conversion from the conventional radar system to the Doppler system. The conventional system was based on discrete electronic technology. No computers were used in the operation of the system. Maintenance operations had to be performed on discrete electronic components, such as integrated circuits, resistors and power supplies. Spare components were kept on site and would be installed by the technologists on electronic cards.

[93] The technology changed, and many of these functions were integrated into smaller components. By way of example, under the conventional system, a radar control unit's components were contained in a cabinet rack 19 inches wide and 3 to 4 feet tall, whereas today, the same functions are contained in one component, 9 inches wide and 6 inches tall, and the system is controlled by a computer, the radar control processor.

[94] Every system used in data acquisition has undergone some form of integration, resulting in smaller units.

[95] The manufacturer of the original AWOS machines used discrete electronic components installed on circuit cards that were assembled in an electronics rack 19 inches wide by 6 feet tall. Spares were purchased as part of the system and retained on site. Technologists who monitored the systems were expected to troubleshoot and repair the systems locally. If a card failed in one of the systems, it was expected that the technologist would install a new card and take the failed card back to the depot to troubleshoot and to repair it, if necessary.

[96] That system has been replaced by an automatic weather station, titled "REAC." The data logger is approximately the size of the Bible. The REAC systems of modules are contained in a

rack 19 inches wide by 18 inches tall. There is a module for each type of sensor. Instead of repairing those modules, the module is replaced by plugging a new module into the system. At this time, no internal repairs are done by the Department of Environment technologists in the field on the systems.

[97] The work of technologists has changed, as they are no longer maintaining individual electronic components. In some instances, the maintenance of equipment requires less technical expertise than it did in the past. Similarly, technologists involved in maintaining the radar system are no longer dealing with repairs at the individual component level on site on a regular basis.

[98] Training has changed for technologists. The training course for maintenance on the old radar system that used discrete components was five weeks long. Three of the five weeks were spent working through schematics at the component level. A lot of emphasis was placed on electronic operation at the component level.

[99] The current radar maintenance course lasts three weeks, and there is one 45-minute session on schematics. The emphasis is now on operations through the control of the computer system. With the system being more computer controlled, the emphasis is to equip people on how to use the computer software.

[100] In the previous system, the antenna was controlled using a manual system with a hand wheel to synchronize the system with the antenna. Those same functions are now done on a computer display. Maintenance technologists need more intimate knowledge of the software to interact with the radar.

[101] Today, the requirement for people attending the radar electronics maintenance course is a one-year electronics background in the technologist-level training course. Technologists must have a basic understanding of electronics principles and troubleshooting.

[102] The maintenance philosophy has also changed from troubleshooting the module to module replacement, which affects the depth to which the training has to go. People who attend the course may not have an in-depth knowledge of electronics. The course provides them the tools to work on and calibrate the system. The radar system is used to perform remote sensing to measure meteorological activity at a distance from the site. Training is also designed to provide technologists with the tools to ensure the quality of the meteorological data by ensuring that the radar detects precipitation and measures the velocity of the precipitation.

[103] The basic radar course does not cover remedial action. The objective of the course is to teach preventive maintenance. When something is found outside of tolerance, the national radar support group is called in to provide assistance to resolve the problem. Components are

no longer repaired at the sites. The national radar support group is composed of technologists who have gone through a certification process as well as engineers who support advanced troubleshooting.

[104] The skill sets of the technologists maintaining the sites vary considerably. Some have very advanced skills and require less support than others. The way the system is currently designed is that repairs are to be done by the national support group and only module replacement is to be done on site. The people in the support group are required to have higher levels of understanding.

[105] Mr. Benko observed that this direction was a wise decision on management's part because, in the previous AWOS and radar systems, an individual card in the RCU might only have had a value of $200, in which case it was logical to have spare cards on site because of the low cost. However, on account of the integration that occurred, as in the case of the radar control processor, a whole rack is on one board, the cost to replace it is $25,000, and the repair costs associated with the new system are managed at the national level.

[106] This resulted in the level of troubleshooting in the field being reduced to the replacement of modules, with the defective module being shipped back to the national office for repairs, some of which were done in-house by the national radar support group, and others being sent back to the manufacturer.

1. <u>Weather monitoring system</u>

[107] The objective of the weather monitoring system is to collect data and monitor atmospheric weather. There have been various monitoring systems using different technology involving both manual and electronic means to measure and record data.

[108] If one wishes to monitor temperature, there are a variety of different ways to monitor and record it. The original standard was a mercury-based thermometer, a manual method that required someone to go out and observe a thermometer. The technology has changed such that you can now take measurements through electronic means. The systems are connected to the sensors that measure and record data. The data is transmitted to various different clients for preparing weather forecasts or for client needs outside of the Department of Environment.

[109] In light of the technological changes to the various systems, Mr. Benko was asked about the role of Mr. Diamond. Referring to the job description, he stated that the data acquisition technologist maintains a variety of systems to acquire data from environmental sensors. The name suggests an involvement in maintaining systems that acquire data.

