

DECISION OF THE DISPUTE RESOLUTION TRIBUNAL

RE: JOINT JOB EVALUATION PROVIDER GROUP

JOB #30 BIOMEDICAL ENGINEERING TECHNOLOGIST

Hearing Date: May 16, 2006 in Regina, Saskatchewan

Tribunal: Phil Johnson (Chair)

Bruce Stremel (Employer Nominee)

Jim Holmes (Unions Nominee)

Presenting for the Unions: Jacquie Griffiths and Bob Laurie

Presenting for the Employers: Francis Schmeichel

Decision Date: August 11, 2006

INTRODUCTION

This Dispute Resolution Tribunal (“the Tribunal”) was formed to hear argument and render final and binding decisions regarding factor ratings and rationales, and job description matters for Job # 30 Biomedical Engineering Technologist. The Tribunal is so authorized by the *Joint Job Evaluation Project Reconsideration Terms of Reference* agreed to by the Canadian Union of Public Employees, the Service Employees International Union, the Saskatchewan Government and General Employees’ Union (henceforth “the Union”), and the Saskatchewan Association of Health Organizations (“the Employer”).

In accordance with the *Terms of Reference*, the Joint Job Evaluation Reconsideration Committee (“RC”) reached consensus regarding factor ratings and rationales, job descriptions and qualifications for the Biomedical Engineering Technologist job (BMET). The *Terms of Reference* give the Joint Job Evaluation Reconsideration Steering Committee (“SC”) final decision-making authority over recommendations coming from the RC, whether or not the RC’s recommendation comes with consensus support. In the case of the BMET, the RC did reach consensus for all its recommendations. However, the SC did not, and the matter was referred to dispute resolution, as provided for in the *Terms of Reference*.

Disputed items are the job description and the factor ratings and/or rationales for all factors, with the exception of the Sensory Demands factor.

By agreement of the Unions and Employers, the Tribunal has limited its deliberations and decisions to the BMET job as it existed during the October 2000 to September 2004 time period. The Tribunal has no authority to consider job duties prior to that time period, or after, and has not done so. Nor is it within the tribunal’s mandate to consider matters of pay or compensation. Rather, the tribunal has made its decisions based on careful analysis of the arguments put before it, and through research of the relevant job evaluation and reconsideration data submitted to those processes by the employees and managers.

DECISIONS

Tribunal factor ratings summary:

DM	ED	EX	IJ	WR	IA	L/S	PD	SD	ENV
3.5	4.5	6.0	4.0	4.0	3.5	2.5	2.5	3.0	4.0

Factor ratings and rationales:

DECISION MAKING

Definition – This sub factor deals with the decision making aspects of the job. Decisions are based on the complexity and/or circumstances inherent in the work requirements as well as the variety and relative difficulty of the material, information, upon which decisions are based. Decision making requires the use of knowledge gained through formal education/training and experience. Degree levels increase in relation to the variety of issues and activities, and to the difficulty of the problems and decisions addressed.

Tribunal rating: 3.5

Rating rationale: This job meets all requirements of degree 3 - (a) *Some choice of action within limits defined by accepted practices is expected;* 3(b) *Solutions to problems or issues requires interpretation of existing procedures, practices, rules and regulations and/or discretion in deciding how to best provide care to a client/patient/resident and/or provide services.* Job also meets Degree 4(b) *May make decisions in unusual circumstances or on exceptions to accepted practices;* and 4(c)*Work involves developing plans to achieve specific short-term goals.*

According to the Notes to Raters for this factor, the job must meet **all** degree 4 statements in order to be rated as a full degree 4. This job does not achieve a degree 4 because it does not meet the requirements of 4(d) *Solutions to issues or problems require adaptation of existing practices, methods, and alternatives.* According to #6 of the Notes to Raters, to meet the requirements of 4(d), the job must contain a planning function. The question arises as to how this planning function is to be interpreted and applied.

The Tribunal reviewed a large number of jobs in the Providers Group not in dispute in order to gain an enhanced understanding of how this factor has been applied by the joint committees.

Jobs rated at a full degree 4 include #79 2nd Class Chief Engineer, 74 Biomedical Engineering Technologist Working Supervisor, 109 Information Technology Senior Analyst and 215 Cytotechnologist Working Supervisor. These jobs, respectively, plan and organize the daily operations of the plant/energy centre, develop maintenance plans and ensure compliance, design and develop new databases and data models, and provide overall direction of the Cytology Lab.

The Tribunal interprets 4(d) to mean that the position must be responsible for adapting existing practices, methods and alternatives for the unit or facility. The BMET does not have that level of decision making and planning authority for the unit or facility.

