U.S. NUCLEAR REGULATORY COMMISSION

REGION I

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Licensee:	Niagara Mohawk Power Corporation P. O. Box 63 Lycoming, NY 13093
Facility:	Nine Mile Point, Units 1 and 2
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L. E. Nicholson, Chief — Date
Reactor Projects Section No. 1A
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TABLE OF CONTENTS

EXECUTIVE SUMMARY

Nine Mile Point Units 1 and 2
50-220/94-05 & 50-410/94-05

PLANT OPERATIONS

The operation staffs at both units performed well during the challenges they faced throughout the inspection period. Unit 1 operators responded promptly and appropriately to two reactor scrams and the Unit 2 operators responded similarly to a reactor scram. Overall, the staff demonstrated an excellent knowledge of the plant systems and procedures. Additionally, procedural adherence, proper communication, self and peer checking techniques, a good questioning attitude, and management oversight created a professional, efficient, safety-oriented control room atmosphere.

MAINTENANCE

Excellent worker performance, planning, and management oversight during both units' forced outages led to safe and productive outages with few unanticipated problems. Additionally, NMPC's decision to shutdown, identify, and evaluate the Unit 2 drywell nitrogen leak demonstrated a conservative safety perspective. However, poor work practices during the previous refueling outage contributed to the particulate contamination of several safety relief valve (SRV) pneumatic actuators that led to the shutdown. Although the SRV contamination problem was corrected during the forced outage, an unresolved item remains pending completion of the root cause evaluation. (URI 50-410/94-05-01)

ENGINEERING

Observations during the Unit 1 transients highlighted weaknesses in your engineering staff support of plant operations. Specifically, inadequate support for the reactor vessel water level backfill modification during the reactor startup resulted in insufficient system flow rates and unanticipated level indication perturbations. In addition, recurring electronic noise spikes on the intermediate range monitors (IRMs) continue to challenge the operators during startups and shutdowns. The recurring IRM noise problems and the use of APRM gain adjustments and bypassing LPRMs to facilitate the mode switch change to RUN are considered unresolved pending further NRC review. (URI 50-220/94-05-02)

Executive Summary (Continued)

PLANT SUPPORT

Your review of containment penetration water seal use at Unit 1 identified a drywell penetration not in compliance with 10 CFR 50, Appendix J. After identification, the penetration was promptly modified and satisfactorily tested.

At the end of the period, a Unit 1 spent fuel pool inventory identified several nuclear instrument detectors that were documented as being part of a recent radioactive waste shipment. This issue is unresolved pending completion of a root cause evaluation and further NRC review. (URI 50-220/94-05-03)

SAFETY ASSESSMENT/QUALITY VERIFICATION

Good management oversight was observed during plant transients. A conservative safety decision was made to shutdown and correct a nitrogen leak inside the Unit 2 drywell.

DETAILS

1.0 SUMMARY OF ACTIVITIES

1.1 NMPC Activities

The Niagara Mohawk Power Corporation (NMPC) safely operated and performed forced outage maintenance at both Nine Mile Point Unit 1 (Unit 1) and Unit 2 (Unit 2). Unit 1 ended 353 days of continuous power operations when the reactor scrammed from 100% power on April 5, during preparations for planned switchyard maintenance. During the subsequent restart on April 11, spurious electronic noise spikes on multiple intermediate range monitor (IRM) channels caused a second reactor scram. The IRM electronic noise was subsequently suppressed and Unit 1 returned to full power on April 13.

On March 12, the Unit 2 reactor scrammed from 100% power when a component failed in the turbine generator electro-hydraulic control (EHC) system. The EHC system was repaired and a reactor startup began on March 14. Several days after reaching 100% power, Unit 2 commenced a normal reactor shutdown from full power and initiated primary containment de-inerting to isolate, repair, and evaluate an unidentified nitrogen leak in the drywell. The subsequent drywell inspection identified the leak source as the pilot valve solenoid assembly on one of the 18 safety relief valves (SRVs). During the forced shutdown, six SRV solenoid assemblies were replaced and their pneumatic supply lines were cleaned because of particulate contamination. Unit 2 resumed full power operations on March 31.

1.2 NRC Activities

Resident inspectors conducted inspection activities during normal, backshift and weekend hours. There were 60 hours of backshift (evening shift) and 67 hours of deep backshift (weekend, holiday, and midnight shift) inspection during this period. In addition, specialist inspections were conducted in the areas of environmental qualification, design changes and facility modifications, radioactive effluent monitoring, and the snubber inspection program. The results of these inspections will be reported separately.

2.0 PLANT OPERATIONS (61726, 71707, 90712, 93702)*

2.1 Operational Safety Verification

The inspectors observed overall plant operation and verified that the licensee operated the plant safely and in accordance with procedures and regulatory requirements. The inspectors conducted regular tours of accessible plant areas, including the following:

- Control Rooms
- Control Buildings
- Access Control Points

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* The NRC inspection manual procedure or temporary instruction that was used as inspection guidance is listed for each applicable report section.

- Turbine Buildings
- Refuel Floors
- Reactor Buildings
- Switchgear Rooms
- Service Water Bays
- Protected Area Perimeter
- Diesel Generator Rooms
- Radwaste Buildings
- Unit 1 Drywell

The inspectors observed plant conditions through control room tours; verified proper alignment of engineered safety features; verified operator response to alarm conditions in accordance with plant operating procedures; verified technical specification (TS) compliance, including implementation of appropriate action statements for equipment out of service; and reviewed logs and records to determine if entries were accurate and identified equipment status or deficiencies. These records included operating logs, turnover sheets, and system safety tags.

The inspectors conducted detailed walkdowns to inspect major components and systems for leakage, alignment, lubrication, cooling water supply, and general conditions that might prevent fulfillment of their safety function. The inspectors observed plant housekeeping, including control and storage of flammable material and other potential safety hazards.

The inspectors found that shift turnovers were comprehensive and accurate, and adequately reflected plant activities and status. Control room operators effectively monitored plant operating conditions and made necessary adjustments. Housekeeping was commensurate with ongoing work. The inspectors concluded that NMPC conducted overall plant operations in a safe and conservative manner.

2.2 Unit 1 Reactor Scram During Switchyard Maintenance Preparations

On April 5, Unit 1 experienced a turbine trip and reactor scram. At the time of the scram, Unit 1 was operating at 100% power and preparing for 345 kV switchyard planned maintenance. Prior to repairing a switchyard disconnect switch, one of the two generator output switchyard supply breakers (R925) was opened. When R925 opened, the other switchyard supply breaker (R915) and the main generator breaker opened unexpectedly, resulting in a generator load rejection with a subsequent turbine trip and reactor scram. The plant reacted as designed and all systems operated as expected, with the exception of the position indication for one control rod. The operators implemented the emergency operating procedures correctly and the reactor was eventually taken to a cold shutdown condition.

The cause of the scram was determined to be a faulty contact in the R915 breaker protective relaying; i.e., a normally-open contact was found closed. Therefore, opening R925 allowed the protective relaying to energize, consequently opening the R915 and main generator breakers. The faulted contact was not detectable prior to this evolution. Maintenance personnel replaced the R915 protective relay module and verified proper functioning of the R925 module.

The plant remained in cold shutdown to perform maintenance and modification work. Major items completed during the forced outage included repair/replacement of six nuclear

instrumentation (NI) detectors and associated circuitry, installation of the reactor vessel water level reference leg backfill modification, repair of the shaft driven feedwater pump, and repair of the main transformer.

The inspectors determined that the NMPC root cause analysis of the scram was timely and effective. The inspectors reviewed the root cause analysis and attended the Station Operations Review Committee (SORC) meetings associated with the scram and the April 11 restart. The inspectors considered the actions taken for this event appropriate.

2.3 Unit 1 Reactor Scram During Plant Startup

While performing a Unit 1 reactor startup on April 11, a reactor scram occurred due to spurious electronic noise spikes on multiple IRM channels. All control rods fully inserted. At the time of the event, reactor power was approximately four percent with IRMs on ranges 8 and 9. Reactor pressure and temperature were 810 psig and 512°F, respectively. All systems performed as designed in responding to the reactor scram.

Immediately prior to the scram, the reactor operator (RO) selected a control rod for single notch withdrawal and turned the control rod movement switch to the ROD OUT NOTCH position. No other plant system or control board activities were in progress. When the scram occurred, the only lit reactor protection system (RPS) scram annunciators were "Auto Reactor Trip" for RPS channels 11 and 12; no initiating scram signals were recorded on the sequence of events log or alarm typer. Approximately 10 seconds after the initial scram signal was received, IRM HI-HI scram signals were generated on five of eight channels when the IRM range switches were ranged down. Because of this, NMPC could not positively confirm if any IRM channels reached a HI-HI condition at the time of the scram. However, a design engineer located at the NI panel indicated that he observed one or more IRM HI-HI red lights illuminate at the time of the scram. Subsequent review of the IRM recorders showed a prominent (though not full scale) spike on Channels 13, 14, 17, and 18.

Unit 1 has a history of significant neutron monitoring electronic noise spikes associated with control rod movements. Two previous incidents resulted in reactor scrams during a startup (April 1993) and a shutdown (July 1991) with power in the intermediate range. NMPC engineering determined the cause of the noise to be voltage transients resulting from energizing and deenergizing relays or timer coils in the control rod drive (CRD) and reactor manual control systems (RMCS). To prevent recurrence, NMPC installed noise suppression resistive/capacitive networks at selected coils in these systems. Post-maintenance testing determined that the modification was effective in suppressing the noise spikes. The subsequent reactor startup commenced on April 13 and was successfully completed without significant IRM noise spikes. During the review of the event, the inspectors identified several weaknesses in engineering support which are discussed is section 4.1.

2.4 Unit 2 Reactor Scram During Weekly Surveillance

During main turbine protective device weekly surveillance testing on March 12, the Unit 2 reactor scrammed from 100% power following fast closure of the turbine control valves (TCVs). This occurred when an operator engaged the push-button test switch for the power/load unbalance (PLU) trip circuit of the turbine EHC system and the push-button failed to operate as expected. The TCV fast closure and attendant rapid reduction in steam flow caused reactor pressure to increase. The TCV fast closure also caused the anticipatory reactor scram and subsequent reactor water level decrease. The pressure increase caused 6 of 18 SRVs to cycle open and subsequently reseat concurrent with the reopening of the TCVs and operation of three of four turbine bypass valves. Reactor pressure during the transient peaked at 1090 psig (less than the TS safety limit of 1325 psig) and reactor water level decreased to 130.1 inches (144.5 inches above the top of active fuel). All plant safety systems responded as required and the operations crew stabilized the plant in hot shutdown.

NMPC's investigation of the scram determined that the PLU push-button test switch failed to open contacts in the trip circuit before closing contacts in the test circuit. Specifically, the opening and closing of contacts was not correctly synchronized by the "break-before-make" switch; possibly due to age-related fatigue (the switch is operated weekly while operating). This failure resulted in an energized and unblocked PLU trip circuit, which subsequently closed the TCVs, initiating the event. Corrective actions for the event included: replacement of the faulty push-button test switch prior to restart, a review of all switches used in similar applications in the EHC system, and a review of safety-related systems for the same type of switch used for testing or indication. The reviews concluded that similar failures would have no adverse affect on the EHC system and could not cause or prevent a safety-related system protective function from occurring.

The PLU trip circuit (also referred to as the load reject circuit) compares signals proportional to the main generator and turbine loads. If the loads differ by at least 40% and the loss of generator load occurred within 35 milliseconds, then several automatic actions occur including the TCV fast closure. The TCV fast closure protects the turbine from excessive overspeed. Excessive turbine overspeed would generate missiles that could impact and damage safety-related structures, systems, or components. The reactor scram following the TCV fast closure anticipates the pressure, neutron flux, and heat flux increase that accompanies the TCV fast closure and minimizes the resultant heat flux increase to maintain adequate margins to the fuel thermal limits.

The inspectors attended the post-scram review and start-up SORC, interviewed operations and technical support personnel involved with the scram, and reviewed the preventive maintenance procedure, LER 50-410/94-01, trip system logic, and the post-scram transient data. Based on the above review, the inspectors concluded that no safety limits were exceeded, the plant responded as designed, the operations staff responded promptly and appropriately, and the LER properly addressed the event and corrective actions. LER 50-

410/94-01 is closed. Unit 2 commenced a normal reactor startup on March 14 and achieved 100% power operations on March 17.

2.5 Startup, Shutdown, and Power Transient Observations at Both Units

The inspectors observed the operations crew performance from the Unit 1 and Unit 2 control rooms during various portions of the startups, shutdowns, and planned power transients. These observations were made during the day, evening, and midnight shifts, including weekends. Throughout these evolutions, the operations staff demonstrated an excellent knowledge of the plant systems, operating procedures, and current plant status. Shift turnovers and briefs, with few exceptions, provided sufficient detail to maintain proper continuity during ongoing evolutions and to keep the operations crew knowledgeable of current plant issues/problems and upcoming evolutions. Procedural adherence, proper communication, self/peer checking techniques, a good questioning attitude, and management oversight created a professional, efficient, safety-oriented control room atmosphere. During special evolutions, systems engineering staff and/or operations staff provided a technical brief and senior plant management provided expectations for the conduct of the evolution. Additionally, operations crews practiced major evolutions on the simulator immediately prior to taking the shift. Minor inspector-identified concerns and self-identified instances of not meeting organizational expectations were promptly addressed and properly corrected.

3.0 MAINTENANCE (61726, 62703)

3.1 Maintenance Observations

The inspectors observed maintenance activities to ascertain if safety-related activities were being conducted according to approved procedures, TSs, and appropriate industry codes and standards. Observation of activities and review of records verified that: required administrative authorizations and tag outs were obtained, procedures were adequate, certified parts and materials were used, test equipment was calibrated, radiological requirements were implemented, system prints and wire removal documentation were used, and quality control hold points were established. Maintenance activities observed included:

<u>Unit 1</u>

WO 94-0734	Core spray pump III 4160 V breaker preventive maintenance
WO 94-0360	Install swagelock sample valves for core spray pump bearing oil
WO 94-0829	Core spray topping pump III 4160 V breaker preventive maintenance
WO 94-1170	Replace emergency diesel generator 103 air compressor
WO 94-0857	Troubleshoot/repair #12 drywell high range gamma radiation monitor
WO 94-1426	Install RC networks per SDC-0061-93 on reactor manual control system relays

WO 94-1448	Troubleshoot loss of control voltage power to #11 feedwater auxiliary oil pump
N1-93-610	Reactor vessel water level reference leg backfill modification

Unit 2

WO 94-1112-0	Inspect for particulate and replace solenoid assembly for 2MSS*PSV129
WO 94-1112-1	Flush pneumatic supply lines to SRVs
WO 94-0259	Condensate booster pump "B" minimum flow valve actuator repair
WO 94-1234	Troubleshoot leakage from safety-related instrument rack 2CES*RAK009
WO 94-1236	Rebuild 2SWP*MOV67B disc wedge guides following VOTES failure
S-MMP-GEN-014	Establishing and Maintaining Freeze Seals on Water Filled Piping

The above activities were effective with respect to meeting the safety objectives.

3.2 Unplanned Unit 2 Shutdown to Repair a Drywell Nitrogen Leak

During the Unit 2 post-scram startup (see section 2.4), control room operators observed increasing drywell pressure which they did not consider attributable to the startup, drywell in-leakage, or barometric pressure changes. This necessitated daily drywell venting to maintain the drywell and suppression chamber internal pressures within TS requirements (14.2 - 15.45 psia) and was subsequently documented for evaluation by a deviation/event report (DER). Preliminary investigations and engineering calculations estimated the leak rate at 300 cubic feet per hour from the nitrogen supply to the main steam SRVs and the inboard main steam line isolation valves.

On March 22, Unit 2 commenced a normal reactor shutdown from full power and initiated primary containment de-inerting to isolate, repair, and further evaluate the unidentified nitrogen leak in the drywell. The subsequent drywell inspection confirmed the leak source as the pilot valve solenoid assembly on one of the 18 SRVs. This SRV is not an automatic depressurization system (ADS) valve and NMPC concluded that the leak did not affect the safety valve function of the SRV. Upon disassembly of the solenoid assembly, NMPC determined the cause of the leakage to be particulate contamination which prevented a ball check valve in the assembly from properly seating. Further investigation identified that this valve was one of six which had its stainless steel flexible pneumatic supply line replaced during the recent refueling outage. In an attempt to bound the problem, the solenoid assembly was removed from another SRV with a similar maintenance history; particulate contamination again was found. NMPC expanded the work scope to remove and inspect the solenoid assemblies for the remaining four affected SRVs (one of which provided an ADS function) and included one additional "control" SRV to provide an indication of system conditions prior to the pneumatic supply line replacements and represent the remaining 12 SRVs. Boroscopic inspections were performed on the seven pneumatic supply lines. The results of these inspections led to the cleaning of the nitrogen supply lines and replacement of

the solenoid assemblies for the six SRVs worked during the outage. The inspection results for the "control" SRV were satisfactory. Unit 2 commenced a normal reactor startup on March 29 and achieved 100% power operations on March 31.

Preliminarily, NMPC attributed the particulate contamination to poor work practices during the replacement of the flexible pneumatic supply lines and inadequate post-maintenance inspection criteria. These poor work practices allowed metal filings, grinding wheel dust, and excessive lubricant to remain in the supply lines and subsequently block the seating surface for the ball check valve during the SRV actuation after the scram. Two other contaminated SRVs actuated following the scram but were not adversely affected by the particulate contamination.

The inspectors performed the following to evaluate the contamination issue and NMPC's actions: observed the investigation and decision making process that led to the shutdown and subsequent restart; observed and interviewed chemistry personnel on the inspections of several disassembled solenoid assemblies; reviewed work packages for the inspection and replacement of the solenoid assemblies and flushing of the pneumatic supply lines; observed and reviewed portions of the post-maintenance tests for the SRVs, including the ADS SRV; interviewed numerous individuals regarding both the refueling outage maintenance and the recent forced outage work; and reviewed the TSs, FSAR, and applicable system prints.

Based on the above, the inspectors concluded the following: NMPC's decision to shutdown, identify and evaluate the nitrogen system leak, then expand the scope of the outage based on the inspection findings, demonstrated a conservative safety perspective; the affected SRVs, including the ADS SRV, would perform their required safety functions; poor work practices and inadequate post-maintenance inspection criteria contributed to the particulate contamination that led to the shutdown; and excellent worker performance, planning, and management/supervisory oversight led to a safe and productive forced outage with few unanticipated problems. The root cause evaluation for the particulate contamination, however, is incomplete. This issue will remain unresolved pending completion of this evaluation and further NRC review. **(URI 50-410/94-05-01)**

3.3 Repair #11 Feedwater Auxiliary Oil Pump Control Power

Unit 1 investigation of an unexpected control room annunciator, #11 feedwater pump auxiliary system, identified a blown fuse in the control power circuit for the #11 feedwater pump auxiliary oil pump. At the time of the problem, the plant was operating at approximately 40 percent power with both #11 and #12 motor-driven feedwater pumps in service. The function of the auxiliary oil pump is to provide bearing oil circulation when the feedwater pump is secured. With the feedwater pumps operating, the auxiliary oil pump is in standby while the internal oil pump provides necessary circulation. Unit 1 entered a 15 day TS limiting condition for operation due to an inoperable redundant component for the high pressure coolant injection (HPCI) system (i.e., #11 HPCI pump train was inoperable due to an inoperable feedwater pump auxiliary oil pump).

The next step of the startup procedure required placing the #13 shaft-driven feedwater pump in service. Because the motor-driven feedwater pumps are secured during the start of the shaft-driven feedwater pump, NMPC determined that continuation of the power ascension was undesirable until the auxiliary oil pump control circuit problem was identified and corrected. The inspectors reviewed NMPC's troubleshooting, repair plan, and retest of the control circuit and considered the corrective actions and followup appropriate. In addition, the inspectors monitored the subsequent #13 shaft-driven feedwater pump start and verified proper operation of the #11 feedwater pump auxiliary oil pump.

3.4 Unit 1 Reactor Vessel Water Level Indication Modification

NRC Bulletin 93-03, "Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in BWRs," required each boiling water reactor licensee to implement hardware modifications to mitigate potential inaccuracies associated with vessel level indications that may occur during plant depressurizations. Unit 1 completed installation of the modification during the forced outage. The modification consists of a continuous backfill to the cold reference leg condensing pots from the discharge of the control rod drive (CRD) pumps.

The inspectors monitored the installation and testing of the backfill modification, and attended the SORC meetings associated with the modification functional test procedures. Except for the engineering staff support during the startup (see section 4.1), all aspects of this modification were satisfactory.

3.5 Surveillance Observations

Through observation of safety-related surveillance activities, interviews, and review of records, the inspectors verified: use of proper administrative approve, personnel adherence to procedure precautions and limitations, accurate and timely review of test data, conformance of surveillances to TSs, including required frequencies, and use of good radiological controls. Unit 2 surveillance activities observed included those listed below and others discussed elsewhere in the report:

Unit 1

N1-MFT-23A	Reactor Water Level Reference Leg Modification - Pre-Startup Test
N1-MFT-23B	Reactor Water Level Reference Leg Modification - Operational Test
N1-MFT-24	Instrumentation Dryer Modification Functional Test

Unit 2

N2-PM-W3	Weekly Testing of Turbine Protective Devices
N2-ISP-ADS-R106	ADS Accumulator and Pneumatic Supply Leak Rate Test

N2-ISP-ADS-R101 Calibration of SRV Relief Valve Circuits, Attachment 3
N2-OSP-ADS-R001 ADS Valve and Position Indication Operability Test

The above activities were effective with respect to meeting the safety objectives.

4.0 ENGINEERING (37700, 71707, 90712)

4.1 Engineering Support During Unit 1 Startups

The inspectors monitored both Unit 1 reactor startups and the post-trip review of the intermediate range reactor scram and identified two weaknesses with respect to engineering support for these activities.

4.1.1 Lack of engineering support/guidance for the reactor vessel water level reference leg backfill modification during the reactor startup.

While shutdown, the pre-startup modification functional test set the three reference leg backfill flow rates at approximately 0.78 gpm each. During the startup, the inspectors observed low local flow indications (0.0, 0.0, and 0.1 gpm) and brought this condition to the attention of the operating crew. The subsequent investigation by operations and system engineering personnel resulted in flow control valve adjustments to reestablish the required flow rates and an increased attention to the backfill system during the startup. Following the backfill flow adjustments, the control room observed unanticipated reactor water level oscillations of approximately six inches for several minutes. The apparent cause of the level oscillations was the introduction of cold water, affecting the temperature equilibrium of the reference legs. NMPC continued to monitor and adjust the backfill flow rates during the startup. Failure of the cognizant engineers to ensure proper monitoring of the backfill system during acceptance testing is considered a weakness.

4.1.2 Recurring electronic noise spikes on the intermediate range monitors.

The inspectors monitored several rod withdrawals during the approach to criticality and power ascension through the intermediate range during the April 11 startup. While "upranging" an IRM from range 6 to range 7, a significant noise spike was experienced. A design engineer stationed at the NI panel noticed intermittent scram lights on three IRM channels. In addition, inspectors noted an intermittent rod block annunciator that failed to "lock-in." Based on interviews with NMPC personnel, the apparent cause of the intermittent rod block and scram signals was operation of the IRM range switch. This unusual condition (i.e., intermittent rod block and scram signals that fail to "lock-in" the RPS logic) was not logged by the reactor analyst or the operating crew, in part, because that this was a normal experience during startups. During review of the subsequent reactor scram (see section 2.3), the inspectors identified the following conditions and compensatory measures taken by the operations department to meet the TS conditions to change the operational mode switch to RUN.

- An engineering evaluation modified the IRMs and deleted range 10. This resulted in less IRM overlap with the average power range monitors (APRMs), and therefore, less margin to the IRM scram setpoint prior to shifting the mode switch to RUN.

- Startup prerequisites establish maximum gain on the APRMs (maximum gain results in a higher APRM reading).

- Startup procedure OP-43A allowed bypassing downscale local power range monitor inputs to the APRMs to allow clearing the APRM downscale alarms to expedite shifting the mode switch to RUN.

- Procedures required an operator stationed at the CRD pressure control valve to boost CRD drive pressure to withdraw stuck control rods. This evolution is normally performed remotely from the control room, but NMPC noted that remote operation resulted in another source of excessive IRM noise.

Based on these observations and interviews, the inspectors concluded that transient electronic noise significantly impacted actual SRM/IRM detector signals. The root cause of this noise condition appears to be the original design and routing of the NI cables. This noise resulted in an increased probability of IRM rod block and scram signals. This conclusion, coupled with the decreased IRM/APRM overlap margin, resulted in significant compensatory actions to satisfy the TS requirements to change the mode switch to RUN. The inspectors questioned whether these actions, although proceduralized, met the intent of TSs. The recurring IRM noise problems and the use of APRM gain adjustments and bypassing LPRMs to facilitate the mode switch change to RUN are considered unresolved pending further NRC review. **(URI 50-220/94-05-02)**

Also, NMPC completed an investigation of the historical SRM/IRM noise problems in October 1993. One of the recommendations to suppress the noise, installation of resistive/capacitance (R/C) networks across relay coils of the RMCS, was ready for implementation prior to the April 11 startup but was not installed. NMPC installed this modification as a corrective action for the intermediate range reactor scram that occurred during the April 11 startup. Based on the previous reactor scrams and the investigation's recommendations, the inspectors concluded that NMPC failed to minimize the operational impact of the noise problem by not installing the modification during the previous forced outage.

4.2 Unit 1 CRD Modification To Meet Appendix J

During a review of containment penetration water seal use at Unit 1, NMPC identified a drywell (primary containment) penetration that was not in compliance with 10 CFR 50, Appendix J, Primary Reactor Containment Leakage Testing. Specifically, the CRD system return header into the reactor was exempt from the testing requirements of Appendix J because of a constant water seal. Appendix J requires at least a 30 day water inventory for

those valves that are exempt from testing because of a water seal. However, NMPC determined that during a postulated loss of offsite power with only one emergency diesel generator available, the emergency operating procedures (EOPs) direct that the CRD pumps be secured; thus the water seal for the penetration would be lost. During the forced outage, NMPC installed a test connection inside the drywell (a test connection already existed outside the drywell) and performed a satisfactory Appendix J Type-C test. The inspectors monitored installation of the test connection, reviewed the test results, and verified that the test met the criteria listed in the Unit 1 TSs. The inspectors reviewed the root cause evaluation and reportability determination and had no further questions.

4.3 Six-Month Torus Wall Ultrasonic Test Results

In accordance with the NRC safety evaluation report (SER) dated August 25, 1992, NMPC submitted the results of their recent ultrasonic measurements of the torus wall thickness. The inspectors reviewed the test data and determined that average wall thickness measurements were above the minimum wall thickness requirements of 0.447 inches. The inspectors also found this data consistent with previous test results. In the previous resident inspection report, 50-220/94-03, the NRC informed NMPC that the NRC no longer requested notification of future schedules of torus inspections for the opportunity to perform additional independent measurements. The NRC still requests that NMPC submit the semi-annual test results as previously agreed in the SER.

5.0 PLANT SUPPORT (71707)

5.1 Unit 1 Radioactive Waste Shipment

The inspectors performed the following: monitored activities associated with the final shipping preparations for the TransNuclear radioactive material (TN-RAM) shipping cask; monitored installation of the impact limiter fasteners and performance of contamination surveys of the cask surfaces; and reviewed temporary fuel handling procedure N1-FHP-RAMT, Handling TN-RAM Cask. NMPC radiological personnel were aware of contamination migration problems another utility encountered with the TN-RAM cask subsequent to transport to the burial site. NMPC performed additional contamination surveys prior to the cask leaving site to ensure surface contamination readings were stable and within regulatory limits.

The shipping cask contained miscellaneous segments of irradiated hardware from the Unit 1 spent fuel pool (NI detectors, control rod blades, etc.). After the cask left site, NMPC conducted an inventory of the spent fuel pool and found a bucket containing several NI detectors. These detectors were listed on the manifest as being part of the TN-RAM shipment discussed above. The inspectors were concerned that this discrepancy was not identified during the loading of the TN-RAM cask. NMPC initiated a DER and root cause evaluation for this event. The inspectors considered this item to be unresolved pending further review. **(URI 50-220/94-05-03)**

5.2 Radiological and Chemistry Controls

During routine tours of the accessible areas at both units, the inspectors observed the implementation of selected portions of NMPC's radiological controls program to ensure: the utilization and compliance with radiological work permits (RWPs), detailed descriptions of radiological conditions, and personnel adherence to RWP requirements. The inspectors observed adequate controls for access to various radiologically controlled areas (RCAs) and use of personnel monitors and frisking methods upon exit from these areas. Posting and control of radiation areas, contaminated areas and hot spots, and labelling and control of containers holding radioactive materials were verified to be in accordance with NMPC procedures. Radiation protection technician control and monitoring of these activities was satisfactory. Overall, the inspectors observed an acceptable level of performance and implementation of the radiological controls program.

5.3 Security and Safeguards

The inspectors observed implementation of the physical security plan in various plant areas with regard to the following: protected area and vital area barriers were well maintained and not compromised; isolation zones were clear; personnel and vehicles entering and packages being delivered to the protected area were properly searched and access control was in accordance with approved licensee procedures; persons granted access to the site were badged to indicate whether they have unescorted access or escort authorization; security access controls to vital areas were maintained and persons in vital areas were authorized; security posts were adequately staffed and equipped, security personnel were alert and knowledgeable regarding position requirements, and written procedures were available; and adequate illumination was maintained. Licensee personnel were observed to be properly implementing and following the physical security plan.

6.0 SAFETY ASSESSMENT AND QUALITY VERIFICATION (40500, 71707)

Station Operations Review Committee

The inspectors attended several SORC meetings for each unit and joint meetings. A combination of assigned members and allowed alternates comprised each meeting. SORC members discussed proposed DER dispositions and 10 CFR 50.59 safety evaluations; discussions focused on safety and corrective actions. One of the Unit 1 SORC meetings focused on the completed post-trip review and root cause determination for the April 11 reactor scram. All SORC members reviewed an internal investigative report (dated January 27, 1994) presented by the NI design engineer to determine necessary corrective actions to mitigate IRM noise spikes. The design engineer concluded that the R/C network across the relay coils in the CRD and RMCS (SDC-0061-93) was the only corrective action from the report recommended at this time. The SORC accepted this conclusion contingent upon satisfactory post-maintenance testing demonstrating effective suppression of the IRM noise spikes.

7.0 PREVIOUSLY IDENTIFIED ITEMS (92701, 62703)

(Closed) URI 50-410/94-03-03
Reactor Protection System Wiring Discrepancy

NMPC identified a RPS wiring discrepancy following a single rod scram event caused by a blown fuse. The inspectors reviewed these issues during the previous inspection period; however, the review was unresolved pending completion of the blown fuse corrective action evaluation and the wiring error root cause evaluation. NMPC subsequently completed these evaluations.

The root cause evaluation for the wiring discrepancy determined that an engineering design change (EDC) to correct RPS circuit voltage problems was implemented during Unit 2 construction but following preoperation testing and system acceptance by NMPC. This EDC added a junction box which necessitated several manipulations of the subject wires. Mislabeling of the wires most likely occurred after the wires were shortened. The mislabeled wires were then reconnected to the hydraulic control unit terminal block causing the south side group four scram pilot valve solenoids to be controlled and powered by the opposite trip system. Quality control (QC) inspections at various stages of the EDC were satisfactory; however, review of the EDC package did not identify QC inspections for cutting and relabeling the wires. NMPC subsequently failed to identify the wiring discrepancy because a comprehensive circuit test following the EDC was not performed. Based on the results of the root cause evaluation and previous corrective actions, no additional actions for the wiring discrepancy are planned because current procedures better control plant design changes and post-modification testing.

Additionally, system engineering personnel evaluated possible corrective actions for the blown fuse by performing a detailed industry survey. The survey reviewed the industry fuse failure rate and fuse preventive maintenance/replacement programs at plants with lower failure rates. Also, the fuse manufacturer and an independent laboratory were consulted. Based on the above evaluation, NMPC concluded that fuse fatigue caused the blown fuse and a fuse replacement program was not necessary.

The inspectors reviewed and discussed with system engineering staff and plant management the DER disposition, past and present procedures governing plant design changes, the root cause evaluation, and corrective actions. Based on the above, the inspectors concluded that NMPC's actions were satisfactory; this item is closed.

(Update) 50-220/94-02-01 and 50-410/94-02-01
Fire Brigade Organization and Training

As of March 30, the site fire brigade consists of a fire chief from each unit, a radwaste operator from each unit, and one additional fireman; a total of five fire brigade members (the two radwaste operators have non-fire brigade primary duties). The inspectors discussed these

changes with the fire protection supervisor and reviewed the administrative controls in place to ensure the fire brigade requirements are met (this includes radwaste supervision maintaining qualified fire brigade members on each shift). The fire protection supervisor stated that the fire chief for each unit advises the appropriate station shift supervisor (SSS) of the fire brigade makeup at the beginning of each shift. This item remains open pending further monitoring of the fire brigade during routine inspection activities.

8.0 MANAGEMENT MEETINGS

At periodic intervals and at the conclusion of the inspection, meetings were held with senior station management to discuss the scope and findings of this inspection. Based on the NRC Region I review of this report and discussions held with Niagara Mohawk representatives, it was determined that this report does not contain safeguards or proprietary information. NMPC did not object to any of the findings or observations presented at the exit meeting.

8.1 Service Water Meeting

On March 17, 1994, NMPC personnel met with the NRC, in the NRC Region I office, to present the intended corrective actions for service water system performance problems identified in their self-assessments and NRC inspection report 93-80. The major issues discussed were the zebra mussel control program at Unit 1 and the design changes for correcting the degrading system flows at Unit 2. The handouts provided in the meeting are contained in Attachment 1. The NRC will continue to monitor these and other corrective actions in the service water systems.

8.2 Senior Management Meeting

On April 15, 1994, NMPC senior management met with NRC senior management to introduce new licensee managers and corporate officers. Other items on the agenda included discussions of the Nine Mile Point business plan, current plant issues, rightsizing, and the economic forecast for both Nine Mile Point units. Handouts from the meeting are included as Attachment 2.

