

UMC

Dear [redacted]

I delayed responding to your letter of Apr. 13, since I did not want it to consist only of my opinions, which are contrary to those of [redacted]. I have attempted, in the intervening period, to collect some information about the effects of requiring the researchers to pay for access to MURR, through the imposition of neutron charges. I have spoken to a variety of people at the funding agencies and to numerous people at MU about this policy.

The waiver of charges dates back to the earliest history of MURR and is associated with both NSF support for infrastructure and permission to carry out commercial work while DOE maintains its fuel support, as the attached recollection by [redacted] makes clear. I have not found any sign of a formal agreement between MU and the agencies and so I inquired as to whether such an agreement exists and what the agencies might do if requests for these charges were included in grant applications.

I spoke first to the office of the NSF that supports some of my work in magnetism (DMR). To the best of their knowledge there is no formal prohibition against payment of these charges. However, they made it clear that the likelihood of increased funding levels was close to zero and that these charges must simply substitute for other expense items such as salary, student support, etc. Furthermore, they suggested that a budget structured in that way (i.e. reduced student support or commitment by the P.I.) would probably be seen by the reviewers in an unfavorable light. In other words, the likelihood of successful funding would be reduced.

I turned then to DOE and spoke to [redacted] from the Office of Energy Research, which funds most of the neutron scattering in the U.S. He informed me that DOE does not allow such charges for use of the DOE facilities, but that he was also not aware of any prohibition against inclusion of those charges in grants to MU. Like NSF, though, he referred to the inelasticity in the funding levels and the trade-off that would have to be made in budgets, to the possible detriment to credibility of the application. He suggested, though, that while his office had no formal objection, this should be discussed with the DOE officers responsible for our fuel support. Consequently, I spoke to [redacted] who is

I was shocked to find that DOE already has serious concerns about the level of commercial activity at MURR, although fuel support would probably continue if things followed their historic course. However, when I explained the new policy, he was quite disturbed. He asked for a letter describing the proposal, which he intends to bring to his advisory board in June. Briefly, his opinion is that DOE should not be supporting commercial work, but that it is tolerated as long as research is the beneficiary. The possibility that the line has been crossed seems real to him.



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I am aware of two previous cases in which this type of charge has been imposed for scattering research. The first was for neutrons at the MIT reactor. The result was the retirement of [redacted] (who subsequently received the [redacted] and the cessation of research at MIT by the remaining faculty in the field. They took their programs to DOE facilities. The reactor's revenues declined and it has been an ongoing struggle to keep the doors open. The other case is the Daresbury Laboratory in the U.K., a national x-ray beam facility. [redacted] informed me that since charges have been imposed, the users are "staying away in droves." They have either shifted to other topics or have applied to the other European Synchrotron facilities for access.

Based on these discussions I conclude that the result of this policy would be, at best, a marginal increase in reactor support, through the substitution of neutron charges for GRA stipends, to the detriment of the educational mission. At worst there will be a decline in grant support and possible loss of fuel support. Is this worth the risk?

I believe this entire problem has arisen in large part due to confusion between the attribution of costs on an accounting basis and the real costs. It is entirely appropriate to attribute a significant fraction of the reactor costs to the neutron beams. However, this process does not alter the fact that closing the beams would lead to no reduction in the reactor operating costs. The major costs of the program are the scientists' salaries, which can be (partially) recovered from research grants. MURR recovered 5 months of my salary this year. Elimination of the entire neutron scattering program would lead to a reduction of MURR's total budget by less than 10% while the scientific program would be cut by about 1/3. This program has generated three Chancellor's Awards for Outstanding Research, published hundreds of peer reviewed papers, educated numerous graduate students and brought many forms of recognition to MU. I believe that there are opportunities for significantly enhanced (block) funding based on MURR's unique position as the center best able to educate the next generation of scientists in this field. The lack of institutional support makes it presently impossible to develop a credible request.

With regard to the Brazilian proposal, my original budget of [redacted] was more than the [redacted] typically awarded by NSF's International Programs. Clearly the addition of [redacted] would have put it totally out of range. I have informed my Brazilian collaborators that I will not submit this proposal and that they should withdraw theirs (which was submitted in July 1998 before I had any idea of these requirements).

I would very much welcome the opportunity to discuss this matter with you and hope that a reasonable solution can be found.

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