

**ED**  
The Power's Best Energy Value



COOPER NUCLEAR STATION

NEBRASKA PUBLIC POWER DISTRICT

2001-2006 STRATEGIC PLAN

NOVEMBER 22, 2000

**ED**  
Cooper Nuclear Station



Our **ROADMAP**  
to the **FUTURE**  
Cooper Nuclear Station

The Planet's Best  
**VISION** Energy Value

Cost Competitiveness  
Organizational Effectiveness  
**CRITICAL SUCCESS FACTORS** Safety

Implement the Enterprise Business Solution  
Focus on Standards, Accountability and Processes  
Improving Performance Through Training  
Improve Self-Assessment and Corrective Action Program Effectiveness  
Asset Value Maintenance  
Engineering Excellence

**STATION-WIDE PRIORITIES**

**EMPLOYEES** Foundation of Our Success: Skilled, Dedicated, Creative, Focused



You hold in your hands the 2001 edition of the Cooper Nuclear Station Strategic Plan. This plan provides our roadmap for years 2001 to 2006. As a member of the Cooper team it is important that you review this plan in sufficient detail to understand how your actions contribute to our overall success.

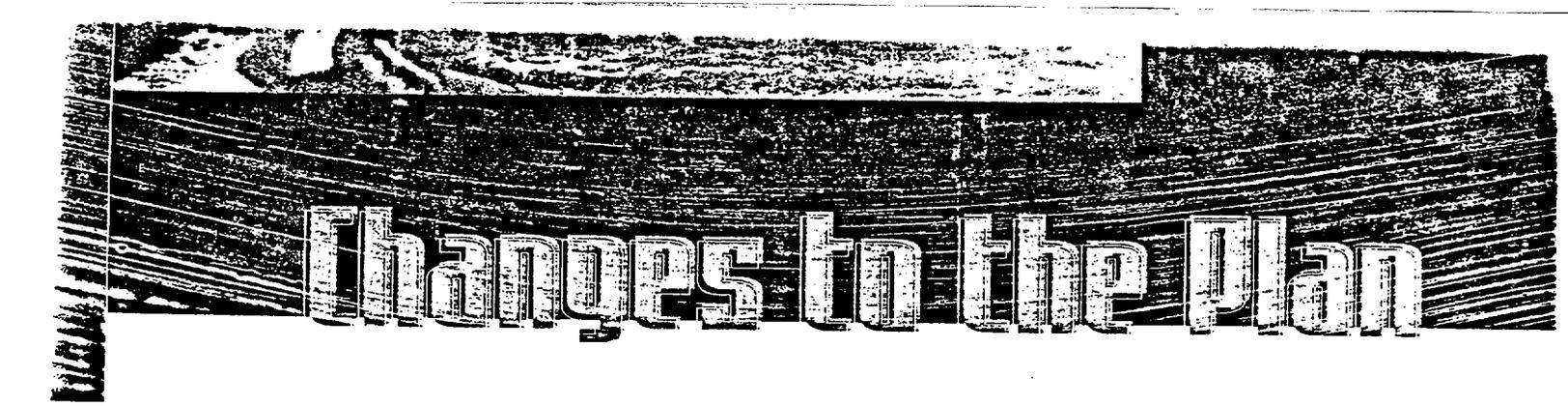
The past year has been a challenging one for Cooper. We have been faced with three forced outages, probation for our Maintenance and Technical training programs, and a leaking fuel assembly. As a result, we have failed to meet many of our Key Station Goals. I am pleased that we have addressed these problems in a professional manner that has ensured safe operation, minimized adverse economic impact and allowed us to work and learn together as a team. Importantly, we have made progress in positioning the station for future success. Notable accomplishments include: completion of engineering position specific training, significant reductions in liquid radioactive waste discharges, continued plant certification training, significant progress on the USAR re-baseline project and completion of the Optimum Water Chemistry project. We can look forward to a successful year in 2001.

Our Vision to become "The Planet's Best Energy Value" is unchanged. I believe this vision embodies the spirit of what we can achieve at Cooper Nuclear Station. To develop a more specific image of where we are going, I urge you to read the "Future" section beginning on page 5. This section provides a detailed picture of where Cooper will be in 2007 by following our Strategic Plan.

Our Mission "To Safely Produce Low-Cost Reliable Energy" is directly in line with NPPD's business objectives. NPPD in its corporate plan calls for "Excellence at CNS." Safe and reliable operation, ranking in the nuclear industry's top quartile, is key to excellence. With respect to cost, NPPD's corporate plan has established a specific performance objective. That objective is to "achieve and maintain power costs 20% below the regional market." Based on current market forecasts, we will reach this objective by meeting the cost goals contained in the Key Station Goals section of this plan. Safety and cost goals can both be reached. Industry experience proves that top quartile performance enables low power cost.

As I have consistently stated, the future of Cooper Nuclear Station rests in our hands. This plan is a tool that will help ensure a bright future for our community, our customers, and ourselves. Successful implementation of this plan is our responsibility and will require our collective efforts. Together we can make Cooper Nuclear Station "The Planet's Best Energy Value."

John Swailes  
Vice President Nuclear



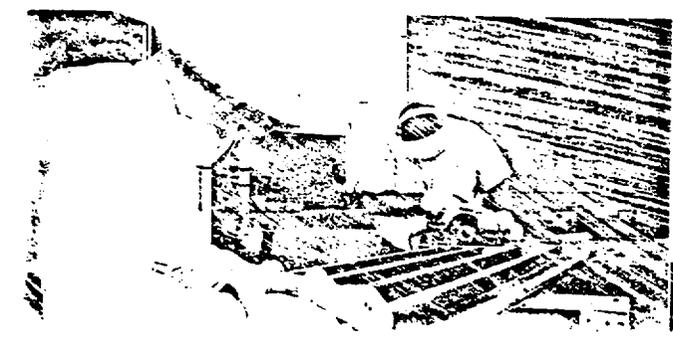
# Changes to the Plan

Nationally, the electric utility industry remains on track towards deregulation of the power generation market. Recent developments around the country, most notably in Southern California, have called into question the final form and timing of the deregulated marketplace. It is clear that the deregulated marketplace will itself have rules and regulations. Indeed, one could conclude that deregulation is really **re-regulation**. However, the forces driving toward deregulation remain. Nebraska's legislature has completed a three year study of deregulation. This study recommended that deregulation be instituted under certain conditions if it would be cost effective for the consumer. In short, if Nebraska's public power system cannot successfully compete against neighboring utilities in providing low cost energy, then a deregulated structure will be instituted. **Competition is here!**