[110] A variety of different people were performing that function previously. There were people who were meteorological inspectors who were primarily maintaining systems related to atmosphere data capturing which involved primarily manual observation programs. These persons also inspected other pieces of equipment not associated with manual programs, such as the radiation network or the evaporation network. This work was non-technical in nature. Both of these programs no longer exist.

[111] More technical systems, such as AWOS, were maintained by electronic technologists because of the nature of the systems. Those responsibilities have now been gathered together into a data acquisition technologist position.

[112] With the varying systems, data technologists may have a variety of different skills to maintain the various systems that have been amalgamated together. As a result, the best way to describe what the position does is in the job description.

[113] The job description recites the responsibility to ensure the accuracy of the meteorological data from the various systems. The technologist has to appreciate what the sensors are measuring.

[114] Disciplines other than electronics that the technologists use include security access, construction, meteorological, mechanical and safety. In addition, all of the systems are computerized.

[115] Mr. Benko stated that Mr. Diamond's strong background and skills in electronics are higher than those required for the job. The minimum training required for a radar technologist is a one-year technical certificate. If technologists have a higher skill level, they are clearly an asset to the department, as they do not require as much support.

[116] The witness was asked to describe the number of checkpoints on the various systems. There may be a number of different checkpoints, depending on the maintenance interval of the system. Bimonthly maintenance is the minimum for radar. The bimonthly maintenance performed on the radar has some 275 individual checkpoints, which must be performed and the results recorded. Some 50 to 60 checkpoints require the use of electronic testing equipment, such as the oscilloscope and the voltmeter.

[117] There can be different levels of troubleshooting, and the level can be taken to the extent of the technologist's knowledge. With the old radar system, which used discrete components, troubleshooting was taught down to the component level. In the present system, troubleshooting is taught down to the module level.

[118] The priority for troubleshooting for all of the systems is to return to full operations as soon as possible. The Department of the Environment is more concerned about the quality of the data. The department's philosophy on how it supports its programs and systems is to ensure the system as a whole is working properly.

[119] The witness reviewed the key activities set out in the data acquisition technologist work description. He confirmed that the key activity is the performance of routine maintenance on the meteorological equipment and electronic remote sensing systems.

[120] The updating of the station information systems databases includes the requirement to update databases for every piece of equipment that has its own reporting system.

[121] The training of colleagues occurs where a technologist goes to an unfamiliar radar site. He may have to be trained on the equipment at that site by a technologist who is familiar with the site.

[122] The witness maintained that data quality was the raison d'être of the maintenance program.

[123] The requirement to maintain knowledge and expertise in new related technologies is important, as the department has gone through significant technological change, and integration has occurred. For example, there used to be a wind sensor cup and a vane, used to measure wind speed and direction. This has been replaced by vastly different technology using ultrasonic probes.

[124] The work description captures a multiple set of disciplines, not just electronic technology, because the technologist is responsible for a remote site, the maintenance of which may involve a number of disciplines. The site may never be seen by a supervisor. It does not mean that they have to be experts in all of those disciplines.

[125] With respect to the narrative under "work characteristics," in the work description that reads, "as **an expert in the field of electronics** (as it relates to remote sensing systems and the operation of meteorological equipment such as weather radar, satellite communication systems, automatic weather stations and remote camera systems), routinely provides technical advice to colleagues (both inside and outside of the region), as well as managers," the witness testified that he did not think the technologist had to be an expert in electronics because of the minimum requirement of one year's electronics background in a technologist-level training course.

[126] He stated he did not consider himself an expert in electronics.

[127] He stated that this work description is a consolidation of disciplines under this specialist. It does not mean that everyone would perform all of the duties described in the description. Someone might do two or three or all of them. The department must manage to the person's capability.

[128] In cross-examination, based on the witness's background and expertise in electronics, he acknowledged that there were three distinct skill levels in electronics maintenance: the technologist who would perform routine maintenance work, the technologist who had earned a technology diploma, who for example in the past was involved in maintaining the microwave system, and the electrical engineer, who would be more involved in the design of the systems. There are various levels of training, depending on the skill levels required to do the job.

[129] He confirmed that the nature of the work and the educational qualifications required to perform the work have all changed. Computers are involved in every aspect the job, and one requires a composite of skills to perform the job. He ventured that an incumbent of the position may have a strong background in mechanical technology and a minimum background in electronics technology.

[130] He was asked what was inside a data logger and said he did not know as he had not opened up a data logger, although he thought it would be electronics. He was asked if this was true for every piece of equipment. If one looked at all of the radar equipment, some components are electronic and some are not. At the system level, the radar is electronic, the computer is electronic, the antenna could be viewed as electronic and mechanical, the building as structural and electronic, the power supply could be viewed as electronic and mechanical, the tower as structural, the radome as structural as well as the foundation for the tower, the building as structural, and fencing and any other auxiliary buildings as structural.

