

**INDIAN POINT 2**  
**2000 – 2004**  
**BUSINESS PLAN**



# INDIAN POINT 2000-2004 Business Plan

## INTRODUCTION

**T**he 2000-2004 Indian Point Business Plan contains the strategic plans required for the accomplishment of our Vision as a World-Class power producer. Additionally, this plan contains year 2000 specific goals and supporting budget requests that are necessary to commence achievement of our ultimate vision.

The specific goals for 2000 represent significant challenges for Indian Point. Two examples are continued high capacity during plant operation and the shortest refueling outage in our history. The challenging goals were agreed upon by the Indian Point staff at various meetings held between May and August of 1999. It is understood that collectively WE can accomplish these goals as a team and only as a team. Senior Management at Indian Point is demanding that WE move beyond a culture that focused on "them" and "they" and change to a functional environment where WE will work together as a team. It is as a team that WE will move forward toward our vision of world-class performance.

What will "world-class" performance look like? One thing that WE all agree on is that "world-class" in 2004 will look significantly different than "world-class" in 1999. It is with this concept that WE recognize the importance of a strong corrective action program, critical and strong Quality Assurance and self-assessment programs as well as continued industry and non-industry benchmarking. WE understand that WE can not do this alone. It is with this philosophy that WE face the future.

In retrospect, WE look back upon 1999 as a good year but perhaps a year where WE returned to our cyclical nature of operating Indian Point. WE had a "world-class" run from September 1998 to August 1999 (342 days.) However, WE also recognize that WE have not necessarily been good stewards of our budget and the number of open condition reports, deficiencies and work-arounds remain unsatisfactory. In addition, design basis reverification is continuing to ensure that plant procedures meet licensing basis requirements. Furthermore, various station processes need improvement (i.e. industrial safety, work control, corrective action, emergency preparedness, etc.).

Preparation for 30 years of operation requires long range planning to position the plant for success. All decisions that are made must support long-term goals. Indian Point faces a number of issues that must be carefully planned and accomplished over the next few years. In order to have our engineering expertise closer to the plant; WE relocated our Design Engineers from Irving Place to a new location in Peekskill. WE must work towards high regards by all regulatory agencies. Site environmental remediation must be our primary goal.



In the second half of the year 2000 WE must focus on preparing for and initiating the Steam Generator Replacement Project. The replacement of the steam generators is currently underway and scheduled to be completed and the unit returned to service by the end of the year. After successful installation, an application to the NRC for license extension will be considered. The spent fuel pool will reach its capacity in 2004. This will cause the plant to look for alternative storage sites or build dry cask storage on the Plant Site. In addition, upgrades are required for the Work Control and plant control systems.

In anticipation of deregulation, accomplishment of the goals specified herein will help position us for competition.

## **VISION**

**WE** are a world-class nuclear operator. WE successfully exhibit the behaviors and promote the values that will allow us to produce electricity safely and reliably today and in a more competitive future.

## **MISSION**

**T**he mission of Indian Point is the safe, environmentally sound, dependable and economic generation of electrical energy utilizing nuclear power. Safe operation shall be the primary goal in planning, organizing, directing, and controlling Indian Point activities. The importance of protecting the health and safety of the public must be understood by employees and be foremost in their conduct of activities.

## **BUSINESS PLANNING PROCESS**

**T**he goal of this business plan is to create a central document that aligns the Indian Point organization to a "roadmap" which will ultimately take us to our vision of being a world-class nuclear operator.

Having said that, it is important to recognize where WE are today. Today, WE are not the best in the industry. WE clearly have improvements to make in many different areas as evident in previous self-assessments (e.g. the Indian Point Program for Excellence) as well as peer assessments (recent Quality Assurance and Institute of Nuclear Power Operations audits). By recognizing that WE are not the best, WE can allow ourselves to acknowledge that many of the processes and programs that WE utilize today have not been effective in bringing us closer to our vision. Therefore, it is fundamentally recognized that changes will have to be made to our existing processes and programs. Many of the goals for the year 2000 will be associated with this "recovery".

A cross-reference matrix has been prepared to provide a clear linkage between this Business Plan and the longer term corrective actions contained in Revision 3 of the "IP2 Recovery Plan". The matrix is presented as Attachment A following the Introduction and is titled,

"Recovery Plan (Rev 3) Longer-Term Corrective Actions and Business Plan Cross Reference." The matrix clearly identifies specific items listed in the "Longer-Term Corrective Actions" section of the Recovery Plan and correlates them with specific actions listed in the Business Plan. Additionally, the matrix lists the person responsible for implementing the action and the scheduled completion date.

So the theme for 2000 is one of "recovery." This next year, and for the immediate future, WE must learn how to perform business as well as (or better) than the nuclear operators already in the top quartile of the industry. WE recognize, and industry indicators clearly indicate, that the plants which consistently rate high in "core competencies" (e.g. reactor safety, work control efficiency, corrective action effectiveness, etc) inherently become economically viable and better positioned for a deregulated environment.

WE also recognize that deregulation as well as our own corporate goals and objectives will not allow us to utilize only "short-term" planning. Therefore, WE expect this business plan to layout the strategic improvements deemed necessary to build a solid foundation that will eventually support sustained economic viability and operating excellence. This strategic plan (as noted in Section IV) will be laid out over the next five years however; WE need to start working the plan in year 2000.

To accomplish our vision, WE commenced a series of station management meetings held during May through August 1999. During these meetings, our vision and mission was reviewed, edited and endorsed by those in attendance. Additionally, strategic issues were identified which were critical to our accomplishment of Indian Point's vision. At subsequent meetings, more specific and near-term goals were established as well as discussions related to resource requirements. Ultimately, the purpose was to tie specific budget requirements to goal accomplishment.

