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MEMORANDUM FOR: R. H. Vollmer, Director, TMI Support

FROM: J. T. Collins, Deputy Director, TMI Support

SUBJECT: REQUEST FOR TECHNICAL ASSISTANCE FUNDING

At my request, Greg Yuhas prepared the attached memo in which he discusses the need to proceed with NRC's evaluation of the 10 over-exposures which have occurred at TMI since the accident. His thoughts parallel mine. As you know, we have tried unsuccessfully to obtain the required help from Region I, IE Headquarters and NRR over the past several months. In view of this, we are recommending that technical assistance funds be made available to secure the help from one of the national laboratories. We estimate about one-half man year (35-40K) would be required. The program has been discussed informally with Bryce Rich, Manager, Radiation Protection, EXXON Co., Idaho Chemical Processing Plant, Idaho Falls, Idaho and they would be interested in conducting the evaluation. I am personally aware of the work these people can do and certify that this group has the required expertise to perform this evaluation. Following the completion of this assignment, I strongly recommend that we keep this group available as consultants to advise us on health physics problems that may be encountered as the licensee proceeds with the recovery program. I have attached for your consideration a scope offthe work to be performed under this contract. I have discussed this approach with George Smith, Region 1, and he is in full agreement. Your immediate attention in this matter would be appreciated.

J. T. Collins
Deputy Director
TMI Support

Attachments: As Stated
cc:
T. Murphy
G. Smith, Region 1
G. Yuhas

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TECHNICAL ASSISTANCE CONTRACT

TITLE: Technical Assessment of Radiation Over-Exposures at Three Mile Island

SCOPE: Provide technical expertise in the field of radiation protection to independently review and analyze the over-exposures of 10 individuals at TMI which have occurred since the March 28 accident. The work should include independent testing and radiation protection equipment and instrumentation used at TMI. The level of effort should be sufficient to assure the validity of the measurements made by the licensee. The evaluation should be presented to the NRC in sufficient detail to permit the NRC staff to reach conclusions as to the acceptability of the licensee's data and evaluation.

Suggested Contractor: EXXON, INEL

Principle Contact: Bryce Rich

Estimated Level of Effort: 0.5 man years

Estimated Cost: 35-40K

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 13, 1979

MEMORANDUM FOR: J. T. Collins, Deputy Director, NRC TMI Site Organization

FROM: G. P. Yuhas, Transient, TMI Site Senior Radiation Specialist

SUBJECT: TECHNICAL SUPPORT

The accident at Three Mile Island (TMI) Unit 2 has created a uniquely adverse occupational exposure environment.

To date, this has resulted in ten known instances of workers receiving doses in excess of those permitted by 10 CFR 20.101.

The licensee has, with the assistance of highly qualified consultants, reviewed and evaluated the dose received by five of these individuals. The results of this review was submitted to the NRC in a formal report pursuant to 10 CFR 20.405. Review and evaluation of the remaining five exposures has been continuing for several months and is expected to be completed in late November, 1979.

These evaluations, as with others at TMI, are routinely influenced and at times guided by NRC Radiation Specialists assigned to the NRC's TMI Site Organization. The evaluations are complex and frequently involve assumptions and models not normally used by these NRC specialists.

It is imperative that each formal report submitted pursuant to the regulations involving unusual or excessive exposure be reviewed expeditiously by a technical expert to insure the dose assigned is appropriate when considered in the light of contemporary radiation protection criterion.

We have repeatedly requested that qualified NRC experts, not directly involved in the initial evaluations, perform this independent technical review. Due to the existing workload, we have not been successful in tasking this assignment.

Since it appears that neither the NRC's workload nor the number of complex radiation protection problems are likely to decrease, I recommend we issue a contract for long term technical health physics expertise with either the Department of Energy's Idaho Laboratory or an independent consultant.

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The scope of this contract should include:

1. Independent review and analysis of exposure evaluations forwarded by the NRC TMI Site Organization.

2. Independent testing and analysis of radiation protection equipment and instrumentation.

3. Consultation and scientific analysis of potential radiation protection problems referred by the NRC TMI Site Organization.

4. Written recommendations in response to items 1, 2 and 3 above.

5. Audits of the NRC's TMI Site Radiation protection programs effectiveness when requested by the Deputy Director NRC TMI Site Organization.

Although somewhat preliminary, it appears this effort would require about one half man year by an extremely qualified, hard working Certified Health Physicist. A small fraction of this time would have to be spent at the TMI site.

Alternatives to a contract include directed reassignment of existing NRC talent or recruitment of an individual into the NRC TMI Site Organization. Neither option would appear as attractive or as effective as the support that might be provided by an independent individual with access to the facilities of a national laboratory.

G. P. Yuhas

G. P. Yuhas,
Transient, TMI Site Senior
Radiation Specialist

cc: H. Denton
G. H. Smith