[131] The department's courses touch on all of these systems. He acknowledged that the design and construction of buildings was done by civil engineers. He acknowledged that a technologist has to know whether the fence is up or down or a door is broken. There is no formal training in the course for technologists on these subjects. The responsibility for security is a responsibility for the property and the buildings and for ensuring that the buildings are locked and secure and the tower and the fencing secure. There is no formal training in the course on the subject. There is training in meteorology for recruits coming into these positions. Employees must review safe work procedures and be familiar with the occupational health and safety requirements.

[132] The witness described the system for radar and its various components and confirmed that the data acquisition technologist inspects and tests this equipment at the regularly scheduled intervals for maintenance. The witness confirmed that it was his evidence that all of

the components of this system consisted of modules that were plug-and-play that one took out and replaced.

[133] He was asked to describe the procedure for removing the magnetron. He stated that he would not be able to describe the process without a manual. He stated that it could involve the manual unbolting of the waveguide, disconnecting the magnetron at the terminals, and unbolting and removing the magnetron.

[134] He was asked to describe the process for removing a data logger. He stated that some data loggers have more wires than others. Some are simple and have 65 wires, while others may contain up to 300 wires that must be disconnected. In more recently manufactured devices, it is not necessary to disconnect any wires but only to separate connectors. Because it is such a laborious activity, this was one of the reasons the department was moving to plug-and-play technical support. The witness agreed that it was fair to say that this maintenance could not be performed by someone without an electronics background.

[135] He asserted that one of the points of the training is to ensure the quality of the data. He also agreed that verification that the electronic equipment was functioning properly within the criteria is part of the job description.

[136] He was referred to the section of the job description relating to risks to health that describes the risk of exposure to high voltage and high power. He confirmed that the description of this risk would not be accurate for persons not working on radar.

[137] He was referred to the note at the bottom of page 1 under the heading “client-service results” that reads in part, “maintain … refers to the tasks associated with the completion of preventative maintenance, emergency repairs of system components or a complete overhaul of the systems” and was asked if it was accurate. He stated that the definition would not reflect the term properly with respect to the radar, as maintenance in his view did not encompass a complete overhaul of the system.

C. <u>Conway L’Esperance</u>

[138] Mr. L’Esperance has been employed by the Department of Environment since June 2000. He has a civil and electrical engineering technology diploma from Lakehead College, as well as a diploma in business administration. He was hired as a meteorological technologist in an EG-02 position. He completed a basic weather observation course and an aerological course for an upper-air technologist. He was posted to the Eureka weather station in the Arctic and performed upper-air weather observations on a three-month rotation to Stony Plains, Alberta for a period of three years. His position was reclassified to an EG-03.

[139] He applied for a program that allowed for a career progression to an EG-05 position. While in this program, he assisted radar technologists and completed the necessary training modules to be appointed as an EG-05.

[140] As an EG-05, he started working in radar, assisting other technologists. Due to the training he received in the program, he was also qualified to work on the AWOS, the reference climate station, the upper-air station, the manned climate station and flight service stations. During 2009-2010, he completed the process to become a certified radar technologist. Upon certification, he became the lead technologist for two radar sites maintained out of the department's Thunder Bay office as well as the lead technologist for two upper-air stations. He also had responsibility for the maintenance of two AWOS, two surface weather stations and one manned site.

[141] In 2011, he entered a competition for an EG-06 position and was ultimately appointed to an EG-06 position, located in Thunder Bay. This position involved the supervision of other employees, including Mr. Diamond, and more administrative duties, although he is still personally responsible for the maintenance of two radar systems out of the Thunder Bay office, two operator stations and one limited-weather information system.

[142] With the contracting out of the weather radio network, the technologists he supervises are taking over the responsibility for the maintenance of three Department of National Defence (DND) AWOS sites. A basic understanding of electronics is required to perform maintenance on these systems. All sensors are replaced and are not repaired on site.

[143] He stated that the EG-05 position encompasses more than electronics expertise. You have to have an understanding of meteorology; you have to deal with the public. The department's mandate is the collection of data and to ensure that the data is accurate, timely and reflective of the weather phenomena.

[144] He stated that EG-05s set up short-term contracts to ensure that radar sites are cleared of snow and vegetation that could compromise the sensors that provide the data. There is siting criteria for stations to ensure that new buildings do not interfere with sensors that would invalidate the data.

[145] Mr. L'Esperance produced a document that he prepared for the hearing summarizing Mr. Diamond's maintenance activity during the department's last fiscal year, April 1, 2011 to March 31, 2012. The summary was based on monthly reports submitted by Mr. Diamond. During that period, he was the lead technologist for the Franktown radar site and two sites located at Egbert and Windsor. He also assisted in the maintenance of the weather radio network and the radar network. His time spent on each of the networks during that fiscal year was: weather

radio, 12%; radar, 29%; CLDN, 5%; leave, 15%; and other, 39%. Time spent on each network included shop time and remote work. The "other" category included meetings, reports, training, office administration, and travel to and from stations. During the new fiscal year that began on April 1, 2012, the weather radio network was contracted out. However, Mr. Diamond took over responsibility for being the lead technologist for the Trenton DND AWOS site.