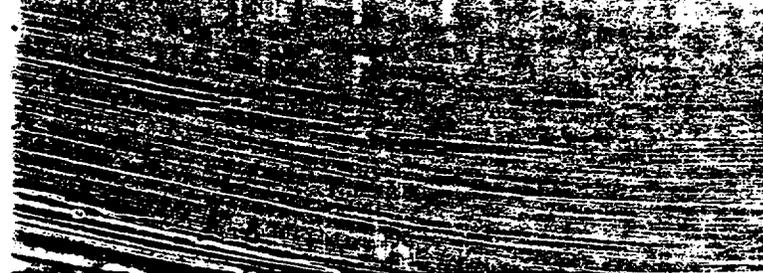
In an effort to maintain access to low-cost generation, NPPD has established a corporate objective to "achieve and maintain power costs 20% below the regional market that includes Nebraska." In response, Bus Bar Cost goals contained in the Cooper Nuclear Station 2000-2006 Strategic Plan were reviewed against current market forecasts for the Nebraska region. The conclusion was that by meeting the plan goals, Cooper can fully support NPPD in maintaining costs 20% below market. As a result the cost goals were left largely unchanged in this revision of the Strategic Plan. These Bus Bar Cost goals can be met as they are consistent with performance being achieved by other well-run, single unit, boiling water reactors. **We can compete!**

As you read this plan you will see that the layout and content are familiar. However, there have been a number of changes worth noting.

The "Staff Turnover" Key Station Goal has been revised to reflect "Voluntary" turnover. This indicator will provide a better indication of the number of people who leave to pursue other opportunities. This provides a more meaningful measure of the station's ability to retain high-performing employees in a competitive labor market.



Collective Radiation Exposure, Bus Bar Cost and Capability Factor goals for 2001 were adjusted to reflect the mid-cycle outage that is planned to start in February. Other Key Station Goals are largely unchanged.



Business Unit Goals have been established for use in the Performance and Development Process. The selected goals are Bus Bar Cost, Industrial Safety Accident Rate and Pre-Outage Planning Milestones.

Perhaps the most significant changes have been in the selection and scope of our Site-Wide Priorities, which were renamed Station-Wide Priorities to be consistent with the name "Cooper Nuclear Station."

**Two new Station-Wide Priorities** were established to focus on **Asset Value Maintenance** and **Improving Performance through Training**. Asset Value Maintenance focuses on a number of activities and projects designed to cost-effectively maintain the value of Copper Nuclear Station. Improving Performance through Training focuses on improving plant performance through investment and sustained improvements in our training programs.

Optimum Water Chemistry and Outage Performance were removed as Station-Wide Priorities. Optimum Water Chemistry is substantially complete with hydrogen injection scheduled by year-end. Improvements in planning and execution of refueling outages resulted in a Spring 2000 refueling outage of 45 days. Additional reductions in outage length will be evaluated as part of the "cycle optimization" portion of the new Asset Value Maintenance priority.

Focus on Standards, Accountability and "Procedures" has been retitled Focus on Standards, Accountability and "Processes." This change reflects the finding of the team working to improve organizational effectiveness that certain processes must be revised not just individual procedures. In particular, station-wide long range planning, department planning, budgeting, prioritizing and scheduling of work will be addressed.

Implementing the Enterprise Business Solution, Improving our Self-Assessment and Corrective Action Programs and Engineering Excellence continue as Station-Wide Priorities in 2001.

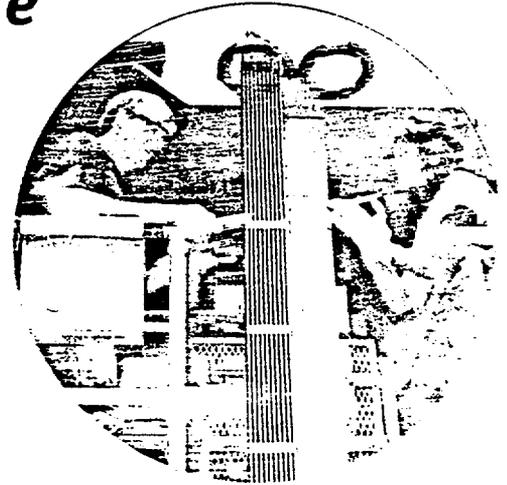
Based on feedback from employees, a list of major projects estimated at over \$20,000,000 has been included in this plan. This list includes projects being considered for implementation during the next six years that are not part of a Station-Wide Priority.

While our Values remain the same, some of them have been identified as "focus" values. During 2001, we will be identifying specific behaviors associated with these focus values and providing positive feedback when these behaviors are displayed.



# OUR VALUE:

*The Planet's Best Energy Value*



# OUR MISSION:

*To Safely Produce Low-Cost,  
Reliable Energy*



# OUR EMPLOYEES:

*The Foundation of Our Success*

Couderc has employees who are capable and hard working. They have consistently shown the level of personal commitment necessary to support an operating nuclear power plant. The pride they take in the plant is evident in everything they do.



# The Future

In the United States, deregulation of the electric power generation market is nearly complete. Consumers are making choices about electricity providers based on price and service. Power produced using nuclear technology is widely recognized as environmentally friendly with little or no pollutant emissions. With steps taken worldwide to reduce global carbon emissions, United States environmental policy recognizes our facility and other nuclear generators as valuable non-polluting assets, and promotes the need for license renewal to help meet growing demand for electricity. The competitive position of nuclear power continues to improve as the power generation industry is faced with higher summer natural gas costs and additional fossil fuel emission control requirements.

Using the Cooper Nuclear Station Strategic Plan as our roadmap, we are rapidly approaching Our Vision of being "The Planet's Best Energy Value." In 2007, focus on our three Critical Success Factors and Key Station Goals have allowed Cooper employees to successfully sustain improved performance.

We recognize that we are accountable for protecting the health and safety of the public and fellow employees and our commitment to protecting the environment remains strong in the year 2007. Milestones we have reached include:

- Our investment in technical training, which started in earnest in 1998, ensures our expertise in design basis, safety analysis, plant systems and equipment, operating characteristics and risk-informed decision making.
- The High-Level Nuclear Waste Disposal Project offers the means for extended on-site safe storage of off-loaded fuel.
- The Optimum Water Chemistry Project helps protect the integrity of the primary system and reactor vessel internals.
- In 2005, our collective radiation exposure is the lowest of any boiling water reactor in the nation, at 25 Rem.
- In 2006, our facility continuously operates in the top quartile of all the world's nuclear plants in the area of nuclear and industrial safety.





