PROPOSAL

TO

METROPOLITAN EDISON COMPANY

MAINTENANCE TRAINING PROGRAM

This what was sent to
to Met Ed with F C Heller
ltr of 10/11/78.
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CONTENTS

1.0 INTRODUCTION

In keeping with The Babcock & Wilcox Company's long standing policy of service, the COMPANY is pleased to make available to Metropolitan Edison Company the training service described in this proposal. In the performance of these services, the technical resources of The Babcock & Wilcox Company will be utilized to provide instruction as further described herein. The staff which will provide the service are personnel with extensive experience in the technology of nuclear power plants and instruction of personnel.

2.0 FACILITIES AND EQUIPMENT

The PURCHASER is expected to furnish classrooms, audio visual equipment, and other teaching aids as appropriate for the conduct of the described program at the PURCHASER'S facilities.

3.0 SCOPE OF SUPPLY

3.1 Nuclear Plant Maintenance Program - Phase I

The scope of this work includes providing two courses of instruction in Nuclear Plant Maintenance spanning a nine day period utilizing the PURCHASER'S facilities. The purpose of this course is to instruct the PURCHASER'S plant maintenance personnel in particular phases of maintenance, as outlined in Section 4.0 "Schedule of Training", peculiar to the PURCHASER'S nuclear power station.

4.0 SCHEDULE OF TRAINING

The COMPANY will furnish this training service in accordance with the following general schedule. The specific date will be that which will be established by mutual agreement.

4.1 A four and one-half day Nuclear Plant Maintenance Program at GPU Service Corporation or other facility provided by the PURCHASER.

SCHEDULE

(One group of 6 to 8 people)

Session Number (4 hours each)	Topics and Objectives
1	Nuclear Steam System (NSS) Overview A. Description of NSS and components with particular emphasis on maintenance related items to be discussed in later sessions. B. Review of materials of construction, system arrangement, flow paths, and component weights, fits and tolerances. C. Walk through of plant facilities to familiarize students with work locations to be discussed in later sessions.
2	Refueling Routine - Part I A. General description of operations normally performed by maintenance personnel. B. General description of overall fueling operation. C. Detailed description of procedures, tools and equipment required to perform the following tasks: 1. Removal of service connections to control rod drives. 2. Venting of control rod drives. 3. Disconnecting control rod drives. 4. In-core instrument removal.

4.0 SCHEDULE OF TRAINING (Cont'd)

Session Number (4 hours each) | Topics and Objectives

3 Refueling Routine - Part II

A. Detailed description of the procedures, tools, and equipment required to perform the following tasks.

1. Removal of head insulation.
2. Installation of seal plate.
3. Stud detensioning operations including:
    - (a) Operation of stud tensioner.
    - (b) Operation of stud handling tool.
    - (c) Detensioning sequence and procedure.
    - (d) Seal plug installation procedure.
4. Assembly of head lifting rigging.
5. Installation of guide studs.
6. Head removal.
7. "O" ring replacement.

4 Refueling Routine - Part III

A. Detailed description of the procedures, tools, and equipment required to perform the following tasks:

1. Installation of indexing fixture.
2. Assembly of plenum lifting rigging.
3. Removal of plenum.
4. Assembly of core support assembly lifting rigging.
5. Removal of core support assembly.

5 Non-routine Maintenance - Part I

A. Detailed description of the procedures, tools, and equipment required to perform the following tasks:

1. Control rod drive maintenance.
    - (a) Position indicator removal, replacement, adjustment.
    - (b) Stator assembly removal and replacement.
    - (c) Motor tube assembly removal and replacement.
    - (d) Drive disassembly and maintenance.

4.0 SCHEDULE OF TRAINING (Cont'd)

Session Number (4 hours each) — **Topics and Objectives**

5 — Non-routine Maintenance - Part I (cont'd)

2. In-core instrument removal, replacement and disposal.

6 — Non-routine Maintenance - Part II

A. Detailed description of the procedures, tools, and equipment required to perform the following tasks:

1. Pump Maintenance.
   - (a) Seal removal and replacement.
   - (b) Pump removal and replacement.
   - (c) Wear ring removal and replacement.
   - (d) Pump motor maintenance.
2. Pressurizer maintenance.
   - (a) Spray nozzle replacement.
   - (b) Relief valve replacement.
   - (c) Heater bundle replacement.

7 — Non-routine Maintenance - Part III

A. Detailed description of the procedures, tools, and equipment required to perform the following tasks:

1. Steam generator maintenance.
   - (a) Orifice adjustment.
   - (b) Leak locating and identification.
   - (c) Tube plugging.
   - (d) Tube inspection.
   - (e) Cleaning.
2. Vessel and internals maintenance.
   - (a) Seal surface maintenance.
   - (b) Stud hole thread maintenance.
   - (c) Stuck stud removal.
   - (d) Vent valve replacement.

8 — Fuel Receipt and Preparation for Refueling

A. Detailed description of the procedures, tools, and equipment required to perform the following tasks:

1. Receipt of fuel and unloading.
2. Receiving inspection.
3. Transfer to storage pool.
4. Installation of control components.

4.0 SCHEDULE OF TRAINING (Cont'd)

Session Number (4 hours each)	Topics and Objectives
8	Fuel Receipt and Preparation for Refueling (Cont'd) 5. Installation of source. 6. Handling precautions.
9	Review, Quiz and Course Critique