1. Cross-examination

[146] Mr. L'Esperance testified that the AWOS sensors are replaced when they malfunction and the sensors that are removed requiring repair are sent to the supplier, DELCOM. He confirmed that the EGs responsible for maintaining the AWOS equipment do not require much of a background in electronics.

[147] He was asked to describe mechanical tasks performed by the EGs. He stated that EGs are required to lower and raise the wind tower, the Stevenson screen that houses the thermometer and the dew cell. The Beaufort rain gauge is mechanical. Technologists follow a prescribed checklist to ensure the gauge is not out of tolerance.

[148] He confirmed that this job has changed over the last 8 to 10 years by the use of computers.

[149] The last time he worked with Mr. Diamond was on the Dryden radar in the summer of 2011. He confirmed that, in his attempts to obtain radar certification, he was involved in on-the-job training by Mr. Diamond and Mr. Murray.

[150] Mr. L'Esperance explained that what he meant when he testified that Mr. Diamond's work required him to have dealings with the public was that he deals with contractors with respect to the maintenance of radar sites. He confirmed that he personally sets up the contracts for the sites for which he is responsible. Other technologists do the same.

[151] The report on Mr. Diamond's responsibilities and workload was prepared for the hearing at the request of his supervisor. The report was prepared from Mr. Diamond's itinerary sheets, which he submits at the end of each month. The figures were arrived at by calculating as a percentage the hours in each category over the total number of work hours in the fiscal year.

[152] During the fiscal year, the office was short-staffed, and as a result, maintenance was performed on the radar network on a quarterly basis as opposed to a bimonthly basis. It was acknowledged that, when the office is fully staffed, the percentage of time devoted to the radar network or maintenance will increase.

[153] When maintenance is performed on a radar site on a bimonthly basis, usually, two employees are sent out. The lead technologist is responsible even if there is a more qualified technologist with him.

[154] The forms for the previous fiscal year did not contain a column for travel, and it was assumed that the travel time was listed in the column for maintenance for the particular system. The new forms did not record travel time separately.

[155] Mr. L'Esperance confirmed that Mr. Diamond will now be responsible for a DND AWOS site.

[156] In re-examination, Mr. L'Esperance indicated that, when he performed on-the-job training on radar sites, the fact that he worked under Mr. Diamond and Mr. Murray did not necessarily mean that he could not have worked under other technologists.

[157] The amount of time required for Mr. Diamond to travel from his home office to the Franktown radar site is approximately 7 to 8 hours. He did not know exactly how long it took to travel to the lightning sites. He is now required to travel to the Department of National Defence radar site that is located in Trenton.

IV. Summary of the arguments

A. Argument of the applicant

[158] For the purpose of facilitating collective bargaining in the public service, employees are placed in appropriate occupational groups, which then become the bargaining units for which bargaining agents are granted representational rights. The allocation into the appropriate occupational group is done based on a review of the duties of the position having regard to the scope of the occupational group definition. In reviewing the duties, one is to have regard to the primary purpose of the position.

[159] In reviewing the evidence, it must be kept in mind that Mr. Diamond performs the job, while the other two witnesses do not. Accordingly, the evidence of Mr. Diamond is the best evidence in the circumstances.

[160] A review of the work description and in particular the important parts of the sections dealing with client service results and key activities indicates that the primary duties of the position involve the application of electronics technology to the maintenance and repair of electronic and telecommunications systems. The work has, as its primary purpose, the application of electronics technology.

[161] In reviewing the list of inclusions of the group definition for the Technical Services Group, the only inclusions that might apply are number three, dealing with the "conduct of analytical, experimental or investigative activities in the natural, physical and applied sciences," and number 11, dealing with the "planning, development and conduct of training in, or the leadership of, any of the above activities." However, it must be emphasized that paragraph 9 of the list of exclusions excludes positions whose primary purpose is the "application of electronics technology to the . . . installation, inspection, maintenance and repair of electronic and associated equipment . . . ."

[162] The EL Group definition and in particular subparagraphs five through nine are relevant. The primary duties of the position involve the "application of electronics technology to the design, construction . . . inspection, maintenance and repair of electronic and associated equipment, systems and facilities and the development and enforcement of regulations and standards governing the use of such equipment." The position falls squarely within the Electronics Group definition.

[163] No matter how broadly the group definition for the Technical Services Group is read, paragraph 9 of the exclusions excludes positions involved in the "application of electronics technology to the . . . maintenance and repair of electronic . . . equipment." A review of the list of inclusions and exclusions for the EG and EL Groups leads to a clear indication that work in EL Group is excluded from work in the EG Group. When the Technical Services Group definition and list of inclusions and exclusions are read in detail, it is clear that the group is composed of a host of specialties of a broad nature in the scientific and support group, whereas the EL Group is a highly specialized group. It is unlikely that the EG Group covers all work involving the application of electronic technology to electronic systems. A review of the inclusions and exclusions indicates that work that would otherwise fall within the Technical Services Group, if it involves the application of electronic technology to electronic systems, would fall within the EL Group, and that would be the proper allocation.