### *Cost Competitiveness*

Through optimal utilization of our resources, plant performance is maximized and our facility is widely recognized as a highly valued generator in the competitive marketplace. Milestones we have reached include:

- Our facility is competitively producing electrical energy with costs that are approximately 20 percent below the market price for our product.
- Advanced fuel designs and fuel contract initiatives have reduced fuel costs by approximately \$1/MWh compared to fuel costs in 1999.
- The size of our NPPD employee staff has decreased from a total of over 800 at the beginning of 2000 to 610 at the end of 2006, primarily by enhancing employee skills and managing attrition effectively.
- The use of contractors and temporary employees is limited to outage support and a few special projects of a specific technical nature.
- A Reactor Power Uprate project has added to our facility's power output rating.
- With completion of the Plant License Renewal project, Cooper is positioned to be competitive well beyond the current licensed life of 2014.
- In 2005, a year without a planned outage, our energy was provided to the bus at a cost of under \$21/MWh.
- During 2006, even though a planned refueling outage will occur, we produce energy at under \$26/MWh.
- As of December 31st, 2006 Cooper completes three years of operation with an average capability factor of 89 percent, at a new higher capacity, a six percent increase over the three-year average that existed in December of 1999.



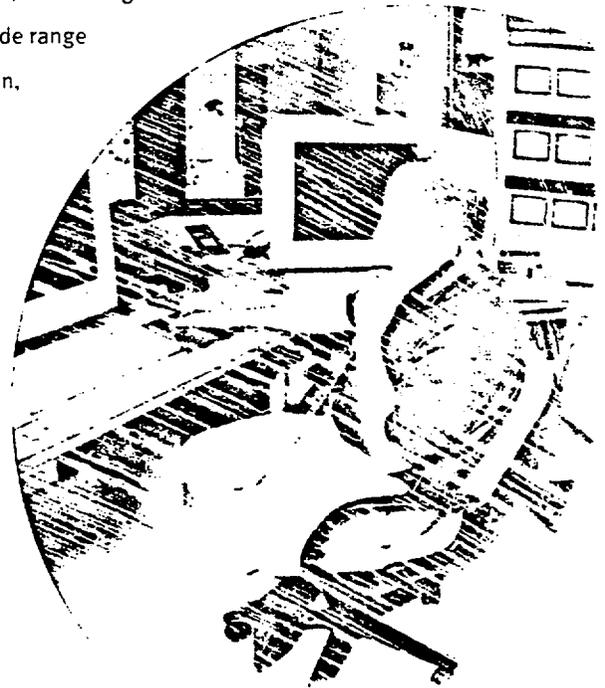


We maintain the highest standards, hold ourselves accountable for performing to those standards, utilize simple process and procedures to accomplish work and are aligned to work only on priority issues. Milestones we have reached include:

- Implementation of the Enterprise Business Solution has significantly improved the effectiveness and efficiency of our business processes.
- Training has provided a highly effective workforce that knowledgeably and efficiently perform cross-functional tasks. This multi-functional skill base empowers us to perform a variety of high-level tasks.
- A succession plan provides for personnel development through rotational assignments and educational investments that allow filling of key leadership positions from within.
- Outages are consistently completed on schedule with no significant human performance-related issues or safety events.
- Roles and responsibilities are clearly defined and understood across the organization.
- Our corrective action and self-assessment programs are recognized as supporting continuous improvement in station performance and are models for the industry.
- Our goals for employee turnover are met and we continue to perform employee surveys and make adjustments to increase job satisfaction.

Cooper Nuclear Station is recognized within the industry for its commitment to excellence. Both within the industry and locally, Cooper is recognized as a great place to work, advocating environmental stewardship and supporting local communities through a wide range of activities. Our workforce benefits from a market-based compensation plan, meaningful and challenging work, a balanced workload and a work environment that is professional and motivating.

As a result of all of this, by 2007, we have achieved our mission of safely producing low-cost, reliable energy. Most of the power generated by our facility satisfies the native load requirements of NPPD, while excess capacity and energy are aggressively marketed to obtain the best price and terms. This effort creates tremendous value for both our facility and our company. Worldwide recognition of our efforts comes as our exemplary performance is compared to that of other nuclear generators. In short, due to significant employee contributions, Cooper Nuclear Station is rapidly becoming "The Planet's Best Energy Value."



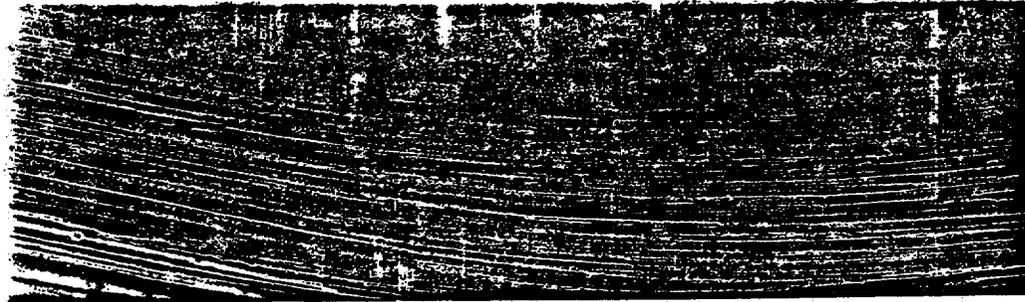


Every effort at Cooper must support one or more Critical Success Factors and it is important that all employees understand how their work contributes to the overall success of our organization.

Cooper has identified three “Critical Success Factors” on which we must focus to support the long-term fulfillment of our Mission. They are: Safety, Cost Competitiveness and Organizational Effectiveness. Safety and Cost are principle elements of our Mission and we must clearly focus in these areas to be successful. Why we need a Critical Success Factor called “Organizational Effectiveness” is a little less obvious. In principle, “Organizational Effectiveness” provides the infrastructure necessary to support excellent safety and cost performance over the long-term.

- All employees protect the health and safety of the public and fellow employees.
- All plant activities are conducted with direct consideration of nuclear, industrial, radiation and environmental safety.
- Operating evolutions are preplanned with consideration of risk and potential contingencies.
- Actions are executed in a thoughtful and controlled manner. Faced with uncertainty, employees stop and resolve the uncertainty before proceeding.
- The plant design is well understood and the design margins are effectively managed.
- Through consistent application of procedures, station configuration is effectively controlled in accordance with the design and licensing basis.
- Safety significance of identified issues are thoughtfully considered and the appropriate actions taken the first time.