List of Attachments

Attachment 1 - Handouts from Service Water Meeting (3/17/94)

Attachment 2 - Handouts from Senior Management Meeting (4/15/94)

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION

UNITS 1 AND 2

PRESENTATION ON SERVICE WATER

MARCH 17, 1994

AGENDA
SERVICE WATER SYSTEMS

INTRODUCTION AND PURPOSE	M. J. McCORMICK JR.
UNIT 1 - ZEBRA MUSSEL CONTROL PROGRAM	
SYSTEM DESIGN OVERVIEW	J. L. RABY
CLUMP BREAKOFF EVALUATION	
TREATMENT DISPARITY	G. A. CORELL
TASK FORCE	J. L. RABY
UNIT 2 - LONG-TERM DESIGN ISSUE RESOLUTION	
SYSTEM DESIGN OVERVIEW	K. D. WARD
PROBLEM STATEMENT	
PROJECT GOALS/OBJECTIVES	C. D. FARSACI
IMPLEMENTATION SCHEDULE	

(ATCH. 1)

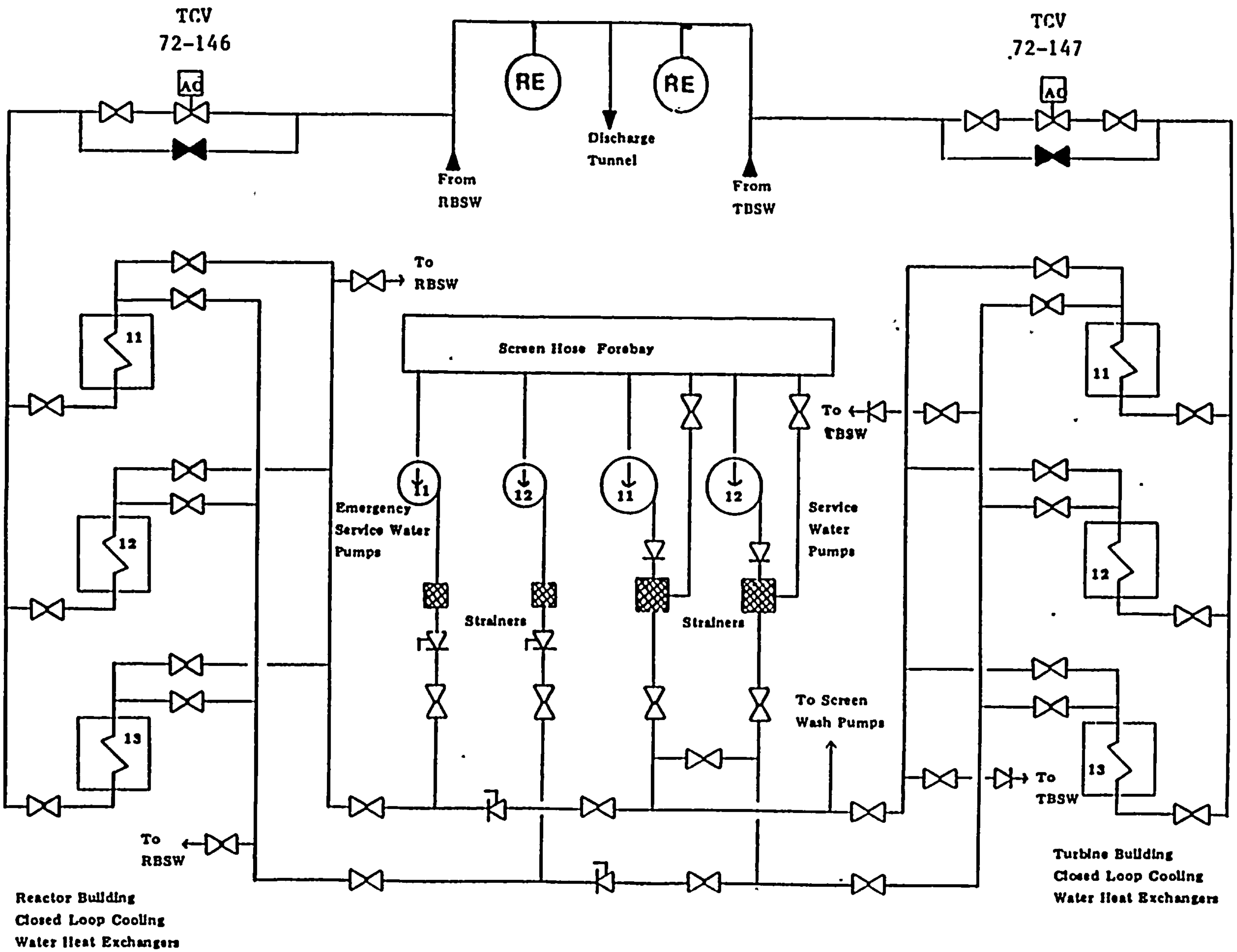
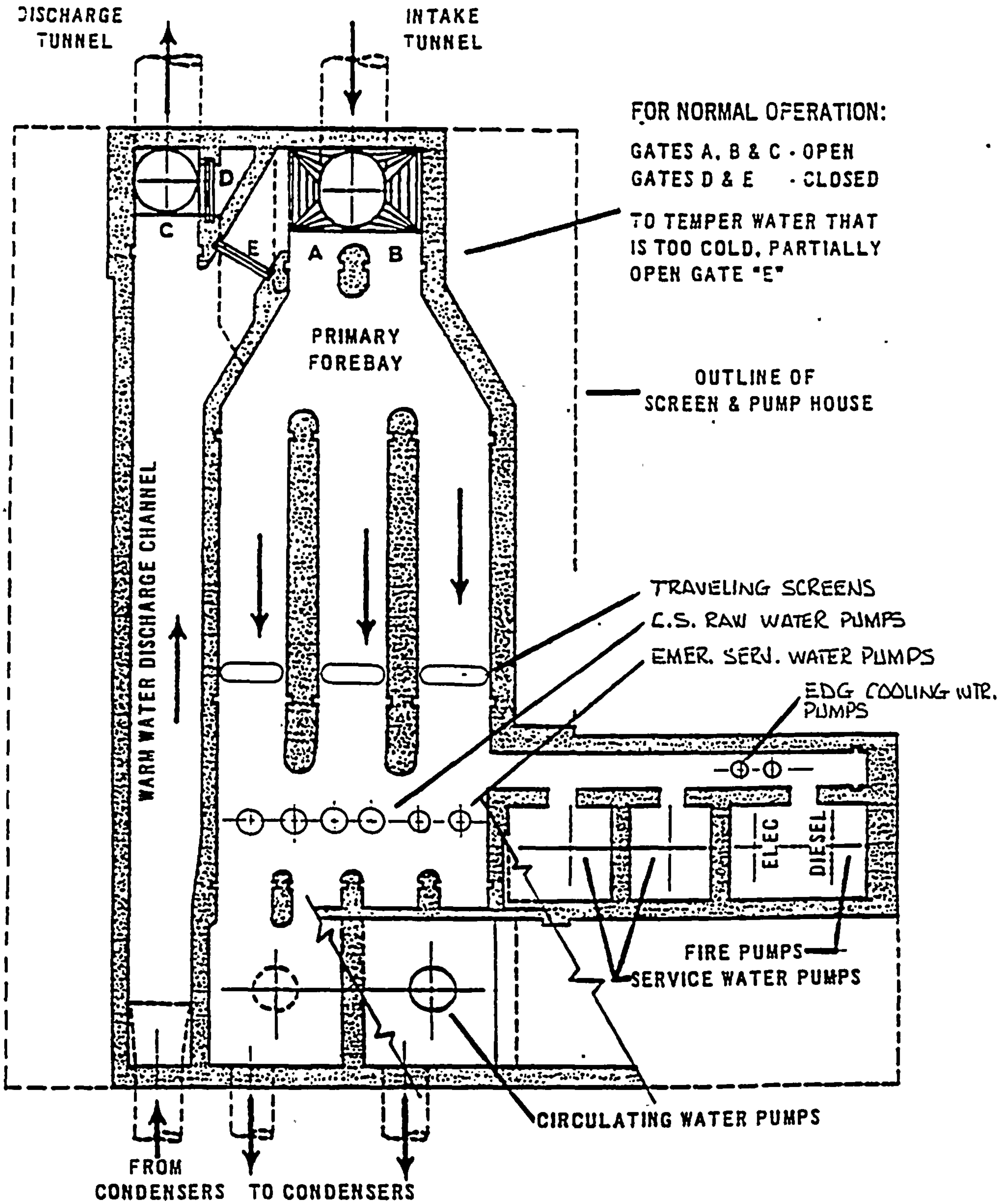


Figure 28-1
Service Water

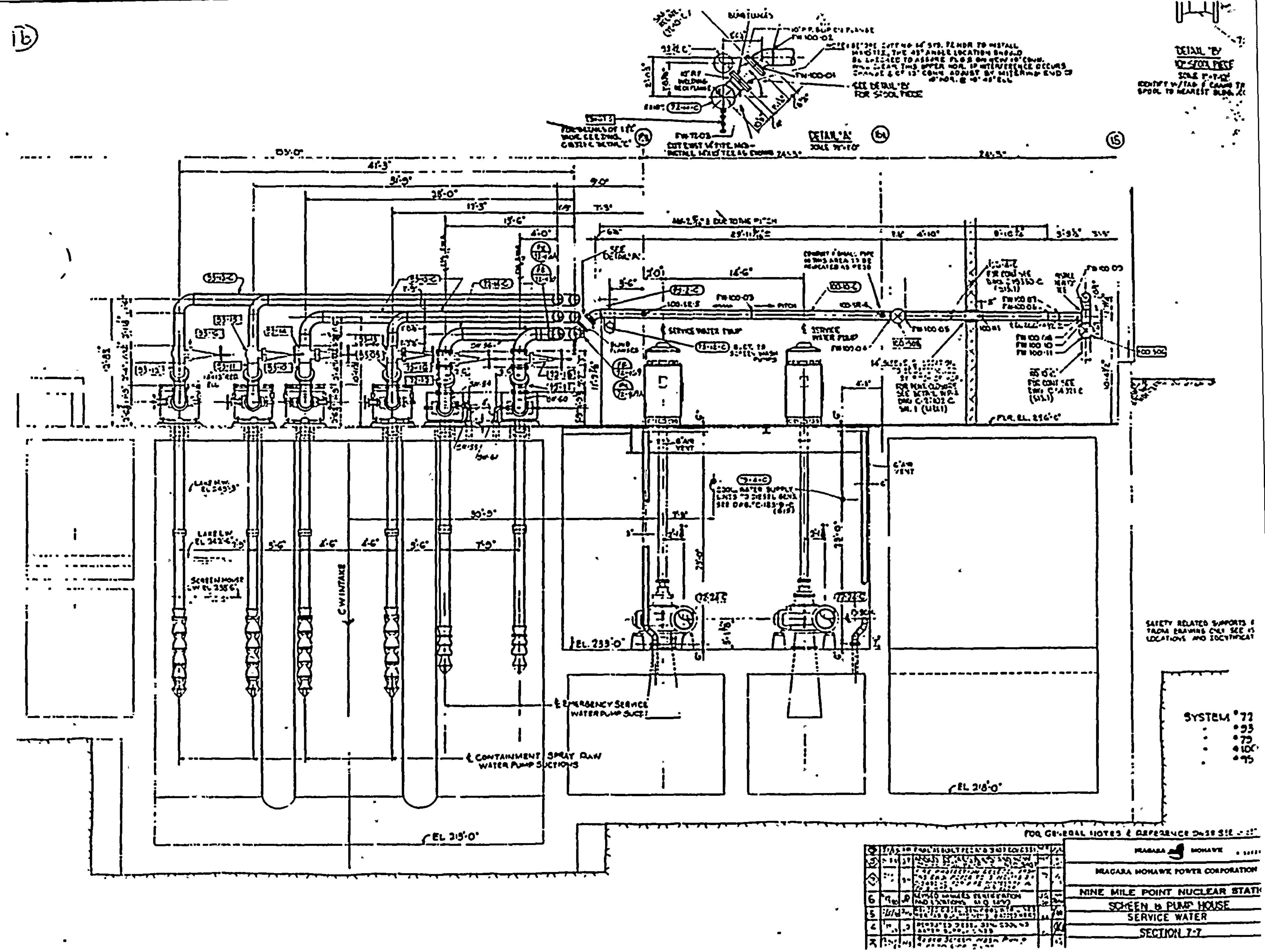
CIRCULATING WATER CHANNELS UNDER SCREEN AND PUMP HOUSE
NORMAL OPERATION



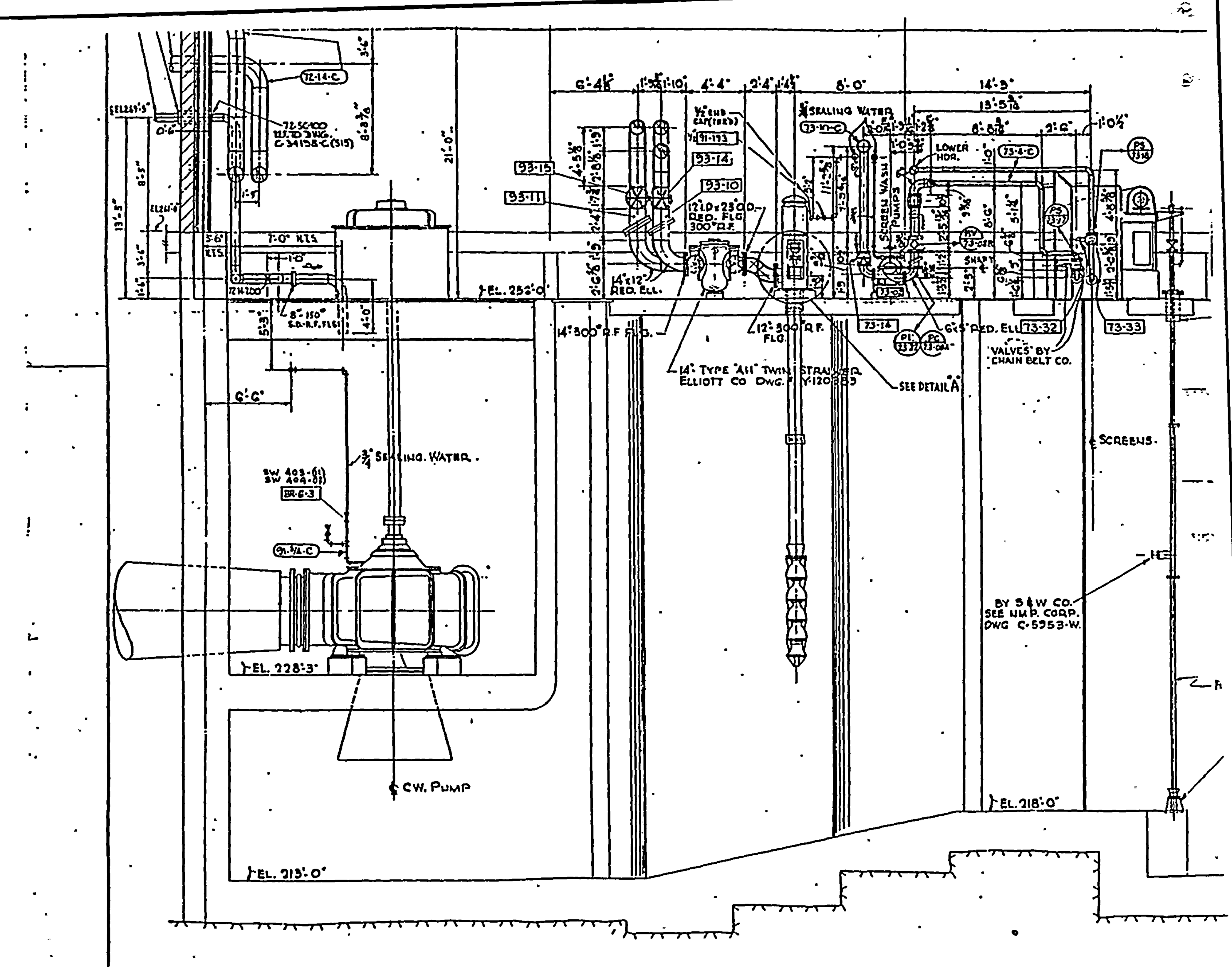
UNIT 1

POTENTIAL FOR MUSSEL CLUMP BREAKOFF RESULTING IN INSTANTANEOUS FLOW BLOCKAGE

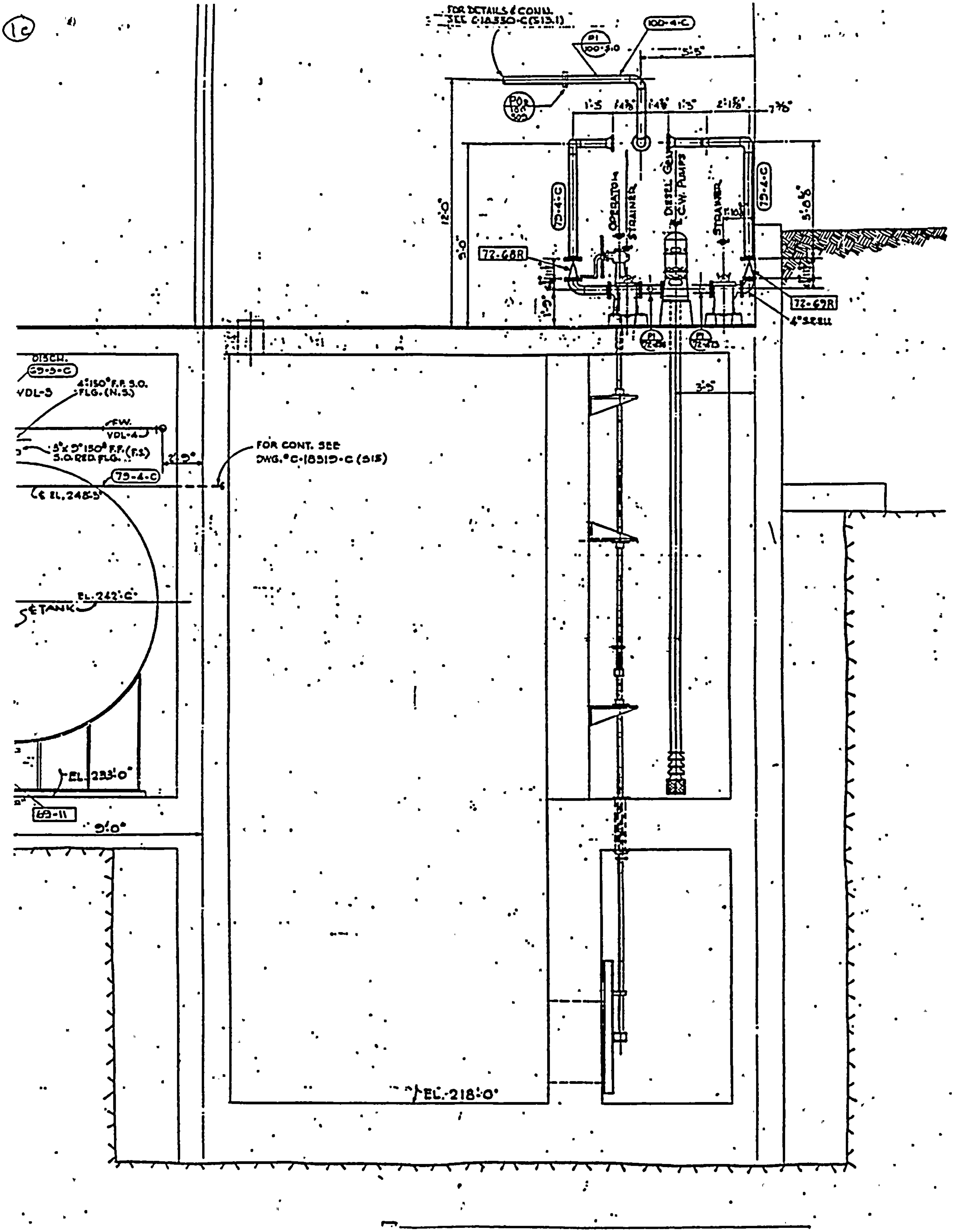
- ENGINEERING EVALUATION COMPLETED
- NORMAL SERVICE WATER PUMPS (2 PUMPS)
  - RBCLC HEAT EXCHANGERS
- EMERGENCY SERVICE WATER PUMPS (2 PUMPS)
  - RBCLC HEAT EXCHANGERS
- CONTAINMENT SPRAY RAW WATER PUMPS (4 PUMPS)
  - CONTAINMENT SPRAY HEAT EXCHANGERS
- EDG COOLING WATER PUMPS (2 PUMPS)
  - EDG COOLING WATER HEAT EXCHANGERS



DETAIL "B"
DETAIL "A"
SEE DETAIL "B" FOR SPOOL PIECE
SERVICE WATER PUMP
SERVICE WATER PUMP
EMERGENCY SERVICE WATER PUMP SUCT.
CONTAINMENT SPRAY RAW WATER PUMP SUCTIONS
INTAKE
EL. 233'-0"
EL. 218'-0"
EL. 215'-0"
FLR. EL. 256'-0"
SYSTEM
FOR GENERAL NOTES & REFERENCE
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATI
SCREEN & PUMP HOUSE
SERVICE WATER
SECTION 7-7



72-14-C
72-SC-100
REF. TO DWG.
C-34105-C(515)
7'-0" NTS.
3'-6" NTS.
EL. 252'-0"
8"-150" S.O.R.F.FLG.
6'-6"
3/4" SEALING WATER.
BR-6-3
91-3/4-C
EL. 228'-3"
℄ CW. PUMP
EL. 213'-0"
93-15
93-11
93-14
93-10
12" I.D x 23" O.D. RED. FLG 300# R.F.
14"x12" RED. ELL.
14" 300# R.F. FLG.
1/2" END CAP (THRD)
91-193
SEALING WATER
73-10-C
12" 300# R.F. FLG.
14" TYPE "AH" TWIN STRAINER
ELLIOTT CO DWG. Y-120385
SEE DETAIL "A"
SCREEN WASH PUMPS
LOWER HDR.
73-4-C
73-14
6"x5" RED. ELL.
73-32
73-33
VALVES BY CHAIN BELT CO.
℄ SCREENS.
BY S&W CO.
SEE NMP. CORP.
DWG C-5953-W.
EL. 218'-0"
6'-4 1/8"
4'-4"
8'-0"
14'-3"
1'-0 1/2"
21'-0"



1c
FOR DETAILS & CONN. SEE C-18330-C (513.1)
100-4-C
5'-5"
12'-0"
9'-0"
72-68R
OPERATOR
STRAINER
DIESEL GEN. C.W. PUMPS
STRAINER
79-4-C
5'-0 5/8"
72-69R
4" S.R.ELL
7 3/8"
3'-5"
DISCH.
69-9-C
4" 150# F.F. S.O. FLG. (N.S.)
VDL-3
F.W.
VDL-4
5"x 3" 150# F.F. (F.S) S.O. RED. FLG.
79-4-C
℄ EL. 248'-5"
FOR CONT. SEE DWG. # C-18319-C (515)
℄ TANK
EL. 242'-0"
EL. 233'-0"
69-11
9'-0"
EL. 218'-0"

UNIT 1

NORMAL SERVICE WATER

- SERVICE WATER PUMPS
  - OWN WELLS, LARGE SUCTION OPENING
- ADAMS STRAINERS
  - AUTO BACKWASH
- RBCLC HEAT EXCHANGERS
  - INSPECTED/CLEANED ANNUALLY
  - MINIMAL EVIDENCE OF MUSSELS
- RBCLC SERVICE WATER DRAG (TCV) VALVE
  - DER 1-94-0288, FLOW BLOCKAGE
  - MANUAL BYPASS VALVE

UNIT 1

EMERGENCY SERVICE WATER

- EMERGENCY SERVICE WATER PUMPS
  - VERTICAL MULTI-STAGE PUMPS
  - QUARTERLY IST TO MONITOR PUMP PERFORMANCE
- DUPLEX STRAINERS
  - MANUALLY CHANGED ON-LINE
- RBCLC HEAT EXCHANGERS
  - INSPECTED/CLEANED ANNUALLY
  - NO EVIDENCE OF MUSSELS
- RBCLC SERVICE WATER DRAG (TCV) VALVE
  - DER 1-94-0288, FLOW BLOCK
  - MANUAL BYPASS VALVE

UNIT 1

CONTAINMENT SPRAY RAW WATER

- CS RAW WATER PUMPS
  - VERTICAL MULTI-STAGE PUMPS
  - QUARTERLY IST TO MONITOR PUMP PERFORMANCE
- DUPLEX STRAINERS
  - MANUALLY CHANGED ON-LINE
- CONTAINMENT SPRAY HEAT EXCHANGERS
  - ONE UNIT INSPECTED/CLEANED EACH REFUEL
  - DRAINED AFTER QUARTERLY TESTING

UNIT 1

EDG COOLING WATER

- EDG COOLING WATER PUMPS
  - VERTICAL SINGLE-STAGE PUMPS
  - SUCTION BASKET CAGE
  - QUARTERLY IST TO MONITOR PUMP PERFORMANCE
- DUPLEX STRAINERS
  - MANUALLY CHANGED ON-LINE
- EDG COOLING WATER HEAT EXCHANGERS
  - INSPECTED QUARTERLY

UNIT 1

SUMMARY

- FOREBAY DESIGN ALLOWS MUSSEL CLUMP SETTLING

- SYSTEMS NORMALLY IN STAND-BY
  - EXCEPTION NORMAL SERVICE WATER

- PUMP DISCHARGE STRAINERS
  - DUPLEX STRAINERS
  - ADAMS STRAINERS

- MONITOR SYSTEM PARAMETERS FOLLOWING TREATMENTS
  - SERVICE WATER D/P
  - IST PUMP FLOW DATA

UNIT 1

ZEBRA MUSSEL TREATMENTS IN FOREBAY

- PROCEDURE N1-CTP-V930
  - FIRST USE
  - OFF-NORMAL GATE CONFIGURATION
  - BIOBOX USED TO EVALUATE TREATMENT EFFECTIVENESS
    - FLOW TAKEN FROM SW HOSE CONNECTION DOWNSTREAM OF SW PUMPS
    - COMPARE CHEMICAL PROPORTIONS AT BIOBOX AND TREATMENT AREA
    - CREDIT FOR 95% MUSSEL KILL RATE

(1a)

CIRCULATING WATER CHANNELS UNDER
SCREEN AND PUMP HOUSE
NORMAL OPERATION

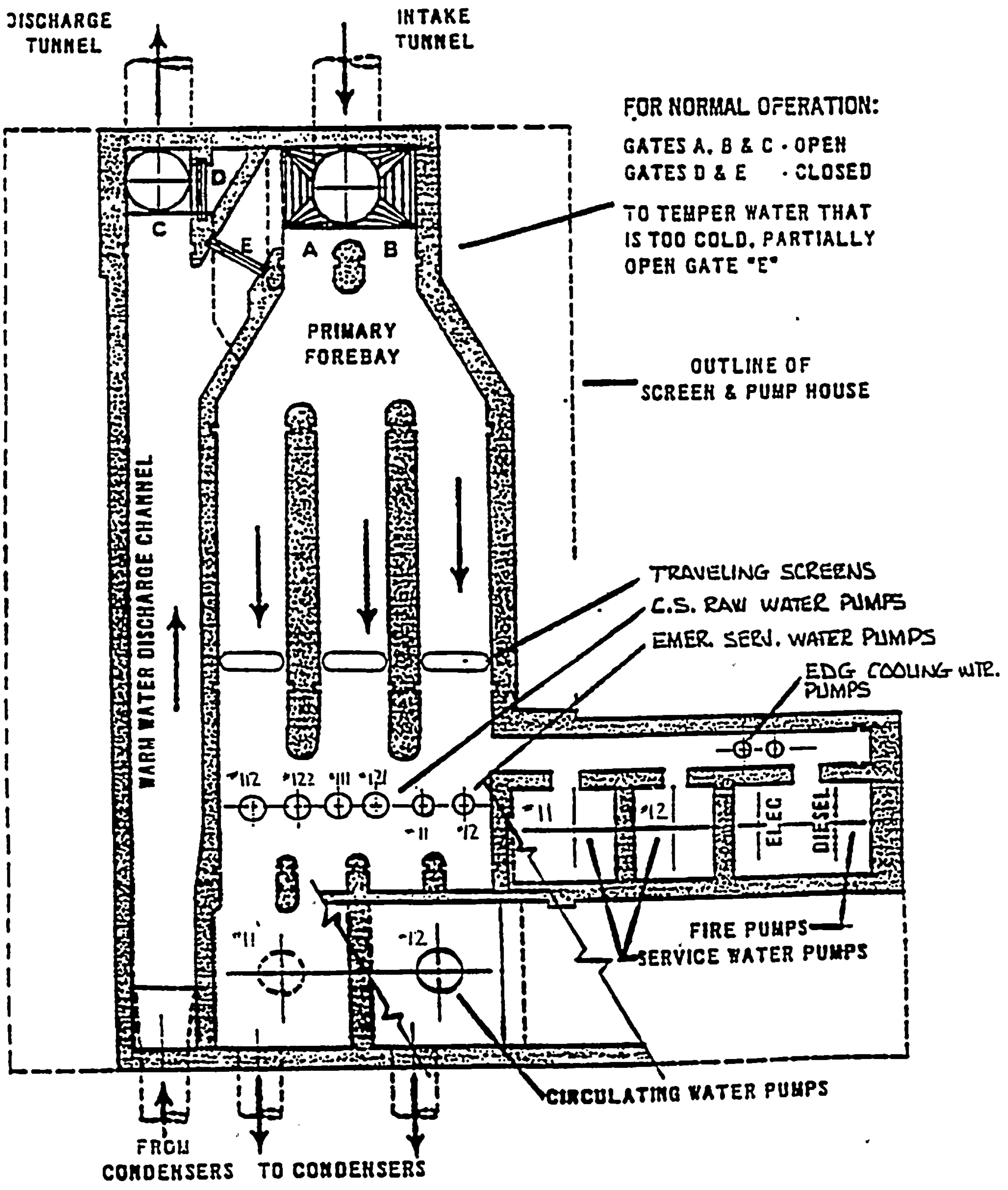
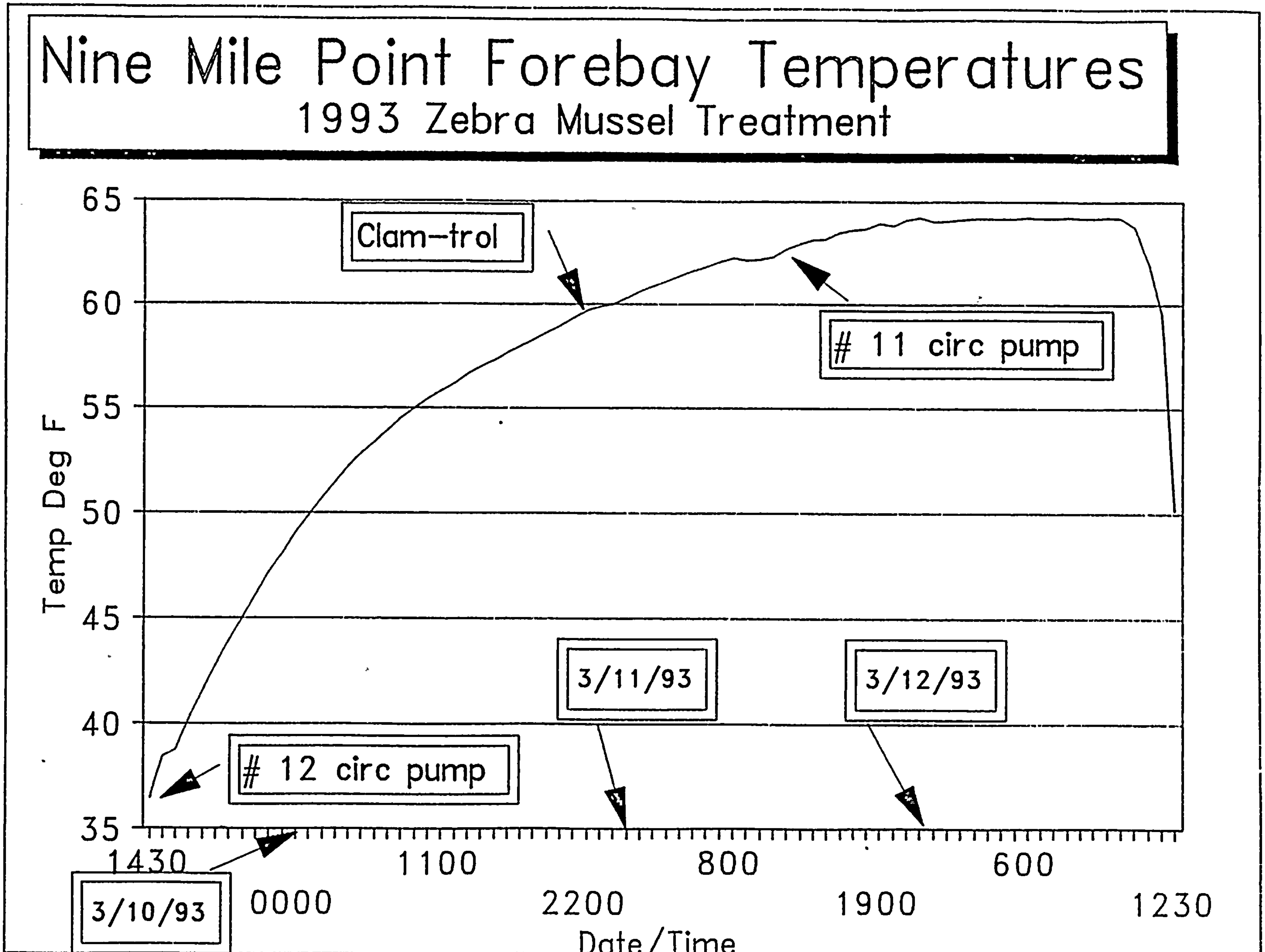


FIGURE III-19

UNIT 1

ROOT CAUSE

- NON-UNIFORM MIXING IMPACTING CONCENTRATION
- CONTACT TIME
- TEMPERATURE DURATION



Nine Mile Point Forebay Temperatures
1993 Zebra Mussel Treatment
Temp Deg F
65
60
55
50
45
40
35
Clam-trol
11 circ pump
12 circ pump
3/11/93
3/12/93
3/10/93
1430
1100
800
600
0000
2200
1900
1230
Date/Time

UNIT 1

CORRECTIVE AND PREVENTIVE ACTIONS

- PROCEDURE CHANGES TO ADDRESS INCONSISTENCIES BETWEEN BIOBOX AND RESULTS IN FOREBAY
    - INCREASED ALLOWABLE CHEMICAL CONCENTRATION FOR TREATMENTS FROM 13-17 PPM TO 25-35 PPM
    - MAXIMIZE CONTACT TIME TO ADDRESS THERMAL SHOCKING CONCERN
    - SAMPLING POINT RELOCATED FOR ANALYSIS AND BIOBOX
    - MIXING IMPROVEMENT - CIRCULATING WATER PUMP OPERATION

UNIT 1

ZEBRA MUSSEL COMMITTEE

- SYSTEMS PERFORMANCE
  - SUPPORT FROM SYSTEM ENGINEERS
- CHEMISTRY
  - CONTROL, SCHEDULE & ASSESS TREATMENTS
- ENVIRONMENTAL
  - PERFORM MONITORING
- CONTROL PROGRAM REVISIONS/IMPROVEMENTS
  - MODs, SDC
  - INDUSTRY EVENTS
  - NEW TECHNOLOGIES
- SCHEDULED MEETINGS

UNIT 1

COMMITTEE MEMBERSHIP

- SYSTEM ENGINEER (COMMITTEE CHAIRMAN)
- CHEMISTRY MANAGER
    - CHEMISTRY GENERATION ENGINEER
- ENVIRONMENTAL MANAGER
- MECHANICAL ENGINEERING
- OPERATIONS SUPPORT GENERATION ENGINEER