[164] Mr. Diamond testified that he routinely performs scheduled maintenance on electronic systems, such as the weather radio, the Doppler weather radar, the lightning detection system, AWOS and the laser cyclometer. He explained in detail how he applied electronic technology to perform maintenance tests on the systems. The evidence of the other witnesses did not contradict Mr. Diamond's evidence with respect to the tests he performs or the equipment he uses. There was an attempt to downplay the complexity of the tests and equipment that he utilizes.

[165] Similarly, Mr. Diamond's evidence with respect to the corrective maintenance that he had to perform on the systems was not contradicted. On the preponderance of the evidence, the primary focus of Mr. Diamond's work is as stated in the work description, which is the

maintenance and repair of electronic systems. In particular, the first bullet in the work description under the title "client-service results" refers to "the inspection and maintenance of electronic data collection and dissemination systems." Mr. Diamond described five or six systems that he maintained. The word "maintain," as used in the word description as noted, refers to the tasks associated with the "completion of preventative maintenance, emergency repairs of system components or a complete overhaul of the systems." Notwithstanding the evidence of Mr. Benko, Mr. Diamond carried out those duties, as defined in the department's document.

[166] With respect to the evidence that one of the duties of the position is to ensure that the site is secure and to keep it clear of vegetation, these are not core duties, and in any event, the responsibility for keeping the site clear of vegetation is contracted out. Determining if the fence around a radar site is up or down is not part of the primary duties of the position.

[167] Mr. Diamond did not collect meteorological data. He used electronic equipment to ensure that the electronic systems met prescribed standards established by the manufacturer.

[168] The second bullet in the work description, under the title "work characteristics," refers to the incumbent of the position as being "an expert in the field of electronics (as it relates to remote sensing systems and the operation of meteorological equipment such as weather radar, satellite communication systems, automatic weather stations and remote camera systems)." Based on this document, the evidence of Mr. Benko, that he did not regard himself as an expert in electronics, should be disregarded.

[169] The duties of all positions are impacted by technological change. However, the primary purpose of the work has not changed. Mr. Diamond is still using electronic technology in the maintenance and repair of electronic systems.

[170] The primary focus of Mr. Diamond's position, based on his work description and the relevant evidence and based on the best but not necessarily a perfect fit, places him within the Electronics Group and not the Technical Services Group.

B. Argument of the respondent, Public Service Alliance of Canada

[171] The PSAC submitted that the onus is on the applicant to establish on clear and compelling evidence that Mr. Diamond is in the EL bargaining unit. The best-fit jurisprudence is like a tiebreaker to be used when there is ambiguity and the evidence is not clear that someone should be in one unit or the other. This is not that kind of case.

[172] In support of the proposition that the onus on the applicant is a heavy one, section 57 of the *PSLRA*, although not directly at play, sets out the criteria that the Board must take into

consideration in determining whether a group of employees constitutes a unit appropriate for collective bargaining. That criteria reflects the employer's classification of persons in positions, including the occupational groups or subgroups established by the employer. There is no debate that the position in question is classified by the employer as an EG.

[173] The Technical Services Group is an amalgam of a number of previously legislated occupational groups. The group definition is extremely broad. The group definition refers to positions that are primarily involved in the performance, inspection and leadership of skilled technical activities. There can be no doubt that the positions in question are technical jobs.

[174] The express inclusions in the group includes positions that have, as their primary purpose, responsibility for one or more of the following activities:

. . .

> *3. the conduct of analytical, experimental or investigative activities in the natural, physical and applied sciences; the preparation, inspection, measurement and analysis of biological, chemical and physical substances and materials . . . the calibration, maintenance and operation of instruments and apparatus used for these purposes . . . including:*
>
> . . .
>
> *(c) the observation and recording of events and the analysis of information relating to such fields as meteorology . . . and the provision of data and information relating to meteorology . . . .*

. . .

[175] This inclusion links Mr. Diamond's duties right to the maintenance of instruments used for meteorology. Although some of the group definitions are ambiguous, the rule of construction must be that the general provision gives way to the specific provision. The group definition specifically refers to the maintenance of instruments relating to meteorology. This employee is not maintaining the Department of the Environment equipment one day and the Department of Transport equipment the next. The sole purpose of the position is to exclusively support the meteorological systems of the Department of the Environment.

[176] The group definition for the EL Group states that the group "comprises positions that are primarily involved in the application of electronics technology to the design, construction, installation, inspection, maintenance and repair of electronic and associated equipment, systems and facilities . . . ." The definition does not say that the group encompasses positions that are primarily involved in electronics or working in electronics, as that would catch all sorts of jobs. One must as a primary purpose use electronics technology in the maintenance and repair of electronic and associated equipment, systems and facilities.

[177] Counsel acknowledged the arguable connection in the applicant's argument to paragraph 5 in the inclusions section of the Electronics Group definition but did not see arguable connections to paragraphs 6, 7 or 8; nor was there any reference to meteorological systems in the section dealing with exclusions.

