Portland General Electric Company

Bart D. Withers Vice President

December 23, 1982

Trojan Nuclear Plant
Docket 50-344
License NPF-1

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington DC 20555

Dear Sir:

TROJAN NUCLEAR PLANT
IAEA Safeguards Program

In accordance with 10 CFR 75.46, subparagraph (a), PGE requests reimbursements for extraordinary expenses incurred as a result of specific IAEA requests to make additional measurements on fuel assemblies at the Trojan Nuclear Plant. More specifically, PGE has been notified of the IAEA's intent to measure the enrichment of new fuel assemblies during the next routine inspection, tentatively scheduled for January 17-18, 1983, and to measure the burnup of spent fuel assemblies at a later date. Both of these measurements are extraordinary since the enrichment of new fuel assemblies and the burnup of spent fuel assemblies are never measured directly at Trojan. Fuel enrichments are determined at the fuel fabrication plant, and PGE relies solely on documentation provided by the manufacturer for enrichment values. Fuel assembly burnup is calculated (not measured) from incore flux maps periodically taken along with plant power history records. The information that the IAEA seeks is therefore available in a documented and auditable form, and the expenses required to make the special measurements to duplicate this information can clearly be classified as extraordinary.

10 CFR 75.46(a) also states that the IAEA will reimburse a licensee for the cost of making any additional measurements at the request of an IAEA inspector. These measurements can be classified as additional measurements, and approval of the reimbursement of all of PGE's cost associated with the measurements should be made accordingly.

In accordance with 10 CFR 75.46, the IAEA must agree to reimburse these expenses in advance. PGE will therefore wait until a response is obtained before allowing the IAEA inspectors to make their measurements at Trojan. Furthermore, please be advised that additional concerns, including those identified in Attachment 1 and the PGE-to-NRC letter dated November 5, 1982, need to be resolved prior to the measurement of new and spent fuel

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121 S.W. Salmon Street, Portland, Oregon 97204

at Trojan. These measurements are not as innocuous as some may believe. For example, in the referenced letter, PGE raised serious concerns over fuel warranties and liabilities. The proposed measurements will subject the fuel to possible damage during fuel handling required by the measurements, and also subject PGE to a loss of warranty from the fuel fabricator unless a waiver is obtained. PGE is concerned over the potential costs involved, since the estimated replacement cost for a new fuel assembly is in excess of $600,000. If an assembly is damaged during a critical path time, such as during refueling, the associated costs due to schedule delays and/or the need to redesign the core would be even greater.

In an attempt to resolve the liability issue, we have attached a permit (Attachment 2) which should be signed by duly authorized personnel from the IAEA and the NRC. With regard to the warranty problem, the fuel fabricator has informed us that a copy of the procedure to be used for the measurements must be reviewed before they can determine the impact on warranty. Although the IAEA agreed to provide these procedures during discussions held at Trojan on November 18-19, 1982, they have not been received to date.

As you know, the Trojan Nuclear Plant is one of the two operating power reactors in the entire country that currently is required to submit to IAEA inspections. NRC Generic Letter 82-25 asks operating plants to volunteer to help the IAEA evaluate its equipment and states that any utility which participates in this exercise will be reimbursed for all expenses incurred. We do not believe that it is equitable or justifiable that the Trojan Nuclear Plant be required to field test the IAEA's measurement equipment and also absorb all of the costs involved. We also do not feel that the two utilities involved should be required to bear the burden of the IAEA inspections beyond the 2-year time frame that was originally proposed.

Sincerely,

B D Withers

Bart D. Withers
Vice President
Nuclear

Attachments

c: Mr. Lynn Frank, Director
State of Oregon
Department of Energy

Mr. R. H. Engelken, Regional
Administrator
U. S. Nuclear Regulatory Commission
Region V

ADDITIONAL CONCERNS REGARDING NEW AND SPENT FUEL MEASUREMENTS AT TROJAN

1. The measurement of the enrichment of new fuel assemblies utilizes a neutron source which causes U-235 fission in the fuel. This is therefore a destructive examination which is contrary to Item 7.4.3 of the Facility Attachment, which calls for nondestructive measurements.

2. Westinghouse requires that they have a person available to witness fuel movement, whether it be for special movements or otherwise, in order to maintain fuel warranties. Costs associated with providing this person is another extraordinary cost for which the IAEA should reimburse PGE for. Please note that Westinghouse will be onsite during the receipt of new fuel. Therefore, the additional costs associated with special fuel movements during this time will be minimized.

3. Discussions with IAEA personnel during their last visit resulted in the identification of a problem with the handling of the radioactive source used in the measurement of new fuel assembly enrichments. The IAEA had planned to handle the neutron source with their hands. This is contrary to radiation protection philosophy employed at Trojan. Our ALARA program requires dose estimates to be calculated and radiation source strengths to be verified. The closest our neutron monitor can get to a source is 4-1/2 in.; therefore, we will require a source handling tool of at least this length. An estimate of the number of people involved and length of time they will spend in the radiation field should also be provided by the IAEA so that this can be factored into the ALARA assessment. Finally, the details of who will receive the neutron source, under what license, and how it is to be stored and shipped offsite needs to be worked out.