- Through optimal utilization of resources, plant performance is maximized and Cooper is widely recognized as a highly valued generator in the competitive marketplace.
- We constantly look for and implement ways to maximize energy production and decrease costs, while enhancing safety.
- We operate the unit and all attendant equipment predictably and reliably in accordance with established plans and procedures.
- We thoughtfully invest in cost-effective ways to enhance plant electric generation capacity, operating life and reliability.
- We achieve performance levels that are competitive in a deregulated environment, which requires that we consistently meet or exceed the cost and production targets established in this plan.
  
- We set the highest nuclear standards and measure ourselves against them.
- We hold ourselves and each other accountable for performing to those standards.
- Processes and procedures are effective and efficient.
- Our organization is aligned to work only on priority activities.
- Effective leadership builds teamwork and accountability.
- The corrective action and self-assessment programs are an integral part of Cooper culture. They are consistently applied in an open and objective environment and their use results in continuous improvement in station performance.
- Human performance is maximized through optimal hiring, training, management and organizational design. Roles and responsibilities are clearly defined and understood across the organization.
- Our workforce benefits from a market-based compensation plan, meaningful and challenging work and a work environment that is professional and motivating.
- Through training, the Cooper employee team develops a multi-functional skill base that empowers them to perform a variety of high-level tasks, and the size of the permanent employee staff is decreased to optimal levels, primarily through attrition and retraining.
- A succession plan provides for personnel development through rotational assignments and educational investments that allow the filling of key leadership positions from within.
- Internal and external communications are accurate, timely and complete.



# Key Station Goals

Key Station Goals have been selected that reflect our performance with respect to each Critical Success Factor.

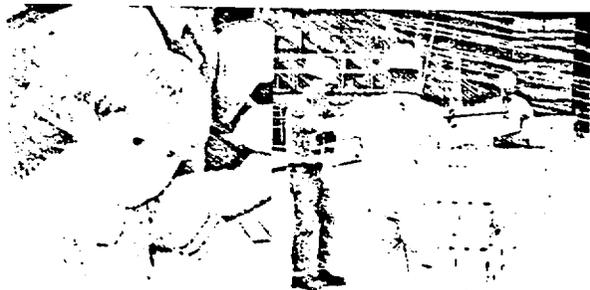
By meeting or exceeding Goals, we successfully accomplish our Mission. These Goals are designed to:

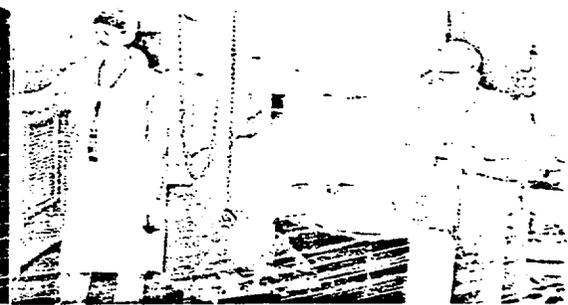
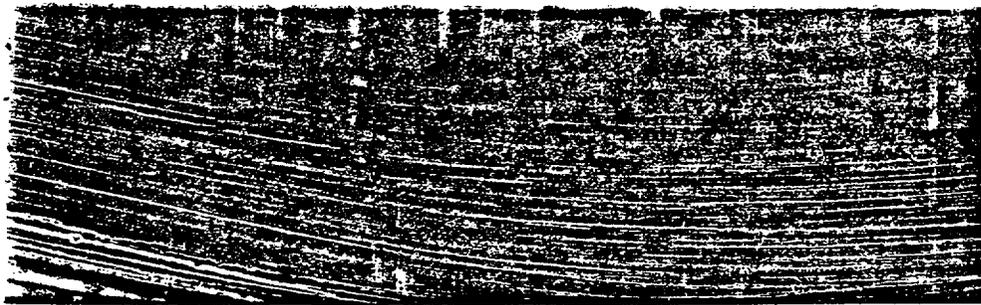
- Provide margin to regulatory performance thresholds that require no increased regulatory response.
- Meet or exceed NPPD's expectations for the performance of the Cooper Nuclear Station.
- Establish performance levels consistent with top quartile performance in the industry as measured by the WANO index. Achieving top quartile performance with respect to the WANO index or any other measure requires that we produce solid results in all areas and achieve industry-leading performance in some areas.

As a Business Unit of NPPD, Cooper establishes Business Unit Goals under the Performance and Development Process. The Performance and Development Process allows for a mix of Business Unit, Department, and Individual goals. Goals are assigned different weights and meeting or not meeting established targets affects an employee's performance-related compensation.

Based on previous employee surveys, 40% has been identified as the appropriate weighting for Business Unit Goals within each individual's "Results" section. Key Station Goals representing each of the Critical Success Factors have been selected. The selected weighting and performance targets for 2001 are as follows:

Bus Bar Cost	\$38.85/MW-Hour	20%
ISAR	.2 Events/200,000 Hours	10%
Outage Milestones	80% on-time completion	10%





Through daily accountability for nuclear, industrial, radiation and environmental safety, we will achieve our safety goals.

The regulatory oversight program provides a broad look at the safety of the plant using a set of objective performance indicators developed by the NRC with input from the nuclear industry. The NRC has established performance indicator thresholds for each indicator. Performance better than these thresholds is characterized as "Green" performance, which requires no increased regulatory response. Internal performance goals have also been established for each of these indicators. Consistently meeting these internal goals provides response time should performance begin to degrade.

INDICATOR	2001	2002	2003	2004	2005	2006
Safety Performance Indicators	All Green					

Human Performance Error Rate measures the number of errors attributed to human performance for every 10,000 hours worked during the year. Errors included in the measurement are those which result in a condition report, occurred within 12 months of being identified, and are attributed to a human performance cause code such as: direct personnel errors, written instructions, ergonomics, training and management methods.

INDICATOR	2001	2002	2003	2004	2005	2006
Human Performance Error Rate (Errors/10,000 Hours)	1.3	1.1	0.9	0.8	0.7	0.6

Collective Radiation Exposure is the sum of internal and external radiation dose, known as Total Effective Dose Equivalent (TEDE), received by all personnel including contractors and visitors during the year. Our goal is that our dose be as low as reasonably achievable (ALARA). The following annual goals represent performance consistent with the very best Boiling Water Reactors in the world with respect to radiation dose. This level of performance will be achieved through improved planning as well as increased use of robots, cameras, teledosimetry, shielding and other dose reduction technologies. These goals also anticipate some reduction in future drywell dose rates due to optimum water chemistry.