Jobs (not in dispute) that rated degree 3.5 include #8 3rd Class Power Engineer, 252 Laboratory Information Systems Technologist, 99 Adaptive Equipment Technician, and 103 Controls Technician. Such positions make decisions following standards and regulations, support, maintain, replace, repair equipment/databases, make decisions in

exceptional circumstances, implement, adapt, test, certify and troubleshoot equipment/system/software problems.

The rating rationale for Decision Making degree 3.5 will be as follows: *Some choice of action when providing engineering solutions to upgrade, customize or modify existing medical devices. Recommends new solutions for enhancing medical devices. Decisions are typically made within accepted practices and procedures. Decisions affecting medical devices can be made on an exceptional basis (e.g. equipment failure during an operating room procedure is repaired on a temporary basis to keep equipment functioning until permanent repairs can be made).*

EDUCATION

*Definition – This sub factor refers to the **minimum** training and/or formalized knowledge (versus practical experience) necessary to prepare an individual to satisfactorily fill a job based on today's educational levels and standards. Such knowledge is most commonly acquired as the result of time spent in schools, trades, colleges, universities or other formal instruction programs or equivalent.*

Tribunal rating: The parties agree that the rating is 4.5, and on the typical route for acquiring the education (Northern Alberta Institute of Technology). However, they disagree on the total classroom and practicum hours involved in completing the diploma course (i.e. the Employer says 2070 hours, while the Union says 2078 hours). The Tribunal has reviewed the relevant documentation and determined that the most appropriate number of hours is 2070. This decision is based on the June 25, 2004 email from a representative of the Northern Alberta Institute of Technology to the Providers Group. The course/practicum hours described in that email are more reliable than the March 28, 2006 email from the same NAIT representative to the Unions, simply because it more closely coincides chronologically with the relevant time period (i.e. the 2000-2004 job evaluation project period).

The rationale for Education degree rating 4.5 will be as follows: **Grade 12. Biomedical Engineering Technology diploma (2070 hours).**

EXPERIENCE

Definition – This sub factor measures the work experience and the length of time (in months or years) required to perform the essential techniques and skills called for by the job. The amount of work experience represents the typical or usual period of training and adjustment to acquire the skills needed on the job itself, as well as the build up of practical know how gained on prior jobs where the same or more elementary principles and techniques are used. Also, considered are related life experiences where one can build up a body of knowledge essential to the proper performance of the job.

Tribunal rating: 6.0

Tribunal rating rationale: This job meets requirements of degree 6 *Over two years, up to and including three years.*

The Tribunal determined this rating through the hearing presentations of the parties, the Job Fact Sheet and Reconsideration data, and by review of a large number of Provider Group jobs for comparison purposes. Regarding the latter point, jobs not in dispute, and rated degree 6, 7 and 8, were studied most closely.

Jobs rated degree 8 include #31 Information Technology Team Leader, 79 2nd Class Chief Engineer and 109 Information Technologist Senior Analyst. As an example of this level of experience, Job 31 *oversees* the design, installation, operation, maintenance and support of all computer based information systems of the department/region.

Jobs rated degree 7 include #13 3rd Class Chief Engineer and 74 Biomedical Engineering Technologist Working Supervisor. As an example of this level of experience, Job 74 supervises staff, provides technical direction to department staff, and coordinates the preventative maintenance program, as well as performing BMET functions such as installing, repairing, calibrating and inspecting biomedical equipment.

Jobs rated degree 6 include #12 Information Technology Analyst and 34 Medical Radiation Technologist - Specialty. As an example of this level of experience, Job 12 designs, installs, implements, operates, maintains and supports all computer based information systems.

Job 30 BMET most closely resembles job 12 Information Technology Analyst in the amount of work experience and adjustment time required. The body of knowledge required and the responsibility levels are similar.

In its presentation, the Union argued that there is a necessity for continuous learning by the BMET as new technology becomes available and is utilized by the health care regions, and therefore must continually take courses on the new technology or learn through experience. The proposal by the Union for a rating of degree 8 on this factor (up to and including five years on the job experience) is a reflection of that reality. However, *all jobs* have a requirement to update their knowledge and keep current in their knowledge and skills. This includes becoming knowledgeable about new technology. Although a requirement of all jobs, continuous learning and knowledge upgrading is not measured by the Job Evaluation Plan.

The Plan, and the Experience factor in particular, measures *previous* experience - i.e. training, work term, apprenticeship, post-ticket, post graduation and skill/knowledge consolidation time; and *on-the-job* experience - i.e. orientation, adjustment, skill/knowledge consolidation time.