It was an expectation of this year's planning process to achieve acceptance for year 2000 goals by the entire plant staff. At a minimum this would include the opportunity for all employees to review and comment on the identified goals, but preferably, contribute to the development of action plans for goal achievement.

## **SELECT 2000 STATION GOALS AND BUDGET REQUEST**

**T**he Indian Point Staff has established a number of year 2000 goals which, when complete, will move us toward our station's vision and mission. Essentially, the completed goals are designed to make Indian Point a long-term competitive player in a deregulated electric market while keeping safety priority number one. The goals, by design, are aggressive in nature so that WE move as rapidly and as prudently possible to the top quartile of nuclear plants in areas such as safety, regulatory performance and cost.

Each goal is assigned to an accountable manager who developed the action plan and schedule required to achieve success. Several of the action plans are cross-discipline in nature and as

such, require teamwork and cooperation with all our Indian Point team members in order to achieve successful completion.

A complete list of 2000 Goals can be found in the next tab.

## **2000 MAJOR TARGETS**

Non-Outage O&M Budget Request .....	\$104.8M
Capital Budget Request.....	\$25.4M
Capacity Factor (non-outage).....	95%
Outage Duration.....	45 days or less
Outage Budget Request .....	\$49.5M

## **PLANT EXPENDITURES**

### **OPERATE THE PLANT WITHIN O&M AND CAPITAL BUDGETS**

**L**ong-term consistency and adherence to an achievable, well planned O&M budget is critical for our competitiveness and demonstrates fiscal responsibility. Our goals for 2000 are simple; getting back to the basics. WE need to expend resources on the “right things” so that WE continue to move the station toward our vision as a world-class power producer. The “right things” are improvements to people, processes, and material plant condition necessary to operate the plant safely and efficiently. Running the station safely and in accordance with regulations will ensure operating consistency and allow us to plan expenditures more effectively in the future.

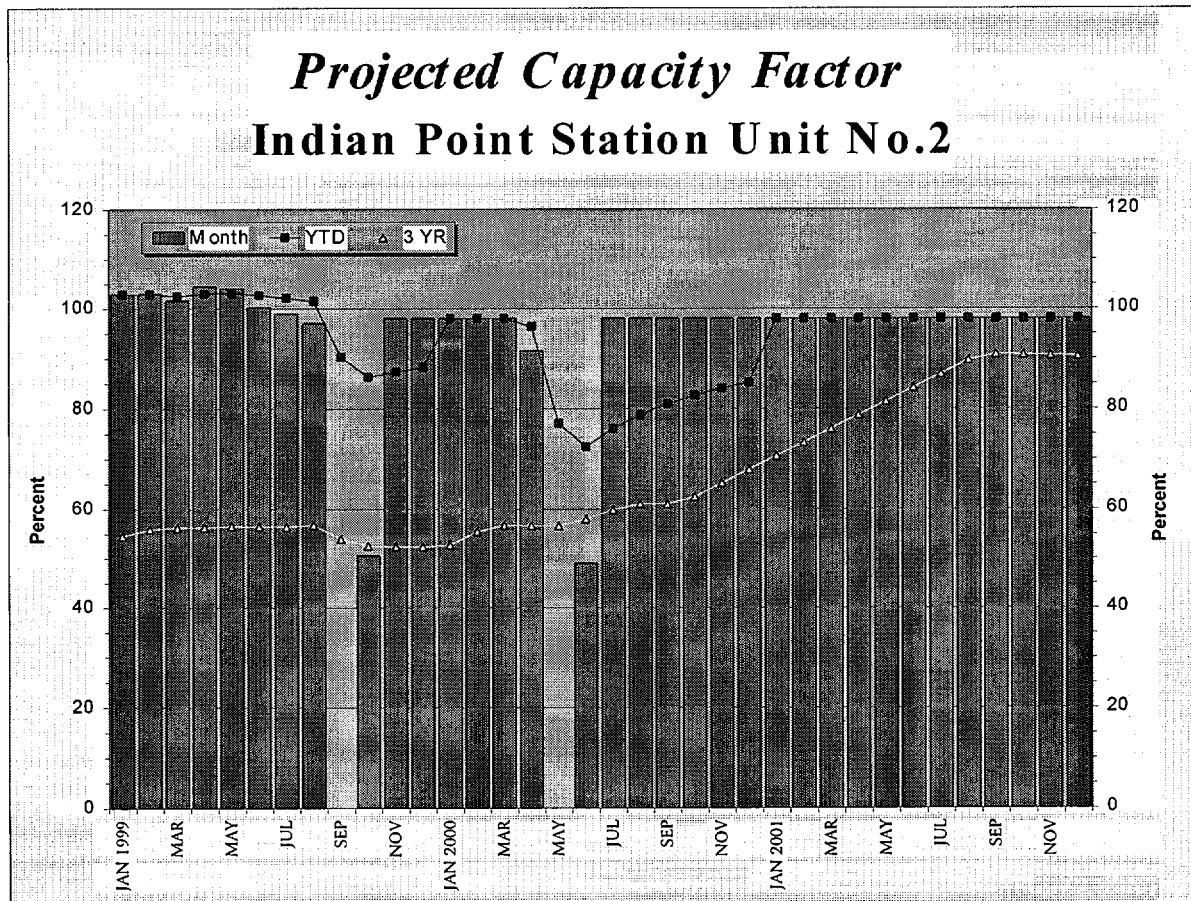
## **CAPACITY FACTOR**

### **SAFELY OPERATE AT 95% CAPACITY OR GREATER DURING NON-OUTAGE**

**A** recognized indicator of plant operational performance is its capacity factor. Capacity factor is calculated by the result of total generation divided by the product of a winter/summer rating and total hours in the period. The capacity factor is the basis for the nuclear portion of the Company’s partial pass through fuel adjustment incentive.