[178] The point in issue is what is required for the job, not what the applicant brings to the job. Mr. Diamond brings a lot of expertise, which is great, but the test is not what the incumbent brings to the job but what the job requires.

[179] Counsel agreed that the best evidence of what a person does comes from the incumbent, but one must distinguish between what an incumbent does and what the job requires.

[180] The evidence overwhelmingly establishes that the duties Mr. Diamond performs are such that he properly belongs in the Technical Services bargaining unit, not the Electronics unit, having regard to the scope of the Technical Services Group definition and informed by the former Board's certification of the PSAC as the bargaining agent.

[181] The Board heard virtually no evidence regarding the work of the other technologist, Mr. Bruce Murray. As a result, there is no proper evidentiary basis for a comparison of the duties Mr. Murray actually performs and the duties described in the Electronics Group definition. Accordingly, the only question before the Board is whether Mr. Diamond's duties properly fall within the Electronics bargaining unit or the Technical Services bargaining unit.

[182] Mr. Diamond's testimony confirmed that his primary duties involved inspecting and maintaining various systems used by the Department of the Environment's meteorological service. The raison d'être of this section of the Department of the Environment, in which he works, is monitoring atmospheric and other environmental conditions, as confirmed by Mr. Benko. Mr. Benko testified that the data acquisition technologists are responsible for ensuring the data that the department's meteorological systems collect is accurate. Mr. L'Esperance testified that the primary purpose of the position was to ensure that the equipment was accurately reporting weather information.

[183] The work description confirms that a key activity of the position is to inspect and maintain "electronic meteorological equipment and complex electronic remote sensing systems," including weather radar. Mr. Benko testified that incumbents are required to understand the elements the data systems are collecting.

[184] Counsel argued that Mr. Diamond exaggerated the scope of these electronic duties, as he claimed his job duties had not changed over some eight years, while in fact, he subsequently acknowledged that he had seen major changes in duties over the years, as the systems have

become far more computerized. Throughout his testimony, Mr. Diamond emphasized the duties that he believed engage his electronic training and downplayed the duties that engage other types of skills. He testified at length about his weather radio duties, neglecting to acknowledge that these duties had all but disappeared. Mr. Diamond testified at length concerning the tests he performed with electronic equipment when performing radar maintenance. However, of the 278 parameters recorded in the bimonthly checklist, only 50 to 60 required the use of electronic test equipment. Similarly, in discussing the maintenance of the AWOS system, he emphasized the use of electronic test equipment and only clarified under cross-examination that some of this equipment was mechanical in nature. Mr. L'Esperance confirmed that employees classified as EG-05 with a basic electronics background maintain AWOS sites. They are not required to repair but only to replace defective equipment on site.

[185] With respect to the electronic work Mr. Diamond performs in inspecting and maintaining weather radar, according to Mr. L'Esperance, Mr. Diamond only spent 29% of his time on radar duties. Assuming the radar duties were predominantly electronic in nature, although the evidence confirms they are not, the percentage of time Mr. Diamond spends on radar duties is simply insufficient to conclude that he predominately performs electronic work. The evidence was clear that, because of technological advancements, radar duties have changed over time and require far less electronics work. Radar maintenance does not require anything like the level of electronics knowledge it once did. The old radar system was composed of discrete components that required troubleshooting at the component level. Today, if a component is not providing a proper reading, it is replaced with a new one. Mr. Diamond's qualifications are above the minimum standard and are an asset for the Department of the Environment but are not a requirement of the data acquisition technologist position. His expertise may have been required in the past, but that is no longer the case.

C. Submissions of the respondent, Treasury Board

[186] With respect to Mr. Murray, there is no evidence before the Board that would enable it to make a determination that he ought to be included in the EL bargaining unit.

[187] The applicant has not met its burden.

[188] It is obvious that Mr. Diamond has an educational background in and brings experience in electronics to his work. However, what is required is a basic understanding of electronics based on one year of study, not three years of formal study and 20 years of experience.

[189] Troubleshooting is now limited to the identification of the problem and the removal of the component and its replacement. The component is sent in for repair. The evidence of Mr. Benko is that the technologists are not working at the component level any longer. In the past,

the radar system was composed of discrete components that were not integrated. Today, the components are integrated with computers. The technologists are no longer maintaining discrete electronics. They are now responsible for entire systems. They are also responsible for sites, fixtures, generators, fencing and property in general. The technologists are not focused on electronics work all the time. The focus is also on ensuring the integrity of the data collected; that is the ultimate object of the program. There are internal and external factors that can compromise the data. All of the duties of the position in relation to the site are important. It is important that the technologists understand the data being collected in order to perform their work. The job is not focused on the functioning of subcomponents of systems but on the overall integrity of the system.

[190] The apprenticeship and professional training program is not limited to electronics or systems. It involves more general training.

[191] Counsel argued that she was not sure that the evidence for Mr. Diamond painted a complete picture. She acknowledged that he used electronic equipment to do some of his work. He also uses computers to do a great deal of his work. In describing his strong background in electronics, he may feel a strong affiliation to the EL Group and was for many years in a position classified as an EL. He knew he was being appointed to his present position and that it was an EG-05 position. There is no evidence that he grieved or that he was not fairly represented by the Public Service Alliance of Canada.