INDICATOR	2001	2002	2003	2004	2005	2006
Collective Radiation Exposure (REM)	145	26	135	130	25	125

Industrial Safety Accident Rate is the number of industrial safety accident events per 200,000 hours worked, averaged over 12 months. Based on current staffing, meeting the target goal of .2 requires that no more than one lost time or restricted work accident occur in any given year. Our goal is to provide a safe place for employees to work and to assure work activities are safely performed. To continuously improve our safety performance, we will adhere to established safety policies and always place personnel safety above cost and schedule considerations.

INDICATOR	2001	2002	2003	2004	2005	2006
Industrial Safety Accident Rate (Events/200,000 Hours)	.2	.2	.2	.2	.2	.2

Success in the "Cost Competitiveness" Critical Success Factor will be realized when we achieve performance levels that are competitive in a deregulated environment.

To be competitive, Cooper's cost of production must be below the price that the market is willing to pay. "Bus Bar Cost" is expressed in terms of "dollars per megawatt-hour," or "\$/MW-Hr." This is calculated by dividing the Nuclear Facility costs (\$) by the amount of electrical energy produced (MW-Hr). Nuclear Facility costs are those in the Nuclear Facility budget. They include Operating and Maintenance, Fuel, Capital, Debt Service, Decommissioning and Overhead. After 2004, Debt Service and Decommissioning costs are anticipated to drop to zero. This accounts for most of the decrease in the Bus Bar Cost goals for 2005 and 2006. With the cost reductions shown, Cooper's Bus Bar Cost is projected to be approximately 20% below the market price for base load energy at Cooper's electrical output bus. As market prices may vary from estimates, achieving a 20% margin to market is necessary to provide confidence that Cooper will be a competitive producer.

"Budget" goals are based on budgeted costs and generation. "Strategic Plan" goals are based on controlling expenditures to budgeted costs, while realizing higher energy generation consistent with the Unit Capability Factors described below. Adjustments are made in calculating the Strategic Plan goals to account for higher fuel usage. Goals assume no increase in energy generation due to a power uprate.

INDICATOR	2001	2002	2003	2004	2005	2006
Budget (\$/MW-Hour)	39.19	31.28	38.32	34.40	20.74	27.21
Strategic Plan (\$/MW-Hour)	38.85	30.18	36.20	32.75	20.05	25.85

Controllable Costs are those directly controllable by the station. These include costs associated with Operation and Maintenance of the station, including pension and hiring costs as well as Capital Costs. Fuel costs are not included. Controllable Costs are projected to decrease through 2005 in terms of both actual and constant dollars. Much of this decrease is based on reducing the staff size to 600 by the end of 2006. Monthly reports will reflect year-to-date variance from budget.

INDICATOR	2001	2002	2003	2004	2005	2006
Controllable Cost (\$M)	109.7	89.9	108.3	106.2	84.8	110.2

Unit Capability Factor is the amount of electrical generation actually supplied to the grid in relation to the maximum energy generation that could be supplied during the period. The 2003-2005 goals represent a three-year rolling average capability factor of 89 percent. We will achieve these levels of performance through improved outage performance, high thermal cycle efficiencies, low forced outage rates and by optimizing coordination of downpowers.

INDICATOR	2001	2002	2003	2004	2005	2006
Unit Capability Factor (Percent)	82	95	86	86	95	87

Success in "Organizational Effectiveness" will be achieved when we have the leadership, standards, accountability, alignment, communication and human performance factors in place to accomplish our mission over the long term. Additionally, our corrective action and self-assessment programs must result in continuous improvement in station performance.

The WANO Index is a composite of 11 different indicators that together provide a view of the operational effectiveness of the station. The performance indicators average data over time frames ranging from 3 months to 3 years depending on the indicator. Each indicator has different point loss threshold and weighting within the index. Goals have been established for these indicators such that meeting them will result in top quartile industry performance as measured against the index.

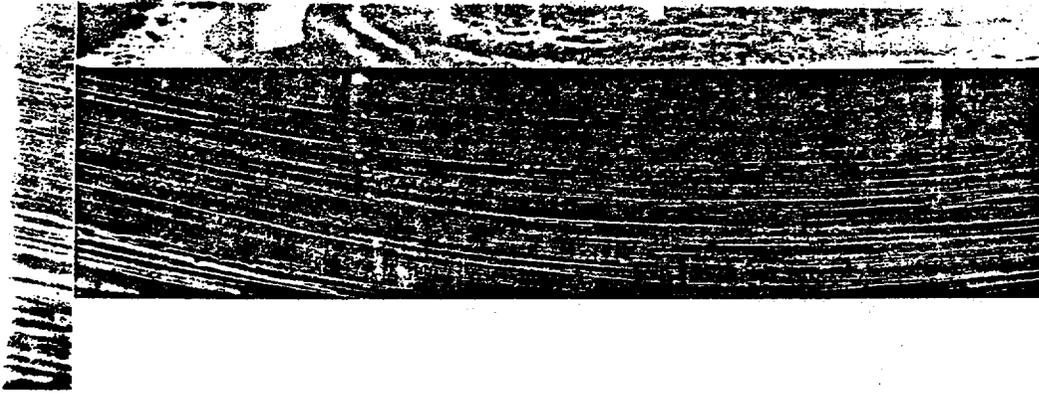
INDICATOR	2001	2002	2003	2004	2005	2006
WANO Index	90	90	95	Top Quartile	Top Quartile	Top Quartile

Voluntary Staff Turnover measures a percentage of regular NPPD employees who cease employment with Cooper Nuclear Station during the year. Unlike the "Staff Turnover" indicator used in previous plans, Voluntary Staff Turnover is designed to provide a better indication of the number of people who leave to pursue other opportunities. This will provide a more accurate measure of the station's ability to retain high-performing employees in a competitive job market. As a result, Voluntary Staff Turnover does not reflect people who retire, whose employment is terminated or who leave employment while subject to a performance improvement plan.

INDICATOR	2001	2002	2003	2004	2005	2006
Voluntary Staff Turnover (Percent)	5	5	5	5	5	5

Unplanned Capability Loss Factor is the percentage of electrical energy generation that was not supplied to the grid due to unplanned shutdowns or outage extensions. When we have an unplanned loss, those relying on our electrical output must replace it on short notice, often at higher replacement power costs. Our long-term goal is to achieve an Unplanned Capability Loss Factor of less than 2.0. This is consistent with top quartile performance in the industry.

INDICATOR	2001	2002	2003	2004	2005	2006
Unplanned Capability Loss Factor (Percent)	3.5	3.5	3.5	3.0	2.5	2.0



Open Non-Outage Corrective Maintenance Inventory is the total number of open corrective maintenance work requests which can be performed online. We are well on our way to achieving a level of performance that is consistent with the best plants in the industry. Meeting these year-end goals requires that all departments be supportive of and attentive to effective planning, scheduling and implementation of maintenance activities.