4. Trojan Technical Specification 3.9.1.2 requires that the HEPA filters and charcoal absorbers be in operation whenever fuel is being moved in the pool and when the crane is in operation with loads over the pool. These filters are replaced after 720 hours of use. The IAEA should reimburse PGE for the costs of filter replacement, pro-rated for actual use during the IAEA's special measurements. In addition, the spent fuel handling tool is normally stored dry on the transfer canal wall. In order to move it into the spent fuel storage pool, the transfer canal must be flooded. This in turn leads to decontamination and radwaste processing costs when the pit is drained and when the tool is returned to its storage location. Alternatively, several persons could attempt to manually transfer the long-handled tool over the wall at risk to the tool, hoist cable/drum alignment, and personnel safety. Therefore, the IAEA spent fuel measurements should be coordinated to take place when the transfer canal is flooded during the refueling interval. All costs associated with this operation should be reimbursed by the IAEA.

5. PGE does not want to risk damaging any fuel assemblies which may be reloaded into the core for an additional cycle; hence, these fuel assemblies should be exempted from measurement. In addition, movement of the fuel assemblies which were severely damaged due to baffle jetting must be avoided to preclude additional dispersal of loose fuel pellets in the spent fuel pool.

6. Any costs associated with decontamination and/or disposal of IAEA measuring devices should also be reimbursed by the IAEA. In addition, special underwater lighting that is required should be supplied by the IAEA, since only wall-mounted flood lights are normally available in the spent fuel pool area.

7. By letter dated October 30, 1981, the NRC stated that PGE is party to any specific arrangement for the use of IAEA equipment and can assure that any such arrangements will not unduly interfere with Plant operations. During the discussions held with the IAEA at Trojan on November 19, 1982, PGE stated that the new fuel assemblies should be measured during a receipt inspection when it will have the least amount of impact on Plant operations (assuming that all of PGE's concerns have been resolved). PGE agreed to inform the IAEA ahead of time when shipments will take place. Nevertheless, the IAEA has already scheduled an inspection for the measurement of the enrichment of new fuel assemblies in January 1983 irregardless of whether or not new fuel assemblies will be received at that time. In addition, PGE has not received a copy of the IAEA procedures or a formal response to any of the concerns raised to date. Our position will continue to be that we will allow the measurements to be taken after our concerns are resolved and the IAEA agrees to pay for all of the costs involved.

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PERMIT

PORTLAND GENERAL ELECTRIC COMPANY, an Oregon corporation, operator of the Trojan Nuclear Power Plant (hereinafter referred to as "PGE"), in consideration of the agreements hereinafter set forth on the part of the INTERNATIONAL ATOMIC ENERGY AGENCY (hereinafter referred to as "IAEA") and the NUCLEAR REGULATORY COMMISSION (hereinafter referred to as "NRC") to be kept and performed, does hereby permit IAEA and NRC and their duly authorized representatives to use Trojan plant equipment and personnel to install their special tools within the Trojan Nuclear Power Plant in order to measure the enrichment of new fuel assemblies and the burnup of spent fuel assemblies currently on the Trojan Plant site. PGE further agrees to make personnel and plant equipment available to IAEA and NRC during the term of this permit for the purposes of performing such measurement and surveillance tests with the equipment as IAEA and NRC deem appropriate and for the further purpose of removal of the equipment upon completion of the same. Plant personnel and equipment while performing the foregoing tasks shall be deemed under the direction and control of IAEA and NRC and IAEA and NRC shall be fully accountable for them during such times. In accepting this permit and the control of plant personnel and equipment as authorized hereunder, IAEA and NRC agree they will reimburse PGE all extraordinary expenses incurred by it as a result of the granting of this permit or the use of its plant and personnel hereunder. Extraordinary expenses for the purposes of this permit include but are not limited to all labor costs incurred by PGE for labor which would not otherwise be incurred by PGE for normal plant operation including labor costs for labor on premium time, all costs for material and equipment which would not otherwise be incurred by PGE in normal

plant operation, all damage to PGE plant, fuel or other property or damage to property of the public due to the acts or omissions of IAEA and NRC, or any of them, including acts or omissions of PGE personnel under the direction or control of IAEA or NRC; all injuries sustained by employees of PGE, representatives of IAEA and NRC and the members of the public due to the act or omission of IAEA and/or NRC and resulting from the exercise by either of rights or privileges granted by this permit, damage to PGE due to the loss or diminution of warranty rights affecting fuel caused by the act or omission of IAEA or NRC or either of them, and all other similar or like damages including those associated with late startup or early shutdown of the Trojan Nuclear Plant which may be attributable to the installation, use or removal of such equipment, testing, and measurement and surveillance therewith. This permit shall commence on _____ _____, 198__ and be terminated upon written notice by any party. IAEA and NRC shall indicate their acceptance of the terms of this permit prior to the commencement date by their endorsement of this permit in the space below provided.

Dated at Portland, Oregon, this ____ day of _____, 198__.

PORTLAND GENERAL ELECTRIC COMPANY (for PACIFIC POWER & LIGHT CO., THE CITY OF EUGENE WATER AND ELECTRIC BOARD, and PORTLAND GENERAL ELECTRIC COMPANY, Licensees).

By _____
Operator of the Trojan Nuclear Power Plant

Approved by:

INTERNATIONAL ATOMIC ENERGY AGENCY

_____

APPROVED AS TO FORM

W. Hutchings

NUCLEAR REGULATORY COMMISSION

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