[192] The applicant has not demonstrated that the primary focus of the work requires the implementation of electronics technology in the performance of his duties.

V. <u>Conclusions on the facts and analysis</u>

[193] The applicant is seeking a declaration from the Board that Mr. Neil Diamond and Mr. Bruce Murray, currently classified as data acquisition technologists in EG-05 positions in the Technical Services Group, are more properly included in Electronics Group.

[194] Section 58 of the *PSLRA* provides as follows:

> ***58.*** *On application by the employer or the employee organization affected, the Board must determine every question that arises as to whether any employee or class of employees is included in a bargaining unit determined by the Board to constitute a unit appropriate for collective bargaining, or is included in any other unit.*

[195] Board jurisprudence has clearly established that the Board cannot involve itself in the classification process.

[196] As stated in *Federal Government Dockyards Trades and Labour Council (Esquimalt) v. Treasury Board (National Defence)*, PSSRB File No. 147-02-25 (19840524):

. . .

> [31] *It follows that in making a determination…the Board cannot involve itself in the classification process. Rather the authority of the Board is restricted to making a determination on the basis of a comparison of the duties actually performed by the employees and the duties prescribed in the group definition . . . .*
>
> [32] *In making its determination . . . the Board is called on to examine the duties that the employees actually perform and to compare those duties with the duties set out in the group definitions . . . The Board would then make its determination on the basis of whether the primary duties performed by the employees come within the duties described in the General Labour and Trades Group definition or within the duties described in the Ship Repair Group definition. This determination is not dependent on the classification that the Treasury Board has seen fit to give to the positions in which the two employees are employed.*

. . .

[197] Vice-Chairperson Potter expressed it another way in *International Brotherhood of Electrical Workers, Local 2228 v. Treasury Board*, 2001 PSSRB 71, at para 53, stating that it was necessary to determine the raison d'etre or the pith and substance of the core duties and functions of the positions.

[198] The Board heard virtually no evidence with respect to the duties of Mr. Bruce Murray and there was no agreement, as is typical in such cases between the parties to the effect that the evidence with respect to Mr. Diamond applied equally to Mr. Murray. The Board must therefore conclude that the applicant has not met its burden of proof with respect to its application to include Mr. Murray in the EL bargaining unit and accordingly dismisses the application of the IBEW-2228 in respect of Mr. Murray.

[199] The evidence with respect to Mr. Neil Diamond's duties is not significantly in dispute; rather, the factual conclusions and their application to the group definitions are in contention. The Board has reached the following conclusions on the facts.

[200] Mr. Neil Diamond is a data acquisition technologist, classified as EG-05, a position he has held for eight years. He has a degree in electronic engineering technology and some 25 years' experience in this field. His day-to-day duties are largely reflected in the work description, namely, the inspection and maintenance of electronic data collection and

dissemination services for the Department of the Environment and, in particular, meteorological systems. It is the duties that are actually performed that are relevant in determining which bargaining unit the employee should be in.

[201] He testified in some detail concerning the nature of the maintenance that he performs on the various systems, namely, weather radar, lightning detection, weather radio and automatic weather stations.

[202] From the evidence of Mr. L'Esperance, it is clear that the maintenance of the weather radio network has been contracted out and the technologists, including Mr. Diamond, are no longer responsible for its maintenance. For the preceding five years, the technologists reporting to Mr. L'Esperance, including Mr. Diamond, have not been responsible for maintaining the AWOS systems; however, they have recently been assigned responsibility for maintaining three Department of National Defence AWOS systems. Mr. Diamond has been assigned responsibility for maintaining one AWOS system in Trenton, Ontario. Mr. Diamond has also been responsible for the maintenance of the weather radar site in Franktown.

[203] I propose to summarily review the background to and current methods of maintaining each of the systems for which Mr. Diamond is currently responsible. The Board accepts the evidence of Mr. Benko with respect to the nature of the systems that are maintained by data acquisition technologists at the Department of the Environment, the impact of technological change on those systems, and the corresponding effect on the basic requirements for and the duties of data acquisition technologists. Mr. Diamond also acknowledged the impact of technological change on the duties of the positions.

A. <u>Weather radar</u>

[204] The Department of the Environment converted its conventional radar to Doppler weather radar in the period 1995 to 1998.

[205] The conventional system was based on discrete electronic technology. No computers were used in the operation of the system.

[206] Maintenance operations were performed on discrete electronic components such as integrated circuits, resistors and power supplies. Spare components were kept on site and would be installed by the technologists on electronic cards.

[207] The technology changed, and many of the functions were integrated into smaller components, and the system was controlled by computers; the work of the technologists changed. The technologists are no longer maintaining individual electronic components. The maintenance and repair of equipment requires less technical expertise than it did in the past.

[208] This is evidenced as well in the training of data acquisition technologists.