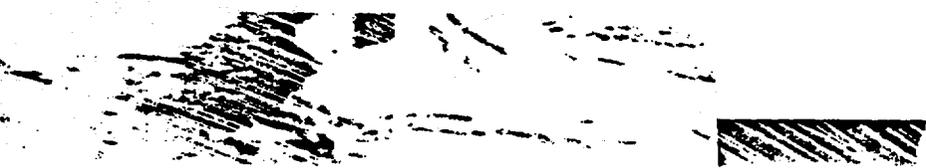
INDICATOR	2001	2002	2003	2004	2005	2006
Open Non-Outage Corrective Maintenance Inventory (Number)	200	200	200	200	200	200

Corrective Action On-Time Completion measures the percent of evaluations and corrective actions assigned under the corrective action program, which are completed on-time with respect to the initial assigned due date. This is indicative of our ability to plan work effectively.

INDICATOR	2001	2002	2003	2004	2005	2006
Corrective Action On-Time Completion (Percent)	85	90	90	95	95	95

Pre-Outage Planning Milestones measures the percent of major and sub-milestones completed on time. This goal is indicative of our ability to plan effectively and align resources to support successful outage implementation.

INDICATOR	2001	2002	2003	2004	2005	2006
Pre-Outage Planning Milestones On-Time Completion (Percent)	80	85	85	85	90	90



# Station-Wide Priorities

In developing this plan our performance is evaluated against many different benchmarks. In addition, business opportunities and potential risks to continued operation are identified. The output of this planning process is a group of major activities designed to have the greatest impact on improving our overall performance and ensuring continued, safe, stable operation. We call these activities Station-Wide Priorities.

EBS is an NPPD corporate-wide initiative designed to align business process improvements across the company, utilizing patented state-of-the-art information tools and software technology. The EBS project is utilizing software provided by SAP America, Inc. as the backbone for the standardization and redesign of many of the functional NPPD Business Unit work processes. In 1999, Phase I implementation of EBS at Cooper installed the R/3 Finance and Accounting (FI) and Controlling (CO) modules. The Finance and Accounting module is essentially used for external reporting purposes, while the Controlling module provides many of the tools needed to manage costs in the operation of our business.

At Cooper, work on Phase II of the EBS Project began immediately following Phase I, with a significant number of NPPD employees from several business units and consultants working throughout 2000. Phase II of EBS will provide the following additional R/3 Modules:

- Plant Maintenance (PM), which combines the maintenance and project systems processes collectively referred to as *Work Management*;
- Materials Management (MM), which provides best of business practices common to *Logistics* or *Supply Chain Management*;
- Master Data (MD), which is the foundation for R/3 processing and contains the critical equipment functional location and quality fields, vendor records, task lists and Bills of Material (BOM), among others.

The schedule for Phase II EBS implementation at CNS calls for integration testing of the R/3 software, revisions of major procedures and development of training material to be completed prior to the end of 2000. "Pilot Training" classes are scheduled to be conducted in December, and are designed to solicit feedback on training effectiveness from a representative sample of CNS employees. Important Station Readiness activities, designed to build support for the major changes EBS implementation will create, like job impacts, are continuing through the end of the year and into 2001.

Training of all employees at CNS will begin in earnest immediately following the New Year's holiday and will continue up to and beyond the "Go-Live" date of March 26, 2001. In parallel with this training, work on data "Cut Over" from our existing legacy systems to the client-server based software will also be undertaken. Following "Go-Live" a core group of employees will be retained in the project to support end-users and to work on structured redesign of several of our most important processes.

*Note: At the time of printing, tentative plans were being put in place to begin Phase III of the EBS project across the company in April 2001. Phase III will provide the software necessary to manage NPPD's Human Resources processes.*

# STATION-WIDE PRIORITIES

## *Review of Standards, Accountability, and Processes*

In 2000, a cross-functional team of employees from all levels was formed. This team took a comprehensive look at organizational effectiveness problems at Cooper, identified six problem statements, and provided detailed action recommendations. This review confirmed that shortfalls with respect to Standards, Accountability, and Processes are the primary contributors to organizational effectiveness problems at Cooper. The recommendations identified by the team are consistent with and build on the actions identified in the 2000 Strategic Plan. Implementation of the team recommendations has begun and will continue in 2001. The following are some of the actions that will be advanced in 2001.

### ***Standards and Accountability:***

- Establish a set of station standards for key activities that define the way business is to be done at Cooper Nuclear Station
- Use a multi-tiered cascade of communications to communicate the standards and behaviors across the station
- Capture standards in policies and procedures
- Assess performance against the new standards
- Establish a set of behaviors that demonstrate our "focus" values, demonstrate our standards and demonstrate accountability
- Implement a method of measurement and reinforcement of the right behaviors
- Establish clear supervisory roles, responsibilities and behaviors; provide necessary training; and hold individuals accountable for performance

### ***Processes:***

- Develop a single station-wide prioritization process
- Establish and maintain an integrated station schedule
- Develop a formal planning process that ensures that financial and human resources are available to accomplish the work prior to authorizing or committing to an activity
- Establish a formal budgeting process that integrates with strategic planning, change control, planning and scheduling.
- Re-establish a formal change control process that ensures any emergent projects are prioritized, planned, scheduled, financed and resource-loaded prior to authorization.

## *Performance Through Training*

In 2000, our Maintenance and Technical training programs were placed on probation and considerable efforts were applied to improve training effectiveness. Management recognizes that additional actions are necessary to ensure that improvements we have made are sustained. **The key to sustained improvement is that we all view training as a means to improve performance in the plant.** Listed below are some of the activities and milestones associated with improving performance through training in 2001:

- Continue implementation of the "Operation's Standards Improvement" project
- Implement the Training Excellence Plan
- Provide pre-job briefing training
- Continue work on the training material betterment projects resulting from task analysis work
- Provide management knowledge and skills training to first-line supervisors
- Ensure our people are fully prepared, from a process and software perspective, for EBS "Go-Live"
- Achieve accreditation renewal in the Operation's programs

**Self-Assessment Program.** An effective self-assessment program will result in continuous improvement in station performance and is essential to the long-term, safe and reliable operation of the plant. The objective of this initiative is to ensure the Self-Assessment Program is effective and is considered an integral part of a continuous improvement culture. Station-wide efforts in 2001 will focus on ensuring the Self-Assessment Program meets current industry-accepted principles and practices and that the self-assessment process is fully integrated into other continuous improvement processes. Our Station-Wide Initiative for 2001 is to:

- Assign a full-time resource dedicated to the administration of the Self-Assessment Program.
- Maximize the effectiveness of current continuous improvement efforts by integrating the Self-Assessment Program with the Corrective Action, Human Performance and Operational Experience Programs.
- Perform a Station-Wide Self-Assessment utilizing the revised self-assessment process.
- Evaluate the current Self-Assessment Program using both inside and outside experts, utilizing the recent INPO document, "Principles for Effective Self-Assessment and Corrective Action Programs," as a guide. Incorporate any required changes into the process prior to the 2001 Station-Wide Self-Assessment.

