To: Rensselaer Micro and Nano Fabrication Clean Room Users

From: Morris A. Washington

Date: June 27, 2011

Subject: Fee Structure for the Micro and Nano Fabrication Clean Room for FY12

Introduction

Effective July 1, 2011, several changes in the fee structure governing use of the Rensselaer Micro and Nano Fabrication Clean Room will be instituted. Key elements of the FY12 fee structure include:

1. Significant subsidization by the Institute of user fees
2. A small increase of 16% in the subsidized hourly rate after three years of no increases
3. A cap on MNCR user fees for heavy users
4. Fee schedule for non-RPI users
5. Fee schedule for training
6. Fee schedule for MNCR staff processing/engineering support

Use of the Micro and Nano Fabrication Clean Room after July 1, 2011, will indicate that the user agrees to be charged according to the rates indicated below.

Background

Since the Rensselaer Micro and Nano Fabrication Clean Room (MNCR) is operated as a recharge center, we are permitted to recover our allowable operating costs through fees to users. Because some of these fees are charged to federal contracts, the allowable operating expenses are governed by federal guidelines. Our fee structure is reviewed every year and fees are adjusted up if we incurred a deficit in the previous fiscal year, or down if there was a surplus.

Our standard rate of $38.74 per hour for fully overheaded contracts has not changed since July 1, 2003. We reviewed our expenses, revenues, and rate structure every year, and decided to maintain the $38.74 hourly rate, even though the cost of operating the MNCR has increased significantly. We were able to maintain this rate because of operating subsidies we received from the Institute and other supporters.

During the last one and half years, we have made significant investments in staff and infrastructure. We have increased our staff from 4 FTE to 7 FTE. We have purchased and installed a number of sophisticated tools that allow us to support cutting-edge
research in microtechnology, nanotechnology, information technology and biotechnology. A number of these tools are complicated to operate, requiring considerable staff support and maintenance contracts to keep up and running.

Because we will have a significant operating deficit this fiscal year, we must increase our hourly rate for FY12.

**FY12 Fee Structure**

As input to the FY12 fee structure calculation, FY11 total operating expenses were estimated by adding the salaries of the current staff supporting MNCR operations and other (federally) allowed operating expenses from FY11. The total estimated operating expenses were divided by the total number of user hours in FY11 to determine the true operating cost (recoverable by federal guidelines) for MNCR usage. Based on these data, the true operating cost for MNCR usage is $117.83 per hour. This operating cost of $117.83 does not include tool installation cost. If tool installation is included, the cost is higher and depends on the number of tools installed, as well as the complexity of the installations. The basis for the MNCR rate calculation is on file in the Office of Research Finance and Administration.

**Hourly rate**

Rensselaer recognizes that most internal MNCR users cannot support the full cost ($117.83 per hour) of MNCR usage on their research contracts and be competitive with other research institutions. The Institute, through the Office of Vice President for Research, will subsidize the cost of the MNCR usage for Rensselaer users and their collaborators.

The maximally subsidized rate beginning July 1, 2011, will be $45.00 per hour, which is approximately 16% higher than the current standard hourly rate but less than 40% of the full cost of using the MNCR.

**User Fee Cap**

For FY12, the user fee cap will be continued. This will assist budgeting by heavy users and to encourage more use of the facility.

a.) RPI users:
The user cap of 400 hours of usage per user per year will be continued. (Does not include training.)

b.) Non-RPI users
No cap will be instituted for non-RPI users at this time, since we do not have heavy industrial users.

**Training**
It is our goal to encourage new users to make use of the MNCR whenever possible. However, training new users is a time consuming activity which has a significant impact on staff resources, particularly as MNCR tools become more complex. Further, we recognize that serving as a module lead can be difficult for busy graduate students. Consequently, in the future we expect that training will be done primarily by staff, with module leads and other experienced users (certified as trainers) assisting as needed. In order to more accurately document and recover some of the cost associated with training new users, these users (trainees) will enter the MNCR using their regular (billable) cards. In addition to paying the hourly MNCR usage rate, the new user (trainee) will be assessed a training fee of $35.00 - $45.00 per hour (tool dependent) to help offset the cost of the trainer’s time. Trainers will obtain a temporary “Trainer Card” from the staff. This card will be used to give the trainer entry to the MNCR, but the hours will not be billable to the trainer’s account. A log will be kept of all usage of the Trainer Card so that the appropriate trainee’s account can be billed at the appropriate rate.

In special cases where the training will consist of two users working together (for example, when a trainer is training someone from his/her research group), the training fee shall not be applied. In these cases, the more junior user will obtain a temporary “Apprentice Card” from the MNCR staff. This card will be used to give that user entry to the MNCR, but the hours will not be billable. A log will be kept of all usage of the Apprentice Card. The more senior user will enter the MNCR using his/her regular (billable) card. While using the MNCR, the Apprentice Card user and the trainer will work together as a team on all processing activities.

**Staff Processing/Engineering Charges**

As a professional courtesy, the MNCR staff members are available without charge to answer questions and offer advice on equipment and processing issues that require a limited amount of staff time. Projects requiring major technical assistance, such as extensive wafer processing or equipment design support, will be subjected to technical staff support charges at $70.00 per hour outside and $100 per hour inside the MNCR. Questions of staff charges on a particular project should be addressed before the work begins through the Office of the General Manager. There is no charge for the Orientation and Safety Class.

**Faculty**

Faculty members are not billed for their presence in the MNCR when they are instructing or consulting with their graduate students. Faculty members conducting processing for research are billed according to the new fee structure.

**Module leads**

Module leads are not billed while carrying out their duties in the MNCR. Most, if not all, hold separate research cards. It is the responsibility of the module lead to use his/her module lead card while serving as a module lead, and to use their research card while conducting research.

**Other (non RPI) academic users**
a.) Users from other academic institutions having an RPI collaborator will be billed the fully subsidized rate plus overhead. With the current hourly rates, other academic users will pay $45.00 x 1.6 = $72.00 per hour.

b.) Users from other academic institutions that do not have RPI collaborators will be billed the unsubsidized operating rate ($117.83).

**Industrial users**
Industrial user will be billed at the unsubsidized rate plus overhead, or $117.83 x 1.6 = $188.53 per hour.

**Other Issues/Comments**

1.) Fees collected from users are used to cover the operating cost and salaries of the MNCR staff. Thus, timely billing and payments are critical. To ensure that fees are recovered promptly, for on-campus users, we will use a new procedure as discussed in the Service Center Policy that allows designated MNCR financial managers to enter charges directly into the Institute’s finance system. Once the transactions are entered and approved, the fees will be promptly posted to the authorizers’ accounts.

2.) This is an hourly rate based fee structure. Users are charged based on the time spent in the MNCR, rather than the specific tool usage. This may not be appropriate for some of the newly installed tools, such as e-beam lithography and dual beam tools. Considerably more expenses are required to maintain operations and processes on the tools. Consequently, after consistent base line processes have been installed on these tools and we have a better understanding of their operating costs, we may add an additional fee on the use of these tools.