UNIT 2

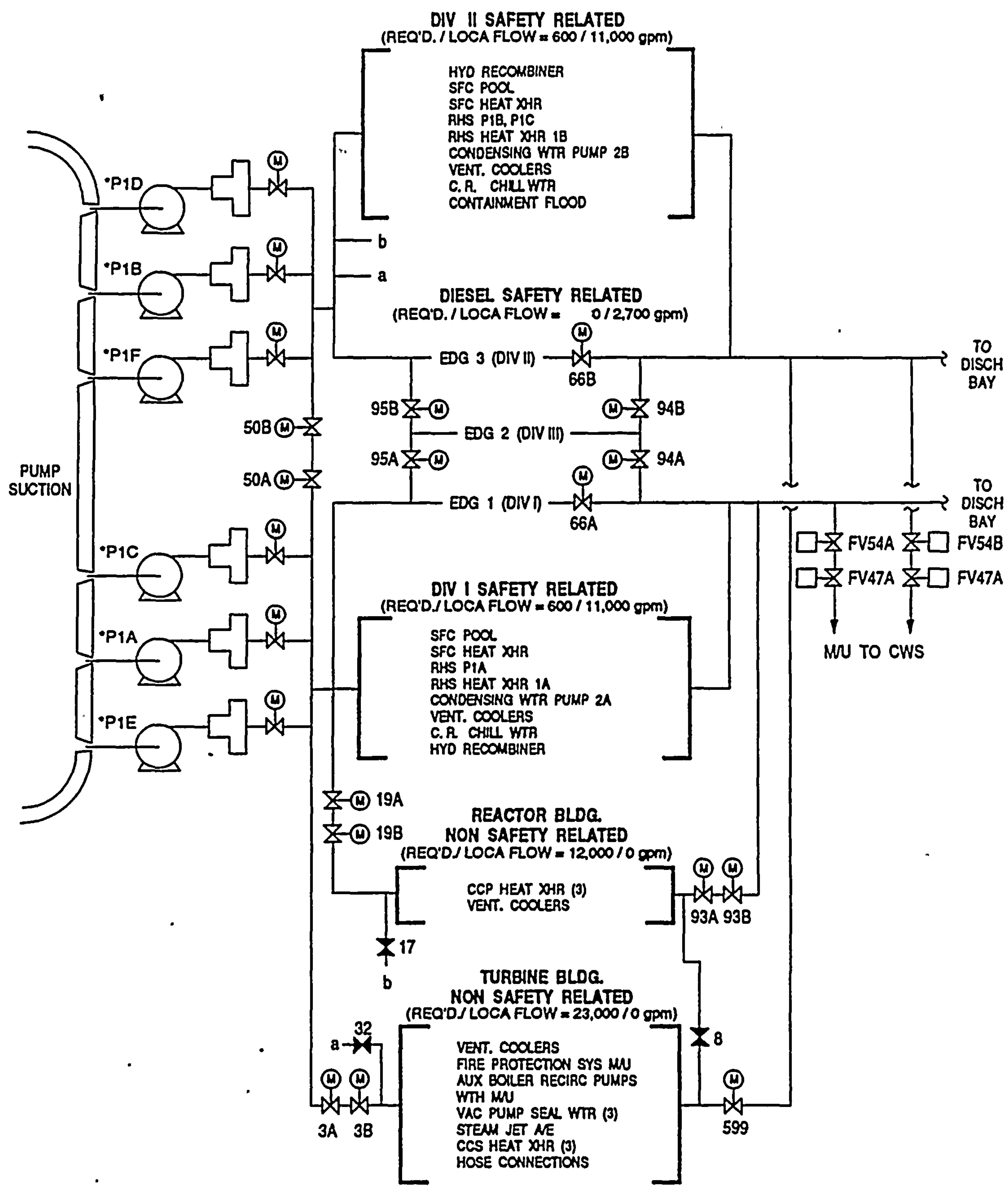
SYSTEM DESIGN OVERVIEW

- BOTH SAFETY RELATED AND NON-SAFETY RELATED COMPONENTS
- ONCE THROUGH DESIGN
- NORMAL OPERATION - 4 OF 6 PUMPS AT NOMINAL 10,000 GALLONS PER MINUTE EACH - CROSS TIE BETWEEN DIVISIONS OPEN
- DBA LOCA/LOOP FLOW APPROXIMATELY 3,400 GALLONS PER MINUTE FOR 1 PUMP -- DIVISIONS ISOLATE WITH PUMP IN EACH DIVISION -- NSR LOADS ISOLATED ON LOSS OF OFFSITE POWER
- SAFETY RELATED DESIGN - ASME III, CLASS 3
- NON-SAFETY RELATED - B31.1

SERVICE WATER SYSTEM

NINE MILE POINT - UNIT 2

NOMINAL FLOW, 40,000 gpm



UNIT 2

PROBLEM STATEMENT

- FOULING
- MIC
- FLOW DEGRADATION
- REDUCED HEAT TRANSFER

UNIT 2

FOULING

- PROGRAM TO DEFINE EXTENT OF PROBLEM

- SAMPLES COLLECTED AND ANALYZED

- RESULTS

  - MIC PRESENT

  - MINOR PITTING AND NO THROUGH-WALL LEAKS

  - SOURCE: MIC AND SILT

- CONCLUSIONS

  - APPROXIMATELY 20% FLOW AREA REDUCTION

  - BOTH AEROBIC AND ANAEROBIC BACTERIA PRESENT

  - NORMAL LEVELS FOR 9 YEAR OLD PLANT

  - SLOWER GROWTH EXPECTED - LESS COLONY FORMING UNITS DUE TO OXIDIZING BIOCIDE USE

  - MACRO FOULING NOT A PROBLEM/PROGRAM IN PLACE

UNIT 2

FLOW DEGRADATION

- OBSERVED DURING HEAT EXCHANGER PERFORMANCE TESTING

- RANGES FROM 5% TO 30%

- REPOSITIONING THROTTLE VALVES TO MAKE UP THE LOSS

- LOCAL BALANCING PROBLEMS DUE TO MARGINAL PIPE SIZE

UNIT 2

REDUCED HEAT TRANSFER

- ALL SAFETY RELATED UNIT COOLERS HAVE BEEN TESTED

- DRAWDOWN UNIT COOLERS

  - THOSE REQUIRED FOR DRAWDOWN TESTED AT AN AVERAGE HEAT REMOVAL CAPACITY OF 81% OF DESIGN

  - ANALYSIS REQUIRES AVERAGE HEAT REMOVAL CAPACITY OF 70% OF DESIGN

  - ADEQUATE MARGIN EXISTS PENDING SYSTEM IMPROVEMENTS

- ALL ROOM COOLERS

  - HAVE MET OR EXCEEDED THEIR HEAT REMOVAL CRITERIA

UNIT 2

PROJECT GOALS AND OBJECTIVES

- RESTORE FLOW TO RECOVER LOST DESIGN MARGIN
- MINIMIZE FUTURE DEGRADATION
- PROVIDE FLOW MARGIN
- IMPROVE SYSTEM RELIABILITY

UNIT 2

- ALTERNATIVES EVALUATED
  - FULL SCALE PIPE REPLACEMENT
  - OFF-LINE CHEMICAL CLEANING
  - ON-LINE CHEMICAL CLEANING
  - CLOSED LOOP SYSTEM
  - MECHANICAL CLEANING
  - NO ACTION BEYOND ROUTINE MAINTENANCE

UNIT 2

- EVALUATION PROCESS - DECISION MATRIX
  - BEST FINAL CONDITION OF SYSTEM TO MAINTAIN SAFETY FUNCTION
  - OUTAGE SCHEDULE IMPACT
  - INDUSTRY EXPERIENCE
  - LOGISTICS
  - COST

UNIT 2

SOLUTIONS TO BE IMPLEMENTED

ACTION	RESULTS EXPECTED
CHEMICAL CLEAN SYSTEM (OFF-LINE)	CLEAN SYSTEMS
RESIZE PIPING	INCREASED FLOW CAPACITY IN SELECTED UNIT COOLER AREAS
CHECK VALVE REMOVAL	IMPROVED SYSTEM FLOW
PERMANENT WATER TREATMENT	MINIMIZE FUTURE DEGRADATION

SOLUTIONS REQUIRING FURTHER EVALUATION

STANDPIPE REDUCTION	PROVIDE MARGIN FOR SYSTEM

UNIT 2

IMPLEMENTATION

ACTION	CURRENT PLAN
► CHEMICAL CLEANING	
♦ DESIGN/INSTALL	REFUEL 4 (5/95)
♦ FIRST CLEANING	REFUEL 5 (10/96)
► BIOCIDE/DISPERSANT SYSTEM	
♦ DESIGN	1995
♦ SYSTEM TIE-IN	REFUEL 5 (10/96)

UNIT 2

IMPLEMENTATION - CONT'D

ACTION	CURRENT PLAN
▸ PIPE REROUTE/REPLACE	
♦ DESIGN	1994
♦ INSTALL	REFUEL 4 (5/95)
▸ CHECK VALVE REMOVAL	
♦ DESIGN	1994
♦ INSTALL	TBD
▸ STANDPIPE REDUCTION	
♦ TRANSIENT ASSESSMENT	1994

NIAGARA MOHAWK POWER CORPORATION

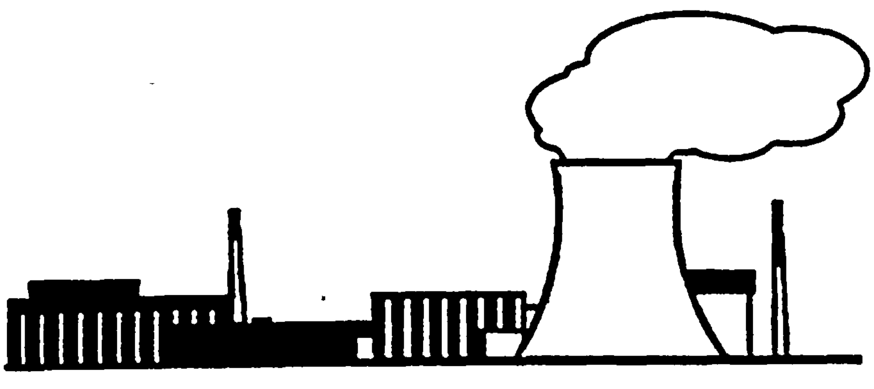
NINE MILE POINT NUCLEAR STATION

UNITS 1 AND 2

NRC - NMPC

SENIOR MANAGEMENT MEETING

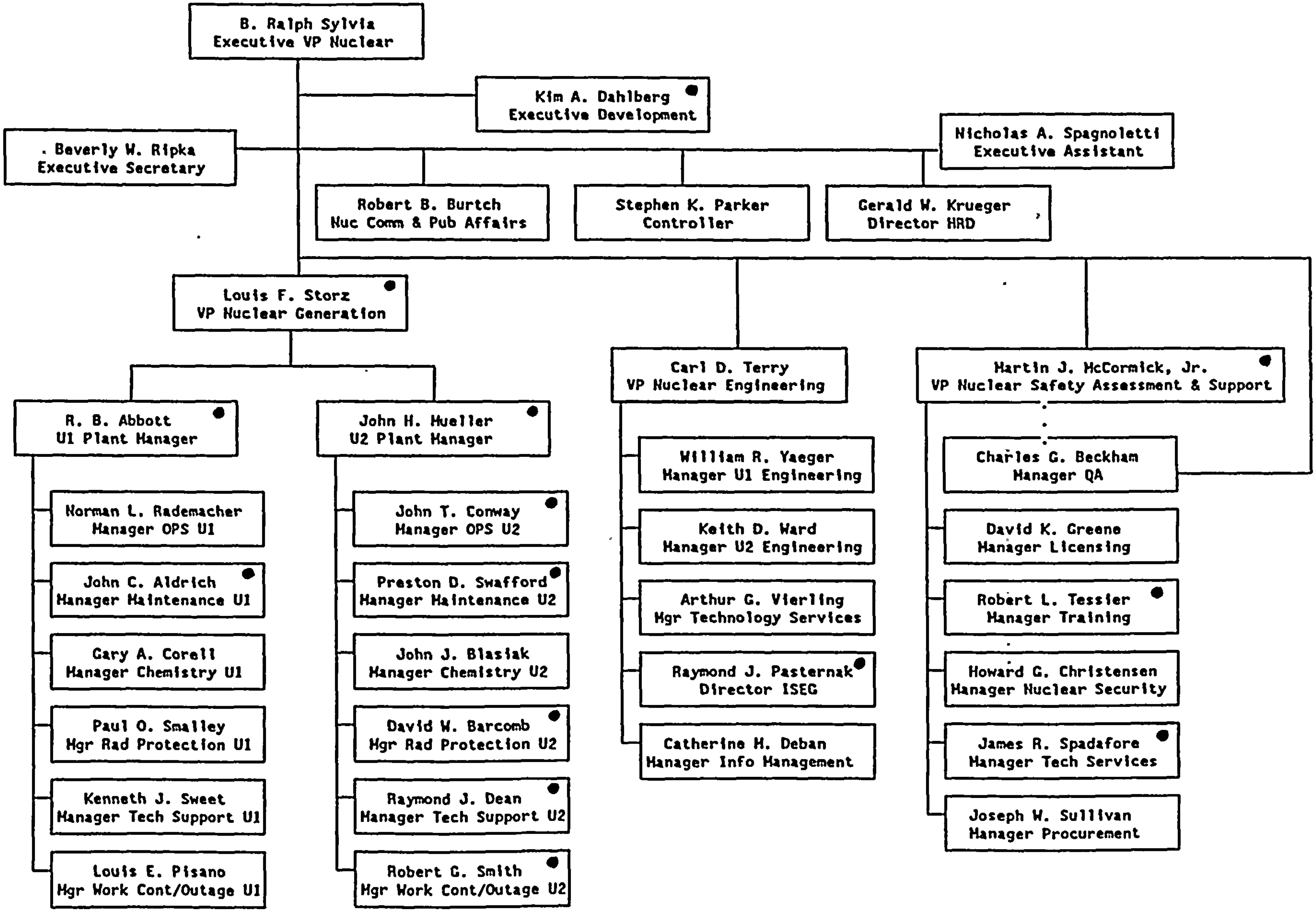
APRIL 15, 1994



NRC - NMPC
Senior Management Meeting
April 15, 1994

AGENDA	
Introduction	B. R. Sylvia
Organization Changes	B. R. Sylvia et. al.
Business Plans	B. R. Sylvia
Current Focus Issues	M. J. McCormick Jr. J. H. Mueller
Rightsizing	B. R. Sylvia
Competition	C. D. Terry M. J. McCormick Jr.

NMPC NUCLEAR SBU (Effec. April 1, 1994)



Louis F. Storz

Louis F. Storz joined Niagara Mohawk Power Corporation in March 1994. He is the Vice President, Nuclear Generation for the Corporation's Nuclear Strategic Business Unit. As Vice President, Nuclear Generation, Mr. Storz will oversee the daily operation of the company's two nuclear plants located at Nine Mile Point in Scriba, New York.

During the nine years before joining Niagara Mohawk Power Corporation, Mr. Storz was employed by Centerior Energy. Mr. Storz was elected as the Vice President, Davis-Besse on June 7, 1993. Prior to his promotion to Vice President, Mr. Storz was General Manager at the Davis-Besse Nuclear Power Station. Mr. Storz was instrumental in helping Davis-Besse achieve the positive turnaround of the nuclear plant during his eight years as General Manager.

Mr. Storz was employed by Louisiana Power and Light Company as the Assistant Plant Manager of Operations, Maintenance, and Planning & Scheduling for the Waterford III Nuclear Generating Station. Additionally, he was responsible for the Shift Technical Advisor (STA)/Shift Manager Program at Waterford.

From 1980 to 1983, Mr. Storz worked for South Carolina Electric & Gas. As the Assistant Plant Manager, Mr. Storz led the start-up testing to full power at their VC Summer Nuclear Unit 1. Additionally, Mr. Storz managed the Nuclear Training Department through cold license.

Mr. Storz joined Wisconsin Electric Power Company in 1972, where he worked for eight years. He held various management positions, including the Superintendent of Operations at Point Beach Nuclear Units 1 and 2. Mr. Storz assisted with the initial formation of the Institute of Nuclear Power Operations (INPO) organization as one of the six original loaned utility employees.

Mr. Storz's nuclear career began in the United States Navy where he served as a Nuclear Reactor Operator. He graduated from Purdue University in 1970 with a Bachelor of Science Degree in Mechanical Engineering. After graduating, he joined Babcock & Wilcox Company in Lynchburg, Virginia as a Contract System Engineer.

Mr. Storz is a member of the American Nuclear Society and the Society of Fire Protection Engineers. He is a Registered Professional Engineer and has held a Senior Reactor Operator's License at two plants.

NUCLEAR SBU EXECUTIVE SUMMARY				
NINE MILE POINT UNIT 1 PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
SAFETY INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Collective Radiation Exposure (Manrem/yr.Max)	288.3	398.4	18.41	125
Volume of Low-Level Radioactive Waste (m^3 shipped)	194.6	131.53	5.83	175
Unplanned Automatic Scrams Per Year	2	2	0	1
Safety System Performance Unavailability (rate/hours)				
High Pressure Injection/Heat Removal Systems	.005	.002/54.8	.006/52.3	.020/700.8
Residual Heat Removal System	.004	.014/831.9	.002/23	.020/1226
Emergency AC Power System	.013	.005/93.6	.003/11.6	.015/262.8
Skin & Clothing Contaminations (maximum per year)	152	193	8	125
Unplanned Radiological Releases	0	0	0	0
No. of Whole Body Counts Above Federal Evaluation Levels	0	0	0	0
Fuel Reliability (μCi/sec)	x	x	750	x

x - No target provided due to discovery of fuel leak

NUCLEAR SBU EXECUTIVE SUMMARY				
NINE MILE POINT UNIT 1 PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Total Revenue Required per Kwhr (¢)	-	4.92	3.86	4.58
Cost per Kwhr (O&M and fuel) (¢)	-	2.44	1.61	1.99
Average Net Capacity Factor (%)	54.2	80.8	99.8	90
Unit Capacity Factor (using MDC net) (%)	-	-	109.3	98
Non-Outage Power Block Backlog	394	376[1]	-	-
Total Non-Outage Power Block Backlog >90 days (%)	-	-	56.4	25
Thermal Performance (%)	98.9	99.4	100	99.2
Non-Outage Corrective Maintenance Control Room Deficiencies >6 weeks old	-	-	6	19
Non-Outage Temporary Modifications >1 year old	-	-	16	3
Chemistry Performance				
Chemistry Index (Reactor Water)	.182	.206	.181	.23
Feedwater Dissolved Oxygen (ppb)	34	32.5	-	-
Conductivity (u/Siemens/cm)	.078	.086	.077	.10
Total Non-Outage O&M ($ millions)	67	61.7	13.84	67.1
Total Planned Outage O&M ($ millions)	-	20.2	-	-
Total Capital ($ millions)	37.0	34.1	3.14	22.3

NUCLEAR SBU EXECUTIVE SUMMARY				
NINE MILE POINT UNIT 1 PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
REGULATORY INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Maximum No. of NRC Violations by Date of Discovery -Levels I, II, III -Level IV	 2 7	 0 2	 0 0	 0 8*
PROFESSIONAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
No. of Licensee Event Reports (LER's) and Violations Attributable to Personnel Errors	8	5	0	2
DER's Open for Implementation > 1 year	-	-	196	200
Open DER's Extended for Implementation ≥2 times	-	-	114	50

*Site target

NUCLEAR SBU EXECUTIVE SUMMARY

NINE MILE POINT UNIT 2 PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
SAFETY INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Collective Radiation Exposure (Manrem/yr.Max)	328.1	360.1	22.56	125
Volume of Low-Level Radioactive Waste (m^3 shipped)	216.2	160.98	54.19	250
Unplanned Automatic Scrams per year	4	1	1	1
Safety System Performance Unavailability (rate/hours)				
High Pressure Injection/Heat Removal Systems	.017	.016/232.66	.020/112.37	.020/350.4
Residual Heat Removal System	.004	.003/53.53	.010/15.45	.020/350.4
Emergency AC Power System	.005	.004/106.28	.006/59	.015/394.20
Skin & Clothing Contaminations (maximum per year)	733	127	5	125
Unplanned Radiological Releases	0	0	0	0
No. of Whole Body Counts Above Federal Evaluation Levels	8	0	0	0
Fuel Reliability (uCi/sec)	1.4	2.86	0	50

NUCLEAR SBU EXECUTIVE SUMMARY				
NINE MILE POINT UNIT 2 PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Total Revenue Required per Kwhr (¢)	-	8.63	8.24	7.87
Cost per Kwhr (O&M and fuel) (¢)	-	2.39	1.50	1.66
Average Net Capacity Factor (%)	54.5	77.7	83.81	90
Unit Capacity Factor (using MDC net) (%)	-	-	89.55	96
Non-Outage Power Block Backlog	382	702[(1)]	-	-
Total Non-Outage Power Block Backlog >90 days (%)	-	-	67	25
Thermal Performance (%)	99.1	98.6	99.03	99.3
Non-Outage Correcrive Maintenance Control Room Deficiencies >6 weeks old	-	-	11	25
Non-Outage Temporary Modifications >1 year old	-	-	30	10
Chemistry Performance				
Chemistry Index (Reactor Water)	.25	.202	.18	.29
Feedwater Dissolved Oxygen (ppb)	32	33	-	-
Conductivity (u/Siemens/cm)	.114	.096	.092	.13
Total Non-Outage O&M ($ millions)	88.5	94.6	19.49	88.9
Total Planned Outage O&M ($ millions)	34.0	33.1	-	-
Total Capital ($ millions)	30.2	36.5	2.89	38.7

NUCLEAR SBU EXECUTIVE SUMMARY				
NINE MILE POINT UNIT 2 PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
REGULATORY INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Maximum No. of NRC Violations by Date of Discovery				
-Levels I, II, III	0	0	0	0
-Level IV, V	7	4	0	8*
PROFESSIONAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
No. of Licensee Event Reports (LER's) and Violations Attributable to Personnel Errors	12	6	0	9
DER's Open for Implementation >1 year	-	-	216	250
Open DER's Extended for Implementation ≥2 times	-	-	154	50

*Site target

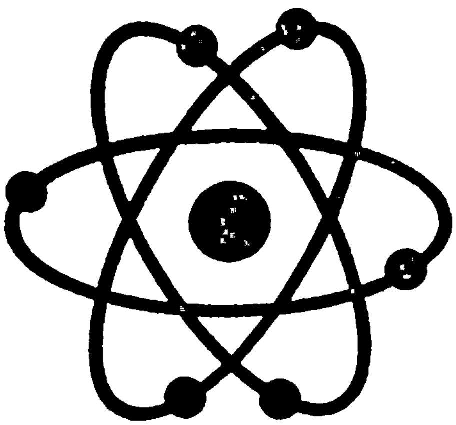
NUCLEAR SBU EXECUTIVE SUMMARY				
NINE MILE POINT COMMON PERFORMANCE INDICATORS	1992	1993	1994	
	ACTUAL	ACTUAL	YTD	TARGET
COMMON SAFETY INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Max.#/OSHA Recordable Lost Work Day Cases NMPC Employees	3	7	1	5
Max. # of OSHA Recordable Incidents NMPC Employees	-	47	10	55
Industrial Safety Accident Rate	-	-	1.02	0.65
COMMON COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
Year-End Staffing (rightsizing)				
NMPC Employees	1936	1710	1559	<1450
Long-Term Contractors	26	39	16	30
% of Power Block Work Requests on Hold for Materials	7	5.9	-	-
COMMON REGULATORY INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
% of NRC Commitments Met on Time	98.8	99.4	100	100
Repeat NRC Violations	-	-	0	0
% of INPO Commitments Met on Time	100	100	100	100
COMMON PROFESSIONAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN				
# of DER's Per Person Attributable to Personnel Errors Per Year	.42	.795	-	-
% of DER's Not Overdue (for disposition and implementation) More than 5 Workdays on Avg. (per month)	97.6	99.9	-	-
# of OJT Observations by Line Mgmt.	160	80	27	65
# of Management Observations of Trng.	408	220	92	150

REPRESENTED/MANAGEMENT POSITION SUMMARY:				
	ABOLISHMENTS		FINAL STAFFING	
BRANCH	REPRESENTED	MANAGEMENT	REPRESENTED	MANAGEMENT
Executive	1	7	4	48
Unit 1	50	15	174	110
Unit 2	36	1	315	168
Safety Assessment & Support	82	38	186	220
Engineering	84	65	68	144
TOTAL	253	126	747	690
	379		1437	

Attachment 2

Nuclear SBU

Performance Monitoring — Executive Report



MARCH, 1994

NUCLEAR SBU

Performance Monitoring - Executive Report

MARCH, 1994

Commercial Performance (continued)

EXECUTIVE SUMMARY
MARCH 1994
UNIT 1

GENERATION

Net generation was 461,583 Mwhrs for the month. Average net capacity factor was 100.2% (109.3% using MDC). This performance raised the 12 month average to 93.68%. The plant availability factor was 100%. Reductions in capacity factor were due to the following. On March 18, 1994, Core Thermal Power was reduced to 85% in order to reverse intake circulating water flow due to tunnel icing. On March 19, 1994, power was reduced to 87% to return back to normal intake circulating water flow. Other reductions in power during the month were due to weekly control valve testing and control rod testing.

FINANCIAL

Nuclear Production Operating and Maintenance preliminary expenditures were $4.63 million, which were under the monthly target by $1.1 million. The preliminary capital expenditures were $1.45 million, which were $.48 million under the monthly target.

TOTAL REVENUE REQUIRED

Total revenue required was 3.78¢/Kwhr for the month; 3.86¢ year-to-date.

PRODUCTION O&M AND FUEL

Cost/Kwhr was 1.58¢ for the month.

REPORTABLE EVENTS (LERs)

There were no reportable events.

NRC VIOLATIONS

There were no Notices of Violations.

COLLECTIVE RADIATION EXPOSURE

Collective radiation exposure was 4.59 manrem while the target was 10.42 manrem. The cumulative target through March was 31.26 manrem while the cumulative actual year-to-date was 18.41 manrem. The 1994 target is 125 manrem or less.

INDUSTRIAL SAFETY

There were no reportable OSHA lost work day cases in March. As of March 31, 1994, Unit 1 employees have worked 217,141 hours or 100 days without a lost time accident.

EXECUTIVE SUMMARY
MARCH 1994
UNIT 2

GENERATION

Net generation was 449,385 Mwhrs for the month. Average net capacity factor was 56.88% (60.77% using MDC). This performance lowered the 12 month average to 75.13%. The plant availability factor was 64.8%. Reductions in capacity factor were due to the automatic shutdown of the unit on March 12 during performance of a scheduled surveillance; a circuit malfunction caused a turbine control valve fast closure and reactor scram. The unit was returned to service on March 16. Reactor power was reduced on March 20 to remove the fourth point heater drain pump from service for corrective maintenance. Commenced a plant shutdown on March 22 as a result of nitrogen leaking solenoid block on a safety relief valve. Following completion of corrective actions, the unit returned to service on March 31.

FINANCIAL

Nuclear Production Operating and Maintenance preliminary expenditures were $6.62 million, which were under the monthly target by $.87 million. The preliminary capital expenditures were $1.16 million, which were $1.53 million under the monthly target.

TOTAL REVENUE REQUIRED

Total revenue required was 11.18¢/Kwhr for the month; 8.24¢ year-to-date.

PRODUCTION O&M AND FUEL

Cost/Kwhr was 1.53¢ for the month.

REPORTABLE EVENTS (LERs)

There was one (1) reportable event. See page 10 for a description of the event.

NRC VIOLATIONS

There were no Notices of Violations.

COLLECTIVE RADIATION EXPOSURE

Collective radiation exposure was 13.44 manrem while the target was 10.42 manrem. The cumulative target through March was 31.26 manrem while the cumulative actual year-to-date was 22.56 manrem. The 1994 target is 125 manrem or less.

INDUSTRIAL SAFETY

There were no reportable OSHA lost work day cases in March. As of March 31, 1994, Unit 2 employees have worked 698,028 hours or 156 days without a lost time accident.

NUCLEAR SBU EXECUTIVE SUMMARY						
NINE MILE POINT UNIT 1 PERFORMANCE INDICATORS	1994 PERFORMANCE INDICATORS					
	1994 TARGET	MONTH OF MARCH		YEAR-TO-DATE		
		ACTUAL	TARGET	ACTUAL	TARGET	
SAFETY INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
1A. Collective Radiation Exposure (Manrem/yr. max) #	125	4.59	10.42	18.41	31.26	
1B. Volume of Low-Level Solid Radioactive Waste (m^3/ft^3)	175 / 6180	5.83 / 205.80	15 / 515	5.83 / 205.80	44 / 1545	
1C. Unplanned Automatic Scrams Per Year #	1	0	0	0	1	
1D. Safety System Performance (rate/hours)						
• BWR high pressure injection/heat removal systems	.020 / 700.8	0 / 0	.020 / 58.4	.006 / 52.3	.020 / 175.2	
• BWR residual heat removal system	.020 / 1226	0 / 0	.020 / 102.17	.002 / 23	.020 / 306.5	
• Emergency AC power system	.015 / 262.8	0 / 0	.015 / 21.9	.003 / 11.6	.015 / 65.7	
1E. Contamination Occurrence Reports	125	2	10	8	31	
1F. Unplanned Radiological Releases	0	0	0	0	0	
1G. No. of Whole Body Counts Above Federal Evaluation Levels	0	0	0	0	0	
1H. Fuel Reliability (μCi/sec)	x	696	x	750	x	
1I. No. LER's due to missed Tech Spec Surveillance Tests	0	0	0	0	0	
COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
2A. Total Revenue Required per Kwhr(¢)	4.58	3.78	4.54	3.86	4.58	
2B. Cost per Kwhr (Production O&M and fuel) (¢)	1.99	1.58	1.98	1.61	2.03	
2C. Average Net Capacity Factor (%) #	90	100.2	90	99.8	90	
Unit Capacity Factor (using MDC net) (%)	98	109.3	98	109.3	98	

#Management Salary Incentive Performance Indicator
x = No target provided due to discovery of fuel leak

NUCLEAR SBU EXECUTIVE SUMMARY						
NINE MILE POINT UNIT 2 PERFORMANCE INDICATORS		1994 PERFORMANCE INDICATORS				
		1994 TARGET	MONTH OF MARCH		YEAR-TO-DATE	
			ACTUAL	TARGET	ACTUAL	TARGET
SAFETY INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
1A.	Collective Radiation Exposure (Manrem/yr. max) #	125	13.44*	10.42	22.56	31.26
1B.	Volume of Low-Level Solid Radioactive Waste (m^3/ft^3)	250 / 8830	20.35 / 718.35	21 / 735.8	54.19 / 1912.91	62 / 2207
1C.	Unplanned Automatic Scrams Per Year #	1	1	0	1	1
1D.	Safety System Performance (rate/hours) • BWR high pressure injection/heat removal systems • BWR residual heat removal system • Emergency AC power system	 .020 / 350.4 .020 / 350.4 .015 / 394.20	 0 / 0 0 / 0 .004 / 8.37	 .020 / 29.2 .020 / 29.2 .015 / 32.8	 .029 / 112.37 .010 / 15.45 .006 / 59	 .020 / 87.6 .020 / 87.6 .015 / 98.5
1E.	Contamination Occurrence Reports	125	2	10	5	31
1F.	Unplanned Radiological Releases	0	0	0	0	0
1G.	No. of Whole Body Counts Above Federal Evaluation Levels	0	0	0	0	0
1H.	Fuel Reliability (μCi/sec)	50	0	50	0	50
1I.	No. LER's due to missed Tech Spec Surveillance Tests	0	0	0	0	0
COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
2A.	Total Revenue Required per Kwhr (¢)	7.87	11.18	7.77	8.24	7.97
2B.	Cost per Kwhr (Production O&M and fuel) (¢)	1.66	1.53	1.64	1.50	1.68
2C.	Average Net Capacity Factor (%) #	90	56.88	90	83.81	90
	Unit Capacity Factor (using MDC net) (%)	96	60.77	96	89.55	96

#Management Salary Incentive Performance Indicator

NUCLEAR SBU EXECUTIVE SUMMARY					
NINE MILE POINT UNIT 1 PERFORMANCE INDICATORS	1994 PERFORMANCE INDICATORS				
	1994 TARGET	MONTH OF MARCH		YEAR-TO-DATE	
		ACTUAL	TARGET	ACTUAL	TARGET
COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN (continued)					
2D. Thermal Performance (%)	99.2	100	99.2	100	99.2
2F. Non-Outage Corrective Maintenance Control Room Deficiencies >6 weeks old	19	6	19	6	19
2G. Non-Outage Temporary Modifications >1 year old	3	16	TBD	16	TBD
2H. Total Non-Outage Power Block Backlog >90 days (%)	25	56.4	TBD	56.4	TBD
2I. Chemistry Performance					
• Chemistry Index (reactor water)	.23	.176	.23	.181	.23
• Conductivity (μ Siemens/cm)	.10	.077	.10	.077	.10
2J. Total Non-Outage Production O&M ($ millions)	67.1	4.63	5.73	13.84	16.94
2L. Total Capital ($ millions)	22.3	1.45	1.93	3.14	5.67
PROFESSIONAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN					
4A. No. of Licensee Event Reports (LER's) and Violations Attributable to Personnel Error #	8	0	1	0	2
4B. DER's Open for Implementation >1 year	200	196	200	196	200
4C. Open DER's Extended for Implementation ≥2 Times	50	114	134	114	134

Management Salary Incentive Performance Indicator

NUCLEAR SBU EXECUTIVE SUMMARY

NINE MILE POINT UNIT 2 PERFORMANCE INDICATORS	1994 PERFORMANCE INDICATORS				
	1994 TARGET	MONTH OF MARCH		YEAR-TO-DATE	
		ACTUAL	TARGET	ACTUAL	TARGET
COMMERCIAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN (continued)					
2D. Thermal Performance (%)	99.3	98.8	99.3	99.03	99.3
2F. Non-Outage Corrective Maintenance Control Room Deficiencies >6 weeks old	25	11	25	11	25
2G. Non-Outage Temporary Modifications >1 year old	10	30	30	30	30
2H. Total Non-Outage Power Block Backlog >90 days (%)	25	67	TBD	67	TBD
2I. Chemistry Performance					
• Chemistry Index (reactor water)	.29	.20	.29	.18	.29
• Conductivity (μ Siemens/cm)	.13	.098	.13	.092	.13
2J. Total Non-Outage Production O&M ($ millions)	88.9	6.62	7.49	19.49	22.16
2L. Total Capital ($ millions)	38.7	1.16	2.69	2.89	8.04
PROFESSIONAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN					
4A. No. of Licensee Event Reports (LER's) and Violations Attributable to Personnel Error #	9	0	1	0	2
4B. DER's Open for Implementation >1 year	250	216	250	216	250
4C. Open DER's Extended for Implementation ≥2 Times	50	154	134	154	134

Management Salary Incentive Performance Indicator

NUCLEAR SBU EXECUTIVE SUMMARY						
NINE MILE POINT COMMON PERFORMANCE INDICATORS		1994 PERFORMANCE INDICATORS				
		1994 TARGET	MONTH OF MARCH		YEAR-TO-DATE	
			ACTUAL	TARGET	ACTUAL	TARGET
SAFETY INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
1J.	Maximum No. of OSHA Recordable Lost Work Day Cases # ● NMPC Employees	5	1[1]	1	1[1]	1
1K.	Maximum No. of OSHA Recordable Incidents ● NMPC Employees	55	2	4	10	14
1L.	Industrial Safety Accident Rate	0.65	1.14	0.65	1.02	0.65
REGULATORY INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
3A.	Maximum No. of NRC Violations by Date of Discovery: ● Levels I, II, III ● Levels IV, V	0 8	0 0	0 1	0 0	0 2
3B.	Repeat NRC Violations	0	0	0	0	0
3C.	% of NRC Commitments Met on Time #	100	100	100	100	100
3D.	% of INPO Commitments Met on Time #	100	100	100	100	100
PROFESSIONAL INDICATORS IN NUCLEAR SBU BUSINESS PLAN						
4D.	No. of OJT Observations by Line Management	65	10	6	27	16
4E.	No. of Management Observations of Training	150	33	12	92	37
4F.	Year-End Staffing ● NMPC Employees ● Long-Term Contractors	≤1450 30	1559[2] 16	TBD 54	1559[2] 16	TBD 54

#Management Salary Incentive Performance Indicator
[1]Individual supports both units
[2]Excludes 54 temporary, part-time and student employees (Preliminary)

ACTION ITEM STATUS REPORT/SUMMARY

OBJECTIVE	MARCH ACTION ITEMS # COMPLETED ON TIME/# DUE	CUMULATIVE TOTAL # COMPLETED ON TIME/# DUE	YEAR-TO-DATE # COMPLETED/ # DUE
SAFETY	3/3	6/6	6/6
% MET	100%	100%	100%
COMMERCIAL	2/5	5/8	5/8[1][2][3]
% MET	40%	62%	62%
REGULATORY	N/A	5/7	6/7[4]
% MET	N/A	71%	86%
PROFESSIONAL	6/8	13/16	13/16[5][6][7]
% MET	75%	81%	81%
TOTAL ACTIONS	11/16	29/37	30/37
% MET	69%	78%	81%

Open Items (Not Met on Time):

[1]Item 2C3. Develop for use a meaningful Return on Net Asset (RONA) for the Nuclear SBU.
- ✓ Preliminary RONA statements have been developed. (Retargeted for July 1994)

[2]Item 2C7a. Develop plan for a comprehensive tool control program.