During the first 8 months of 1999 Indian Point’s capacity factor was in excess of 101%, indicative of continuous full power operations. While this number shows our potential to be a player in competitive power production, WE recognize that it is only indicative of short-term

success. The reactor trip on August 31 and subsequent recovery reinforce this statement. The three-year rolling average (also depicted) shows that WE are well below the industry median in capacity factor. Hence, our aggressive goals for this area. In 2000, WE plan to have our shortest refueling outage ever (described later) and WE will maintain the consistency needed in plant operations to continue to increase our three-year rolling average capacity factor.



## REFUELING OUTAGE PERFORMANCE

**R**efueling outage performance represents one of the major opportunities and challenges for Indian Point. Refueling outage length directly impacts the bottom line, including loss of revenue from generation, costs associated with the outage, and the need to purchase replacement power. Shorter outages also mean shorter periods of system and component derangement and therefore enhance reactor safety. Plans to reduce outage length include careful review of outage vs. on-line work, use of new technologies, improved processes, and incorporation of lessons learned from industry benchmarking.

Additionally, recent INPO assessment and past findings by Quality Assurance have found improvements are needed in the area of Human Performance. Specifically, weaknesses are noted in the area of general employee knowledge in the area of administrative procedures and plant design/licensing basis as well supervisory skills. To become a world class power generator, WE will need to continuously improve in all human performance areas and certainly the three specific areas noted by our peers.

## **HUMAN RESOURCES**

**G**oals have been set to reduce the total of permanent and temporary employees to approximately 0.8 per megawatt by 2002. Through the use of industry benchmarking, we will be able to identify opportunities to reduce plant staff to achieve these goals. It is expected that attrition will provide the mechanism for goal accomplishment.

<u>Year</u>	<u>Goal</u>
2000	776
2001	776
2002	768
2003	760
2004	749

## **LONG TERM PLANS & STRATEGIC ISSUES**

**I**ndian Point's Business Plan contains programs, processes and goals to accomplish its mission through 2004. As stated earlier, that mission is to become a world class energy producer. WE believe that at a minimum, a world class energy producer in 2004 will exhibit the following attributes:

- a spirit of continuously improving to a world-class level of performance and quality as defined by employees, World Association of Nuclear Operators, Institute of Nuclear Power Operations, and the Nuclear Regulatory Commission.
- considerably improved plant material condition.
- attracts, develops and maintains a talented and dedicated team.
- recognized by staff and customers (including outside agencies,) as a top (world-class) performing nuclear unit.

- maintains close and mutually supportive relations with the community, which actively promotes nuclear power as an environmentally safe and economical energy option.
- the energy supplier of choice for purchasers of power.
- is poised to efficiently supply energy through the year 2033.
- achieving economies of scale with Unit 3 have been successfully conducted.

It is fundamentally recognized that Indian Point will continue to be challenged to reduce overall operating costs. WE are already being challenged to improve our cost effectiveness due to pending competition. Additionally, WE continue to be challenged to improve our plant's performance indicators by an industry that is annually improving in all areas associated with safety and reliability. These include reducing the backlogs in Maintenance, Engineering and Corrective Action. In addition, WE will strive to improve our procedures for temporary facility changes, use of caution tags, operator's knowledge of plant, component labeling, contamination control, and pre-job briefings. These examples are driving us to challenge the way WE do everyday business (process improvement) as well as how WE can strategically improve our cost effectiveness.

Based on the above, several strategic long-term issues have been identified by our staff which present significant challenges to our ability to achieve our mission and vision. WE recognize that these long-term issues must be successfully resolved in order to attain a presence in the industry's top quartile performers. In many cases, these issues are prevalent at other nuclear plants resulting in a clear advantage to those plants that do the best job with implementation. Thus, it is acknowledged that these issues become a vital part of the Plant's Strategic Plan since they will control financial and human resources in areas deemed most critical to our ultimate success.

Our staff has selected the issues contained in this section. Due to emergent industry issues, the changing power industry, as well as other drivers outside of our immediate control, WE recognize that this list can change from year to year. WE will review this list each year and realign our resources to address the most appropriate long-term strategic issues. The current list is as follows:

1. Steam Generator Replacement
2. Spent Fuel Storage Issues
3. Satisfy the Needs of the Regulators
4. License Extension
5. Material Condition of the Plant and Housekeeping Standards
6. People – Ambassadors of Indian Point
7. Staff Expertise
8. Community Relations
9. Profitability/Competition
10. Stewardship of Environmental Resources

## **STEAM GENERATOR REPLACEMENT**

Indian Point 2 has the last Westinghouse Model 44 steam generators still in service in the industry. Inspections of our generators both before and after the steam generator tube failure that occurred on February 15, 2000 have revealed various problems, some of which appear to have been arrested, but the remaining service life of the generators is uncertain. WE have decided to replace the steam generators as soon as possible because continued operation with the existing steam generators will require substantial inspection and repair costs as well as increased outage time. In addition to saving inspection costs and outage time, installation of new steam generators will allow for approximately 40 megawatts additional capacity and will prepare the plant for license extension. Replacement generators are on site and the Steam Generator Replacement Project is underway. The plans call for installation of the new steam generators and return to service during the last quarter of 2000.