Success will be measured as part of a 4th quarter review of the 2001 self-assessment activities at Cooper Nuclear Station, including the Station-Wide Self-Assessment. This self-assessment will be performed by key senior managers, managers and outside industry experts and will include a thorough review of the depth, quality and effectiveness of the Station-Wide Self-Assessment and the overall self-assessment process.

**Corrective Action Program.** During 2001, we will focus on the following aspects of our Corrective Action Program:

- Identifying our own problems
- Consistently applying our Corrective Action Program to resolve problems
- Ensuring that Operability Evaluations are an integral part of our program
- Timely completion of medium to long-term corrective actions



In addition to meeting Key Station Goals, employees will continue to work on several initiatives in the year 2001 that could be instrumental in maintaining the value of Cooper in the years ahead. These initiatives include the pursuit of license renewal, cycle improvements, power uprate and adoption of an alternate source term.

**License Renewal.** The CNS operating license is valid until January of 2014. The initial license period of 40 years can be renewed for an additional 20 years. Results of a recent study demonstrate that a renewed CNS operating license can translate into significant savings for customers by delaying the expense of building a new power plant to replace Cooper's capacity. In 1999, NPPD submitted a letter to the NRC indicating interest in pursuing license renewal. During 2001, we anticipate a determination by the corporation of whether and when to begin preparation of a license renewal application.

**Cycle Optimization.** Considerable benefits can be obtained by reducing the duration of refueling outages and extending operating cycle lengths. Implementation of cycle optimization, which might include 24-month operating cycles and 30-day refueling outages, could increase the station's capacity factor by over three percent. Increasing the time between refuelings would require a license amendment demonstrating that safe operation would be maintained during a longer cycle. In addition, the maintenance program

would need to be optimized to support a longer period of reliable operation. Refueling outage length can be reduced through many activities, including; refueling bridge reliability improvements, improved main steam line plugs, alternate decay heat removal capability, optimized on-line maintenance, etc. During 2001 we will study the optimal combination of operating cycle and refueling outage length.

**Power Uprate.** Based on the results of an ongoing feasibility study, an increase in the rated power output of CNS by as much as 20 percent is possible. A decision is expected in 2001 regarding the level of investment in power uprate.

**Alternate Source Term.** Adoption of an alternate source term in the plant design basis is necessary to permit flexibility in implementing a number of cost-beneficial actions such as cycle optimization and power uprate, while improving defense-in-depth and safety margin documentation. A feasibility study will be performed in 2001. This study will identify the benefits, costs and work associated with adopting an alternate source term.

In early 1998, we began implementing the "Strategy for Achieving Engineering Excellence." Improvement actions taken in 2000 include: completing the Significant Condition Report backend review project, finishing the position specific training for all required engineering personnel, and completing another plant certification class. Significant work has been completed on the Updated Safety Analysis Report (USAR) re-baseline project and that project will be completed in early 2001. These actions have resulted in improved engineering support for operation and maintenance of our facility. While many of the improvement actions have been accomplished, some significant improvement activities are still in progress and will be focused on in 2001. These include:

- Complete the Updated Safety Analysis Report (USAR) re-baseline project.
- Continue refining the Engineering Support Personnel Training Program.
- Continued focus on improving our design and licensing basis documentation, understanding, and application.
- Improve the configuration control process.
- Implement engineering process changes required to support EBS implementation.
- Effectively support the station's corrective action program, especially the station operability determination process.
- Establish Program Health monitoring tools and notebooks.
- Resolve long-standing equipment issues including Z-Sump, REC design and licensing basis, and Service Water system material condition and performance.

# Our Values

Through our practical application of these values in the workplace, NPPD will achieve its business goals while allowing each of us to grow professionally. These Values represent a philosophy of how we want to conduct business as a whole. It may not be possible or appropriate to rigorously apply each value to every business situation. For example, individuals might miss a personal engagement because they were required to work overtime in order to restore a safety system to service. This does not mean that we have failed to live our value of "promoting a balanced life." However, we need to structure our business such that we do not consistently require such actions and we must recognize the contribution of those who support the station. If there is an apparent conflict between Values, actions should be taken that best support our Mission "To Safely Produce Low-Cost Reliable Energy."

## **Excellence**

- **Recognize and reward achievement**
- Continually improve
- Provide leading edge technology
- Promote accountability
- Commit resources for highest value
- Monitor performance against the "best of the best"
- Protect Assets while striving for cost efficiency

## **Employee Focused**

- **Promote professional growth and development**
- Promote a "balanced life"
- Value expertise and talent more than position
- **Practice safety in all endeavors**
- Empower and support employees
- Be considerate of employee feelings

## **Integrity/Honesty/Trust**

- Be trustworthy – walk the talk
- **Show respect for individuals**
- Be fair in treatment of others
- Display strong ethical standards
- Environmental stewardship

## **Creativity**

- Anticipate and adapt to changing conditions
- **Challenge the status quo**
- View mistakes as learning opportunities
- Acknowledge and reward innovation

## **Customer Focus**

- **Understand and follow through to meet customer needs**
- Work to exceed customer expectations
- **Seek feedback on a regular basis**
- Display a sense of urgency in serving customers

## **Teamwork**

- Be courteous to all teammates
- Be open in sharing information
- Acknowledge Contribution
- Focus on "win-win" outcomes
- Empower teams to find solutions
- **Reinforce right behaviors**

The **bold** Values are "focus" Values. One of the actions being taken within the Station-Wide Priority to "Focus on Standards, Accountability and Processes" will identify behaviors that demonstrate that we are living these focus Values. A process for measuring these behaviors and providing positive feedback will also be established.

# MAJOR PLANT PROJECTS

The following is a list of major plant projects estimated at over \$100,000 that are not included as part of a Station-Wide Priority. This listing is provided for general information and is subject to change. The most updated list of projects can be accessed on the CNSWEB at the "Strategic Plan" button.