The rationale for Experience rating of 6.0 will read as follows: *Twenty-four months previous experience in a clinical engineering setting to consolidate knowledge and skills. Twelve months on-the-job experience to become familiar with region/facility/department policies and procedures.*

INDEPENDENT JUDGEMENT

Definition – This sub factor refers to the degree of freedom available to exercise individual action in undertaking tasks and achieving required outputs through the application of methods, procedures and/or policies. It also considers ingenuity and/or creative thought, which may be needed on the job. It is limited by the amount of direction and job control received from either personal supervision/leadership and/or standard practices and precedents.

Tribunal rating: 4.0

Tribunal decision rationale: Job meets requirements of 4(a) *Carries out the majority of the work requirements within generally accepted practices and/or project/program plans; 4(b) Work involves a choice of methods or procedures, analysis and trouble shooting to determine the cause of the problem and choosing the action necessary to achieve the desired outcome; 4(c) The exercise of judgement is a normal requirement, but is restrained by program/work/project objectives.*

This job does not meet any degree 5 requirements because, as per Notes to Raters #9, degree level 5 “refers to wide planning with the ability to interpret regulations and standards”. This wide planning function applies to all points of degree 5. There is no evidence that this job performs the wide planning function. Jobs 109 Information Technology Senior Analyst and 206 Informatics Coordinator provide examples of the planning function (eg. 109: design, plan, install networks, evaluate programs to achieve optimal business and technical results, determine computer system security requirements; 206: develop the framework for data acquisition and management, plan and implement strategies to address regional informatics needs). Both jobs rated 4.5 on this factor.

The rationale for Independent Judgement rating 4.0 will be as follows: ***Performs regular preventative maintenance on medical devices according to specifications and manufacturer’s guidelines and standards. Troubleshoots, problem solves and repairs medical devices. Exercises judgement when researching, analyzing and troubleshooting equipment and software problems and developing solutions.***

WORKING RELATIONSHIPS

Definition – This sub factor measures the necessary working relationships of the job holder with other people. The contacts can be internal or external to the organization. Contacts include talking face-to-face, talking on the telephone, making presentations, written communication, instructing, guiding, or counseling. In evaluating this sub factor, the majority of the guidelines and explanations need to apply for a full degree level rating.

Tribunal rating: The parties agree on a rating of 4.0 for this factor. There are minor differences in the rationales provided.

The rationale for Working Relationships degree 4.0 is as follows: ***Requires tact and discretion when providing technical explanation and/or advice to co-workers, physicians, managers, peer professionals and other employees on various medical devices.. Uses***

persuasion to attain cooperation from staff when making temporary repairs to medical devices until permanent repairs can be made.

IMPACT OF ACTION

*Definition – This sub factor measures the likelihood and the probable impact of action by the job. Consider the job’s responsibility for actions, resources and services, and the extent of losses to the agency, facility or service which may result from insufficiently considered decisions or misjudgements. Impact of action is determined on the basis of **likely or usual impact not rare or extreme** possibilities. Impact of action is diminished by those systems/controls designed and put in place to limit impact.*

Tribunal rating: 3.5

Tribunal decision rationale: Job meets requirements of degree 3 *Impacts result in identifiable losses; 3(a)May cause identifiable deterioration in public, client/patient/resident, families, business or employee relations; 3(b)May result in serious injury/discomfort (short term)to others (i.e. employees, clients/patients/residents, public); 3(c)May cause substantial delays in a phase of the work of others; 3(d)May cause serious results through late delivery, and/or breakdown in equipment or services, or inadequate planning for key assignments. Also Meets 4 Impacts cause significant losses to the agency, facility or service; and 4(b) May result in serious with uncoordinated effort.*

The parties both agreed to a 3.5 rating during the May 16 hearing. However, they did not agree on or propose rationales.

The rationale for Impact of Action degree 3.5 rating will be as follows: ***Installs and maintains equipment, and resolves equipment problems. Misjudgement or insufficient analysis when repairing equipment may result in equipment failure and serious disruptions and/or delays to patient care, the discomfort of clients/patients/residents, and financial and public image losses to the agency/facility or service.***

LEADERSHIP/SUPERVISION

*Definition – This sub factor considers the degree, kind (type) and intricacies of operating supervision or the nature of functional advice/specialty leadership provided in staff and/or community relationships. **Operating supervision** refers to situations where there is a direct, clearly understood reporting relationship between the supervisor and staff. **Functional guidance or advice/specialty leadership** may be provided by a person who is primarily responsible for the function and provides advice to others in how to carry out related work tasks.*

Tribunal rating: 2.5

Tribunal rating rationale: This job meets requirements of degree 2 *Provides occasional guidance to the primary function of others. 2(c)Provides functional guidance to internal operating personnel. Also meets 3(d) Provides functional guidance and/or specialty advice on the interpretations of policies and practices to operational leaders (or outside contractors/agencies).*

The BMET does not achieve a 3.0 rating because it is not assigned responsibility to direct the work of others (i.e. assign, check and maintain the flow of work, or contribute to performance evaluations of staff).