## **SPENT FUEL STORAGE**

At present, Indian Point is licensed to operate until 2013. However, the plant's Spent Fuel pool can hold fuel assemblies until only 2004. Therefore, additional fuel storage is needed by that year. Even premature shutdown of the plant would entail the continued operation of the Spent Fuel Pool at a cost of approximately \$5 million or more per year until the pool is emptied. All utilities operating a nuclear plant have contributed to the Department of Energy (DOE) for the development of a spent fuel storage facility. Unfortunately, for a variety of reasons, the DOE will not be able to receive spent fuel until 2010, at the earliest.

Since 1994 a consortium of nuclear utilities, including Con Edison, have been working on the development of a centralized Independent Spent Fuel Storage Installation to be located on Indian lands in the Western United States. The facility is expected to be built on the Skull Valley Indian Reservation. However, the facility could run into a number of political obstacles. Therefore, a secondary plan is being evaluated.

Con Edison has begun an engineering and licensing campaign to enable it to build an on-site Independent Spent Fuel Storage Installation, possibly within Unit 1. This plan, if approved, will negate the need for an off-site spent fuel storage facility.

## **SATISFY THE NEEDS OF REGULATORS**

The credibility with the public of the regulatory agencies that oversee the operations at Indian Point is essential to our business. Our credibility with these regulatory agencies and their confidence in our ability to operate the facility safely and in accordance with the terms of the licenses and permits they have issued to us are the foundation for the general public's continued confidence in the safety of our operations. Regulatory confidence is established by excellence in plant operations, prompt and forthright communications when problems occur, and by properly considering the regulator's role and responsibilities in our

planning. As the Nuclear Regulatory Commission moves to reduce unnecessary regulatory burden by aligning requirements to the associated level of risk WE need to ensure that our risk assessment tools and ability to properly use them are up to the task. The success of several of the other strategic issues identified in the Business Plan will depend on the strength of our relationships with our regulators. WE will need their cooperation and support in going forward with Steam Generator replacement, spent fuel storage options, and laying the groundwork for extending the operating license. WE recognize that making the conversion to the improved Standard Technical Specifications and ensuring that commitments to the NRC are formally captured and tracked are essential if we are to obtain the needed regulatory support and cooperation for our long-term objectives.

## **LICENSE EXTENSION**

**T**he NRC has put into place new regulations that allow a licensee to file an application to extend the license of a nuclear power plant for up to 20 years. The application must be filed at least 5 years prior to the expiration date of the facility. Therefore, the window of opportunity for requesting license renewal for Indian Point 2 will close on September 28, 2008.

Current industry experience indicates that approximately 2 to 3 years will be required to prepare an application at a cost of approximately 10 million dollars. Prior to the preparation of the license renewal application, corporate approval needs to be obtained. Evaluations need to be prepared and presented to corporate decision-makers to demonstrate the benefit of pursuing license renewal compared with other options. Additionally WE need to continue to monitor/participate in industry/NRC activities especially those associated with the preparation/review of license renewal applications. WE also need to "preserve the option", that is, assure that WE do not do anything now that would preclude pursuing the license renewal option in the future.

## **MATERIAL CONDITION OF THE PLANT AND HOUSEKEEPING STANDARDS**

**I**ndian Point Support Facilities have, for the most part, had minimal maintenance or upgrades since their construction. The Administrative Facilities were originally planned to accommodate less than 400 employees. Currently, including contractors, there are about 900 personnel working at the site.

Dedicated space for the Technical Support Center and the Work Control Center are in a temporary building on the Main Turbine floor that does not have the space to properly organize and optimize the work effort. In addition there is no space necessary to meet current industry standards in support of on-line and outage work. These issues become priorities in every employee meeting and have a negative impact on productivity and morale.



A facilities improvement plan has been submitted as part of the 2000 goals.

## **PEOPLE AS AMBASSADORS OF INDIAN POINT**

**O**ur employees are a vital link to public concern and public opinion. Often our employees are also our customers and the best forum for public relations. Historically, as a company, WE failed to recognize the positive influence a well-informed employee could yield in their neighborhood, community and other affiliations. Con Edison has acquired lessons learned from missed opportunities to maximize the use of our own employees to educate the public. The nuclear industry in particular needs to counter the strong political opposition and concerns about nuclear power with truth about the viability and safety of nuclear energy. WE need to arm our employees with honest, accurate, and timely information about current events in our business. WE need to prepare materials that assist our employees in carrying the message to the public. WE need to take the mystery out of technical situations and define current events in clear, simple, understandable terms. WE need to provide our employees with the valuable resource --- information--- which transforms them into ambassadors of Indian Point.

## **STAFF EXPERTISE**

**N**uclear Operations has historically pursued technical excellence as a primary measure of staff expertise. Technical excellence has contributed to Indian Point industry recognition and credibility. People were rewarded for technical excellence and the ability to get things done. People are our most valuable resource and provide the competitive edge we need to bring us to new standards of excellence. The business world is more complex and rapidly changing. Technical skills alone will no longer allow us to meet today's business challenges. The definition of competency has expanded. WE need strong leadership skills. First and foremost we require our managers to have the ability to listen and respond appropriately to concerns. WE need all managers to demonstrate coaching and counseling skills. WE need managers who are capable of developing their people and working effectively with peers. WE need to further develop our people to manage time and multiple priorities; communicate standards and expectations and information in general ; hold people accountable in meaningful ways; deal with ambiguity and change as well as ethical and discrimination issues; and demonstrate a willingness to be team players. WE need well rounded professionals who are as respectful of the need for leadership skills as they are for technical expertise.

## **COMMUNITY RELATIONS**

**B**y virtue of the uniqueness of our business and our location (in the suburbs of New York City, the premiere metropolitan area in the United States) Indian Point is an inextricable part of the local and extended community. Currently Indian Point's community outreach involves maintaining governmental and community relationships through local advertising, philanthropic giving and participation in community programs and events. Nuclear Communications/Public Affairs supports corporate media relations in dealings with local and national media on nuclear issues and partners with them in the implementation of corporate media response for emergency preparedness and planning specifically through the staffing and functioning of the Joint News Center.