<b>Fuel Pool Cleanup</b> Dispose of used components stored in fuel pool.	750,000		
<b>Refueling Bridge</b> Modify the refueling bridge to improve reliability and minimize lost outage critical path time.	1,378,000		
<b>Replace Service Water Pipe Material</b> Replace the service water pipe on the discharge side of the REC heat exchangers due to erosion and corrosion.	998,120		
<b>250V Battery Replacement</b> Install new cells in the 250 volt battery systems.	500,000		
<b>Replace Vessel Level and Feed Pump Turbine Controllers</b> Replace original GEMAC analog control systems with digital distributed control systems.	853,300	550,000	
<b>Replace Recirculation Flow Controllers</b> Replace obsolete GEMAC reactor recirculation flow controllers.			210,000
<b>EQ Resolution Project</b> Correct programmatic Environmental Qualification program weaknesses through the implementation of the EQ program corrective actions, including defining and developing the appropriate standards and expectations for all site programs.	2,364,675	1,336,802	811,680
<b>Engineering Excellence Strategy</b> Resource to conduct plant certification training and performance of safety system assessments.	450,000		
<b>Training Facility</b> Construct a new training facility to house the Maintenance and Technical groups.	1,000,000	2,000,000	
<b>Plant Water Environmental Discharge Limit</b> Determine what modifications, if any, are necessary to maintain discharge water temperature below the State permitted limit.	150,000	150,000	
<b>Service Water Gland Seal Water Treatment</b> Treat the service water from the riverwell so that minerals remain in solution.	138,739	128,770	452,989
<b>Reactor Feed Pump Turbine Rotors</b> Procure and install two new Reactor Feed Pump Turbine Rotors. A serviceable used rotor will be placed in the warehouse as a spare.	3,159,000		300,000
<b>Shell Thinning Repair of Feedwater Heaters</b> Several feedwater shells and nozzles are projected to fall below their minimum wall thickness and must be repaired or replaced.	569,100		
<b>Condenser Seismic Qualification</b> Provide analysis that the condensers will be available following a seismic event to limit any radioactive releases due to MSIV leakage.	536,000		
<b>Control Rod Blade Replacement and Disposal</b> Ongoing replacement of spent control blades.	180,000	180,000	120,000
<b>High Level Waste Storage</b> Provide for extended on-site storage of spent fuel beyond current spent fuel pool capacity.			37,000,000

# MILESTONES

Successful implementation of this plan is the responsibility, and will require the collective energy, of all employees of Cooper Nuclear Station. The plan will be managed through monthly reviews of station performance, relative to all of the

Key Station Goals. Performance not meeting expectations will be evaluated and needed actions taken. Progress on each Station-Wide Priority will be reviewed periodically by management. Information on station performance and

<b>Replace SW-MO-650 and 651 Valves</b> Repetitive rubber seat failures of these valves will be eliminated through their replacement with a different type of valve.	122,864	24,617		
<b>Training Excellence Support</b> Resources necessary to support sustained training performance.	454,000			
<b>REC/SW Crosstie Design Review or Modification</b> Conceptual design.	41,000		65,000	
<b>HPCI-CV-15CV</b> Replace the existing swing check valve with a lift check valve to improve LLRT performance and decrease maintenance costs.	217,322			
<b>Temperature Limit Changes</b> Raise the Ultimate Heat Sink and Reactor Equipment Cooling maximum allowable temperatures.		316,000		
<b>Main Steam System Project</b> Provide valve mapping services and increased spare parts inventory to better support testing and refurbishment activities.	387,000	495,000	333,000	533,000
<b>Upgrade PMIS</b> Replace obsolete PMIS data terminal display equipment and plotters.			300,000	
<b>EQ Monitoring Equipment in Steam Tunnel</b> Install permanent monitoring equipment to trend actual equipment temperatures.			150,000	
<b>Operations Procedure Betterment Upgrade</b> Complete rewrite of all Operations abnormal and emergency procedures except EOP's and EPIP's.	170,560			
<b>RHRWS Rad Monitors</b> Replace the existing radiation monitors, which are not reliable due to low flow and pressure in the system, with four clamp-on monitors.	107,986			
<b>Torus Penetration</b> Conduct re-analysis of the torus penetration calculations to ensure design and licensing requirements are met.	124,000			
<b>Electrical Load Margin</b> Increase electrical load margins to support increased area cooling.	250,000			
<b>CNS Ambulance/M&amp;TE Facility</b> Build a facility to house the ambulance and the M&TE calibration lab.		129,500		
<b>Alternate Decay Heat Removal</b> Supply additional cooling capacity to the spent fuel pool to allow greater outage schedule flexibility.		982,279		
<b>Auxiliary Refuel Floor Platform</b> Acquire a moveable platform that would span the reactor cavity to allow parallel activities to take place.		242,300		
<b>Vessel Head Removal Carousel</b> Procure a carousel with five new tensioners and conduct analysis for single pass tensioning to support reductions in outage duration.		656,717		
<b>Refuel Floor Tools</b> Procure reactor service poles, control rod blade/fuel support piece combination grapple, shroud head bolt tool and a vessel head O-ring storage box.		413,105		
<b>Removal of MIC Safe Harbors</b> Remove vestigial pipe runs within the service water system to eliminate breeding grounds for iron reducing bacteria.	112,250		74,402	
<b>Brush Rigging for RRMG Sets</b> Install brush rigging on the Reactor Recirculation MG sets that will permit the brushes to be replaced while the MG set remains in operation, eliminating the need to enter single loop operation.	160,000			

implementation of our Station-Wide Priorities will continue to be published and communicated monthly to employees through the "Planet Cooper" newsletter. Periodic discussions will be held with employees about our progress under the plan. Additionally, monthly presentations will continue to be made to the NPPD Board of Directors.



# Cooper Nuclear Station

NEBRASKA PUBLIC POWER DISTRICT  
POST OFFICE BOX 98  
BROWNVILLE, NEBRASKA 68321

Cooper Nuclear Station, the largest single power generation unit in the state of Nebraska, has performed safely from its location on the banks of the Missouri River near Brownville since July of 1974, when first put into commercial operation.

The station has a net generating capacity of 778 megawatts of power and operates by producing heat from the fission of nuclear fuel. This fission occurs in a Boiling Water Reactor, which contains more than 33,000 individual fuel rods. Through December 1999, Cooper has produced more than 112 million megawatt-hours of electrical energy. An important part of the activities at Cooper is a radiation monitoring program which routinely measures radiation levels in samples of air, soil, vegetation, milk, river water, well water and wildlife in the vicinity of the plant. There have been no adverse environmental effects since the plant was constructed.