[3]Item 2C10. Develop and implement the integrated long-range plan.
- ✓ Draft plan being compiled. (Retargeted for May 1994)

[6]Item 4C3c. Develop Nuclear SBU award for innovative ideas that improve performance and reduce costs.
- ✓ No progress. (Retargeted for July 1994)

[7]Item 4B2a. Set schedule for assessment process for remaining branches.

Still Not Met from Previous Months:

[4]Item 3B3. Schedule a legislative/opinion leader reception.
- ✓ A decision will be made in the next quarter (spring) on the appropriate time to schedule this reception.

[5]Item 4D1c. Improve goal setting and coaching skills on performance management.
- ✓ Performance evaluations moved ahead to coincide with rightsizing assessment process. (Retargeted for October 1994)

N/A = Not Applicable

UNIT 1

LER/VIOLATION SUMMARY

LERs

During March, there were no reportable events to the NRC.

NOTICES OF VIOLATIONS

During March, NMP Unit 1 received no Notices of Violations.

SIGNIFICANT EVENTS

OPERATIONS

- ✓ NMP1 automatically shut down on April 5 ending a run of 352 continuous, safe service; preliminary review identified the cause of the scram to be a failed relay.
- ✓ An all-time monthly record for Net Electric Generation was established in March at 461,577 MWh.

Work Control/Outage Management

- ✓ First GL89-10 valve (93-26) successfully staged and tested.

UNIT 2

LER/VIOLATION SUMMARY

LERs

During March, there was one (1) reportable event to the NRC.

LER 94-01 On March 12, 1994 at 1923 hours, Nine Mile Point Unit 2 (NMP2) experienced several Engineered Safety Feature actuations. Specifically, an automatic reactor scram caused by turbine control valve fast closure and primary containment and reactor vessel isolations caused by low (Level 3) reactor vessel water level. At the time of the event, the reactor mode switch was in the "RUN" position (Operational Condition 1) with the plant operating at approximately 100 percent of rated thermal power.

The cause of the event was a faulty pushbutton test switch in the power/load unbalance trip circuit of the Turbine Electrohydraulic Control (EHC) system. This caused the power/load unbalance trip circuit to become energized and subsequently, the turbine control valves to fast close on a power/load unbalance trip signal initiating this event. The root cause of this event is poor equipment design.

NOTICES OF VIOLATIONS

During March, NMP Unit 2 received no Notices of Violations.

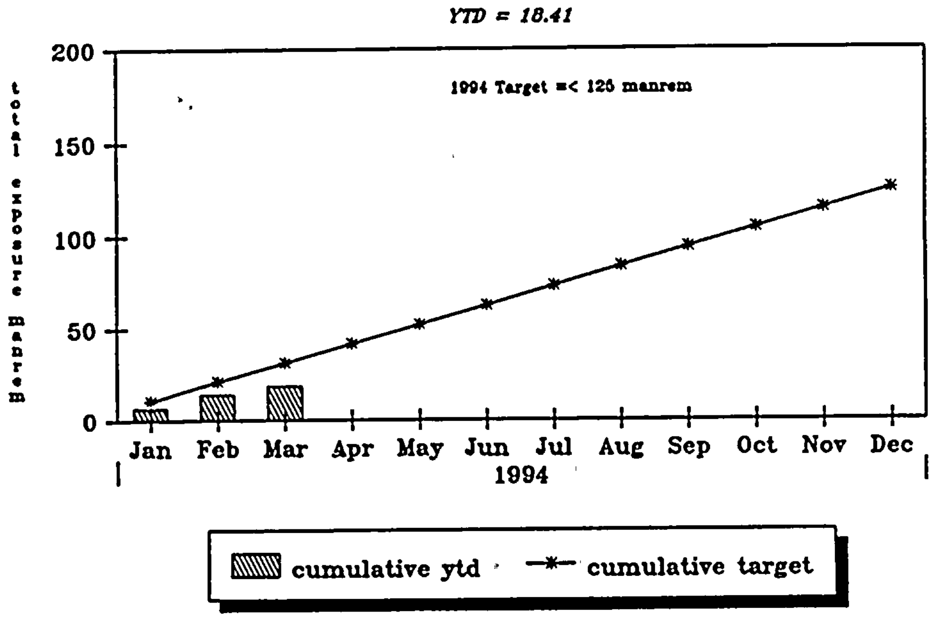
SIGNIFICANT EVENTS

- On 3/5/94, the Division II Emergency Diesel Generator was declared inoperable because of a burned out relay in its starting circuit. The relay was replaced and a post maintenance test was successfully completed and the diesel was declared operable. This event resulted in an unplanned entry into a Limiting Condition of Operation (LCO).
- At 1923 hours on 3/12/94, Unit 2 scrammed during performance of scheduled surveillance N2-PM-W3, "Weekly Testing of Turbine Protective Devices." The power/load unbalance portion of the surveillance was being performed when a malfunction in the circuit caused a turbine control valve fast closure and reactor scram. Plant systems performed as designed in response to the scram. Unit 2 was returned to service at 0610 hours on 3/16/94.
- On 3/20/94, reactor power was reduced to 95% to remove the fourth point heater drain pump from service for corrective maintenance. The shaft seal and lower motor bearing were replaced, and it was later determined that the motor shaft was bent. The shaft was straightened and the pump returned to service on 3/28/94.
- Commenced plant shutdown on 3/22/94 to investigate nitrogen leakage inside the primary containment. The leak was found to be the result of a leaking solenoid block on 2MSS*PSV124. Further investigation identified foreign material contamination of six SRV's which underwent flexible air line replacement during RFO-03. Following the completion of corrective actions, Unit 2 was returned to service at 2317 hours on 3/31/94.

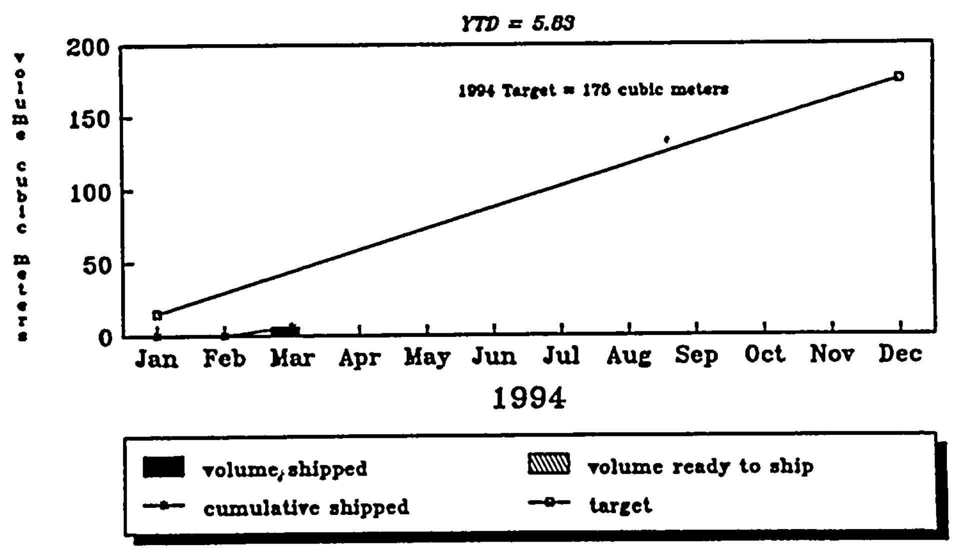
BUSINESS PLAN

PERFORMANCE INDICATOR GRAPHS

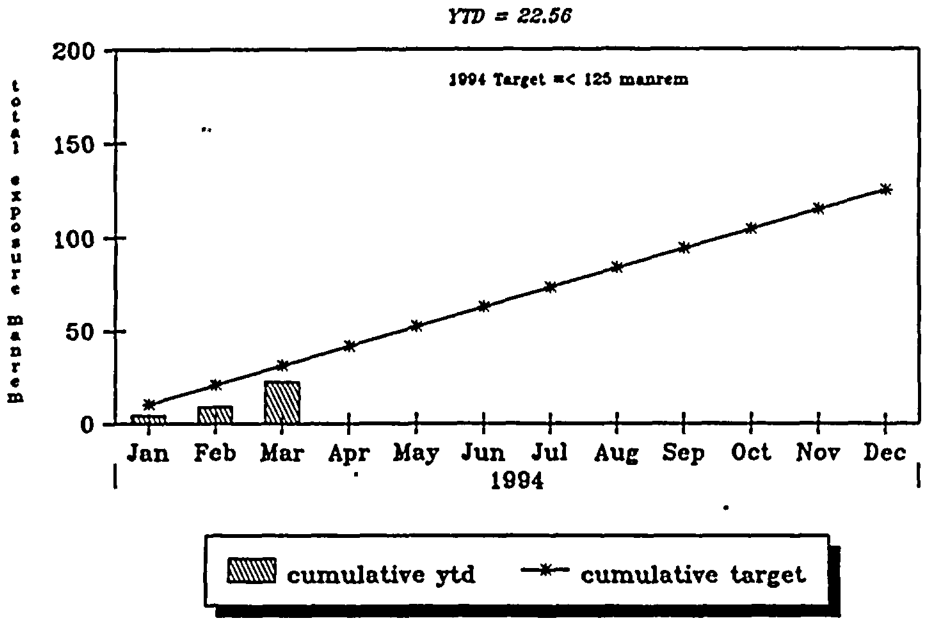
PI 1A. NINE MILE POINT UNIT 1
COLLECTIVE RADIATION EXPOSURE



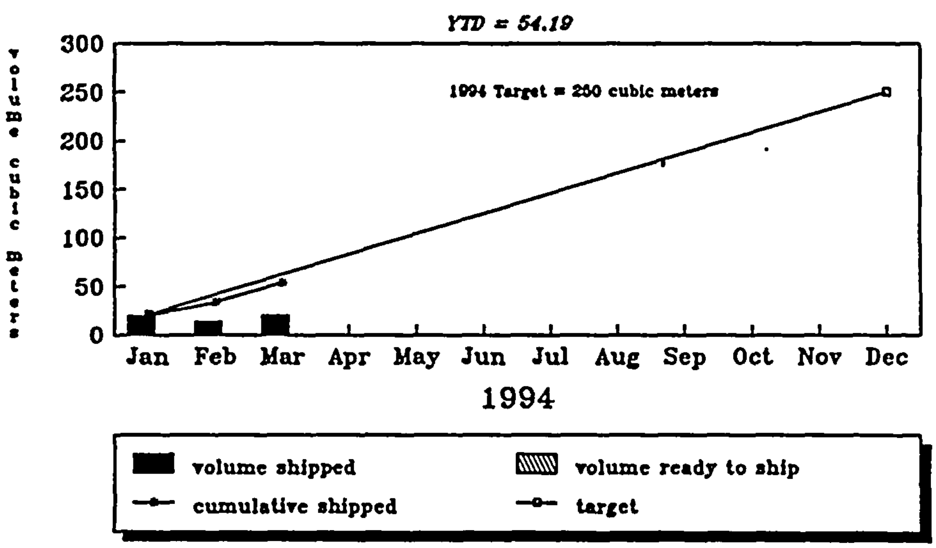
PI 1B. NINE MILE POINT UNIT 1
TOTAL SOLID RADWASTE
(Volume of Low–Level Solid Radwaste)



PI 1A. NINE MILE POINT UNIT 2 COLLECTIVE RADIATION EXPOSURE

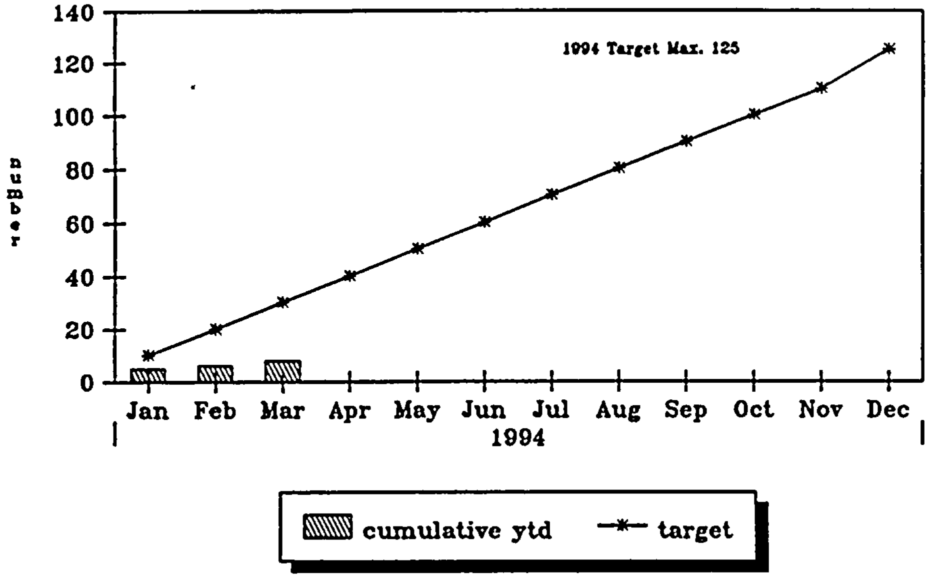


PI 1B. NINE MILE POINT UNIT 2 TOTAL SOLID RADWASTE (Volume of Low-Level Solid Radwaste)



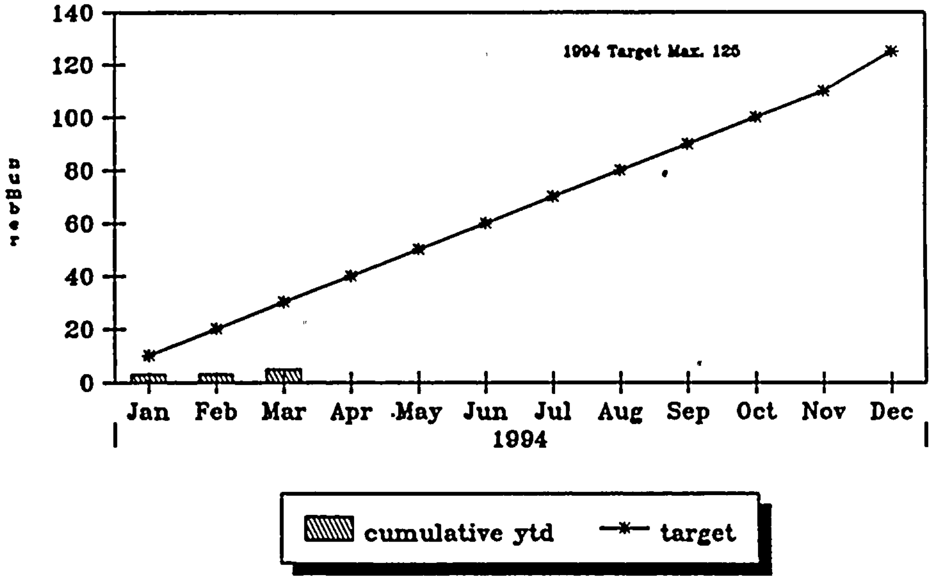
PI 1E. NINE MILE POINT UNIT 1
CONTAMINATION OCCURRENCE REPORTS

YTD = 8



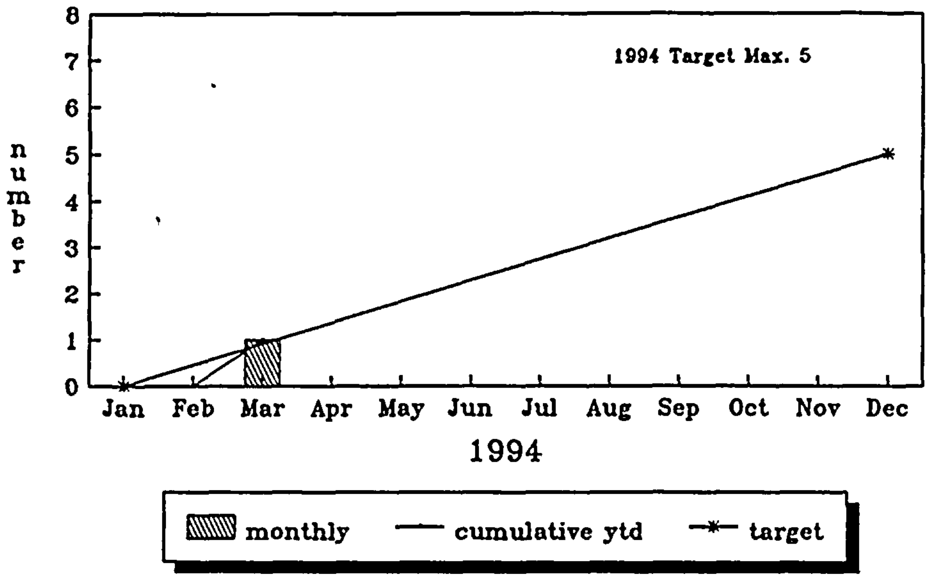
PI 1E. NINE MILE POINT UNIT 2
CONTAMINATION OCCURRENCE REPORTS

YTD = 5



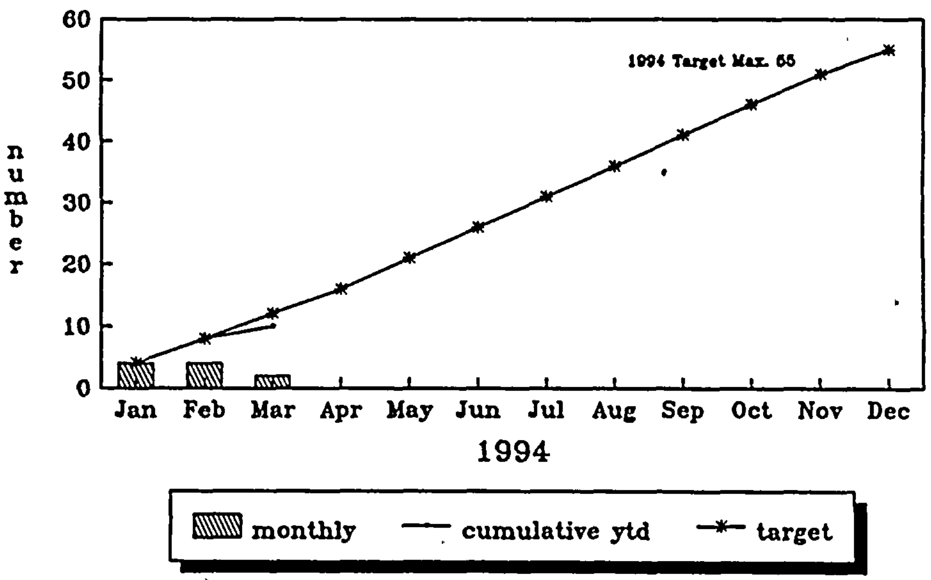
PI 1J. NUCLEAR SBU
OSHA LOST WORK DAY CASES

YTD = 1



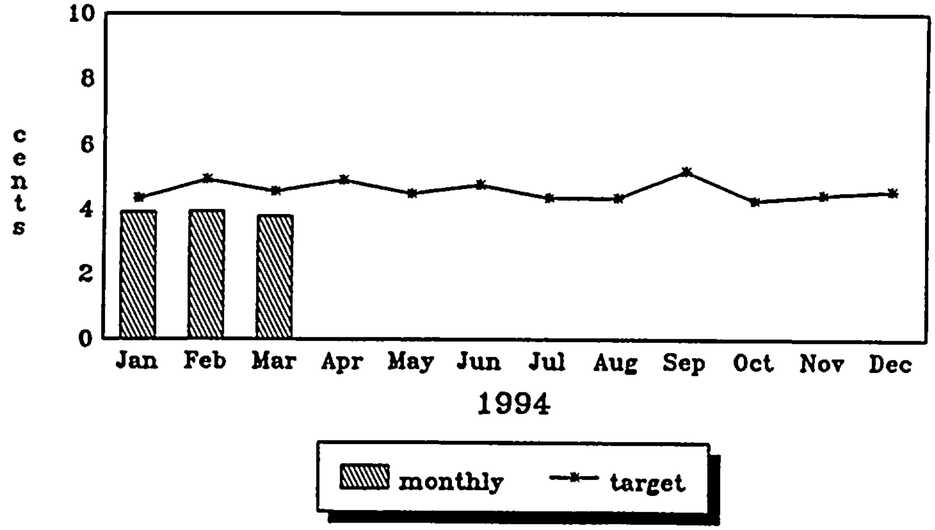
PI 1K. NUCLEAR SBU
OSHA RECORDABLE INCIDENTS

YTD = 10



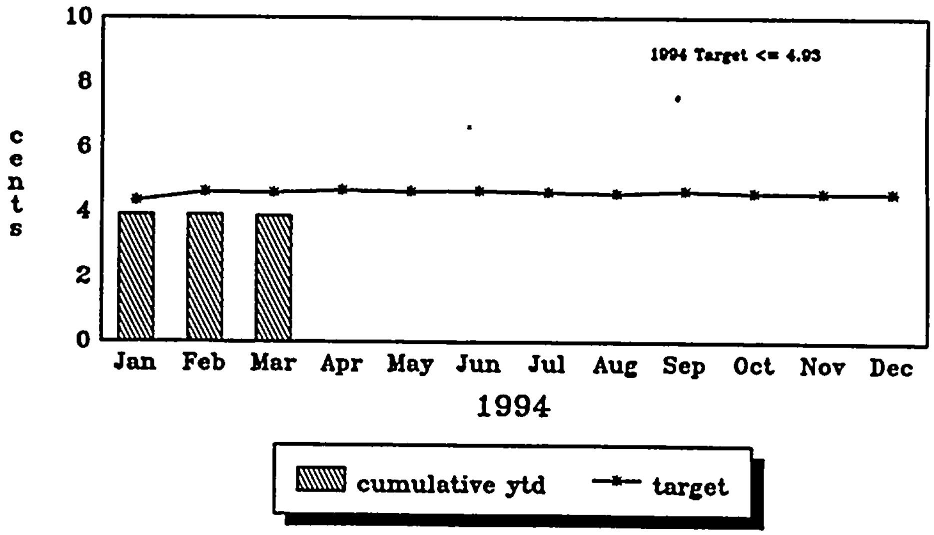
PI 2A. NINE MILE POINT UNIT 1
TOTAL REVENUE REQUIRED PER Kwhr
(Monthly)

MONTH = 3.78



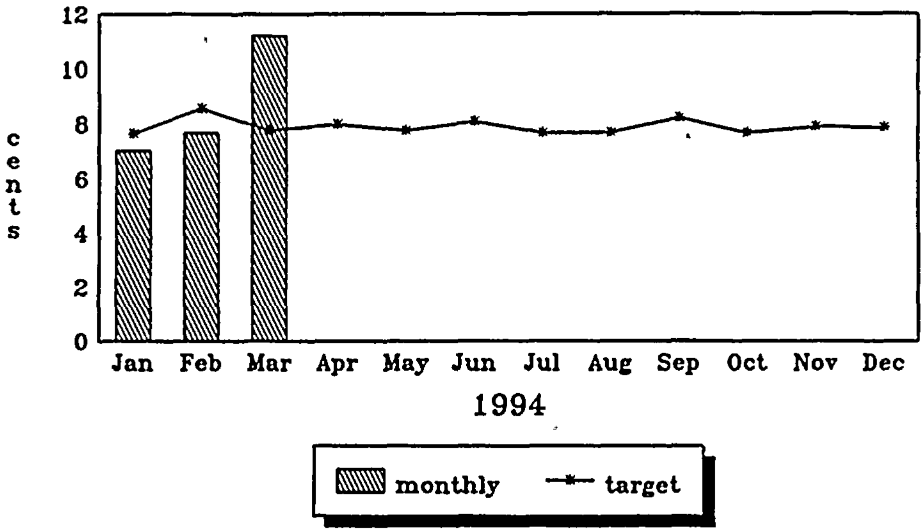
PI 2A. NINE MILE POINT UNIT 1
TOTAL REVENUE REQUIRED PER Kwhr
(Average YTD)

YTD = 3.86



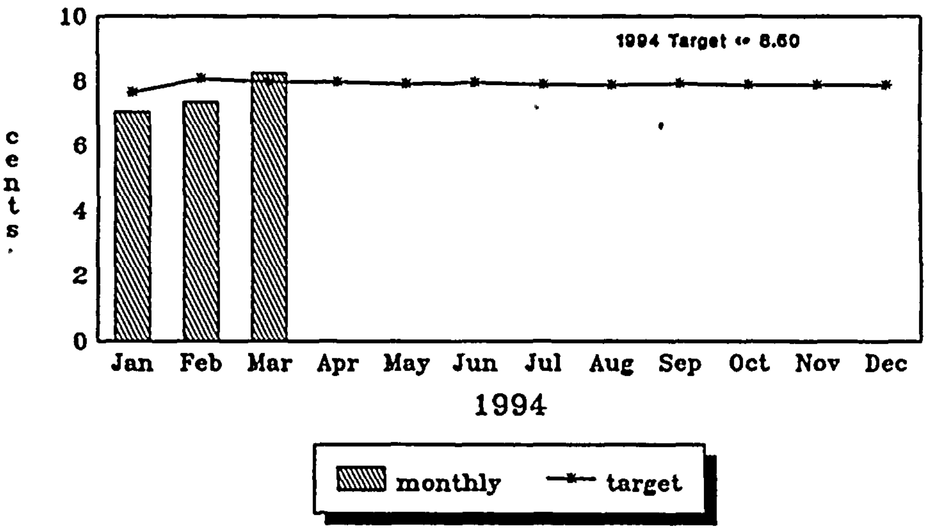
PI 2A. NINE MILE POINT UNIT 2
TOTAL REVENUE REQUIRED PER Kwhr
(Monthly)

MONTH = 11.18

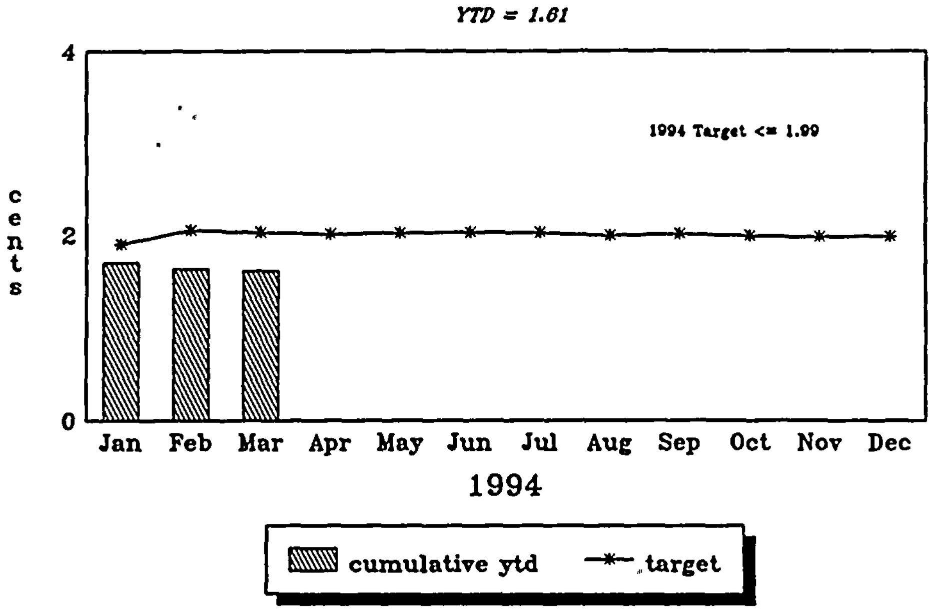


PI 2A. NINE MILE POINT UNIT 2
TOTAL REVENUE REQUIRED PER Kwhr
(Average YTD)

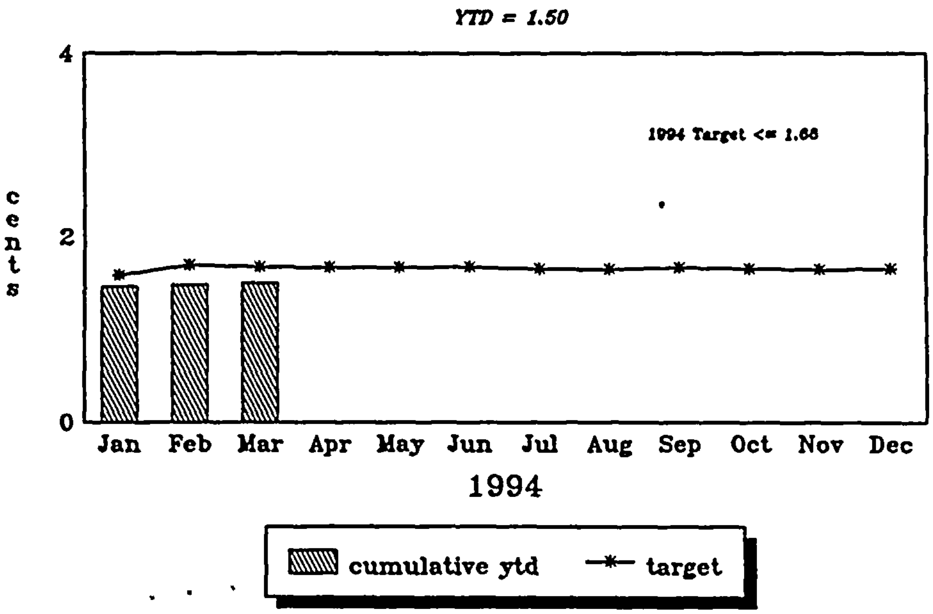
YTD = 8.24



PI 2B. NINE MILE POINT UNIT 1
COST PER Kwhr (Production O&M and Fuel)

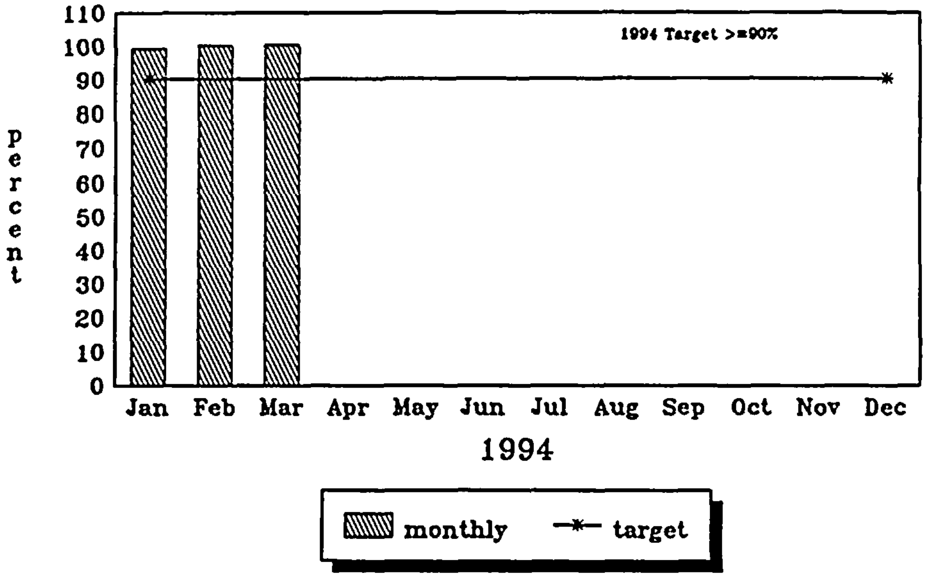


PI 2B. NINE MILE POINT UNIT 2
COST PER Kwhr (Production O&M and Fuel)