The rationale for Leadership/Supervision rating 2.5 will read as follows: ***Provides occasional guidance to staff. Provides functional guidance or specialty advice concerning new equipment operation to physicians and other medical professionals.***

PHYSICAL DEMAND

*Definition: This sub factor considers the **degree and severity of exertion** associated with the job. Consider the intensity and severity of the physical effort rather the strength or energy needed to perform the task as required by the job as well as the **continuity and frequency** of that effort. Consider also the choice of action available to seek relief or perform less demanding tasks. This sub factor also considers the dexterity required by the job. The levels of manual dexterity are determined by considering the frequency of and duration in the use and/or coordination of fine or course movements (e.g. hand/eye, hand/foot coordination).*

Tribunal rating: 2.5

Tribunal rating rationale: This job meets requirements of degree 2 *Regular effort, between 50-75% of the time. 2(a) Activities such as standing, walking, keyboarding, driving, lifting, pushing, pulling awkward objects and/or assisting clients/patients/residents. 2(b) Working in confined spaces (where movement is restricted) 50% of the time. 2(c) Tasks performed require regular accurate coordination of fine or course movements.*

There is no question that the BMET is required to perform physical activities of a type that can be found at any of the three degree levels of the Physical Demand factor. What distinguishes one degree from another, however, is the *frequency* with which the physical activities are undertaken. The basis of the dispute over this factor rating is whether the Physical activity required of the BMET is **regular** (the activity occurs often – i.e. several times daily almost every day or between 50-75% of the time) or **frequent** (the activity occurs frequently – i.e. on a daily basis over 75% of the time).

By review of the Job Fact Sheets, reconsideration data and presentations to the dispute resolution hearing, and a survey of other Providers Group jobs that rated degree 2, 2.5 and 3, the Tribunal has determined that the BMET performs regular physical effort of a frequency required at degree 2, and with an additional .5 on the rating to credit the requirement to move heavy equipment and work in awkward and uncomfortable positions.

The Tribunal notes that the BMET spends a considerable amount of time involved in activities that are not of a physical nature. These include researching new technologies and equipment, maintaining inventory, reviewing service contracts, analyzing cost and benefit trends, and writing operating and testing procedures.

Jobs credited at degree 3 for frequent physical demands include #92 Environmental Services Worker, #44 Plumber, and # 105 Diagnostic Medical Sonographer. These jobs involve, respectively, lifting furniture, walking and standing (100% of time), carrying and emptying garbage (job #92); lifting, climbing, twisting/awkward positions (#44); scanning patients in uncomfortable positions for extended periods involving continual repetitive motions (#105). A distinguishing aspect of jobs rated degree 3 is that the job is by its nature predominantly physical, with little or no requirement or opportunity to perform non-physical activities. As stated above, the BMET is required and has opportunity to perform less physical activities.

The rationale for Physical Demand rating 2.5 is as follows: ***Regular physical effort required when walking, climbing, crouching, repairing, moving equipment. Servicing/calibrating biomedical equipment requires fine hand/eye coordination. Job involves periods of transporting heavy equipment and working in awkward positions.***

ENVIRONMENT

This sub factor measures the frequency of exposure that the job has to undesirable or disagreeable environmental conditions, or hazards under which the work is performed. Consider only those conditions or hazards which are inherent in the nature of the work. Do not consider extreme situations, that is, where the risk of a specific situation or accident occurring is unlikely. Consider the frequency of exposure to undesirable working conditions or hazards. Do not consider conditions for which premiums are paid.

Tribunal rating: 4.0

Rationale for rating: The job meets requirements of level 4: *The work is performed in an environment with frequent exposure to minor or regular exposure to major disagreeable conditions or hazards.*

The Tribunal has reviewed the Job Fact Sheets, the reconsideration information, the information presented by the parties at the dispute resolution hearing, and surveyed other Provider Group jobs (non-disputed) rated degree 3, 4 and 5 on this factor.