[209] Training technologists to maintain the old radar system emphasized electronic operation at the component level, working through schematics. Three of the five weeks of the training course were devoted to this activity. The current radar maintenance course lasts three weeks, with one 45-minute session devoted to schematics. The emphasis is now on the use of the computer software that controls the system.

[210] Technologists currently attending the radar electronics maintenance course require only a basic understanding of electronics principles and troubleshooting as evidenced by a one-year background in electronics. The decision to troubleshoot to the module and to replace the module has affected the depth of the training. The objective of the course is to teach preventative maintenance, not remedial action, which is now the responsibility of the national radar support group.

[211] It is clear that the weather radar system is an electronic system and that Mr. Diamond utilizes electronic equipment, such as an oscilloscope, to check the radar pulse. Mr. Diamond maintains that the oscilloscope can only be used by electronic technologists in diagnosing electronic problems. Mr. Benko acknowledged that the oscilloscope is used in diagnosing problems with the weather radar system; however, he asserted that, of some 275 checkpoints on the system, only 50 to 60 of the checkpoints required the use of an oscilloscope. If problems are found, the technologist, using his skill and intuition, locates the fault and orders replacement parts from the radar support group and installs a new unit.

[212] Mr. Diamond acknowledged that, if he suspected a malfunction in a system, he did not exclusively use electronic equipment and stated that mechanical equipment was used some of the time.

[213] The technologist is also responsible for the radar site and the radar tower. Part of the job is to ensure the security of the site through visual observation and equipment, as well as the heating and ventilation of the facility. The technologist also ensures that the tower ground is not compromised. The technologist also must check fluid levels in the pedestal and the slip rings, which involves some general mechanical duties. There is also a requirement to check belts. Mr. Diamond also acknowledged having to grease equipment, such as the rotator parts.

B. <u>AWOS</u>

[214] The original AWOS machines used discrete electronic components. Spares were purchased as part of the system and were retained on site.

[215] Technologists were expected to troubleshoot and repair the systems locally.

[216] The system has been replaced by an automatic weather station consisting of a system of modules for each sensor. The modules are not repaired on-site but are replaced by plugging a new module into the system.

[217] Mr. Diamond considered that the wind test kit for measuring revolutions in wind speed on the automatic weather station to be electromechanical, as opposed to purely electronic, and that the wind jig used to calibrate the wind vane was completely mechanical.

[218] Mr. L'Esperance was of the view that the technologists responsible for maintaining the AWOS equipment did not require much of a background in electronics.

C. Lightning detection

[219] Mr. Diamond acknowledged that the computer was used almost exclusively to diagnose problems in the lightning detection system and that very little electronic equipment was utilized.

D. Other

[220] Clearly, the nature of the job and the expertise of the technologists required to maintain the systems has changed over the past decade.

[221] The Board accepts the evidence of Mr. Benko and Mr. L'Esperance that the objective of the weather monitoring system is to collect data and monitor atmospheric weather, and ultimately, the technologist has the responsibility to ensure the accuracy of the meteorological data from the various systems.

[222] Mr. L'Esperance testified that, based on Mr. Diamond's reports; he spent approximately 29% of his time during the past fiscal year on weather radar duties. Assuming that the maintenance of the weather radar system predominantly involved the use of electronic technology, the facts do not support a significant use of electronic technology in the maintenance of the AWOS system or in the lightning detection system.

[223] Applying these facts to the Electronics Group definition, I do not conclude on the totality of the evidence dealing with the maintenance of all of the systems that Mr. Diamond is primarily involved in the application of electronics technology to the inspection, maintenance and repair of electronic and associated equipment.

[224] The facts support a finding that the current maintenance of these systems requires the application of a number of technical skills, including a background in electronics, computers and mechanical technology, as well as an understanding of meteorology.

[225] This factual finding supports the conclusion that Mr. Diamond falls within the Technical Services Group definition and in particular the inclusion set out in subparagraph three that reads in part, "positions that have, as their primary purpose, responsibility for one or more of the following activities:" the design, construction, modification and assessment of technical systems and equipment or the calibration, maintenance and operations of instruments and apparatus used for these purposes; and the observation, calculation, recording and interpretation, presentation and reporting of results of tests or analysis, including:

. . .

> *(c) the observation and recording of events and the analysis of information relating to such fields as meteorology, hydrography, or oceanography and the presentation of the results of such studies; and the provision of data and information relating to meteorology.*

. . .

[226] I conclude all on all of the evidence that the "primary purpose" or "raison d'etre" of the data technologist position, in dispute does not solely require the application of electronic technology but rather is more diverse and touches on site security, mechanical issues and computer technology for the purpose of ensuring the overall integrity of the meteorological system.

[227] After reviewing all the evidence, I am satisfied that the primary duties of the position more properly fall within the Technical Services Group definition, and as such, the application submitted by the IBEW-2228 is hereby dismissed.

[228] For all of the above reasons, the Board makes the following order:

(The Order appears on the next page)

VI. Order

[229] The application is dismissed.

January 24, 2013.

David Olsen,
a panel of the Public Service
Labour Relations Board