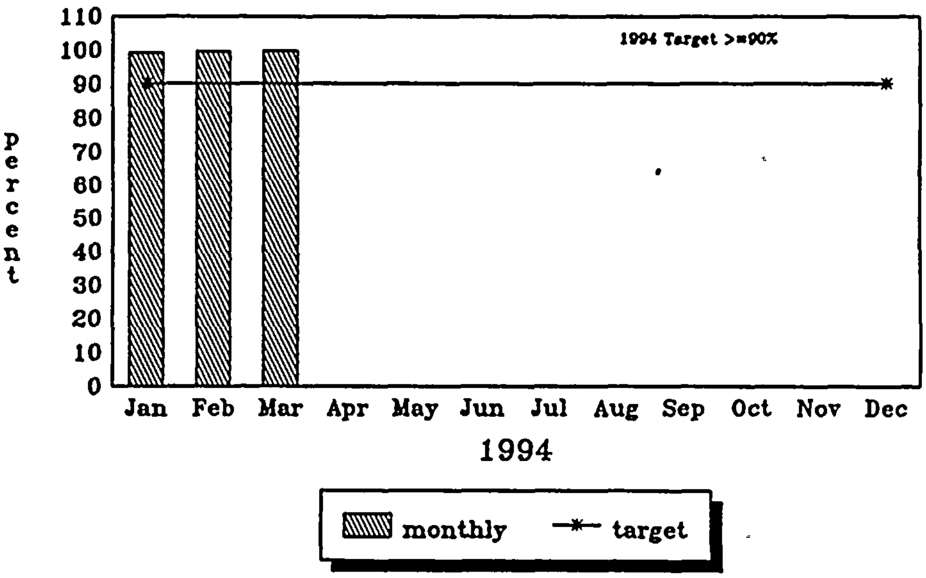
PI 2C. NINE MILE POINT UNIT 1
MONTHLY AVG. NET CAPACITY FACTOR

MONTH = 100.2%



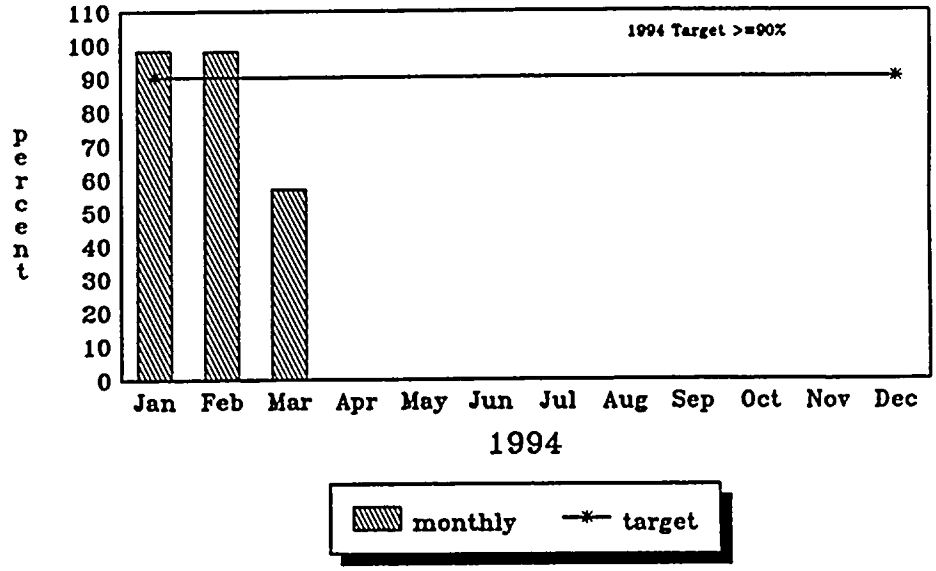
PI 2C. NINE MILE POINT UNIT 1
CUMULATIVE AVG. NET CAPACITY FACTOR

YTD = 99.8%



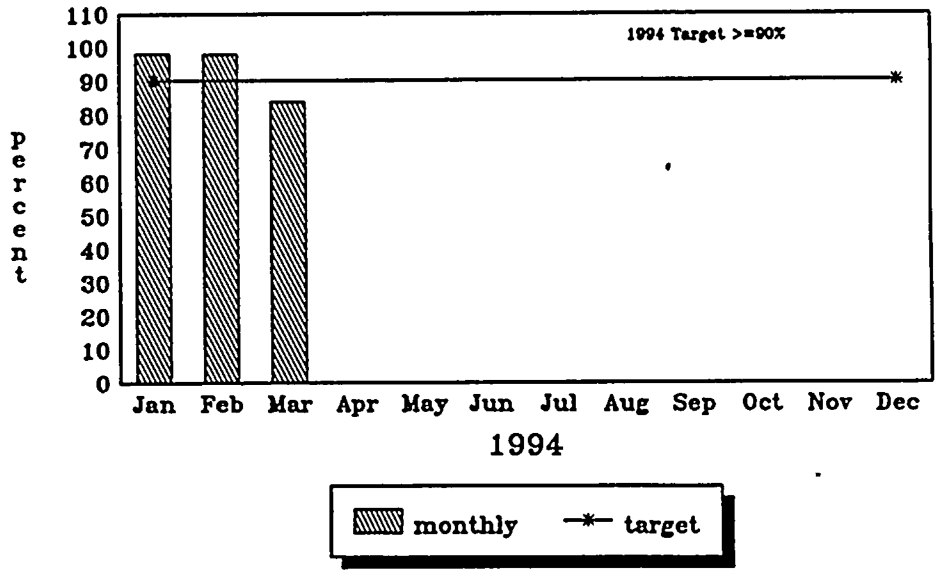
PI 2C. NINE MILE POINT UNIT 2
MONTHLY AVG. NET CAPACITY FACTOR

MONTH = 56.88%



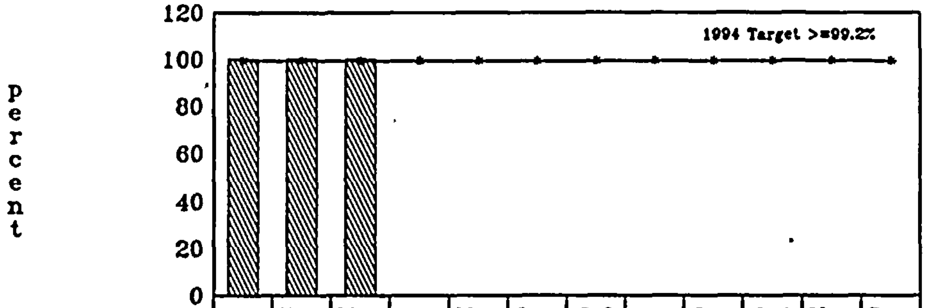
PI 2C. NINE MILE POINT UNIT 2
CUMULATIVE AVG. NET CAPACITY FACTOR

YTD = 83.81%



PI 2D. NINE MILE POINT UNIT 1
THERMAL PERFORMANCE

YTD = 100%



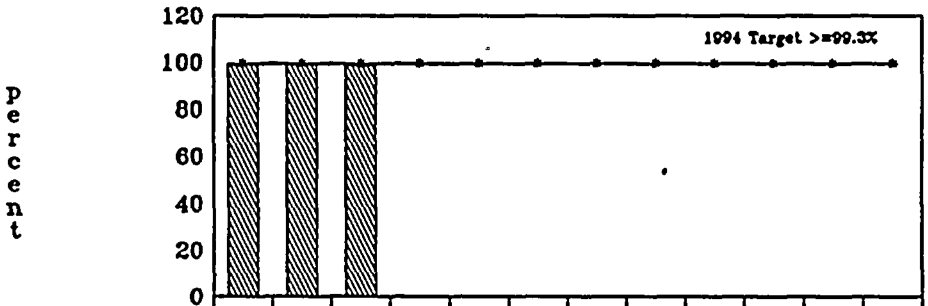
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
monthly actual	100	100	100									
target	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2

1994

monthly actual — target

PI 2D. NINE MILE POINT UNIT 2
THERMAL PERFORMANCE

YTD = 99.03%

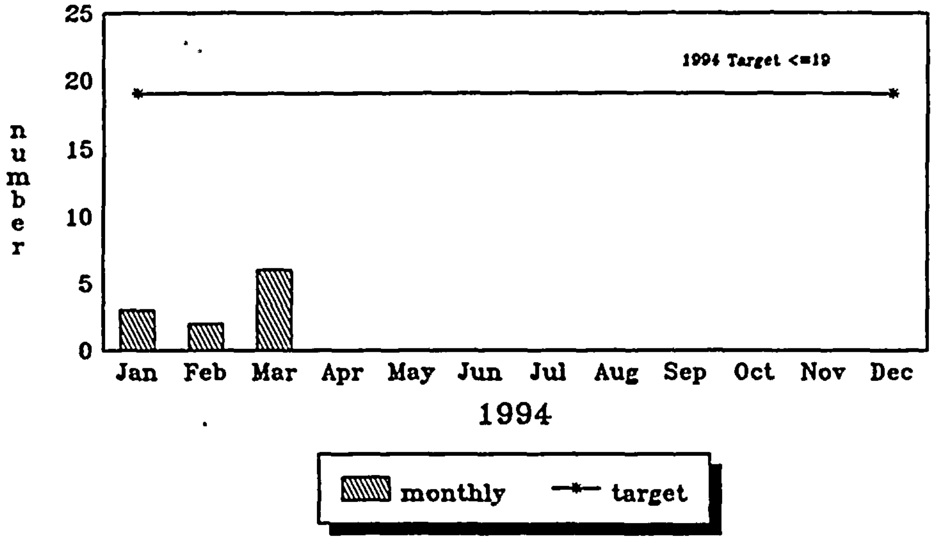


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
monthly actual	99.1	99.1	98.8									
target	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.3

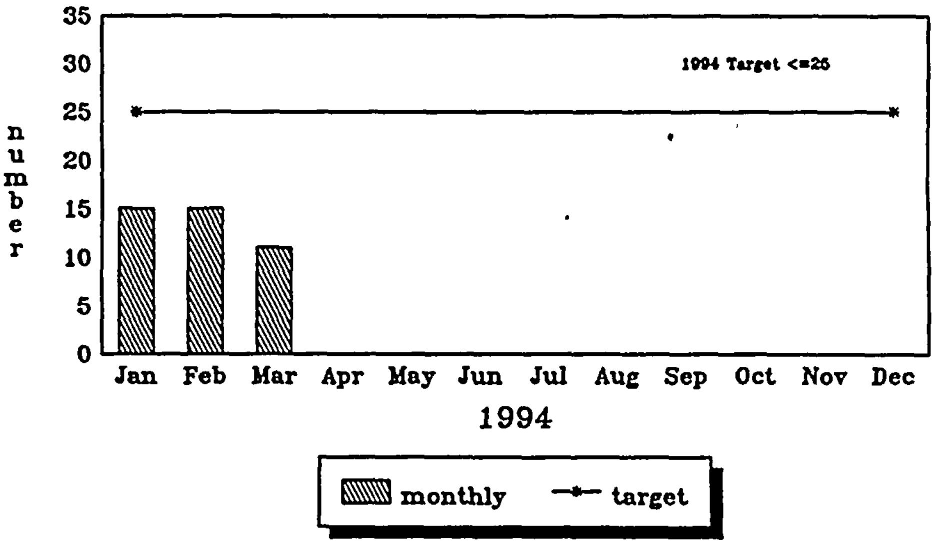
1994

monthly actual — target

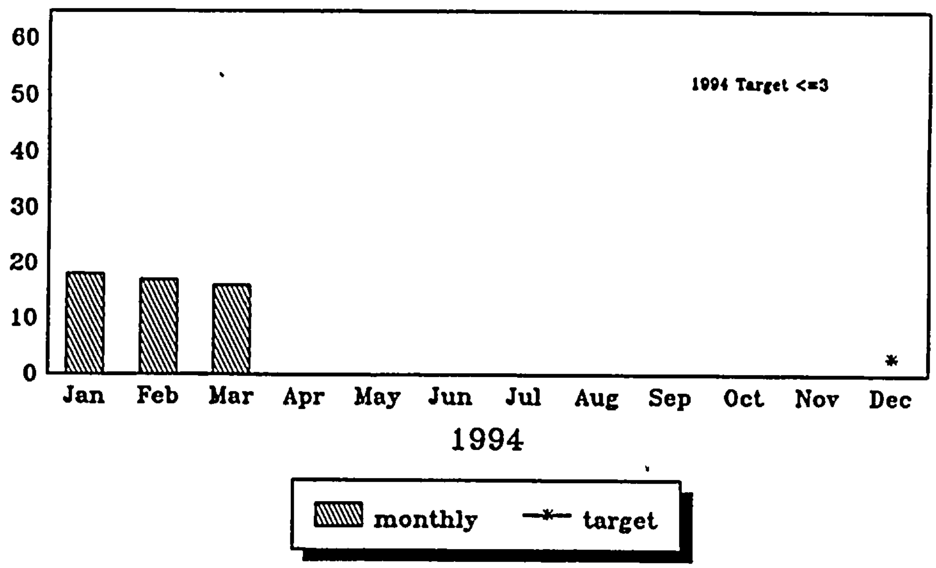
PI 2F. NINE MILE POINT UNIT 1
NON-OUTAGE CORRECTIVE MAINTENANCE
CONTROL ROOM DEFICIENCIES >6 WEEKS OLD



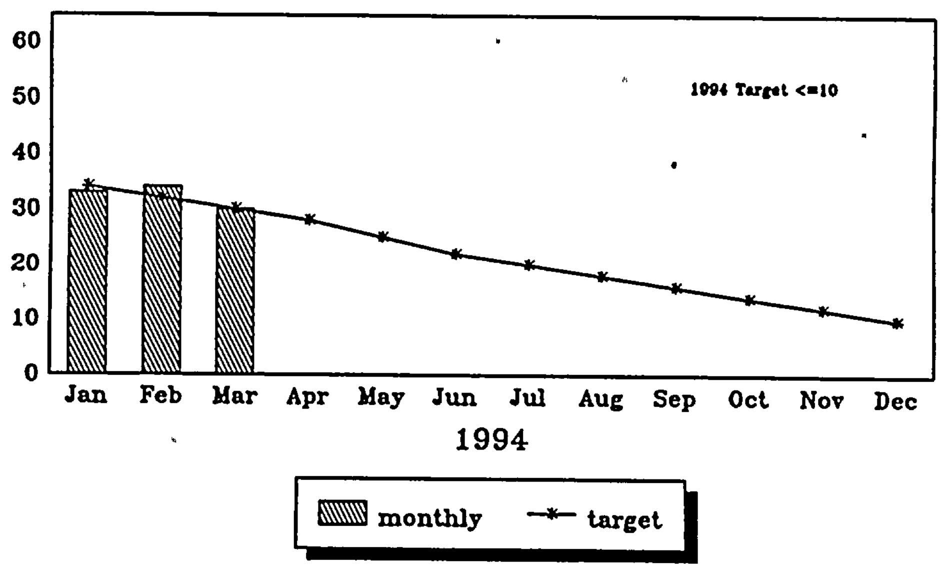
PI 2F. NINE MILE POINT UNIT 2
NON-OUTAGE CORRECTIVE MAINTENANCE
CONTROL ROOM DEFICIENCIES >6 WEEKS OLD



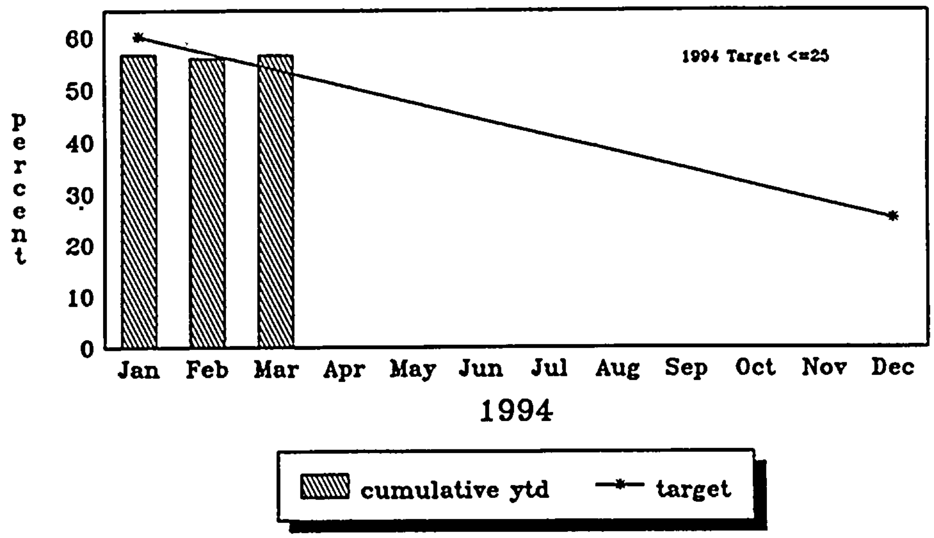
PI 2G. NINE MILE POINT UNIT 1 NON-OUTAGE TEMPORARY MODIFICATIONS >1 YEAR OLD



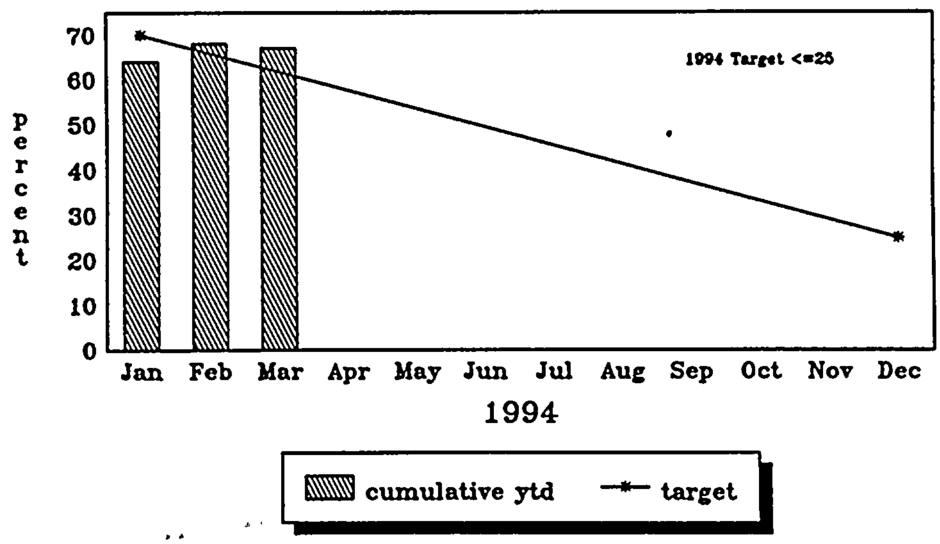
PI 2G. NINE MILE POINT UNIT 2 NON-OUTAGE TEMPORARY MODIFICATIONS >1 YEAR OLD



PI 2H. NINE MILE POINT UNIT 1
TOTAL NON-OUTAGE POWER BLOCK
BACKLOG >90 DAYS

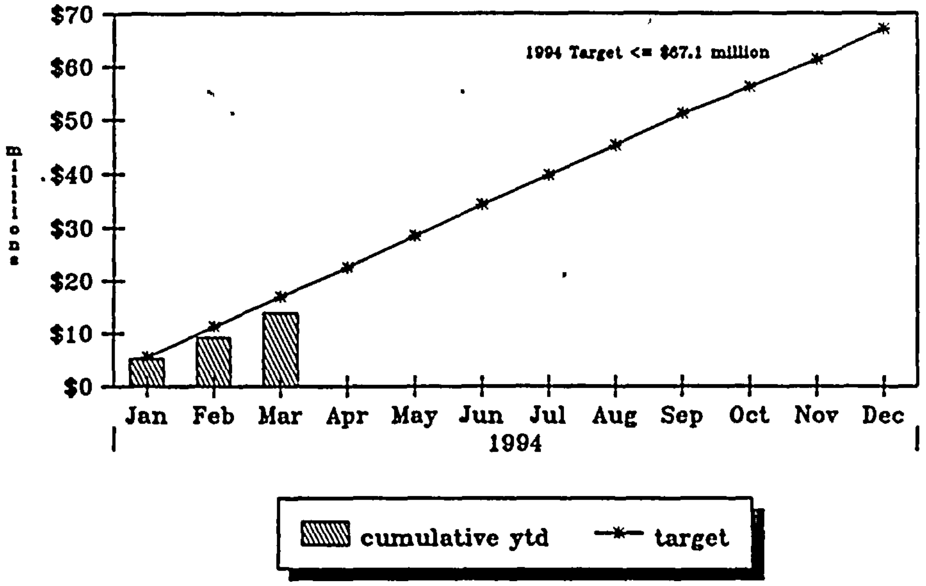


PI 2H. NINE MILE POINT UNIT 2
TOTAL NON-OUTAGE POWER BLOCK
BACKLOG >90 DAYS



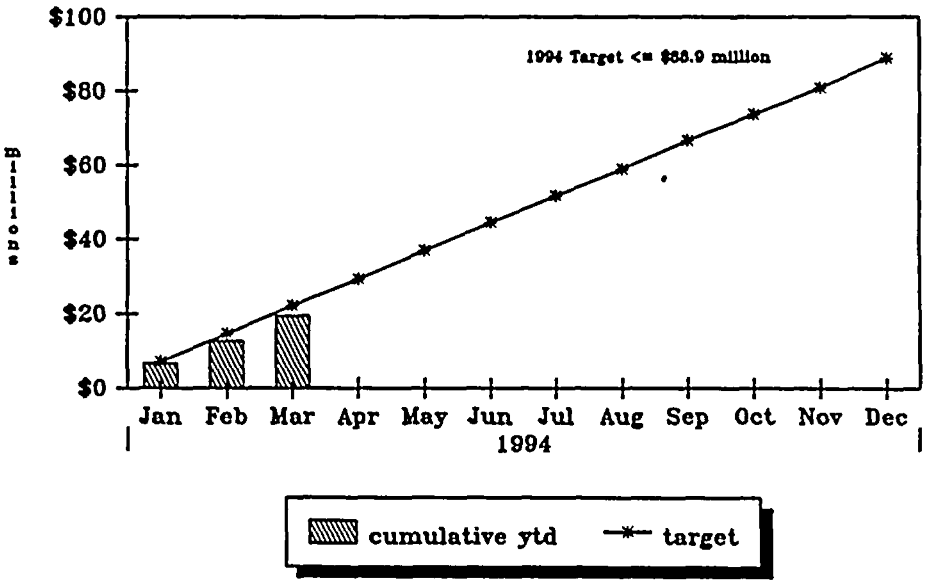
PI 2J. NINE MILE POINT UNIT 1
TOTAL NON–OUTAGE O&M

YTD = $13.84



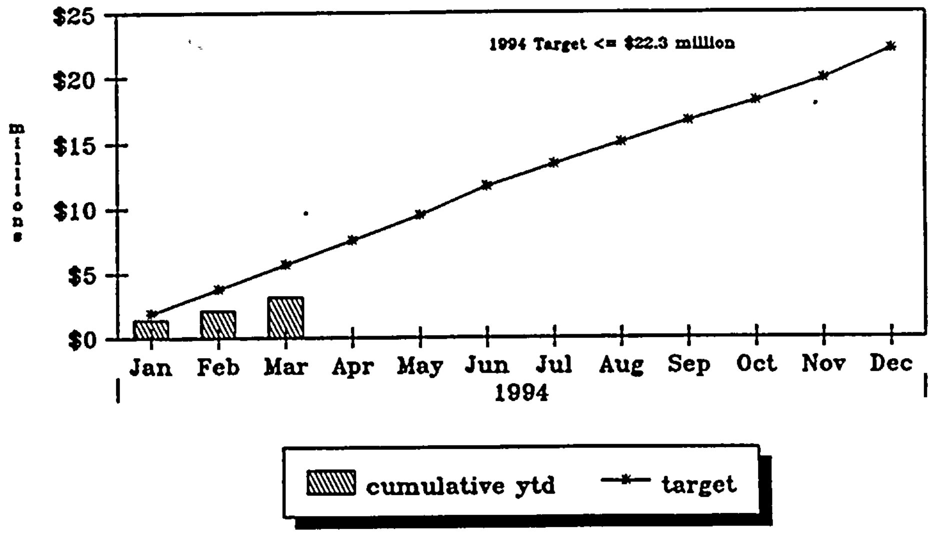
PI 2J. NINE MILE POINT UNIT 2
TOTAL NON–OUTAGE O&M

YTD = $19.49



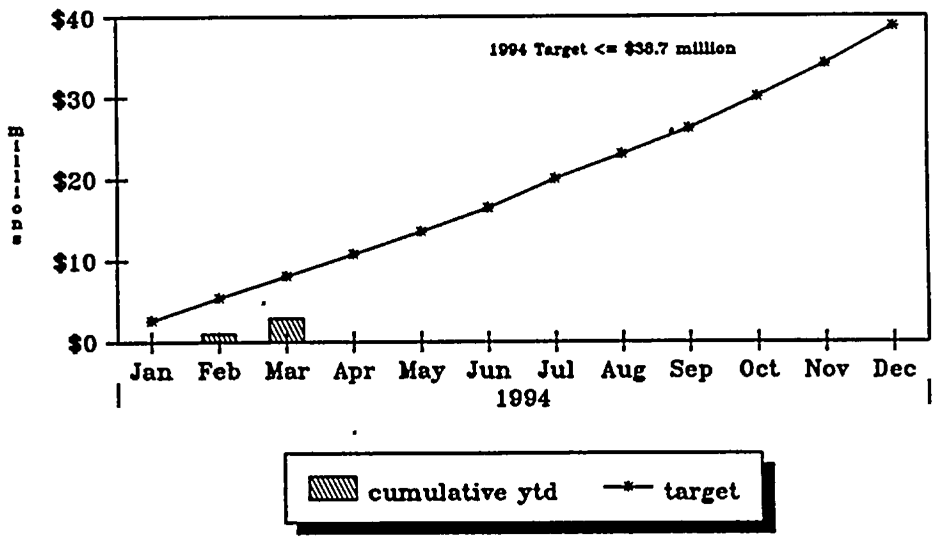
PI 2L. NINE MILE POINT UNIT 1
TOTAL CAPITAL
(Including Common & Indirects)

YTD = $3.14

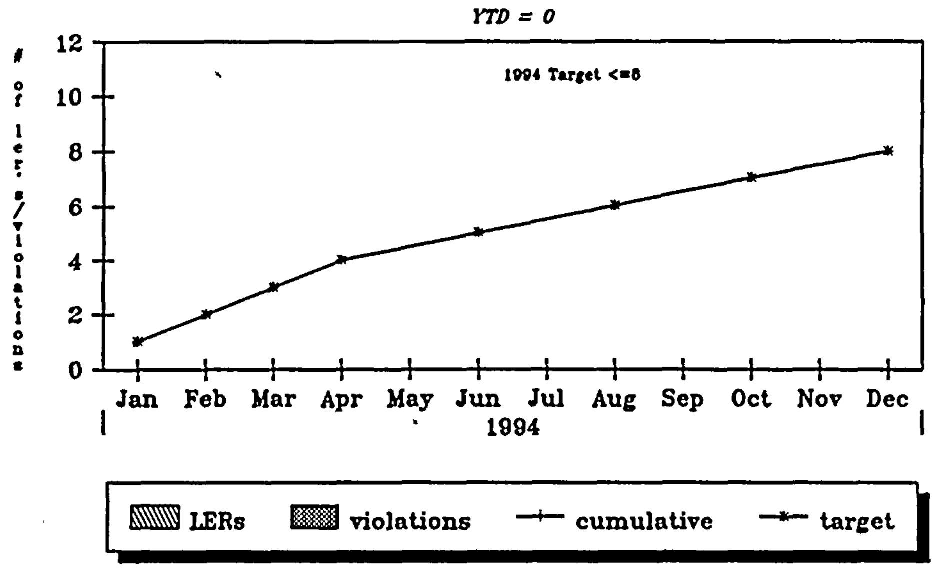


PI 2L. NINE MILE POINT UNIT 2
TOTAL CAPITAL
(Including Common & Indirects)

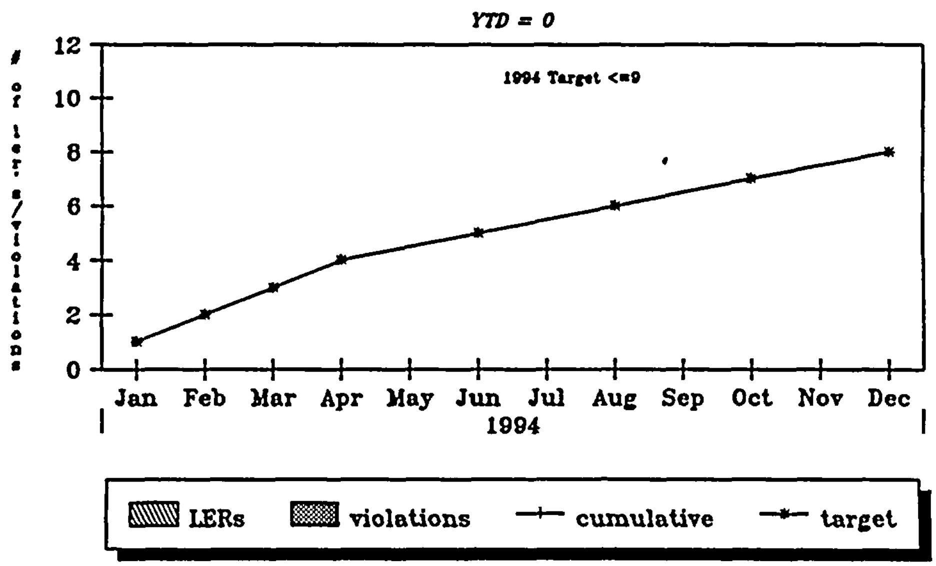
YTD = $2.89



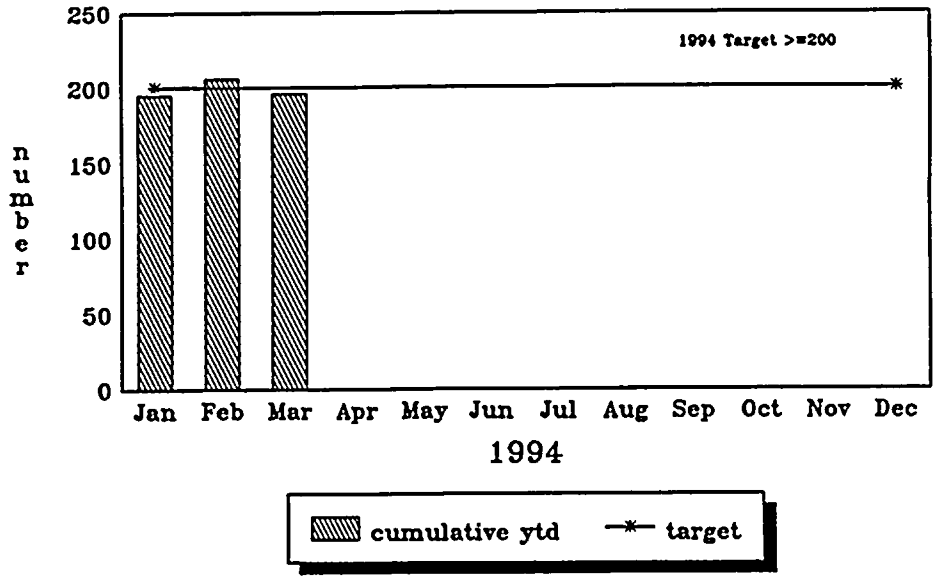
PI 4A. NINE MILE POINT UNIT 1
LICENSEE EVENT REPORTS/VIOLATIONS
RESULTING FROM PERSONNEL ERRORS



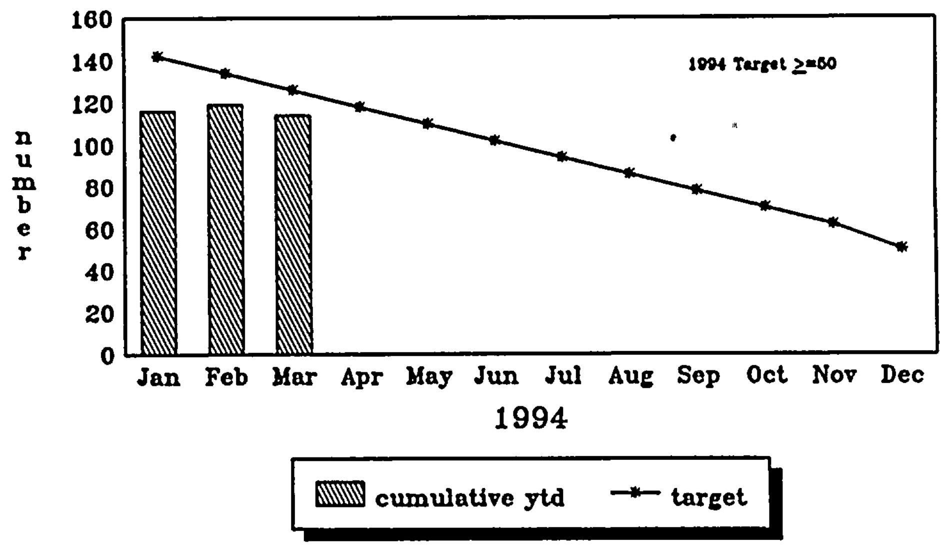
PI 4A. NINE MILE POINT UNIT 2
LICENSEE EVENT REPORTS/VIOLATIONS
RESULTING FROM PERSONNEL ERRORS