Jobs rated degree 5 on this factor include #20 Licensed Practical Nurse, #18 Dental Assistant, and #70 Medical Laboratory Technologist I. Working conditions for these jobs involve direct care of convalescent, acutely ill and long term care patients (job #20); frequent exposure to sharps, blood and body fluids, infectious diseases, unpredictable patients (job # 18); and frequent exposure to chemicals, blood and body fluids, sharps and infectious diseases (job #70). The nature of jobs rated degree 5 is that they work directly with patients, involving exposure to blood or infectious diseases, or they work directly with blood or bodily fluid specimens.

Jobs rated degree 4 on this factor include #103 Controls Technician and #234 Network Technician and Maintenance Operator. Working conditions for these jobs involve repairing pumps, fans, motors, compressors and steam systems with exposure to chemicals, extreme noise, high voltage and steam (job #103); repairing fans, motors,

boilers, chillers, HVAC, with exposure to chemicals, steam, sharps, extreme noise (job #234).

Jobs rated degree 3 include #79 2nd Class Chief Engineer and #111 Engineering Technologist. Working conditions for these jobs include supervision and administration and maintaining, operating and repairing the plant/energy system with exposure to extreme temperature, steam, noise and chemicals (job #79); determining space requirements and producing drawings, preparing tenders for projects and supervising projects, with exposure ammonium hydroxide, multiple deadlines and interruptions #111).

We accept the evidence provided by the Union that much of the equipment the BMET works on must be assumed to be contaminated with bodily fluids, and that disinfecting the equipment occurs in a work environment where chemical fumes and splashes are a hazard. Some of the positions also are exposed to radiation. These are major conditions which occur often (including daily). But such conditions are not constant or all of the time, and the job cannot be rated at degree 5 for this reason. As well, the survey of jobs at the various degree levels indicates that the working conditions for the BMET most closely resemble those of the degree 4 jobs, where the work does not involve direct patient contact but the environment does involve significant hazards.

The rationale for Environment rating 4.0 will read as follows: *Regular exposure to major conditions such as contaminated medical devices, blood and body fluids, and chemical substances.*

JOB DESCRIPTION

There are minor revisions to the Provincial Job Description.

Title: (30) Biomedical Engineering Technologist

Summary of Duties:

Assembles, installs, repairs, calibrates, inspects and performs preventative maintenance on biomedical equipment. Responds to critical equipment repairs to address patient safety in a timely manner.

Qualifications:

Biomedical Engineering Technology diploma

Knowledge, Skills and Abilities:

Advanced computer skills
Interpersonal and communications skills
Ability to work independently
Valid drivers license

Experience:

Twenty-four months previous experience in a clinical engineering setting to consolidate knowledge and skills.

Key Activities:**A. Maintenance, Troubleshooting and Repair**

- Plans, designs, builds and modifies solutions to existing equipment.
- Troubleshoots and repairs malfunctioning patient care, diagnostic and therapeutic equipment – the equipment may or may not be in use during repair.
- Provides engineering solutions for custom requirements or out-of-support equipment including preventative maintenance procedures.
- Monitors equipment and performs regular corrective and preventative maintenance in accordance with manufacturer guidelines and ensures proper calibration for safe and efficient operation.
- Reviews Medical Alerts ensuring medical equipment is in compliance.
- Provides technical and service support to other Health Regions/facilities/departments.
- Maintains local area clinical networks in conjunction with Information Technology unit, where required.

B. New Equipment Testing and Calibration

- Analyzes cost and benefit trends for equipment purchases.
- Evaluates new equipment prior to purchase through consultation with physicians, nurses, managers, manufacturers and suppliers.
- Develops installation and site plans for new equipment.
- Unpacks, assembles, inspects and calibrates all new equipment according to manufacturer specifications.
- Installs new equipment.
- Writes, develops, modifies and implements operating and testing procedures.
- Participates in internal and external quality assurance/quality control programs as required by local protocol and government regulations/standards (e.g. Health Canada Medical Device licensure program).

C. Documentation and Data Entry

- Develops and maintains a comprehensive database for all medical systems, their components and scheduled maintenance.
- Organizes schedules to ensure inventory is available for planned maintenance.
- Maintains comprehensive logs of equipment maintenance and repairs.
- In conjunction with Risk management, participates in incident investigations involving medical equipment that affects patients or staff.

D. Education/Training

- Researches and reviews new technologies and equipment.
- Acts as a medical equipment information resource for various departments, staff and equipment users.
- Conducts training for physicians, staff and patients on the operation and maintenance of various medical devices.
- Informs staff and equipment users of possible problems that may occur and solutions to correct those problems.
- Informs staff and equipment users of upgrades and operational changes to medical equipment.

E. Inventory

- Maintains spare parts inventory for high maintenance equipment.
- Orders parts for routine maintenance items.
- Provides cost-effective alternative parts solutions.
- Reviews service contracts for efficiency.