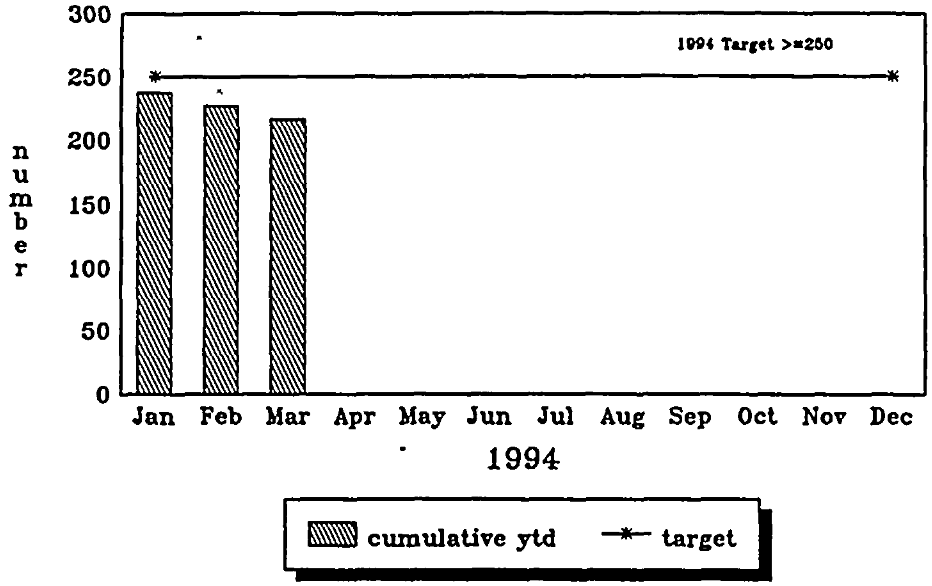
PI 4B. NINE MILE POINT UNIT 1
DER's OPEN FOR IMPLEMENTATION >1 YEAR



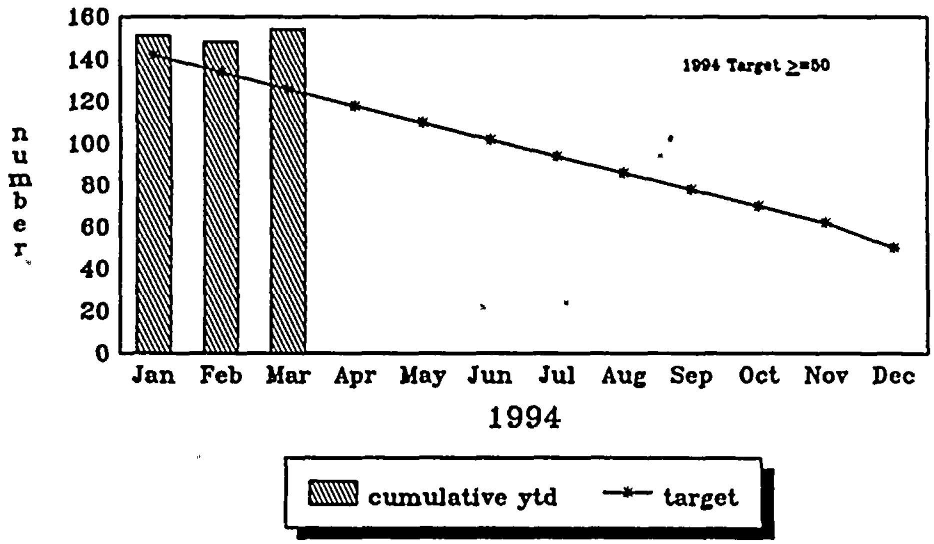
PI 4C. NINE MILE POINT UNIT 1
OPEN DER's EXTENDED
FOR IMPLEMENTATION ≥2 TIMES



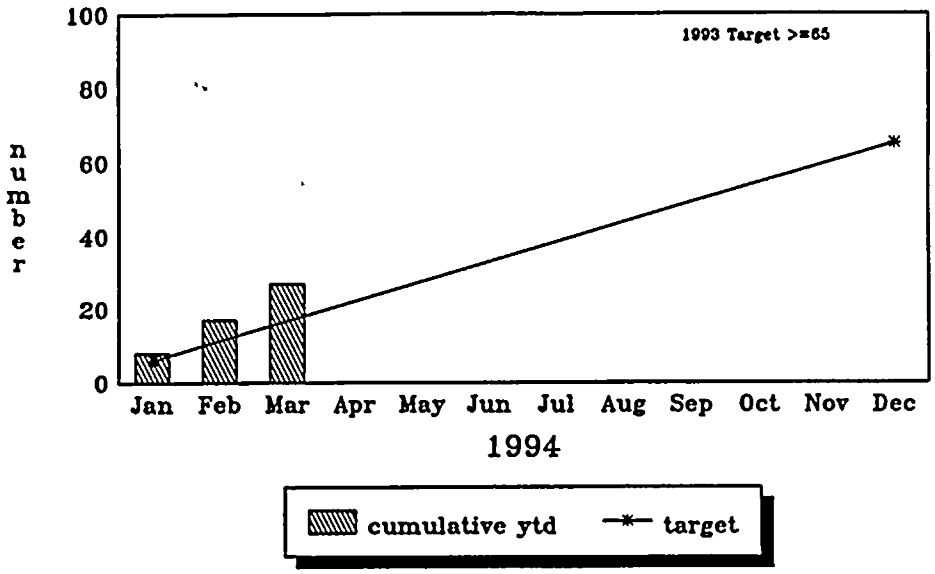
PI 4B. NINE MILE POINT UNIT 2
DER's OPEN FOR IMPLEMENTATION >1 YEAR



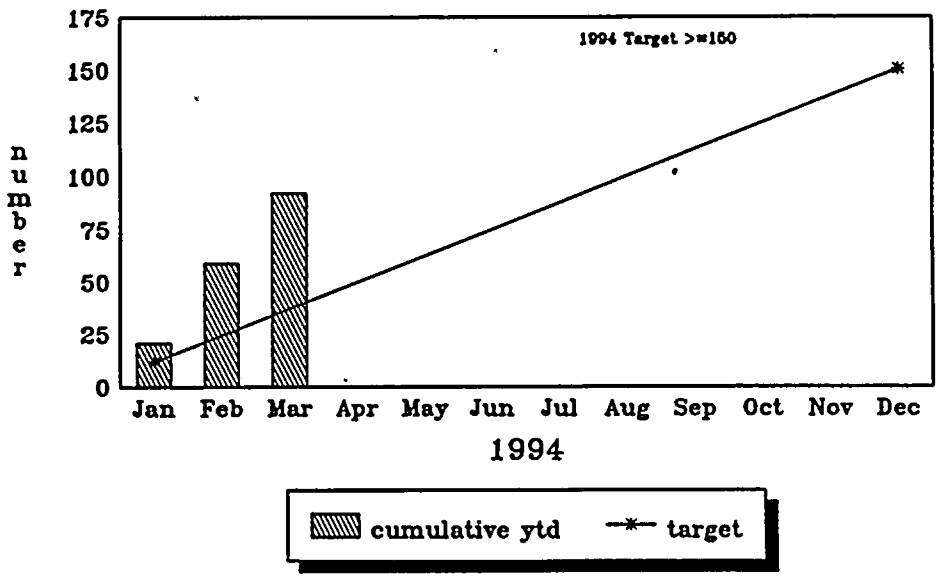
PI 4C. NINE MILE POINT UNIT 2
OPEN DER's EXTENDED
FOR IMPLEMENTATION ≥2 TIMES



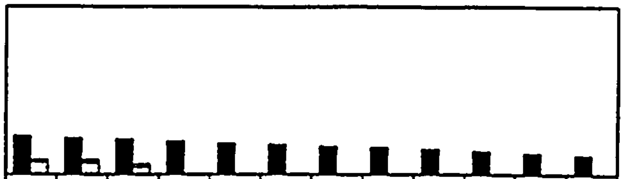
PI 4D. NUCLEAR SBU
OJT OBSERVATIONS BY LINE MANAGEMENT



PI 4E. NUCLEAR SBU
MANAGEMENT OBSERVATIONS OF TRAINING



PI 4F. NUCLEAR SBU
LONG TERM CONTRACTOR PERSONNEL
GOAL/PERFORMANCE COMPARISON



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CONTRACTORS-UN1	4	5	5									
CONTRACTORS-UN2	19	18	11									
TOTAL ACTUALS	23	23	16									
GOAL	59	56	54	51	48	46	43	41	39	36	33	30

(excludes dedicated capital modification contractors)

1994

GOAL
CONTRACTORS-UN2
CONTRACTORS-UN1

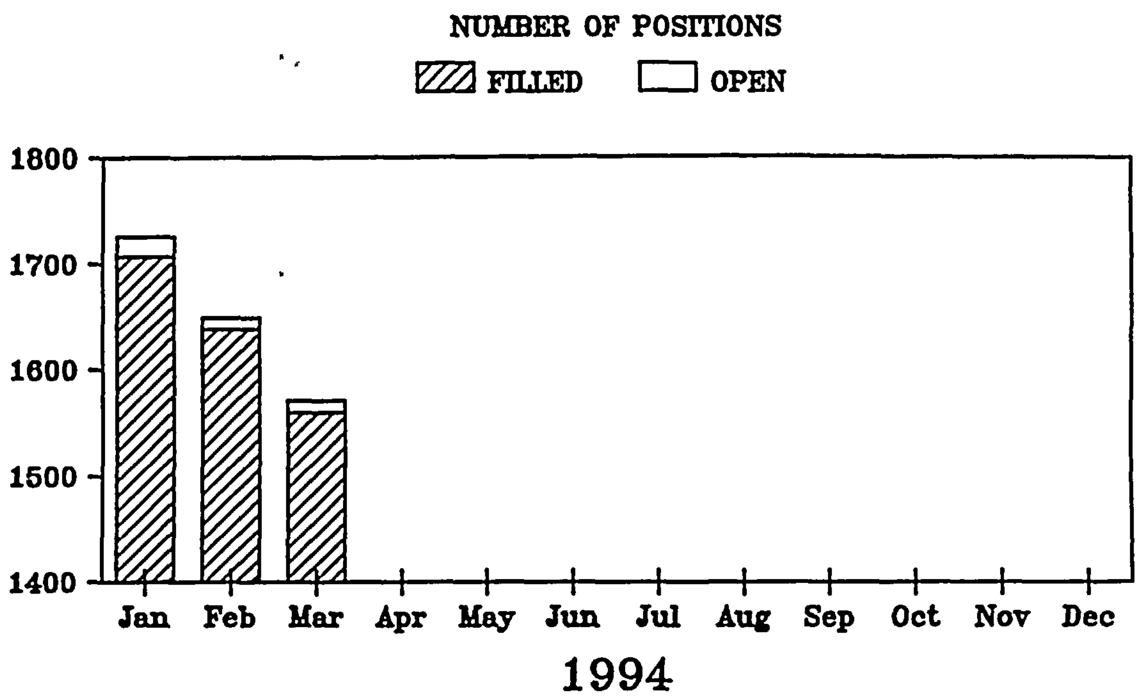
PI 4F. CONTRACTORS
BY DEPARTMENT

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
GENERATION-UN1	0	0	0									
GENERATION-UN2	6	4	2									
EXECUTIVE VP-UN1	0	0	0									
EXECUTIVE VP-UN2	0	0	0									
ENGINEERING-UN1	4	5	5									
ENGINEERING-UN2	10	12	7									
SafAsses,Lic,Trng-U1	0	0	0									
SafAsses,Lic,Trng-U2	3	2	2									

(excludes dedicated capital modification contractors)

1994

PI 4F. NUCLEAR SBU MANPOWER STATUS



PRELIMINARY NUMBER FOR MARCH

PI 4F. MANPOWER STATUS BY DEPARTMENT		
DEPARTMENT TITLE	February Actual Filled	March Actual Filled
Executive-VP/Staff	11	12
Human Resource Development	20	19
Nuclear Communications & Public Affairs	6	6
Nuclear Controller	17	17
Nuclear Engineering	290	286
Nuclear Generation	825	787
Safety Assessment, Licensing & Training	469	432
TOTALS*	1638	1559 (Preliminary)

*Excludes 54 temporary, part-time and student employees

NRC ACTIVITIES

VIOLATIONS

Unit 1 - None

Unit 2 - None

INSPECTIONS

94-03 Routine Monthly Residents' Inspection
94-06 Routine Engineering Inspection NMP1/NMP2
EQ Information Gathering NMP1

SCHEDULED INSPECTIONS

Scheduled inspections for April:

- NMP1/NMP2 Snubber Inspection (April 11 - April 15)
- NMP1/NMP2 Liquid/Gaseous Effluents Inspection (April 18 - April 22)

INPO STATUS

STATUS OF INPO COMMITMENTS/MISCELLANEOUS

- NMPC has committed to 22 action items in response to the 1993 Site Evaluation and the Unit 2 Outage Review Visit. To date, 18 action items have been completed.
- Year-to-date, 100% of INPO commitments were completed on time.
- The 1994 INPO Site Evaluation is scheduled for May 16 - 27, 1994.
- The INPO team manager will be on site April 18 for a pre-visit meeting to discuss the overall conduct for the May evaluation. The simulator portion of the Site Evaluation will be conducted the week of April 25.

OPEN SOER's

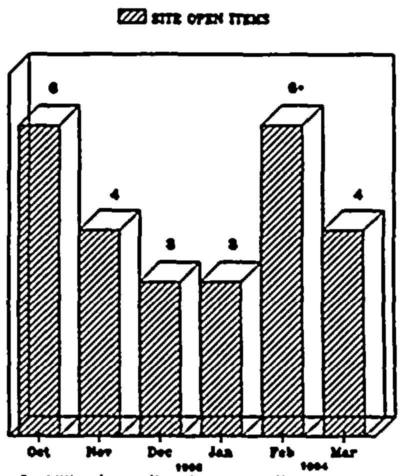
Unit 1

- SOER 93-01 - SORC approved with actions related to implementation of radiation monitoring setpoints.

Unit 2

- SOER 93-01 - SORC approved with action related to trending of background and source checks of radiation monitors.

OF OPEN ACTION ITEMS



*3 additional commitments as a result of the U2 outage review visit

SCHEDULE

- J. Alberts attended an INPO sponsored workshop on human performance March 15.
- N. Rademacher attended an operations department workshop March 15 - 16 and was a guest speaker.
- D. Willis attended a shift supervisor professional development seminar March 20 -April 1.
- R. Dean, K. Ward, W. Yaeger and J. Young attended an engineering managers workshop March 29 - March 31. J. Young was a guest speaker at the workshop.

LOOK AHEAD - APRIL

- N. Rademacher will participate as a peer evaluator at Brunswick April 4 - 8.
- L. Storz will participate in a Senior Nuclear Executive Seminar April 11 - 13.
- R. Smith will participate as a peer evaluator for an Outage Assist Visit at Dresden April 11 - 15.
- P. Smalley and D. Barcomb will be meeting with INPO counterparts April 12.

LOOK AHEAD - APRIL (continued)

- R. Tessier will participate as a peer evaluator in the Accreditation Evaluation Visit for Comanche Peak Steam Electric Station April 18 - 22.
- L. Storz will participate at a pre-exit evaluation meeting at INPO on April 14.
- R. Hall will be the lead for a pre-visit meeting on April 18 for the Site Evaluation.
- INPO will conduct simulator training and control room crew performance as part of the May Site Evaluation April 25 - 29.
- R. Matteson will participate at the Shift Supervisor Professional Development Seminar April 24 - May 1.

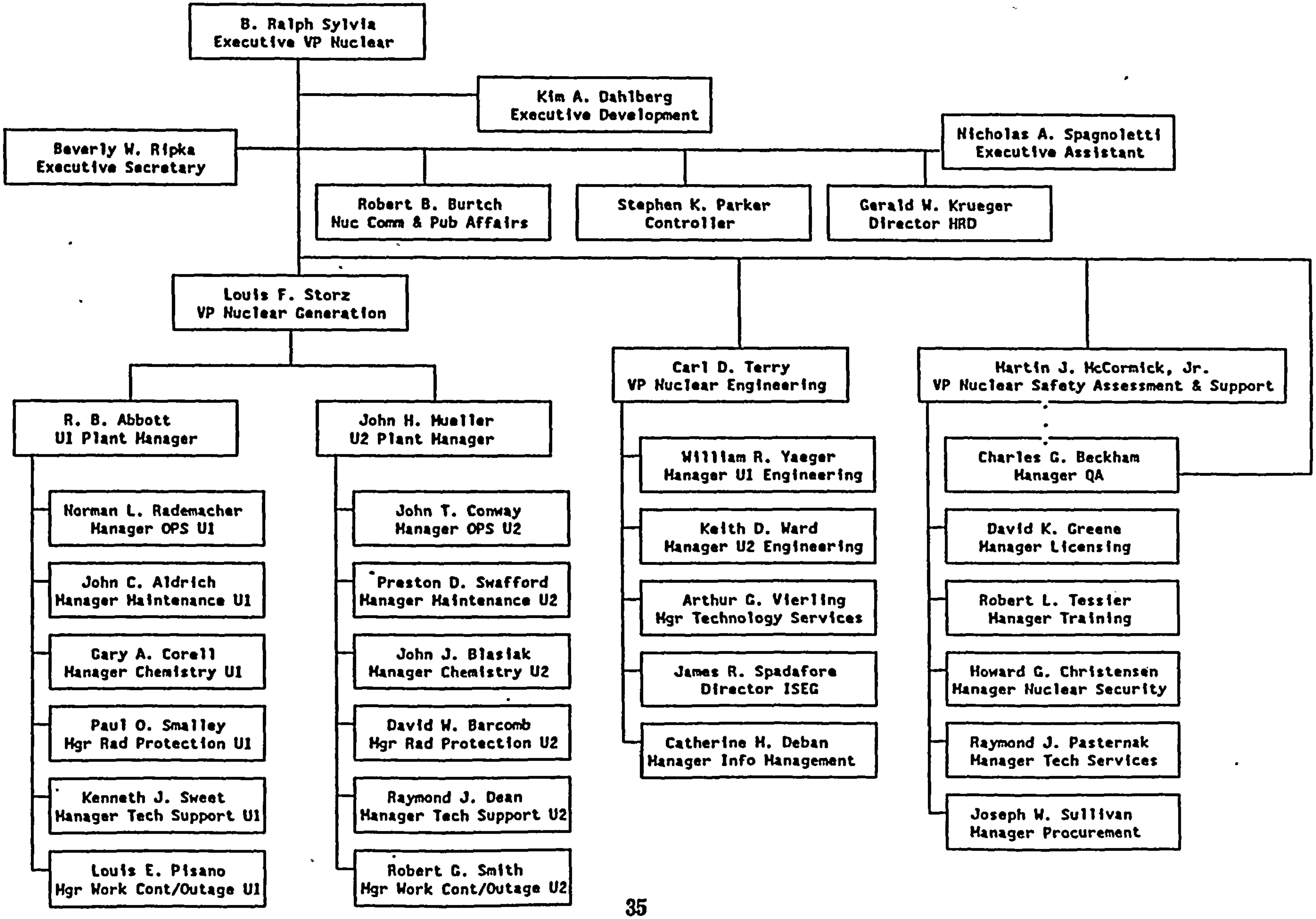
PSC ACTIVITIES

NINE MILE POINT 1 PERFORMANCE INCENTIVE REPORT
(as of February 1994)

o	Target Capacity Factor for Entire Incentive Period (Oct. 1990 through April 1995)	61.26%
o	Cumulative Target Capacity Factor from Oct. 1990 to date	62.74%
o	Actual Capacity Factor Achieved from Oct. 1990 to date[1]	75.31%

[1]Actual capacity factor represents generation for the period ending, excluding the 1991 mid-cycle outage.

NHPC NUCLEAR SBU (Effec. March 1, 1994)



OBJECTIVE 1 - SAFETY

COLLECTIVE RADIATION EXPOSURE

The total amount of whole-body radiation exposure received by all personnel (including contractors and visitors) at the plants during each calendar year.

VOLUME OF LOW-LEVEL SOLID RADWASTE

Per unit annual volume of low-level radioactive waste generated after processing for storage or for burial. Low-level radioactive waste includes dry, contaminated materials (e.g. trash, wood, tools), waste solidification system output, and dewatered resins, filters, and sludge. Spent nuclear fuel is not included.

UNPLANNED AUTOMATIC SCRAMS PER YEAR

An actuation of the reactor protection system that results in a scram signal at any time when the unit is critical. Scrams that are planned as part of special evolutions or tests are not included in this definition. The value for this indicator is the number of scram signals per year.

SAFETY SYSTEM PERFORMANCE

The performance indicator is calculated separately for each of the three BWR systems. The safety system performance indicator is defined for each safety system as the sum of the unavailabilities, due to all causes, of the components (or emergency generator trains) in the system during a time period divided by the number of trains in the system. This definition is further explained as follows:

Component Unavailability: the fraction of time that a component is unable to perform its intended function when it is required to be available for service--The component unavailability is the ratio of the hours the component was unavailable (unavailable hours) to the hours the system was required to be available for service. The safety systems included for Unit 1 are emergency AC power, feedwater injection, emergency condensers, and Residual Heat Removal; and the Safety Systems for Unit 2 are emergency AC power, Reactor Core Isolation Cooling, Residual Heat Removal, and High Pressure Core Spray.

CONTAMINATION OCCURRENCE REPORTS

The number of skin and clothing contaminations reported on Contamination Occurrence Reports (CORs).

Skin and clothing contaminations are those which, before washing or cleaning, exceed a radioactivity level from beta and gamma emitting isotopes of 100 cpm above background as measured by a Geiger-Mueller instrument with a pancake probe (frisker).

UNPLANNED RADIOLOGICAL RELEASES

Any release of licensed radioactive material from Nine Mile Point to the environment which is not permitted by the Technical Specifications or NRC regulations.

WHOLE BODY COUNTS

The number of positive whole body counts equating to an intake greater than 10 percent of the Annual Limit on Intake, ALI, 10CFR20.1502(b)(1).

FUEL RELIABILITY

The indicator is defined as the combined steady-state off-gas activity rate (microcuries/second) measured at the steam jet air ejector outlet (Recombiner Discharge) for the six primary noble gas fission products, corrected for the tramp uranium (recoil release) contribution. Tramp uranium is fuel which has been deposited on reactor core internals from previous defective fuel or is present on the surface of fuel elements from the manufacturing process.

Steady state is defined as continuous operation for at least three days at a power level that does not vary more than ± five percent. Plants should collect data for this indicator at a power level above 85 percent when possible. Plants that did not operate at steady-state power above 85 percent should collect data for this indicator at the highest steady-state power level attained during the month. The data required to determine each unit's value for this indicator is the monthly activity rate (microcuries/second) of the krypton-85m, krypton-87, krypton-88, xenon-133, xenon-135 and xenon-138 isotopes.

LER'S DUE TO MISSED TECHNICAL SPECIFICATION SURVEILLANCE TESTS

A missed Technical Specification surveillance test occurs when the Technical Specification required surveillance test is not completed within its required time frame including its allowable extension. LER's recorded under this category are the result of missed Technical Specification surveillances for the current year and do not include discovered missed Technical Specification surveillances from the past year(s).

OSHA LOST WORKDAY CASES

Cases which involve a day away from work because of an occupational injury or illness.

For each case, a lost workday does not include the day of injury or onset of illness or any days on which the employee would not have worked even though able to work. Contractor personnel are not included in this indicator.

OSHA RECORDABLE INCIDENTS

All work-related deaths and illnesses, and those work-related injuries which result in loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid.

INDUSTRIAL SAFETY RATE

This indicator is defined as the number of accidents per 200,000 manhours worked for all utility personnel permanently assigned to the station that result in any one of the following:

- one or more days of restricted work (excluding the day of the accident)
- one or more days away from work (excluding the day of the accident)
- fatalities

$$\text{Safety Rate} = \frac{(\#\text{restricted time accidents})+(\#\text{lost time accidents})+(\text{fatalities})\times 200{,}000\text{ manhours}}{(\#\text{station manhours worked})}$$

OBJECTIVE 2 - COMMERCIAL

TOTAL REVENUE REQUIRED PER KWHR (¢)

Revenue required to recover the unit's total estimated costs at the unit's business plan capacity factor including return on investment.

AVERAGE NET CAPACITY FACTOR (ANCF)

The Average Net Capacity Factor is determined by dividing the net electrical energy generated, expressed in megawatt hours, by the product of the expected plant output net and the total hours during the month that the unit operated with breakers closed. The expected plant output is established by a monthly average circulating water inlet temperature and using the net generation output curve for the applicable unit.

$$\text{ANCF} = \frac{\text{Actual MWHe (Net)}}{\text{Expected MWNet x (hours in month)}} \times 100\%$$

THERMAL PERFORMANCE

The ratio of the design gross heat rate (corrected) to the adjusted actual gross heat rate. Design gross heat rate (corrected) is determined by correcting the initial plant gross heat rate to include the demonstrated effects of plant modifications or operating deviations. The adjusted gross heat rate is adjusted to account for circulating water inlet temperature deviations from design values.

Thermal Performance is determined as follows:

$$\frac{\text{design gross heat rate (corrected)}}{\text{adjusted actual gross heat rate}} \times 100\%$$

REFUEL OUTAGE DURATION

The period of time between the shutdown of the reactor before a refueling and the startup of the unit after that refueling (breaker to breaker).

NON-OUTAGE CORRECTIVE MAINTENANCE CONTROL ROOM DEFICIENCIES >6 WEEKS

A control room deficiency is any meter, chart recorder, indicating light, annunciator or other component within the control room that does not accurately represent the parameter or state it is intended to monitor. The actual fault may be in the hardware or software providing the input signal. Control room devices such as switches, controllers, or pushbuttons which do not operate as intended are also considered control room deficiencies.

This performance indicator reviews control room deficiencies that do not require an outage and are greater than six weeks old.

NON-OUTAGE TEMPORARY MODIFICATIONS >1 YEAR

Long-standing temporary modifications implemented greater than one (1) year which do not require an outage to be cleared.

NON-OUTAGE POWER BLOCK BACKLOG >90 DAYS

The total number of corrective maintenance Problem Identification (PIDs)/Work Orders which do not require an outage to be worked and are 90 days or more old. Power Block Work Orders are those for work on equipment associated with the safe, reliable generation of electricity and apply primarily to plant systems.

$$= \frac{\text{Total Non-Outage Power Block Backlog PIDs/WOs} > 90 \text{ days}}{\text{Total \# Non-Outage Power Block Backlog PIDs/WOs}} \times 100\%$$

CHEMISTRY PERFORMANCE INDEX (CPI) - Reactor Water

The reactor water chemistry index compares the concentration of selected parameters (chloride, sulfates and conductivity) to industry-accepted values for those impurities. The monthly average of the daily time-weighted measurements for each impurity is divided by the accepted value for the impurity, and the sum of these ratios is normalized to 1.0. The "accepted values" are the "achievable values" defined in the BWR Owners Group Guidelines. This indicator applies only during power operation, (i.e., greater than 10 percent power).

$$CPI = \frac{[(Cl)/15 \text{ ppb} + (SO4)/15 \text{ ppb} + \text{Conductivity}/0.2\mu S/cm]}{3}$$

CONDUCTIVITY

The average daily value (μSiemens/cm), for the period, for conductivity; includes only values taken at reactor power greater than 10 percent.

OBJECTIVE 3 - REGULATORY

NRC VIOLATIONS BY DATE OF DISCOVERY

The number of violations known to have occurred or were identified, including pending violations not yet issued by the NRC, by month of occurrence/identification.

REPEAT NRC VIOLATION

Repetitive violation as determined by the NRC; may be followed by greater enforcement action by the NRC.

PERCENT OF COMMITMENTS TO INTERFACING AGENCIES MET ON TIME

A measure of responsiveness to interfacing agencies (e.g. NRC, INPO). The percentage of instances in the reporting period where a commitment noted in meeting minutes or formal written communications between the Nuclear SBU and an interfacing agency were completed within the stated schedule. INPO Commitments are tracked on the DER tracking system.

OBJECTIVE 4 - PROFESSIONAL

PERSONNEL ERRORS RESULTING IN A LICENSEE EVENT REPORT (LER)/VIOLATION

Number of Personnel Errors made during the reporting period that result in an LER/Violation. A count of one is made for a personnel error that results in both an LER and a violation.

PERSONNEL ERROR

Human action (behavior), either observable or non-observable, that transforms normal performance into an abnormal situation.

LICENSEE EVENT REPORTS

Reports which identify events which meet the criteria of 10CFR50.73. These do not include reports written against safety/relief valve problems as required by NUREG-1047, Section 15.9.3.

DER's OPEN FOR IMPLEMENTATION >1 YEAR

Monitors DER's that are open for implementation of the corrective action(s) greater than one year. This indicator is measured from the Part 4 Branch Manager approval date to present.

OPEN DER's EXTENDED FOR IMPLEMENTATION ≥ 2 TIMES

Monitors the DER scheduled completion date, such that DER's are not extended greater than or equal to two times from the initial scheduled date. This indicator is measured from the scheduled completion date versus interim completion date(s).

ON-THE-JOB (OJT) TRAINING OBSERVATION

Number of times supervision/management from the line organization observes OJT in the plant.

MANAGEMENT OBSERVATIONS OF TRAINING

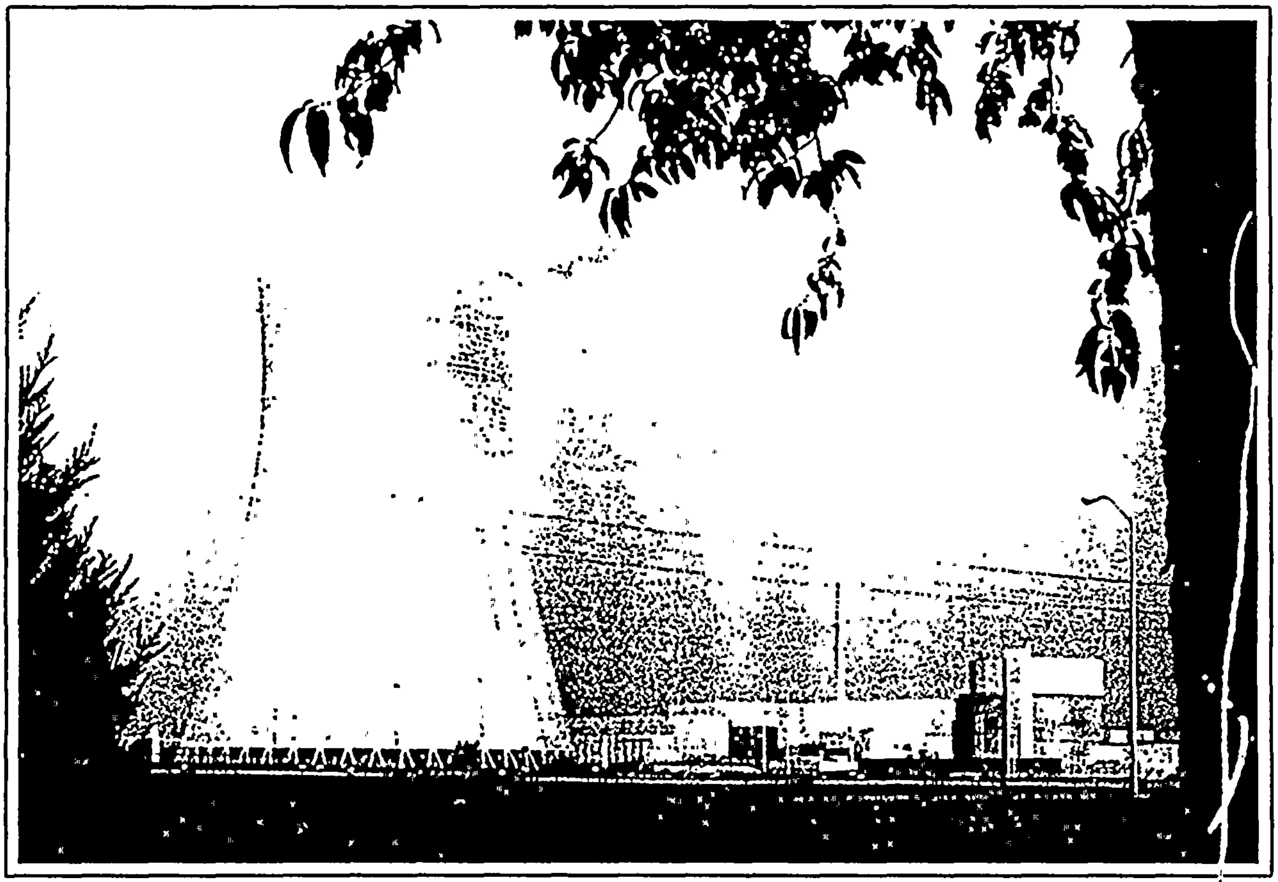
Number of times supervision/management observes training in the classroom, laboratory or simulator.

LONG-TERM CONTRACTOR POSITIONS

Long-term contractors who augment the Nuclear SBU staff (longer than six months). These contractors are usually appointed because of a lack of in-house expertise, special assignments, or other reasons which preclude NMPC from filling the position with an employee.

NUCLEAR SBU BUSINESS PLAN

1994-1997



NIAGARA MOHAWK

FOCUS ON *RESULTS*

NIAGARA MOHAWK
NUCLEAR STRATEGIC BUSINESS UNIT

1994 - 1997 BUSINESS PLAN

FOCUS ON
RESULTS

1994-1997 NUCLEAR SBU BUSINESS PLAN
CONTENTS

Key

In the objective sections, many action items are followed by initials in parentheses.

Ex: *(**MJM**, SMT)*

The bold, shaded initials (**MJM** in the example) correspond with the lead senior manager. Any additional initials (*SMT* in the example) correspond with support organizations (the entire senior management team, in this case).

FOCUS ON
RESULTS

1994-1997 NUCLEAR SBU BUSINESS PLAN INTRODUCTION

The Nuclear SBU's performance continues to play a major role in the future financial and operational success of Niagara Mohawk. Through the business plan, we are positioning ourselves to be successful and to show continuous improvement in our performance so we can reach our vision of being one of the best and win in a competitive market.

Nine Mile Point Units 1 and 2 experienced a very successful year in 1993. Impressive operational runs and meeting the operational challenges the year presented were remarkable. In addition, the successful refueling outages at both units exhibit how teamwork is essential in accomplishing our mission. We need to continue the momentum we have had. There is a tendency to step back and let up, which could cause us to drift back. We need to continue to push ahead, increasing our knowledge and becoming more productive.

This document describes the actions we believe are required to continue to improve our performance and presents our plan for attaining nuclear operations excellence. An understanding of where we are headed requires a knowledge of the environment in which we operate and how the regulatory characteristics of that environment may change. This business plan, with its strategies to meet the demands of the future, is that roadmap.

This new regulatory environment is already moving us into a field within which we have never before had to operate: competition. We must position ourselves to operate in a competitive market by achieving high capacity factors, short refuel outages and reducing costs. The world in which we operate is changing. The increase in demand for electricity is slowing, and cost pressures are rising. State and Federal regulations have already led to a number of new power producers. By New York State Law, Niagara Mohawk has to buy power from these producers and transport it across our service area. Units are on the drawing board, and there have already been requests to build more units within the Niagara Mohawk service area that could have a total generating capacity greater than our system needs. If the customer has a choice in where to buy power, we must be prepared to compete with these newer units. Competition is already here. With deregulation a possibility, we must position the Nuclear SBU to compete with lower cost power producers. The challenge is to simultaneously maintain or improve quality while aggressively managing costs.

Because of this environment, we must continue to learn to operate the nuclear SBU as a business, with our business plans as a roadmap. This SBU level business plan continues to focus our efforts in achieving nuclear operations excellence along four dimensions called Objectives. Our objectives are to strive for excellence in the areas of Safety, Commercial, Regulatory, and Professional Performance.

Some of the business plan key issues facing the Nuclear SBU in the next few years are:

- *Improving our INPO rating during the 1994 evaluation*
- *Improving thermal performance and/or reduce lost megawatts*
- *Streamline the Work Control Process*
- *Completion of Units 1/2 Design Basis Reconstitution Programs*
- *Evaluating the existing rightsizing plans*
- *Development of a comprehensive tool control program*

1994-1997 NUCLEAR SBU BUSINESS PLAN INTRODUCTION

Nuclear power plants will always have more regulatory requirements than our non-nuclear counterparts. We must satisfy many regulatory criteria; NRC regulations and the Code of Federal Regulations, INPO Performance Criteria and Indicators, and American Nuclear Insurers to name a few. Since our safety and operational success depends in a large part on our satisfying regulatory criteria, we have chosen many of their performance criteria against which to measure ourselves. To maintain and reinforce our objectives, we will continue to monitor and track our performance indicators monthly.

Of all the goals, the most important is continuing our stable operating performance of 1993; it is critical to our success within Niagara Mohawk... We must be a reliable source of generation.. The reduction in cost and personnel will continue to challenge us. We must continue to improve our knowledge and skills if we are to become more productive in this competitive market. We must continue, through benchmarking and self-assessment, to find those practices that are essential to operating and maintaining our plants in compliance with regulatory requirements and in the most efficient and cost-effective manner.

J. M. Endries, President
Niagara Mohawk Power Corporation

B. R. Sylvia, Executive Vice President
Nuclear SBU

R. B. Abbott, Plant Manager
Nine Mile Point - Unit 1

J. H. Mueller, Plant Manager
Nine Mile Point - Unit 2

G. W. Krueger, Director
Human Resource Development

C. D. Terry, Vice President
Nuclear Engineering

M. J. McCormick Jr., Vice President
Nuclear Safety, Assessment and Support

The Nuclear SBU will continuously improve its performance so that:

- *it will be one of the best* run nuclear operations in the industry by 1995*
- *it will survive and be a winner in a competitive market*

* *INPO 1 and SALP 1*

The Nuclear SBU operates its plants safely and efficiently to maximize value to its neighbors, customers, shareholders and employees.

NUCLEAR AND INDUSTRIAL SAFETY

Maintaining the general health and welfare of the public and employees is the principle consideration in activities related to Nine Mile Point Unit 1 and Unit 2. Having the right knowledge and attitude will prevent unplanned plant events and personnel injuries. Each employee is obligated to work safely in every situation and to promptly correct and/or report unsafe conditions to supervisors.

PLANNING AND GOAL SETTING

Planning and Goal Setting are the key processes by which our objectives are achieved. Goals are established and a plan is developed such that the roles and responsibilities of the entire work force are understood and focused towards our mission. The Business Plan is the roadmap for carrying out our mission. Work is completed in a timely manner and managed to minimize employee radiation exposure and the use of overtime and undue reliance on resources outside of Niagara Mohawk Power Corporation. Success will depend on our ability to communicate and function as a team.

COMPETITIVE ADVANTAGE

Maintaining a competitive advantage is a key to our success. Key goals for obtaining a competitive advantage are high capacity factors, short refuel outages and reducing costs. High productivity throughout every process in the organization is a key to obtaining a competitive advantage. Our productivity will increase if we become more knowledgeable, technically skilled, involved and excited about our jobs. Meeting the competition head on will require the commitment of each employee to seek ways to become more efficient and to reduce costs while maintaining safe operation and the adherence to regulatory requirements.

TEAMWORK

Teamwork focused on common, well understood objectives is essential to attaining our goals. Cooperation, mutual respect and support among and between the Nuclear Strategic Business Unit branches and others are expected. Supervisors involve their team members in decisions and hold them accountable for their actions. Tasks are coordinated and completed through collaborative efforts of groups involved. Personnel are appreciated as contributing members of the team and are aware of how their individual performance affects the work of others. Teamwork is essential for successful accomplishment of our mission.

PROBLEM IDENTIFICATION AND RESOLUTION

Problem identification and resolution is a proactive and aggressive process used to strengthen our commitment to excellence. Personnel anticipate and communicate potential problems to supervision promptly. Problems are resolved at the lowest possible level in the organization but are promptly reported up the chain of command. Monitoring progress on and solving the day-to-day problems is fundamental for continued improvement. Individual knowledge and clear expectations are key for proper utilization of this system.

COMMUNICATION

Communication, using the chain of command, is required for the Nuclear Strategic Business Unit to function effectively. Communication is carried out by each person with openness, honesty, mutual respect, and integrity up and down the chain of command. Information is shared horizontally and vertically in a timely manner.

LEADERSHIP

Leadership is a key to our success and continued improvement. Leadership empowers people to work as a team, to take on more responsibility and accept the decision-making process down through the organization. Leadership encourages innovation, better ways of working and cost reduction ideas. Leaders ensure individuals success through coaching. Leadership is doing the right thing to accomplish the mission in the most straight-forward way.

POLICIES AND PROCEDURES

Policies and procedures are the documents that guide our work and the technical requirements we must fulfill. Policies and procedures are fully adhered to and enforced in a consistent manner regardless of the person's position or level within the organization. Policies and procedures are followed to safely and effectively maintain and operate the units. When a policy or procedure is incorrect, ineffective, or unclear, it is not violated or deviated from; but is reported utilizing the DER system for review. Personnel work together to ensure procedures are necessary, clear, accurate, and easy to use.

QUALITY

Quality is the product of applying knowledge, skills and initiatives to ensure all work activities are done correctly the first time. We achieve quality through the selection, assignment, training and professional development of all personnel. Personnel know what they must do and do it in the safest, most efficient and cost effective manner. The Nuclear Strategic Business Unit cannot compete in a competitive market unless it possess high standards for quality.

ACCOUNTABILITY/RESPONSIBILITY

Accountability/Responsibility is the means by which we empower our personnel to answer for the performance of the plant and their performance as individuals. Personnel, regardless of level or function within the organization, accept accountability for assigned tasks and responsibility for results of their actions.

SELF-ASSESSMENT

Self-assessment is the process used to evaluate individual and group performance that is an integral part of the Nuclear Strategic Business Unit's way of doing business. Individuals and work groups are personally responsible and accountable to assess their work performance against their Business Plans, including Principles for Continued Improvement, with an emphasis on results achieved. We will routinely identify, plan, and act on specific corrective actions to maintain strengths and address opportunities for improvement.

SAFETY PERFORMANCE: Carl D. Terry

Safety is the most important factor for operating nuclear power plants. We will continue to focus our attention on those issues that have a major impact on maintaining the health and welfare of our employees and the public who rely on us to protect them.

Our first obligation is to protect the health and safety of the general public. From meeting our NRC commitments to the design and operation of our plants, everything we do must be based on avoiding any harmful release of radiation to the public.

In regard to worker safety, we must do all we can to minimize the risk of exposure and accidents. Workers include both Niagara Mohawk and contractor personnel working for us. Accomplishment of our objective is supported by design and planning; but the most important factor is you, the employee.

Public and employee safety includes protection from the radioactive materials generated on site. As we progress toward site storage of radioactive material, Niagara Mohawk is continuing to follow the activities of the New York State Low Level Waste Siting Commission as they attempt to develop a waste site in New York. The Siting Commission has not yet selected a site, and New York could lose access privileges to shipping waste to Barnwell, South Carolina at any time. Preparing for this is not only important to Niagara Mohawk, but also to the general public. We are continuing to monitor the political environment; in the meantime, everyone must make every effort to reduce the amount of radioactive waste material we generate.

As we move into 1994, we, individually and collectively, should accept nothing less than excellence in our safety performance. In this area, second best is not good enough.

1994-1997 NUCLEAR SBU BUSINESS PLAN
OBJECTIVE 1 - SAFETY

SAFETY PERFORMANCE (Nuclear, Radiological, Industrial) - Protect the health and safety of the public and employees.

SENIOR ADVOCATE: Carl D. Terry .

PERFORMANCE INDICATORS	Industry Standard	TARGETS							
		UNIT 1				UNIT 2			
		1994	1995	1996	1997	1994	1995	1996	1997
*A. Collective radiation exposure (Manrem/yr. max)	<255[1]	125	420[2]	110	365	125	375	125	375
*B. Volume of low-level solid radioactive waste generated after processing(m^3/ft^3)	<245[1]/ 8650	175/ 6180	175/ 6180	175/ 6180	175/ 6180	250/ 8830	245/ 8650	225/ 7945	200/ 7060
*C. Unplanned automatic scrams per year	<1[1]	1	1	1	1	1	1	1	1
*D. Safety system performance (rate/hours) • BWR high pressure injection/ heat removal systems	<.025[1]	.020/ 595.2	.020/ 595.2	.020/ 595.2	.020/ 595.2	.020/ 350.4	.020/ 301.44	.020/ 308.16	.020/ 350.40
• BWR residual heat removal system	<.020[1]	.020/ 1226	.020/ 1226	.020/ 1226	.020/ 1226	.020/ 350.40	.020/ 350.40	.020/ 351.36	.020/ 350.40
• Emergency AC power system	<.025[1]	.015/ 262.8	.015/ 262.8	.015/ 262.8	.015/ 262.8	.015/ 394.20	.015/ 394.20	.015/ 395.28	.015/ 394.20
E. Contamination occurrence reports	N/A	125	250	125	250	125	250	250	125
F. Unplanned radiological releases	0	0	0	0	0	0	0	0	0
G. No. of whole body counts above federal evaluation levels	N/A	0	0	0	0	0	0	0	0
*H. Fuel reliability (μCi/sec)	300	x	x	400	400	50	50	50	50
I. No. LER's due to missed tech spec surveillance tests	N/A	0	0	0	0	0	0	0	0

PERFORMANCE INDICATORS	Industry Standard	COMMON			
		1994	1995	1996	1997
J. Maximum number of OSHA recordable lost-work day cases • NMPC Employees	10-15 Top Quartile	5	5	5	5
K. Maximum number of OSHA recordable incidents • NMPC Employees	49-68 Top Quartile	55	50	50	50
*L. Industrial safety accident rate	<0.50[1]	0.65	0.50	0.50	0.50

*INPO Performance Measure
Shaded years indicate a refuel outage year
[1] INPO goal for 1995

[2] Does not include vessel drain down
X - Fuel leak detected

FOCUS ON RESULTS

STRATEGIES

A. Maximize plant safety performance.

B. Minimize on-site personnel radiation exposure.

C. Optimize handling and storage of radiological materials.

D. Minimize lost-time injuries due to occupational accidents or illnesses.

E. Reduce scram frequency.

1994-1997 NUCLEAR SBU BUSINESS PLAN
OBJECTIVE 1 - SAFETY

Strategy A - Maximize plant safety performance.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Develop and implement action plans to address significant NRC Generic Letter (GL) concerns.	Successful closure of Generic Letters with all regulatory requirements satisfactorily met.	
	a. Complete implementing GL 89-10 (MOV concerns) Program. (RBA/JHM, CDT)		a. U2 - Spring 1995 (RF4) U1 - Spring 1997 (RFO14)
	b. Complete implementing GL 88-14 (Instrument Air) Program. (CDT, RBA/JHM)		b. U1 - End of RFO13 U2 - Feb 1994
	c. Develop GL 88-20, IPEEE (Individual Plant Examination for External Events) Program. (CDT)		c. U2 - June 1995 U1 - August 1996
2.	Adopt NUMARC plant specific EALs. (MJM)	EAL procedures reflect plant specific methodology.	September 1994
3.	Improve the tagging/markup program. (RBA/JHM/GWK)	Improve productivity and worker safety.	May 1994
	a. Evaluate temporary tagging/markup procedure used during the Unit 2 outage.		a. January 1994
	b. Develop a single tagging/markup procedure.		b. March 1994
	c. Work with union to finalize the single tagging/markup procedure.		c. May 1994

Strategy B - Minimize on-site personnel radiation exposure.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Continue to emphasize ALARA, including lessons learned from outage assessments. (RBA/JHM, SMT)	Come in at or below projected ALARA goals and SBU performance indicator targets.	December 1994
2.	Develop integrated resource plan for Cobalt Management. (CDT)	Reduce exposure/contamination occurrences.	March 1994

Strategy C - Optimize handling and storage of radiological materials.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Implement a plan for the interim storage of spent fuel. (CDT)	Spent fuel storage does not adversely impact operations.	December 1996

Strategy C - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
2.	Implement low level radioactive waste minimization/segregation program. (RBA/JHM)	Reduce radwaste burial costs.	June 1994
	a. Evaluate waste segregation on site.		a. March 1994
	b. Develop and implement administrative controls for waste minimization.		b. June 1994

Strategy D - Minimize lost-time injuries due to occupational accidents or illnesses.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Establish back care program to reduce back injuries. (MJM)	Reduce OSHA recordable back injuries by 50% over 1993 results.	December 1994
	a. Purchase National Safety Council Back Power Program.		a. February 1994
	b. Implement full back care program.		b. August 1994
2.	Improve employee health. (MJM)		
	a. Implement educational programs in the areas of smoking, weight loss, eye care, etc. based on health maintenance or regulatory trends.	a. Promote employee health awareness.	a. December 1994
	b. Obtain and assess industrial hygiene exposure to painting, asbestos gasket removal, EMF, etc.; implement necessary actions to protect workers.	b. Complete health exposure monitoring to maintain regulatory compliance. Streamline and improve work process.	b. February 1995

Strategy E - Reduce scram frequency.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Develop Technical Specification applications for amendment that will reduce the probability of inadvertent scrams. (MJM/RBA/JHM)	Reduces possibility of inadvertent scrams due to testing.	December 1994

COMMERCIAL PERFORMANCE: Richard B. Abbott/John H. Mueller

The best run nuclear operations produce power at a capacity factor of over 70 percent for outage years and 90 percent for non-outage years. We have a considerable challenge ahead of us to reach the goal of being among the best, but as this business plan's capacity factor performance indicators show, we believe the goal is achievable in the next four years. Across the industry, the focus for commercial operation is to increase production of electricity and reduce the cost of producing the power. Strategies and targets have been put into place at Niagara Mohawk Nuclear; to achieve stability of that operating performance at the desired capacity factor. Further, getting there once is not good enough; we have to make sure that we have the right people and processes in place to stay there.

To increase production, we will continue to focus on the things that will allow us to increase our capacity factor. We will do this by concentrating on the planning and execution of our outages. . Minimizing outage duration and maximizing equipment performance and reliability are the keys to ensuring maximum production. In addition, we want to continue to focus our attention on the Top Ten Lists at both units to resolve equipment performance issues.

To reduce our O&M Cost, we will concentrate on increasing efficiency and productivity and reduce outage length. We at Niagara Mohawk are not alone in this effort. All across the country, nuclear power plants are cutting back to prepare for the competition that will inevitably come. We must meet this challenge while increasing efficiency and productivity. Benchmarking and self-assessments are extremely important in ensuring that we are doing things the most efficient way. Good SALP and INPO performers operate with smaller staffs than poor performers. We must learn how they do it and emulate those practices.

We have a considerable challenge ahead of us. Let us work together to do the right things right the first time and to meet, and eventually lead, the industry in commercial performance. Together, we can be the best.

COMMERCIAL PERFORMANCE - Operate the plants to maximize production at the lowest achievable cost in keeping with the highest standards for nuclear safety.

SENIOR ADVOCATES: Richard B. Abbott (Unit 1) and John H. Mueller (Unit 2)

PERFORMANCE INDICATORS		Industry Standard	TARGETS							
			UNIT 1				UNIT 2			
			1994	1995	1996	1997	1994	1995	1996	1997
A.	Total revenue required per Kwhr (¢)	N/A	4.93	7.14	5.03	7.12	8.50	11.12	10.81	8.07
B.	Cost per Kwhr (O&M and fuel) (¢)	N/A	1.99	2.94	1.80	2.90	1.66	2.42	2.39	1.58
C.	Average net capacity factor (%)	N/A	90	70	90	>70	90	70	>70	90
•D.	Thermal performance (%)	>99.5[1]	99.2	99.5	99.5	99.5	99.3	99.5	99.5	99.5
E.	Refuel outage duration	N/A	N/A	55	N/A	55	N/A	60	60	N/A
F.	Non-outage corrective maintenance control room deficiencies >6 weeks old	N/A	19	17	15	10	25	20	15	10
G.	Non-outage temporary modifications >1 year old	N/A	3	0	0	0	10	0	0	0
H.	Total non-outage backlog >90 days	N/A	25%	25%	25%	25%	25%	25%	25%	25%
I.	Chemistry performance •Chemistry index (Reactor water)	<0.30[1]	.23	.23	.23	.23	.29	.27	.26	.26
	•Conductivity (μ Siemens/cm)	N/A	.10	.10	.10	.10	.13	.13	.13	.12
J.	Total non-outage O&M ($ millions)	N/A	67.1	64.6	61.0	63.1	88.9	91.6	93.5	96.9
K.	Total planned outage O&M ($ millions)	N/A	0.0	25.1	0.0	26.6	0.0	36.3	37.4	0.0
L.	Total capital ($ millions)	N/A	22.3	20.8	15.9	16.1	38.7	37.6	29.5	29.1

•INPO Performance Measure
Shaded years indicate a refuel outage year
[1]INPO goal for 1995

STRATEGIES

A. Increase efficiency and maximize plant equipment performance and reliability.

B. Minimize outage durations.

C. Implement operational and cost-related improvements.

D. Simplify work processes and procedures.

Strategy A - Increase efficiency and maximize plant equipment performance and reliability.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Develop and implement an appropriate approach to reliability centered maintenance program which supports the Maintenance Rule and rightsizes the preventative maintenance program. (RBA/JHM, CDT)	Continued improvement in system availability over the four-year plan.	July 1996
	a. Implement lessons learned from evaluations of the first system evaluation and streamline program.		a. January 1994
	b. Rightsize the preventative maintenance program.		b. July 1996
2.	Support NRC review of pending submittal for power uprate at Unit 2. (CDT, JHM, MJM)	Timely NRC approval.	May 1995
3.	Develop program to improve thermal performance and/or reduce lost megawatts at both Unit 1 and Unit 2. (RBA/JHM)	Improve plant efficiency.	November 1994
4.	Evaluate existing Post Maintenance Test (PMT) program against industry standards. (RBA/JHM)	Resolution of NRC concerns in SALP.	December 1994
	a. Assess Post Maintenance Test problems.		a. May 1994
	b. Benchmark other Post Maintenance Test programs.		b. September 1994
	c. Implement improvements for PMT program.		c. December 1994

Strategy B - Minimize outage durations.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Make decision on implementation of the 24-month outage cycle plan at Unit 2. (CDT,JHM,MJM)	Increased cycle average capacity factor and capability factor.	March 1994

Strategy B - continued

	ACTION		EXPECTED RESULTS		COMPLETION DATE
2.	Implement Refuel outage plans at Unit 1 to ensure outages are kept to a reasonable duration and managed in accordance with NDD-OUT. (RBA, CDT, MJM)				
a.	Freeze all other workscope for RFO13 (other than modifications).	a.	Outage workscope list finalized.	a.	August 1994
b.	Begin RFO13.	b.	Outage's goals met per NDD-OUT.	b.	February 1995
c.	Complete outage modifications scope list for RFO14.	c.	Outage-related modifications identified and finalized.	c.	July 1995
d.	Freeze all other workscope for RFO14 (other than modifications.)	d.	Outage workscope list finalized.	d.	August 1996
3.	Implement refuel outage plans at Unit 2 to ensure outages are kept to a reasonable duration and managed in accordance with NDD-OUT. (JHM, CDT, MJM)				
a.	Complete evaluation of core shuffle.	a.	Determine feasibility and benefit of core shuffle. Identify design and procedural concerns and solutions.	a.	January 1994
b.	Freeze all major workscope.	b.	All major workscope frozen. Major = significant resource, schedule or budget impact.	b.	April 1994
c.	Freeze outage scope.	c.	Scope addition/deletion review process is implemented into an overall outage schedule.	c.	October 1994
d.	Begin RF4.	d.	Outage goals met per NDD-OUT.	d.	May 1995
e.	Complete outage modifications scope list for RF5.	e.	Outage-related modifications identified and finalized.	e.	May 1995
f.	Freeze all other workscope for RF5 (other than modifications).	f.	Outage workscope list finalized.	f.	July 1996

Strategy C - Implement operational and cost-related improvements.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Develop Unit 2 decommissioning plan. (CDT)	Plan developed and approved by the Senior Management Team.	October 1994
2.	Update the Unit 1 Economic Study before purchasing fuel. (SKP)	Updated economic study.	May 1994
3.	Develop for use a meaningful Return on Net Asset (RONA) for the Nuclear SBU. (SKP)	Supports emphasis on total cost concept and measuring the value added of the nuclear assets.	March 1994
	a. Develop 1995-1998 targets for RONA.		September 1994
4.	Evaluate 54%/46% split between Unit 2 and Unit 1. (SKP)	Better cost accounting.	June 1994
5.	Develop a partnership on work effort with New York Power Authority and Oswego Steam (example: joint EOF, warehouse). (MJM/RBA/JHM)	To improve performance/reduce costs.	June 1994
6.	Complete the Nuclear SBU business planning and budgeting process for 1995. (BRS/SKP, SMT)	SBU is focused on the areas and indicators necessary to achieve results to successfully carry out the Nuclear SBU vision and mission.	
	a. Develop the preliminary Nuclear SBU budget for 1995. (SKP)	a. Provide focus on total cost management.	a. July 1994
	b. Develop drafts of the Nuclear SBU and branch/unit business plans for 1995-1998. (BRS/SMT)	b. Development of preliminary goals.	b. August 1994
	c. Provide preliminary 1995 budget and draft SBU business plan to MATS. (BRS/SKP)	c. Satisfy co-tenant agreement.	c. August 1994
	d. Provide final draft of SBU business plan to Corporate. (BRS)	d. Corporate review of SBU plan.	d. October 1994
	e. Finalize the SBU and branch/unit business plans for 1995-1998. (BRS)	e. Finalize business plans.	e. December 1994
7.	Develop a comprehensive tool control program. (MJM, RBA/JHM)	Minimize cost and work delays through effective tool control.	
	a. Develop plan.		a. March 1994
	b. Implement plan.		b. December 1994

Strategy C - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
8.	Improve the materiel condition of the plant. (RBA/JHM/CDT)		
	a. Reduce control room deficiencies (e.g., annunciators).	a. Improve control room materiel condition.	a. May 1994
	b. Reduce number of temp mods.	b. Zero non-outage temp mods older than one year other than those requiring an outage	b. January 1995
	c. Develop and implement a plan for removal or retiring in-place obsolete equipment.	c. Make determination of which equipment can be removed.	c. Per plan
	d. Improve plant labeling per branch plans.	d. Plant/P&ID changes made.	d. December 1997
9.	Streamline RWP process by implementing computerized RWP/Planning/Access control program. (RBA/JHM)	Simplify radiation work permit process.	June 1994
10.	Develop and implement the integrated long-range plan. (CDT)	Focus efforts on necessary and important work.	March 1994
	a. Include a life cycle management program in the long-range plan. (RBA/JHM)		a. July 1994

Strategy D - Simplify work processes and procedures.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Aggressively pursue full implementation and improved utilization of W. C. Mosse. (RBA/JHM)	Improve work control system.	
	a. Develop a plan to present to the Senior Management Team for future development of W. C. Mosse.		a. March 1994
	b. Complete installation of procurement/accounting module.		b. September 1994

Strategy D - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
2.	Streamline the work control process. (MJM, RBA/JHM)	Increased productivity of both SR/NSR work.	
	a. Evaluate total work processes at both units.		a. January 1994
	b. Evaluate each process step and modify, where appropriate.		b. June 1994
	c. Assess results and make additional changes to process if necessary.		c. December 1994

REGULATORY PERFORMANCE: Martin J. McCormick Jr.

A strong regulatory performance is essential for nuclear power to remain as a viable energy source and to avoid costly compliance measures. This requires that we continue to enhance relationships with our external constituents such as the Nuclear Regulatory Commission, Institute of Nuclear Power Operations, Public Service Commission, American Nuclear Insurers, State and County officials, our neighbors, and our customers. We need to maintain a good working relationship with each of these constituents in order to keep nuclear power a viable energy source for Niagara Mohawk Power Corporation.

To that end, we need to continue to focus on self-assessing our regulatory performance against the criteria with which the NRC, INPO and the PSC measure us. The three major initiatives to accomplish this continue to be the Nuclear SBU Business Plan, the Internal SALP-Type Assessment (ISTA), internal INPO type assessments (IITA), and the analysis/trending of DERs.

Through the Business Plan, we are striving to meet the Corporate, Nuclear SBU, and PSC MERIT goals that come from our Business Plan's action items and are monitored through our performance indicators.

Through ISTA and IITA, we evaluate our performance against NRC and INPO criteria by performing our own assessments. We must improve the regulators' perception of our operation with emphasis on sustained performance. A part of this is continuing to send people on INPO peer evaluations and benchmarking trips to obtain information to evaluate our performance and processes against the best in the industry.

Through the DER process, we continually identify our problem areas and develop appropriate plans for correcting them. Further, our root cause program must ensure problems are solved so they are not repeated.

A measure of our performance by all external constituencies is our ability to meet our regulatory performance indicators which we know are highlighted to the public through the news media. The action items resulting from the analysis and trending of DERs will help focus our activities and energies to reduce NRC violations, meet our commitments, and thus improve our NRC and INPO ratings.

By successfully completing our action items and meeting our performance indicators, we can demonstrate that we are one of the best performing nuclear facilities in the industry.

REGULATORY PERFORMANCE - Improve Regulatory Performance and enhance communications with external constituencies.

SENIOR ADVOCATE: Martin J. McCormick Jr.

PERFORMANCE INDICATORS		Top Quartile Region 1	COMMON 1994	COMMON 1995	COMMON 1996	COMMON 1997
A.	Maximum no. of NRC violations by date of discovery: • Levels I, II, III	4 (per dual-plant site)	0	0	0	0
	• Levels IV, V		8	6	4	4
B.	Repeat NRC violations		0	0	0	0
C.	% of NRC commitments met on time		100	100	100	100
D.	% of INPO commitments met on time		100	100	100	100
E.	SALP Rating		≤1.25	1	1	1
F.	INPO Rating[1]		2	1	1	1

[1] INPO rating may be issued the following year
Shaded years indicate a refuel outage year

STRATEGIES

A. *Continue to improve communications and relationships with external constituencies.*

B. *Continue to improve communications and relationships with the public and news media.*

C. *Continue to improve regulatory performance and compliance.*

D. *Eliminate requirements marginal to safety.*

Strategy A - Continue to improve communications and relationships with external constituencies.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Continue participation with INPO. (MJM, SMT)		
	a. Send at least one manager each year to INPO Senior Nuclear Plant Manager Course.	a. Improved management performance.	a. Yearly
	b. Continue to support industry review groups.	b. List of candidates for potential openings.	b. August 1994
	c. Submit list of candidates to participate as peer evaluators in 1995.	c. List for proposed peer evaluators submitted.	c. December 1994
2.	Identify areas for potential INPO assist visits. (MJM)	Better use of industry experience.	Annually
	a. Review audits, surveillances, self-assessments, plant evaluations, etc.	Areas identified.	a. September 1994
	b. Request assist visits from INPO.		b. October 1994
	c. Participate in assist visits.		c. December 1994
3.	Continue line management involvement of training. Support accreditation renewal of applicable branches. (MJM, SMT)	Assurance of line involvement and buy-in identifying and monitoring training needs.	
	a. Satisfy requirements of Accreditation Board.		a. December 1994
4.	Complete the preparation and follow-up for the 1994 Site INPO evaluation. (MJM)	Preparation activities completed; evaluation conducted; follow-up actions completed through final report issuance.	
	a. Complete or have action plans in place to resolve findings/SOER's from the 1993 INPO Site evaluation.		a. April 1994
	b. Develop and issue position papers on key issues.		b. April 1994
	c. Provide timely responses on the INPO Evaluation Report.		c. August 1994

Strategy B - Continue to improve communications and relationships with the public and news media.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Conduct additional site/plant tours. (RBB)	Improve understanding of nuclear power and Nine Mile Point.	December 1994
2.	Increase interview opportunities for media with senior management team. (RBB)	Improve media and public's impression of professionalism and expertise of Niagara Mohawk nuclear staff.	December 1994
3.	Host a legislative/opinion leader reception. (RBB)	Improve government and public understanding of nuclear power and relations with Nine Mile Point staff.	February 1994

Strategy C - Continue to improve regulatory performance and compliance.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Update and present five-year plan to address NRC-related issues to the NRC. (MJM)		
	a. Present updated five-year plan (1994-1998) to the NRC.	a. NRC aware of upcoming NMPC submittals so that resource/budget plans are enhanced.	a. January 1994
2.	Rightsize the Unit 2 USAR. (MJM, CDT, JHM)	Approximately a 25 percent reduction in USAR volume.	April 1994
3.	Evaluate the cost/benefits of converting to the Improved Standard Technical Specifications (ITS) for NMP2. Pursue line-item technical specification improvements contained in the ITS. (MJM, CDT/JHM)	Project report prepared...Technical Specification amendments issued for line-item improvements.	December 1994
4.	Complete the Unit 1 Design Basis Reconstitution base program. (CDT, SMT)	Development of system design basis documents.	June 1994

Strategy C - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
5.	Complete the Unit 2 Design Basis program. (CDT, SMT)	System design basis documents updated and issued, including changes to USAR.	December 1996
	a. Drawing update project.		a. December 1995
	b. Complete System Design Basis documents.		b. December 1996
6.	Perform self-assessment against INPO criteria (IITA). (MJM, RBA/JHM)	Improved INPO rating.	
	a. Develop internal Plant Experience Report prior to next evaluation.		a. January 1994
	b. Conduct management self-assessment against INPO type criteria.		b. February 1994
7.	Support mid-SALP period ISTA. (MJM, RBA/JHM)	Improved performance.	Per schedule
	a. Conduct mid-SALP period ISTA for unit performance improvement.		a. June 1994
	b. Communicate ISTA findings with NRC personnel.		b. August 1994
	c. Determine corrective actions from ISTA evaluations.		c. August 1994
	d. Use ISTA report to support Objective 3, Strategy A actions.		d. August 1994
8.	Provide program for Maintenance Rule (10CFR50.65) to assure readiness. (RBA/JHM)		
	a. Evaluate NUMARC guideline 93-01.		a. January 1994
	b. Develop action plan to implement guideline.		b. January 1994
	c. Implement action plan.		c. December 1994

Strategy C - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
9.	Expand the influence of the SALT group through the use of multiple discipline expertise to address plant/support concerns. (MJM)	Focus use of Licensing/QA/Training to enhance solution to problems that emerge.	
	a. Evaluate organization.		a. June 1994
	b. Make changes if required.		b. December 1994
10.	Meet or surpass environmental laws and regulations, in coordination with Corporate Policy on Protection of the Environment, through increased environmental awareness and enhanced oversight of operations. (MJM)	Improve environmental performance.....	Ongoing
	a. Minimize environmental impact and regulatory violations in support of the Corporate Environmental Performance Index.	a. Meet Corporate Environmental Performance Index goal.	a. December 1994
11.	Develop program for reducing/eliminating chlorofluorocarbons (CFCs). (CDT)	Proactive approach in addressing the CFC refrigerant use, handling and phase-out issues.	
	a. Assess initial impact of the new CFC regulations on Units 1 and 2. Provide recommendations for procedural and equipment changes needed to comply with the new regulations, and to prevent adverse effects on plant operation.		a. January 1994
	b. Develop a database for CFC equipment, evaluate equipment, prioritize and define retrofit options.		b. December 1994
	c. Evaluate CFC equipment upgrade options, perform cost-benefit analyses and determine required modifications.		c. December 1995
	d. Finalization and scheduling of modifications, simple design changes and design basis update.		d. December 1997

Strategy D - Eliminate requirements marginal to safety.

ACTION	EXPECTED RESULTS	COMPLETION DATE
1. Implement a program to reduce regulatory burdens associated with marginal to safety requirements. (MJM)	Revise or eliminate commitments marginal to safety to use resources more effectively to enhance safe plant operation.	
a. Continue to make improvements to the NMP1 and NMP2 Technical Specifications which eliminate unnecessary requirements.	a. Related Technical Specification changes are submitted to NRC on schedule set with Plant Managers.	a. December 1994
b. Develop process for revising commitments and institute a program which identifies and reduces unnecessary regulatory commitments.	b/c. Reduction in unnecessary regulatory commitments and regulations.	b. December 1994
c. Identify and pursue appropriate changes to regulations through exemptions and rulemaking (through NUMARC).		c. December 1994
d. Provide a status report to the Senior Management Team which includes a list of all identified reductions and plans for implementation.	d. Status and plans agreed to by the Senior Management Team.	d. June 1994; December 1994

PROFESSIONAL PERFORMANCE: Gerald W. Krueger

Over the past year, we improved our operating efficiency and maintained emphasis on safety. Our benchmarking activities told us that the best plants are the ones with the best operating and cost efficiencies. Rightsizing and cost reductions will need to continue to maintain economic feasibility and remain competitive in a marketplace that continues to change.

The theme of this year's Business Plan is to build on our path to success by gaining employee commitment and involvement as we continue to improve performance. The improvements we have set out to make in this year's Business Plan are in the areas of knowledge, skills, communication, and leadership.

Strengthening the skills and knowledge of our work force will improve our performance and lead to more innovative ways to do our tasks even better. The Senior Management Team is also committed to eliminating communication barriers between themselves and all levels of the organization.

One area that is in need of improvement is the strengthening of our work practices through better work planning. Improvement in this area will result in clearer definitions of work to be done and improved execution of work activities, which will in turn improve all facets of our business from reduced radiation exposure to reduced costs.

In order to become one of the best run nuclear operations in the industry, we must continue to develop a good business partnership with the union membership. This requires realization of a common understanding of the needs and goals of the organization as well as a sensitivity to the needs of the union membership.

A true professional organization values the diversity among its members and the innovation and creativity of varying points of view. We must continually strive to build professionalism by overcoming negative stereotyping of employees based on race, creed, color, sex, age and physical handicap and to value the diversity within our organization.

All of the above initiatives are important; however, the single most important component in improving professional performance is you, the employee. The best training, coaching, and facilities do not guarantee success. We cannot succeed without the full support and ownership of every Nuclear employee. Organizational performance will improve as a direct result of our striving to maximize our performance as individuals.

PROFESSIONAL PERFORMANCE - Maximize individual and organizational performance to achieve desired results.

SENIOR ADVOCATE: Gerald W. Krueger

PERFORMANCE INDICATORS	TARGETS							
	UNIT 1				UNIT 2			
	1994	1995	1996	1997	1994	1995	1996	1997
A. No. of Licensee Event Reports (LERs) and violations attributable to personnel error	8	5	5	5	9	9	8	8
B. DERs open for implementation >1 year	200	200	200	200	250	250	250	250
C. Open DERs extended for implementation ≥ 2 Times	50	20	10	5	50	20	10	5

PERFORMANCE INDICATORS	COMMON			
	1994	1995	1996	1997
D. No. of OJT observations by line management	65	60	60	60
E. No. of management observations of training	150	150	150	150
F. Year-end staffing (rightsizing) • NMPC employees	≤1450	≤1450	≤1450	≤1450
•*Long-term contractors*	30	25	20	15

Shaded years indicate a refuel outage year

STRATEGIES

A. ***Rightsize the Nuclear SBU.***

B. ***Increase and maintain the skills and knowledge of employees at all levels of the organization.***

C. ***Improve employee communications.***

D. ***Strengthen leadership skills.***

E. ***Take initiative to develop a good working/business relationship with the union.***

F. ***Maintain the Nuclear commitment to EEO.***

Strategy A - Rightsize the Nuclear SBU.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Evaluate existing rightsizing plans and adjust target. (GWK, SMT)	Establish new targets through comprehensive evaluation of necessary work and organization structure.	
a.	Develop rightsizing plan, including the union in its development.		a. January 1994
b.	Communicate rightsizing plan to all employees.		b. January 1994
c.	Reevaluate work activities and streamline organization based on opportunities to combine or eliminate work activities.		c. February 1994
d.	Review layers of management for opportunities to flatten organization.	Improved lines of communication to employees.	d. March 1994
e.	Complete implementation of plan.		e. June 1994
f.	Continue to evaluate ways to improve organizational effectiveness.		f. December 1994

Strategy B - Increase and maintain the skills and knowledge of employees at all levels of the organization.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Assess skills and knowledge of maintenance personnel. (MJM/GWK, RBA/JHM)	Determine training needs and best methods for delivery of training.	
a.	Identify skills and knowledge opportunities for improvement of maintenance personnel.		a. March 1994
b.	Develop action plan and training implementation schedule to address opportunities for improvement.		b. June 1994
c.	Identify career development needs of management and professional employees in maintenance branch.		c. October 1994
d.	Develop action plan and training implementation schedule.		d. December 1994

Strategy B - continued

ACTION	EXPECTED RESULTS	COMPLETION DATE
2. Assess skills and knowledge of personnel (MJM/GWK, RBA/JHM)		
a. Set schedule for assessment process for remaining branches.		a. March 1994
b. Develop assessment program to identify skills and knowledge opportunities for improvement for other branches.		b. June 1994
c. Complete assessment process for other branches		c. December 1994
d. Develop action plan and training implementation schedule to address opportunities for improvement.		d. June 1995
e. Identify career development needs of management and professional employees.		e. October 1995
f. Develop action plan and training implementation schedule for management and professional employees.		f. December 1995
3. Initiate training and development program. (MJM/GWK)	Training and development programs initiated to improve skills and knowledge.	December 1994
a. Provide more emphasis on OJT by in the field training.		a. December 1994
b. Develop a plan and schedule for: • Systems training (including license base) for maintenance • SRO certification for key managers and supervisors		b. March 1994

Strategy B - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
4.	Transition OJT and classroom training to job through coaching and mentoring. (MJM/GWK)	Skills and knowledge learned in classroom are transferred to work environment.	October 1994
	a. Coaching process expanded to other departments in generation beyond maintenance.		a. March 1994
	b. Establish a mentor/leadership/coaching program for middle level management by Senior Management Team.		b. April 1994

Strategy C - Improve employee communications.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Establish a focus group comprised of a cross-section of employees to improve present communication process. (RBB)	Communication needs are identified and improvements made.	September 1994
2.	Develop interactive communication both up and down organization. (RBB, GWK)	Improve quality and speed of communication. More Senior Management involvement and visibility in workplace.	November 1994
3.	Improve employee recognition and success celebration programs. (GWK, SMT)	Flexibility to better target reward to event.	December 1994
	a. Evaluate introduction of group awards.		a. February 1994
	b. Assess opportunities for improving Nuclear SBU incentive awards.		b. December 1994
	c. Develop Nuclear SBU award for innovative ideas that improve performance and reduce costs.		c. March 1994
4.	Continue to implement the integrated facilities study and communicate any changes. (CDT, MJM, SMT)	Improved employee performance, morale, and working conditions.	December 1994
5.	Evaluate results of the 1993 Employee Attitude Survey and develop action plan(s) to address issues, where appropriate. (GWK)	Improve employee morale.	October 1994

Strategy D - Strengthen leadership skills.

ACTION	EXPECTED RESULTS	COMPLETION DATE
1. Assess leadership skills and develop individual leadership programs. (GWK, SMT)	Employee involvement in Nuclear SBU mission is increased and commitment strengthened.	
a. Utilize reverse reviews.		a. Ongoing
b. Incorporate leadership skills into SBU Succession/Management Development program.		b. June 1994
c. Improve goal setting and coaching skills on performance management.		c. February 1994
d. Develop teambuilding skills.		d. May 1994
e. Develop skills for encouraging employee involvement and creating an empowering work environment.		e. April 1994
2. Improve Senior Management communications of goals and expectations. (GWK, SMT)	Senior Management goals and expectations are clearly communicated and understood.	January 1994
a. Set up focus group with branch managers to generate ideas.		a. January 1994
b. Present ideas to the Senior Management Team.		b. January 1994

Strategy E - Take initiative to develop a good working/business relationship with the union.

ACTION	EXPECTED RESULTS	COMPLETION DATE
1. Provide plan to deal with bumping that may take place from Oswego Steam Station. (GWK, MJM)		June 1994
a. Review possible candidates.		a. January 1994
b. Commence task training before coming to Nine Mile Point.		b. March 1994
2. Involve union leadership and membership in problems before decisions are made. (GWK, SMT)	Improved relations.	December 1994
3. Use more mutual gains approaches to solving problem. (GWK, SMT)	Better union buy-in to change.	December 1994

Strategy E - continued

	ACTION	EXPECTED RESULTS	COMPLETION DATE
4.	Develop Nuclear SBU addendum to labor contract. (GWK, SMT)	Key work rule changes are identified and negotiated into nuclear addendum.	
	a. Identify and prioritize key work rule changes with Plant Managers		a. March 1994
	b. Negotiate changes on top 10 items with Nuclear SBU union leadership.		b. December 1994
	c. Negotiate balance of items (below 10 on priority) into addendum.		c. December 1995

Strategy F - Maintain the Nuclear commitment to EEO.

	ACTION	EXPECTED RESULTS	COMPLETION DATE
1.	Maintain or improve Affirmative Action Plan goals during reorganization and rightsizing. (GWK)	Maintain or improve Affirmative Action Plan goals.	December 1994
2.	Support efforts of workforce Diversity Task Force and its mission. (GWK)	Employees have greater appreciation for cultural, race, and gender differences.	December 1994
	a. Support training initiative.		
	b. Support and champion diversity events.		

LINKAGE OF THE CORPORATE STRATEGIC PLAN TO THE SBU BUSINESS PLAN

1994 - 1996 Corporate Strategic Plan Objective and Strategy		Nuclear X-Reference
Business Objective: Improve total returns to shareholders		
1.	Continue to focus on total cost-management with the goal of minimizing customer bill increases.	SBU 2.C.1,2,3,4
2.	Implement recommendations from the Comprehensive Industry Restructuring and Competitive Analysis for the 2000s (CIRCA 2000) study.	Nuclear SBU Business Plan
3.	Continue to pursue sustained improvement in the operating performance of the Nine Mile Point nuclear units.	Nuclear SBU Business Plan
4.	Improve planning and budgeting processes and skills to provide the Company with a competitive management tool that ensures resources are allocated in a manner that maximizes returns.	SBU 2.C.6 SBU 2.C.10
5.	Develop and pursue new forms of regulation that are more consistent with emerging competition.	SBU 3.D.1
Service Objective: Provide reliable and high quality electric and gas services at competitive prices.		
2.	Continue to focus on total cost management with the goal of minimizing customer bill increases.	SBU 2.C.1,2,3,4
Conduct Objective: Improve employee empowerment, pride, teamwork, safety and personnel development to maximize performance.		
1.	Enhance the mutual gains process between organized labor and management to allow us to become more competitive.	SBU 4.E.3
2.	Promote the development of employees through an increased emphasis on career development, succession planning, performance feedback, and pay for performance initiatives and formal management and employee training.	SBU 4.B.1,2 SBU 4.D.1
3.	Facilitate job enrichment by cultivating the strengths of a diverse workforce.	SBU 4.F.2
4.	Develop and implement improvement programs to address those areas that scored low in the 1993 employee attitude survey.	SBU 4.C.5
5.	Continue to implement recommendations in the Safety Assessment Improvement Program, with all recommendations either completed or ongoing by 1995.	SBU 1.D.1,2
6.	Develop and implement a comprehensive business ethics initiative to reaffirm the Company's commitment to deal with customers, employees, suppliers, and governments on the basis of mutual respect and utmost integrity.	Nuclear SBU Business Plan
Environmental Objective: Improve environmental performance		
1.	Incorporate the Corporate Environmental Policy into the business and budget planning processes.	SBU 3.C.10

LINKAGE OF CORPORATE GOALS TO THE SBU BUSINESS PLAN

1994 - 1996 Corporate Goals	1994	1995	1996	Nuclear X-Ref
Business Objective: Improve total returns to shareholders.				
• Departmental Expenses	$900	$958	$953	2.PI.J & K
• Capital Additions	TBD	TBD	TBD	2.PI.L
• Staffing Levels	N/A	10,509	10,509	4.PI.F
• Nuclear Performance Index	8.0	8.0	8.0	Nuclear SBU Business Plan
Service Objective: Provide reliable and high quality electric and gas services at competitive prices.				
• *None for Nuclear*	NA	NA	NA	NA
Conduct Objective: Improve employee empowerment, pride, teamwork, safety and personnel development.				
• *Lost Workday Case Incident Rate*	1.17	.77	.69	1.PI.J
• Total OSHA Recordable Incident Rate	5.26	4.13	3.71	1.PI.K
• Employee Attitude Survey				
• Demonstrating Company Values:				
• Employee Recognition • Open and Honest Communication • Teamwork • Build a Climate of Trust	NA NA NA NA	TBD from Corporate Survey	N/A N/A N/A N/A	Nuclear SBU Business Plan 4.C.5
• Empowerment Index	NA		N/A	
• Management Effectiveness Index	NA		N/A	
• Commitment to Safety Index	NA		N/A	
• Commitment to Customer Index	NA		N/A	
• Supervisor Confidence Index	NA		N/A	
• Employee Morale Index	NA		N/A	
• Average Index	NA		N/A	
Environmental Objective: Improve environmental performance.				
• Environmental Performance Index - Internal	Improve	Improve	Improve	3.C.10

"1994-1996 based on 11,000 employees

1994-1997 NUCLEAR SBU BUSINESS PLAN
ACTION ITEM REPORT SCHEDULE FOR MONTHLY SMT MEETINGS

1994 REPORT ITEM	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Unit 1 Stub Tube Cracking				X						X		
2. Generic Letters: a. 89-10 (MOV's)										X		
b. 88-14 (Instrument Air)									X			
c. 88-20 (IPEEE)	X										X	
3. Low Level Rad Waste Legislation and Storage Issues					X						X	
4. Spent Fuel Legislation and Storage Issues											X	
5. Reliability Centered Maintenance Program Including Adoption of the Maintenance Rule								X				
6. Source Term Reduction Program			X									
7. Rightsizing*		X				X						X
8. ISTA Evaluation Results*							X					
9. Internal INPO Evaluation Results*		X										
10. NRC 5-Year Plan*												X
11. Increase & Maintain Skills & Knowledge of Employees												X
12. Improve Tagging/Markup Program*			X									
13. Program to Improve Thermal Performance				X						X		
14. Refuel Outage Plans*												X
15. Economic Study Revision*					X							
16. Implementation of W. C. Mosse*			X						X			
17. Design Basis Reconstitution*						X						
18. Long-Range Plan*			X				X					
19. Modifications to Work Control Process									X			
20. Regulatory Burdens Associated with Marginal to Safety Requirements*						X						X
21. Implement Improvements to PMT Program											X	
22. Coaching Team		X					X					
23. Prime to Vax Conversion								X				
24. Improve Employee Health								X				
TOTAL REPORTS/MONTH	1	3	4	2	2	3	3	3	3	3	4	5

Shaded numbers = Part of SBU Plan
Shaded X's = Included Written Business Plan Report
*Requires SMT approval, otherwise informational meeting

FOCUS ON
RESULTS

1994-1997 NUCLEAR SBU BUSINESS PLAN
RESOURCE LOADED ACTIVITIES

Primary Function	# of Emp	Labor	Non-Labor		Total
Executive VP					
Executive VP	2	$241.7			
Salina Meadows Lease			1,023.0		
INPO/NUMARC Dues			483.1		
Forced Outage Contingency			1,266.0		
Discretionary			512.1		
Other Non-Labor			82.2		
Nuclear Controller	7	366.5			
Other Non-Labor			48.3		
NuCAPA	4	223.8			
ANEC/USCEA Dues			235.3		
Energy Info Center			32.3		
Other Non-Labor			40.0		
Human Resources	9	482.3			
Relocation Expenses			0.0	(1)	
Recognition Program			37.8		
Other Non-Labor			50.2		
Total Executive	22	1,314.3	3,808.3		5,122.6
Engineering					
VP Nuc Engineering	1	46.1			
Cancelled Const Orders			900.0		
BWR Owner's Group			92.0		
Discretionary			614.2		
Other Non-Labor			72.3		
Engineering Unit 1	85	2,541.0			
Expense Mods			0.0	(1)	
Other Non-Labor			214.2		
Technology Services	30	1,412.2			
Fuel Management			178.7		
Stability Analysis			0.0	(1)	
10 Year ISI			200.8		
Other Non-Labor			91.3		
ISEG	4	311.8			
SRAB			96.0		
Other Non-Labor			13.2		
Information Management	33	1,282.4			
Rents(Repro/Ref Matls)			84.6		
Computer Software			518.4		
Service Maint Agreemts			671.1		
WCMOSSE/EWC			0.0	(1)	
Software Development			296.1		
Document Control			36.4		
Records Management			30.7		
Performance Services			34.2		
Other Non-Labor			577.8		
Total Engineering	153	5,592.5	4,724.0		10,316.5

FOCUS ON
RESULTS

1994-1997 NUCLEAR SBU BUSINESS PLAN
RESOURCE LOADED ACTIVITIES

Unit 1 1994 Primary Function	# of Emp	Labor	Non-Labor		Total
Generation					
VP Generation	4	408.0			
Discretionary			1025.2		
Non-Labor			307.5		
Total VP Generation	4	408.0	1,332.7		1,740.7
Plant Manager Unit 1					
Operations Unit 1	106	7,682.3			
Radwaste Disposal Costs			3,157.5		
Valve & Comp Labelling			0.0	(1)	
Other Non-Labor			713.0		
Maintenance Unit 1	125	6,523.2			
Misc Maint Activities			570.0		
RCM			0.0	(1)	
Non-Labor			1,781.4		
Chemistry Unit 1	17	1,053.4			
Chemical Purchases			84.0		
Service Water Treatments			0.0	(1)	
Var Chem Analysis			0.0	(1)	
Non-Labor			377.5		
Radiation Protection Unit 1	44	2,589.0			
Protective Clothing			278.0		
RP Records Mgt (EPM)			0.0	(1)	
ALARA Program			50.0		
Non-Labor			191.5		
Technical Support Unit 1	27	1,403.6			
Service Maint Agreemts			119.1		
System Eng Consultants			75.0		
Non-Labor			86.0		
Work Control/Outage Unit 1	26	1,530.0			
Pre-Outage Schedulers			0.0	(1)	
Non-Labor			101.5		
Radiation Protection Unit 2	7	396.1			
Dosimetry Program			43.5		
Non-Labor			65.2		
Total Plant Manager Unit 1	352	21,177.6	7,696.2		28,873.8

FOCUS ON
RESULTS

1994-1997 NUCLEAR SBU BUSINESS PLAN
RESOURCE LOADED ACTIVITIES

Unit 1
1994

Primary Function	# of Emp	Labor	Non-Labor	Total
Site Support				
General Mgr Site Support				
Discretionary			146.3	
Site Services	25	683.1		
Snowplowing			140.6	
Buildings & Grounds/Trash			204.1	
Medical Services			34.1	
Safety Activities			22.6	
Non-Labor			314.9	
Technical Services	30	1,614.7		
Misc Environ Monitoring			482.7	
Fire Department			35.5	
Security Locks/Doors/Keys			109.0	
Portable Instrument Repair			93.9	
Non-Labor			200.7	
Procurement	37	1,136.3		
Pooled Inventory Mgt			140.0	
RAPID/NOMIS			0.0 (1)	
Stores Handling			554.8	
Non-Labor			38.8	
Security	51	2,918.8		
Security Activities			92.2	
Fitness for Duty			43.0	
Non-Labor			199.6	
Total Site Support	143	6,352.9	2,832.8	9,185.7
Safety Assessment				
General Mgr Safety Assess	1	84.6		
Discretionary			434.0	
Other Non-Labor			5.2	
Licensing	10	605.4		
NRC Fees			4,100.0	
Non-Labor			84.2	
Training	42	2,589.3		
Simulator Lease			1,000.0	
Simulator Software Mod			300.0	
Emergency Preparedness Fees			759.1	
Misc Training			0.0 (1)	
Non-Labor			133.6	
Quality Assurance	27	1,525.3		
QA Activities			96.1	
Non-Labor			125.0	
Total Safety Assessment	80	4,804.5	7,021.2	11,825.7
Total Unit 1	784	$39,649.8	$27,415.2	$87,065.0

(1) Budget partially or completely covered in Discretionary.
* Denotes a Business Plan Item

FOCUS ON
RESULTS

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT ONE
1993/1994 CAPITAL FORECAST
($000)

ITEM #	DESCRIPTION	1993 APPROVED BUDGET	1994 PRELIM FORECAST	INCREASE (DECREASE)
1)	REPLACE CONTROL BLADES	48	409	361
2)	SIMPLE DESIGN CHANGES	294	1,022	728
3)	MG SETS/PROCESS COMPUTER	548	0	(548)
4)	MISC TOOLS AND EQUIPMENT	658	657	(1)
5)	COMPUTER UPGRADE	658	373	(285)
6)	STUB TUBES	722	10	(712)
7)	5TH H.P. FEEDWATER HEATER	856	0	(856)
8)	INSTR. AIR DRYER # 11	928	0	(928)
9)	MISC PLANT ADDITIONS	1,154	860	(294)
10)	APPENDIX J	1,697	493	(1,204)
11)	PRELIMINARY STUDY & INVESTIGATION	1,824	1,737	(87)
12)	CRDR PHASE III	2,107	0	(2,107)
13)	PROD PLANT NOMMALS	2,247	1,048	(1,199)
14)	OTHER	4,230	4,028	(202)
15)	CAPITAL ADDITIONS DISTRIBUTABLES	6,530	4,344	(2,186)
16)	DESIGN BASIS RECONSTITUTION	9,987	3,259	(6,728)
	SUBTOTAL	34,488	18,240	(16,248)
17)	COMMON(NMP#1 SHARE)	1,736	4,050 *	2,314
	GRAND TOTAL	36,224	22,290	(13,934)

* INCLUDES $2,487K FOR FACILITIES IMPROVEMENTS

1994-1997 NUCLEAR SBU BUSINESS PLAN
RESOURCE LOADED ACTIVITIES

Unit 2
1994

Primary Function	# of Emp	Labor	Other Non-Labor		Total
Executive VP					
Executive VP	4	$343.6			
Salina Meadows Lease			1,125.0		
INPO/NUMARC Dues			578.3		
Forced Outage Contingency			2,278.5		
Discretionary			802.6		
Other Non-Labor			60.6		
Nuclear Controller	11	607.7			
Other Non-Labor			80.1		
NuCAPA	5	261.7			
ANEC/USCEA Dues			282.2		
Energy Info Center			34.7	(1)	
Other Non-Labor			47.2		
Human Resources	11	530.8			
Relocation Expenses			0.0	(1)	
Recognition Program			43.8		
Other Non-Labor			110.1		
Total Executive	31	1,743.8	5,247.1		6,990.9
Engineering					
VP Nuc Engineering	5	34.1			
Cancelled Const Orders			1,000.0		
BWR Owner's Group			100.0		
GE Settlement			220.0		
Discretionary			1560.8		
Other Non-Labor			84.8		
Engineering Unit 2	82	2,503.8			
Expense Mods			18.0		
GL 89-10 Support			0.0	(1)	
SWEC Settlement			33.0		
Setpoint Program			0.0	(1)	
Mod Staff Augmentation			0.0	(1)	
Other Non-Labor			226.5		
Technology Services	22	1,261.2			
Tech Spec Setdown Equation			0.0	(1)	
Fuel Management			210.3		
10 Year ISI			234.2		
Other Non-Labor			90.4		
ISEG	6	353.6			
SRAB			118.0		
Other Non-Labor			32.9		
Information Management	32	1,530.2			
Rents(Repro/Rel Mats)			101.8		
Computer Software			823.4		
WCMOSSE/EWC			0.0	(1)	
Service Maint Agreemts			604.6		
Software Development			346.1		
Document Control			42.7		
Records Managment			36.5		
Performance Services			40.7		
Other Non-Labor			684.5		
Total Engineering	157	5,702.9	6,624.1		12,327.0

1994-1997 NUCLEAR SBU BUSINESS PLAN
RESOURCE LOADED ACTIVITIES

Unit 2 1994 Primary Function	# of Emp	Labor	Other Non-Labor	Total
Generation				
VP Generation	8	676.6		
Discretionary			3227	
Other Non-Labor			1,128.4	
Total VP Generation	8	676.6	4,355.4	5,032.0
Plant Manager Unit 2				
Operations Unit 2	118	8,709.5		
Valve & Comp Labelling			0.0 (1)	
3D Monicore			0.0 (1)	
Other Non-Labor			342.1	
Maintenance Unit 2	190	11,254.8		
Misc Maint Activities			1,088.0	
Feedwater Pump Seal Rebuilds			0.0 (1)	
GL 89-10			0.0 (1)	
Breaker Overhauls			0.0 (1)	
SRV Refurbishment			800.0	
Scaffold Decon			0.0 (1)	
RCM			0.0 (1)	
MSIV Actuator Repair			180.0	
Other Non-Labor			1,385.4	
Chemistry Unit 2	23	1,494.3		
Chemical Purchases			894.0	
Equipment Rental			112.8 (1)	
Other Non-Labor			433.4	
Radiation Protection Unit 2	78	4,449.8		
Radwaste Disposal Costs			3,356.0	
ALARA Program			15.0	
Dosimetry Program			52.5	
RP Records Mgt (EPM)			0.0 (1)	
Protective Clothing			278.0 (1)	
Other Non-Labor			813.5	
Technical Support Unit 2	45	2,507.3		
Service Maint Agreemts			410.0	
Tech Spec Surv Program			0.0 (1)	
Feedwater Perform Test			0.0 (1)	
Other Non-Labor			113.1	
Work Control/Outage Unit 2	15	916.4		
Pre-Outage Schedulers			0.0 (1)	
Other Non-Labor			64.8	
Radiation Protection Unit 1	1	46.8		
Other Non-Labor			30.7	
Total Plant Manager Unit 2	477	29,426.9	10,457.1	39,884.0

FOCUS ON
RESULTS

1994-1997 NUCLEAR SBU BUSINESS PLAN
RESOURCE LOADED ACTIVITIES

Unit 2
1994

Primary Function	# of Emp	Labor	Other Non-Labor		Total
Site Support					
General Mgr Site Support					
Discretionary			170.8		
Site Services	29	995.7			
Snowplowing			200.8		
Buildings & Grounds/Trash			239.9		
Medical Services			40.9		
Safety Activities			27.4		
Other Non-Labor			357.1		
Technical Services	37	1,951.9			
Misc Environ Monitoring			841.3		
Fire Department			45.8		
Security Locks/Doors/Keys			131.0		
Portable Instrument Repair			112.8		
Other Non-Labor			231.8		
Procurement	42	1,273.7			
Pooled Inventory Mgt			20.0		
RAPID/NOMIS			0.0	(1)	
Stores Handling			811.7		
Other Non-Labor			82.9		
Security	61	3,509.0			
Security Activities			108.3		
Fitness for Duty			81.2		
Other Non-Labor			186.1		
Total Site Support	169	7,735.3	3,377.6		11,112.9
Safety Assessment					
General Mgr Safety Assess	1	101.7			
Discretionary			645.8		
Other Non-Labor			5.3		
Licensing	10	610.3			
NRC Fees			3,900.0		
Tech Spec Evaluation			0.0	(1)	
Other Non-Labor			88.5		
Training	47	2,917.6			
Simulator Lease			1,820.0		
Simulator Software Mod			300.0		
Misc Training			0.0	(1)	
Emergency Preparedness Fees			817.0		
Other Non-Labor			282.6		
Quality Assurance	36	2,132.2			
QA Activities			110.4		
Other Non-Labor			106.8		
Total Safety Assessment	94	5,761.8	7,757.4		13,519.2
Total Unit 2	806	$51,047.3	$37,818.7		$88,866.0

(1) Budget partially or completely covered in Discretionary.
* Denotes a Business Plan Item

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT TWO
1993/1994 CAPITAL FORECAST
($000)

Item #	DESCRIPTION	1993 Approved Budget	1994 Prelim Forecast	Increase (Decrease)
1)	Service Water/Unit Cooler	0	3,761	3,761
2)	ITE Molded Case Breakers	111	156	45
3)	Purchase Spare Transformer	500	0	(500)
4)	Miscellaneous Plant Additions	531	601	70
5)	Local Power Range Monitors	771	20	(751)
6)	CWS Chem Inj Facility	798	0	(798)
7)	Plant Painting Program	808	650	(158)
8)	Production Plant Normals	821	1,263	442
9)	Stuffing Box Refurbishment	931	0	(931)
10)	Upgrade IAS Compressors	1,101	0	(1,101)
11)	Snubber Reduction	1,148	600	(548)
12)	Simple Design Changes	1,156	1,200	44
13)	Enhance MSIV Guide Pads	1,230	0	(1,230)
14)	SWEC Settlement	1,263	269	(994)
15)	Generic Letter 89-10	1,430	0	(1,430)
16)	Preliminary Study & Investigation	1,481	2,063	582
17)	Replace Control Blades	2,121	30	(2,091)
18)	Tools and Equipment	2,679	1,422	(1,257)
19)	Standby Gas Treatment	3,812	0	(3,812)
20)	Other	3,067	2,962	(105)
21)	CAD Engineering Support (NOTE)	1,561	1,130	(431)
22)	CAD Engineering Programs	3,356	3,089	(267)
23)	GE Settlement Credits	(1,809)	(228)	1,581
	SUBTOTAL	28,867	18,988	(9,879)
24)	Common(NMP#2 Share-Excl Facilities)	2,033	1,879	(154)
	SUBTOTAL	30,900	20,867	(10,033)
25)	Site Facilities(NMP#2 and Common)	7,805	9,740	1,935
26)	Turbine Rotors	0	3,000	3,000
27)	Power Uprate	0	3,056	3,056
28)	RP Access Facility & New Chem Lab	0	1,045	1,045
29)	CAD Engineering Support (NOTE)	1,000	1,000	0
	SUBTOTAL	8,805	17,841	9,036
	GRAND TOTAL	39,705	38,708	(997)

NOTE: ALLOCATED $1.0M TO ITEMS 25-29 FOR 1993 AND 1994.

OBJECTIVE 1 - SAFETY

COLLECTIVE RADIATION EXPOSURE

The total amount of whole-body radiation exposure received by all personnel (including contractors and visitors) at the plants during each calendar year.

VOLUME OF LOW-LEVEL SOLID RADWASTE

Per unit annual volume of low-level radioactive waste generated after processing for storage or for burial. Low-level radioactive waste includes dry, contaminated materials (e.g. trash, wood, tools), waste solidification system output, and dewatered resins, filters, and sludge. Spent nuclear fuel is not included.

UNPLANNED AUTOMATIC SCRAMS PER YEAR

An actuation of the reactor protection system that results in a scram signal at any time when the unit is critical. Scrams that are planned as part of special evolutions or tests are not included in this definition. The value for this indicator is the number of scram signals per year.

SAFETY SYSTEM PERFORMANCE

The performance indicator is calculated separately for each of the three BWR systems. The safety system performance indicator is defined for each safety system as the sum of the unavailabilities, due to all causes, of the components (or emergency generator trains) in the system during a time period divided by the number of trains in the system. This definition is further explained as follows:

Component Unavailability: the fraction of time that a component is unable to perform its intended function when it is required to be available for service--The component unavailability is the ratio of the hours the component was unavailable (unavailable hours) to the hours the system was required to be available for service. The safety systems included for Unit 1 are emergency AC power, feedwater injection, emergency condensers, and Residual Heat Removal; and the Safety Systems for Unit 2 are emergency AC power, Reactor Core Isolation Cooling, Residual Heat Removal, and High Pressure Core Spray.

CONTAMINATION OCCURRENCE REPORTS

The number of skin and clothing contaminations reported on Contamination Occurrence Reports (CORs).

Skin and clothing contaminations are those which, before washing or cleaning, exceed a radioactivity level from beta and gamma emitting isotopes of 100 cpm above background as measured by a Geiger-Mueller instrument with a pancake probe (frisker).

UNPLANNED RADIOLOGICAL RELEASES

Any release of licensed radioactive material from Nine Mile Point to the environment which is not permitted by the Technical Specifications or NRC regulations.

WHOLE BODY COUNTS

The number of positive whole body counts equating to an intake greater than 10 percent of the Annual Limit on Intake, ALI, 10CFR20.1502(b)(1).

FUEL RELIABILITY

The indicator is defined as the combined steady-state off-gas activity rate (microcuries/second) measured at the steam jet air ejector outlet (Recombiner Discharge) for the six primary noble gas fission products, corrected for the tramp uranium (recoil release) contribution. Tramp uranium is fuel which has been deposited on reactor core internals from previous defective fuel or is present on the surface of fuel elements from the manufacturing process.

Steady state is defined as continuous operation for at least three days at a power level that does not vary more than ± five percent. Plants should collect data for this indicator at a power level above 85 percent when possible. Plants that did not operate at steady-state power above 85 percent should collect data for this indicator at the highest steady-state power level attained during the month. The data required to determine each unit's value for this indicator is the monthly activity rate (microcuries/second) of the krypton-85m, krypton-87, krypton-88, xenon-133, xenon-135 and xenon-138 isotopes.

LER'S DUE TO MISSED TECHNICAL SPECIFICATION SURVEILLANCE TESTS

A missed Technical Specification surveillance test occurs when the Technical Specification required surveillance test is not completed within its required time frame including its allowable extension. LER's recorded under this category are the result of missed Technical Specification surveillances for the current year and do not include discovered missed Technical Specification surveillances from the past year(s).

OSHA LOST WORKDAY CASES

Cases which involve a day away from work because of an occupational injury or illness.

For each case, a lost workday does not include the day of injury or onset of illness or any days on which the employee would not have worked even though able to work. Contractor personnel are not included in this indicator.

OSHA RECORDABLE INCIDENTS

All work-related deaths and illnesses, and those work-related injuries which result in loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid.

INDUSTRIAL SAFETY RATE

This indicator is defined as the number of accidents per 200,000 manhours worked for all utility personnel permanently assigned to the station that result in any one of the following:

- one or more days of restricted work (excluding the day of the accident)
- one or more days away from work (excluding the day of the accident)
- fatalities

$$\text{Safety Rate} = \frac{(\#\text{restricted time accidents}) + (\#\text{lost time accidents}) + (\text{fatalities}) \times 200{,}000 \text{ manhours}}{(\#\text{station manhours worked})}$$

OBJECTIVE 2 - COMMERCIAL

TOTAL REVENUE REQUIRED PER KWHR (¢)

Revenue required to recover the unit's total estimated costs at the unit's business plan capacity factor including return on investment.

AVERAGE NET CAPACITY FACTOR (ANCF)

The Average Net Capacity Factor is determined by dividing the net electrical energy generated, expressed in megawatt hours, by the product of the expected plant output net and the total hours during the month that the unit operated with breakers closed. The expected plant output is established by a monthly average circulating water inlet temperature and using the net generation output curve for the applicable unit.

$$\text{ANCF} = \frac{\text{Actual MWHe (Net)}}{\text{Expected MWNet} \times (\text{hours in month})} \times 100\%$$

THERMAL PERFORMANCE

The ratio of the design gross heat rate (corrected) to the adjusted actual gross heat rate. Design gross heat rate (corrected) is determined by correcting the initial plant gross heat rate to include the demonstrated effects of plant modifications or operating deviations. The adjusted gross heat rate is adjusted to account for circulating water inlet temperature deviations from design values.

Thermal Performance is determined as follows:

$$\frac{\text{design gross heat rate (corrected)}}{\text{adjusted actual gross heat rate}} \times 100\%$$

REFUEL OUTAGE DURATION

The period of time between the shutdown of the reactor before a refueling and the startup of the unit after that refueling (breaker to breaker).

NON-OUTAGE CORRECTIVE MAINTENANCE CONTROL ROOM DEFICIENCIES >6 WEEKS

A control room deficiency is any meter, chart recorder, indicating light, annunciator or other component within the control room that does not accurately represent the parameter or state it is intended to monitor. The actual fault may be in the hardware or software providing the input signal. Control room devices such as switches, controllers, or pushbuttons which do not operate as intended are also considered control room deficiencies.

This performance indicator reviews control room deficiencies that do not require an outage and are greater than six weeks old.

NON-OUTAGE TEMPORARY MODIFICATIONS >1 YEAR

Long-standing temporary modifications implemented greater than one (1) year which do not require an outage to be cleared.

NON-OUTAGE POWER BLOCK BACKLOG >90 DAYS

The total number of corrective maintenance Problem Identification (PIDs)/Work Orders which do not require an outage to be worked and are 90 days or more old. Power Block Work Orders are those for work on equipment associated with the safe, reliable generation of electricity and apply primarily to plant systems.

$$= \frac{\text{Total Non-Outage Power Block Backlog PIDs/WOs >90 days}}{\text{Total \# Non-Outage Power Block Backlog PIDs/WOs}} \times 100\%$$

CHEMISTRY PERFORMANCE INDEX (CPI) - Reactor Water

The reactor water chemistry index compares the concentration of selected parameters (chloride, sulfates and conductivity) to industry-accepted values for those impurities. The monthly average of the daily time-weighted measurements for each impurity is divided by the accepted value for the impurity, and the sum of these ratios is normalized to 1.0. The "accepted values" are the "achievable values" defined in the BWR Owners Group Guidelines. This indicator applies only during power operation, (i.e., greater than 10 percent power).

$$CPI = \frac{[(Cl)/15\text{ ppb} + (SO4)/15\text{ ppb} + \text{Conductivity}/0.2\mu S/cm]}{3}$$

CONDUCTIVITY

The average daily value (μSiemens/cm), for the period, for conductivity; includes only values taken at reactor power greater than 10 percent.

OBJECTIVE 3 - REGULATORY

NRC VIOLATIONS BY DATE OF DISCOVERY

The number of violations known to have occurred or were identified, including pending violations not yet issued by the NRC, by month of occurrence/identification:

REPEAT NRC VIOLATION

Repetitive violation as determined by the NRC; may be followed by greater enforcement action by the NRC.

PERCENT OF COMMITMENTS TO INTERFACING AGENCIES MET ON TIME

A measure of responsiveness to interfacing agencies (e.g. NRC, INPO). The percentage of instances in the reporting period where a commitment noted in meeting minutes or formal written communications between the Nuclear SBU and an interfacing agency were completed within the stated schedule. INPO Commitments are tracked on the DER tracking system.

OBJECTIVE 4 - PROFESSIONAL

PERSONNEL ERRORS RESULTING IN A LICENSEE EVENT REPORT (LER)/VIOLATION

Number of Personnel Errors made during the reporting period that result in an LER/Violation. A count of one is made for a personnel error that results in both an LER and a violation.

PERSONNEL ERROR

Human action (behavior), either observable or non-observable, that transforms normal performance into an abnormal situation.

LICENSEE EVENT REPORTS

Reports which identify events which meet the criteria of 10CFR50.73. These do not include reports written against safety/relief valve problems as required by NUREG-1047, Section 15.9.3.

DER's OPEN FOR IMPLEMENTATION >1 YEAR

Monitors DER's that are open for implementation of the corrective action(s) greater than one year. This indicator is measured from the Part 4 Branch Manager approval date to present.

OPEN DER's EXTENDED FOR IMPLEMENTATION ≥ 2 TIMES

Monitors the DER scheduled completion date, such that DER's are not extended greater than or equal to two times from the initial scheduled date. This indicator is measured from the scheduled completion date versus interim completion date(s).

ON-THE-JOB (OJT) TRAINING OBSERVATION

Number of times supervision/management from the line organization observes OJT in the plant.

MANAGEMENT OBSERVATIONS OF TRAINING

Number of times supervision/management observes training in the classroom, laboratory or simulator.

LONG-TERM CONTRACTOR POSITIONS

Long-term contractors who augment the Nuclear SBU staff (longer than six months). These contractors are usually appointed because of a lack of in-house expertise, special assignments, or other reasons which preclude NMPC from filling the position with an employee.