WE recognize the need to build on the efforts of the past that have opened channels of communication with local politicians and established a strong network among the four surrounding counties in their emergency preparedness functions. Creating a nuclear education program/process that utilizes employee talent and engages our employees as local community ambassadors through participation in local business forums including chambers of commerce and community and cultural events are goals designed to enhance and improve existing community relationships. The goals and action plans that Nuclear Communications/Public Affairs is proposing for the year 2000 and beyond will establish a practical, cost-effective community and government relations program and process for Indian Point. WE will continue to take full advantage of the good working relationship WE have with Indian Point 3 and the New York Power Authority's public affairs organization and explore more joint initiatives with them.

## **PROFITABILITY/COMPETITION**

**T**he business environment that Indian Point will be operating in the very near future will represent a dramatic departure from our present and past environment. Unbundling of electrical generation has already begun and we will shift from a regulated environment to a market environment. As deregulation opens the market once dominated by electric utilities, the need to produce a competitively priced product, will increase. To stay competitive Indian Point will have to reduce costs and increase generation to achieve profitability. In this environment, the viability of Indian Point will be dictated by our ability to generate sufficient revenue from competitive market prices to cover our cost of operation. This necessitates reducing operating costs, improving efficiencies, and increasing capacity. In addition to goals for capacity factor and outage length, the non-outage production costs (fuel & operating costs) for the year 2000 amount to 2.2 cents per Kwhr.

## **STEWARDSHIP OF ENVIRONMENTAL RESOURCES**

**A**t Indian Point WE are committed to protecting human health and the environment. WE recognize that our workers are our most important resource and their safety and well being are of paramount importance. In the year 2000 WE will fully incorporate the elements of the Pinnacle Program into our overall Station industrial safety program to help us raise awareness and reduce lost time accidents.

WE will also develop and initiate a plan to achieve environmental excellence WE will improve Station environmental procedures and ensure that we implement established Corporate Environmental Procedures).

WE will work closely with the surrounding communities and take the lead in forging strong relationships with community leaders and regulators. WE will work towards improving the appearance of our site and look for opportunities to reduce costs through pollution prevention.

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Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p><b>1. <u>Human Performance Improvements.</u></b></p> <p>Several human performance issues were identified during the assessments conducted after this event. A systematic approach to improve IP2 human performance will be taken. Human performance improvements will include the following specific attributes:</p> <ul style="list-style-type: none"> <li>• Periodic, structured, human performance stand downs.</li> <li>• Institute of Nuclear Power Operation assistance with initial program development.</li> </ul>	<p><b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), <u>Problem Statement 9</u> Actions:</b></p> <p>a.2. Set schedule for seven H-P site-wide training sessions.</p> <p>Status: Site-wide training sessions (stand downs) have been scheduled. Four have been conducted, and additional sessions have been scheduled at approximately six week intervals.</p> <p>a.3. Set up INPO assist visit for Human Performance.</p> <p>Status: INPO has been contacted, and an assist visit was conducted. Visit was completed on 3/3/00, and are currently awaiting the final report.</p> <p>a.9. Review INPO information for ideas/methods which can be used @ IP2.</p> <p>Status: Information has been obtained and is being reviewed by the IP2 staff.</p>	<p>Russell (Sponsor)</p> <p>Russell</p> <p>Russell</p> <p>Russell</p>	<p></p> <p>Complete</p> <p>Complete</p> <p>Complete</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<ul style="list-style-type: none"> <li>Periodic self-assessments of station human performance.</li> <li>Assessment of knowledge weaknesses associated with administrative procedure requirements, and plant design and licensing basis.</li> <li>Formal training in human performance evaluation techniques.</li> </ul>	<p>Conduct Human Performance peer assessment.</p> <p>Status: INPO assist peer assessment was conducted on 3/3/00.</p>	Russell	Complete
	<p>Conduct two self-assessments of station human performance during 2000.</p> <p>Status: Self-assessments of station human performance are currently scheduled for August and December, 2000.</p>	English	Complete (1) 12/15/00
	<p>Status: See Item 9, Increasing the Knowledge Level of Plant Design and Licensing Bases, for specific Business Plan actions, sponsor/owners, and completion dates.</p>		
	<p><b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), Problem Statement 9 Actions - Training:</b></p>		
	<p>c.1. Attend INPO "Excellence in Human Performance" training session.</p> <ul style="list-style-type: none"> <li>Develop training materials and Conduct "train the trainer" sessions.</li> <li>Conduct site wide human performance training.</li> </ul> <p>Status: P. Russell and C. English attended INPO Human Performance training 3/14-16/00. Site wide training scheduled to commence on 7/31/00.</p>	<p>Russell</p> <p>English</p> <p>English</p>	<p>Complete</p> <p>Ongoing</p> <p>12/31/00</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<ul style="list-style-type: none"> <li>Effectiveness reviews.</li> </ul>	<p>Develop monthly error reduction metrics.</p> <p>Attend September EPRI Industry Error Reduction workshop. Review techniques, methods, and effects.(See Note 1)</p> <p>Develop additional tools to measure effectiveness based on EPRI workshop.</p> <p>Perform effectiveness reviews as part of human performance self-assessments scheduled for August and September 2000.</p> <p>Note 1 - In lieu of September EPRI workshop, Industry Workshop was attended in June, 2000</p>	<p>English</p> <p>English</p> <p>English</p> <p>English</p>	<p>Complete</p> <p>Complete</p> <p>12/30/00</p> <p>12/30/00</p>



Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
An assessment of the corrective action program will be conducted to identify needed improvements.	a.3. Present collective analysis trend reports to CARB.  Status: Proposed performance indicators have been developed and have been reviewed and approved by CARB.	Mecchi	Complete
	<b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), Problem Statement 6 Actions:</b>		
	a.1. Establish clear guidance for acceptable age of ICAs based on significance.	Russell	Complete
	a.2. Reinforce management expectations for resolution of CRs.	Russell	Complete
	d.1. Prepare a memo to site management which establishes: a. Expectations for evaluating and implementing corrective actions, and b. Department goals for measuring timeliness of completing actions.	Russell	Complete
	Status: Management expectations and timeliness goals have been reviewed and approved by the CARB.		
	<b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), Problem Statement 7 Actions:</b>		
	a.3. Conduct a Corrective Actions Process Programmatic Area Assessment.	Hale	Complete
	a.4. Coordinate site efforts for INPO Assist visit.	Hayes	Complete
	Status: Corrective Action Program Self-Assessment draft report is being finalized. INPO Assist visit is scheduled for April 24, 2000.		



Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>The extent and effectiveness of training on the Corrective Action Program will be evaluated.</p>	<p><b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), <u>Problem Statement 1</u> Actions:</b></p> <p>c.2. Implement first line supervisor training and reinforcement strategy for CR initiation.</p>	Pavlinik	Complete
	<p><b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), <u>Problem Statement 6</u> Actions:</b></p> <p>c.2. Implement CRS overview training.</p> <p>Status: Training modules have been prepared and training classes have commenced. This training applies to first line supervisors and all other personnel. CRS training is scheduled to be conducted every Thursday for the remainder of 2000.</p>	Pavlinik	Complete

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>3. <u>Operations Improvements.</u></p> <p>Operations Department management clarified roles and responsibilities of the operating teams and their supervision. Management expectations for understanding and limiting risks during and following an event of this nature were conveyed.</p> <p>Lessons learned from the event are being reinforced during monthly staff meetings with the Shift Managers and the regular communications between the Shift Managers and their crews.</p> <p>Lessons learned training is being provided for operations personnel in certain areas of system operation, electrical theory, Technical Specification applicability and log-keeping.</p>	<p>Status: Clarification of roles and responsibilities of the operating teams and their supervision, and conveying management expectations for understanding and limiting risks during and following an event of this nature were accomplished prior to plant restart. Specific actions taken are provided in response to Condition Report 199906868 (SL-2 Report).</p> <p><b>OPERATIONS ACTION PLAN, Item 02:</b></p> <p>2. Establish monthly staff meetings with Shift Managers by 6/99.</p> <p>Status: Meetings were conducted with Shift Managers in September 1999 to discuss lessons learned from the event. Regular staff meetings have been initiated and are routinely conducted.</p> <p>Status: Lessons learned training for operations personnel in log-keeping were provided prior to restart in response to Condition Report 199906868 (SL-2 Report). Training on electrical theory, waste gas compressor operation, and the process for determining Technical Specification applicability has been incorporated into continuing training for operations personnel.</p> <p>Additional Actions Planned: Additional actions to improve log-keeping are being developed as a result of the February 15, 2000 Alert (Condition Report 20000983). Metrics for the key focus areas of the Operations Improvement Plan exist and will be included in the Operations Business Plan, including the results of the Operations Observation Program.</p>	<p>Ferrick (Sponsor)</p> <p>Dean</p> <p>Dean Nichols</p>	<p>Complete</p> <p>Complete</p> <p>Complete</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>4. <u>Maintenance Improvements.</u></p> <p>Observations of Maintenance Department performance during the recovery reinforced the need for improvements in the areas of organization and management, work planning, work performance, training and qualification and work management. Specific needs include:</p> <p>Establishment of an Instrument and Controls Planning Group;</p> <p>Development of a planning standard for the Instrument and Controls organization;</p> <p>Implementation of a procedure upgrade program;</p>	<p><b>MAINTENANCE ACTION PLAN</b></p> <p>Areas for maintenance improvement included in this action plan include Training, I&amp;C Preventive Maintenance Program, Planning Work Packages, Performance Indicators, Standards and Expectations, Work Management, and Management Effectiveness. Additional Business Plan categories include Organization and Management, Work Planning, and Training and Qualification. Actions have been identified for each of these areas.</p> <p>Work Planning</p> <p>1. Establish an Instrumentation and Controls Planning staff.</p> <p>Status: Position guides for planners have been approved and a schedule for filling these positions is being developed.</p> <p>Planning Work Packages:</p> <p>2. Assign a dedicated team of planners and technicians with QA oversight to address the development or adoption of current planning standards established in the Maintenance Administrative Directive's and Instrumentation and Controls Administrative Directive's.</p> <p>Status: Awaiting the establishment of the Maintenance Planning Manager position, currently scheduled for March 2000.</p> <p>Work Planning:</p> <p>3. Implement procedure upgrade program.</p> <p>Status: Procedure revisions in progress.</p>	<p>Poirier (Sponsor)</p> <p>Woody</p> <p>Planning Manager</p> <p>Dorn</p>	<p>12/31/00 (all plan actions)</p> <p>1/1/01</p> <p>12/31/00</p> <p>12/1/00</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
Incorporation of Post Maintenance Tests into work packages.	<p>Planning Work Packages:</p> <p>4. Incorporate Post Maintenance Testing in work packages prior to packages being deemed Ready for Work.</p> <p>Status: Incorporation of PMTs into work packages has commenced.</p>	Poirier Ventosa	Complete



Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<ul style="list-style-type: none"> <li>The number of performance based training activities conducted, such as walk-throughs and drills, will be increased.</li> <li>The Emergency Preparedness training program will be reviewed and program materials revised to reflect procedure, facility, and organizational changes.</li> <li>Emergency Planning Department program guidance shall be enhanced and formalized to govern the following areas: conduct of drills and exercises including the critique process, self-assessment activities, problem recognition and resolution, commitment tracking, and performance indicators.</li> <li>Relationships with off-site agencies will be strengthened through improved communication and support.</li> </ul>	<ul style="list-style-type: none"> <li>The number of performance based training activities conducted, such as walk-throughs, facility seminars, and drills, will be increased with the goal of running 4 quarterly drills, one dry-run exercise and one evaluated exercise.</li> </ul>	Inzirillo	Complete
	<ul style="list-style-type: none"> <li>The Emergency Preparedness training program will be reviewed and program materials revised to reflect procedure, facility, and organizational changes.</li> </ul>	Inzirillo	Complete
	<ul style="list-style-type: none"> <li>Emergency Planning Department program guidance shall be enhanced and formalized to govern the following areas: conduct of drills and exercises including the critique process, self-assessment activities, problem recognition and resolution, commitment tracking, and performance</li> </ul>	Inzirillo	10/00
	<ul style="list-style-type: none"> <li>Strengthen relationships with off-site agencies through improved communication and support.</li> </ul> <p>Status:</p> <p>Additional Actions Planned: The Emergency Preparedness Business Plan will be revised to include milestones and due dates for specific actions, and improved metrics.</p>	Inzirillo	In Progress



Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>7. <u>Improving the Modification Process.</u></p> <p>Weaknesses in the modification process were identified during the recovery from the event. To address this concern, processes and practices utilized to develop engineering work packages will be enhanced to provide consistent and high quality technical products.</p> <p>The following improvements are planned to support the enhancement of the engineering work:</p> <p>Coordination study for non-safety related Motor Control Center;</p> <p>Updating the load studies (i.e. Emergency Diesel Generator, 480VAC System);</p>	<p><b>SITE ENGINEERING, PLANT ENGINEERING PROJECTS</b></p> <p>Mod Optimization Process - Changes planned for the Year 2000 include continuation of the Mod Streamlining effort in order to identify and implement specific process improvements in the MOD process. Additional improvements are expected as this streamlining effort continues into 2001.</p> <p>Status: The Mod Optimization project is contained in the draft revisions to the Design Engineering Business Plans. These revisions include estimates of the resources being allocated to this effort. Improvements have already been made to the Determination of Equivalency process and to the process used for making changes in valve packing. Efforts are in progress to make changes in the Minor Change process and to develop an Engineering Reply process. A project manager has been named to this project and he is coordinating the various efforts and generating a project plan and schedule.</p> <p><b>DESIGN ENGINEERING, ELECTRICAL PROJECTS &amp; PROGRAMS BUSINESS PLAN</b></p> <p>Status: These longer-term corrective actions are included in the Electrical Projects &amp; Programs Business Plan item entitled "Upgrade of Electrical Calculations". The description for this item is being enhanced to directly reference these Recovery Plan items. Outside resources have been solicited to support completion of the coordination study. It is anticipated that this work will be completed by the end of 2000. The load studies are updated following each refueling outage, and it is anticipated that these updates will be completed by the end of 2000.</p>	<p>Baumstark (Sponsor)</p> <p>Tuohy Ventosa</p> <p>Wong</p>	<p>12/31/00 (year 2000 scope)</p> <p>12/31/00</p>



Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>Preparation of indexing and scanning capability for engineering documents.</p>	<p><b>DESIGN ENGINEERING BUSINESS PLAN</b></p> <p>Additional Actions Planned: The Design Engineering Business Plan will be revised to include milestones and completion dates for improving the indexing and scanning capability for engineering documents.</p>	<p>Tuohy</p>	<p>12/31/00</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>8. <u>Configuration Management Control Improvements.</u></p> <p>The event identified several weaknesses in the control of plant configuration. For example, the load tap changer was not in the automatic position, contrary to the plant licensing basis. Improvements to enhance the plant configuration control process:</p> <p>Complete the current Final Safety Analysis Report verification effort within the current schedule;</p> <p>Update and/or develop design basis documents to include current design and licensing bases information;</p> <p>Validate and upgrade critical setpoint values, calculations, and bases documents (e.g. Emergency Operating Procedures, Instrument Drift) are in progress.</p>	<p><b>CONFIGURATION MANAGEMENT ACTION PLAN, PLAN OF ACTION:</b></p> <p>1) Verify FSAR</p> <p>Status: The review of the FSAR is essentially complete, but corrective actions remain to be done. Corrective actions associated with risk significant systems are scheduled for completion by 3/31/00. The remaining non-risk significant systems will be completed by 3/31/01.</p> <p>4) Upgrade and or write 25 DBD's as committed to the NRC in response to 50.54f over a period of 3 years - March 2002.</p> <p>Status: 6 DBD's have been completed to date. 6 DBD's are in progress and on track for completion in 2000.</p> <p>5) Control of Setpoints needs to be improved - previous QA audits and NRC inspections found control of setpoints to be inadequate.</p> <p>Status: Grade 1 setpoints were completed by 12/31/99, Grade 2 (EOP) setpoints are scheduled for 6/30/00 completion. Identification of Grades 3 and 4, and their completion, will follow.</p> <p>Additional Actions Planned: Milestones and completion dates for the above items will be included in a revision to the Business Plan.</p>	<p>Ryff (Sponsor)</p> <p>Ryff</p> <p>Ryff</p> <p>Ryff</p>	<p></p> <p>3/31/01</p> <p>3/31/02</p> <p>Complete</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>9. <u>Increasing the Knowledge Level of Plant Design and Licensing Bases.</u></p> <p>Knowledge of the design and licensing bases for plant systems, structures, and components is needed. The current Final Safety Analysis Report update project will enhance the accuracy and availability of the design and licensing bases, and additional training will be conducted to more effectively utilize this updated information. Procedures will be reviewed and revised, as appropriate, to more effectively implement operability reviews in accordance with Nuclear Regulatory Commission Generic Letter 91-18, Revision 1, "Resolution of Degraded and Nonconforming Conditions". Additionally, training will be provided to appropriate personnel on this review process.</p>	<p><b>CORRECTIVE ACTION PROGRAM (CAP) Leadership Plan, (Revision 2), Problem Statement 2 Actions:</b></p> <p>b.1. Assess existing process to identify areas of potential requirements to provide clearer guidance in effectively implementing the operability evaluations in accordance with GL 91-18, Rev 1. This may entail consolidating the requirements currently in the following procedures:</p> <p>SAO-112, Corrective Action Program SAO-460, 10 CFR50.59 Safety Evaluations SE-SQ-12.317, Equipment Operability Assessments OAD 41, Operator Burden Program OAD 15, Policy for Conduct of Operations SAO-204, Work Control</p> <p>Status: Assessment underway.</p> <p>b.2. Recommend changes and implement or coordinate implementation, as applicable.</p> <p>Status: No actions to date, awaiting results of assessment.</p> <p>c.1. Coordinate development and implementation of Operability training (i.e. GL91-18R1) for Operations, Engineering and CARB.</p> <p>Status: No actions to date, awaiting results of assessment and procedure changes.</p> <p>c.2. Provide training on procedure changes.</p> <p>Status: No actions to date, awaiting results of procedure changes.</p>	<p>Russell (Sponsor)</p> <p>Hinrichs</p> <p>Hinrichs</p> <p>Russell</p> <p>Russell</p>	<p>12/31/00</p> <p>Complete</p> <p>10/30/00</p> <p>10/30/00</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
	<p><b>CONFIGURATION MANAGEMENT ACTION PLAN</b>, Design Basis Understanding/Knowledge Actions - Training:</p> <ul style="list-style-type: none"> <li>• Provide Design/Licensing Basis Sensitivity training via ESP</li> <li>• Develop DB/LB course explaining concepts and showing tools.</li> <li>• Data and search Tools.</li> <li>• Train those who need it. <ul style="list-style-type: none"> <li>• ESP</li> <li>• Determine who else.</li> </ul> </li> </ul> <p>Status: Initial exposure to DB/LB tools has been provided to all ESP participants. Feedback from this training has been used to develop a DB/LB course, and this training has been incorporated into the current ESP continuing training program.</p> <p>Additional Actions Planned: An ESP training module, covering the design and licensing bases, will be prepared by 12/31/00 for incorporation into the ESP Training and Qualification Program.</p> <p><b>Additional Action Taken:</b> TAR written to Training to have this action accomplished via approved training method.</p>	<p>Ryff (Sponsor)</p> <p>Ryff</p> <p>Ryff</p> <p>Ryff Ryff</p>	<p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete Complete</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>10. <u>Safety System Functional Assessment.</u></p> <p>The current process for periodically assessing the operational performance capability of selected safety systems will be enhanced through in-depth, multi-disciplinary engineering reviews to verify that these systems are capable of performing their intended safety functions. A Safety System Functional Assessment on a risk significant system (Auxiliary Feedwater) will be conducted in January 2000.</p>	<p><b>QUALITY ASSURANCE ACTION PLAN</b></p> <p>Completion of a Safety System Functional Assessment of the Auxiliary Feed Water System.</p> <p>Status: Field reviews have been completed and a formal exit meeting has been conducted. The Assessment Report is issued.</p>	<p>Morris (Sponsor)</p> <p>Howe</p>	<p>Complete</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>11. <u>Effectiveness Review.</u></p> <p>An effectiveness review will be conducted during the first quarter of 2000 to ensure that corrective actions taken have been effective in resolving the management, technical, and process challenges identified during this event.</p>	<p>Status: Quality Assurance has developed an assessment plan to conduct this effectiveness review. A draft surveillance report has been prepared documenting this review. Surveillance 09-SR-002 Post Restart Action Recovery Plan was issued.</p> <p>Additional Actions Planned: Follow-on QA reviews are planned. These additional reviews are described in the initial surveillance report.</p>	<p>Morris (Sponsor)</p> <p>O'Toole</p>	<p>Complete</p>

Longer-Term Corrective Actions (Recovery Plan Rev 3)	Status of Business Plan Actions and Additional Business Plan Actions Planned	Owner and Sponsor	Scheduled Completion Dates
<p>12. <u>Indian Point Unit No. 2 Business Plan.</u></p> <p>The 2000 – 2004 Business Plan will support our objective to continually improve performance. Improvement plans will be developed by the various organizations and integrated into one Business Plan to include open post-restart actions and other initiatives.</p>	<p>Status: The Business Plan has been issued, and periodic progress reviews are being conducted with senior management, including the Chief Nuclear Officer. The Business Plan will be revised by April 30, 2000 to resolve some NRC concerns, and subsequent revisions are expected. This cross-reference will be incorporated into the Business Plan. Additional performance indicators are planned.</p>	<p>Noonan (Sponsor) All Department Managers</p>	<p>12/31/00</p>

**Action Plan 1- Organizational Effectiveness**

<b>Actions</b>	<b>Owner</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Current Status</b>
Conversion of Contractor HP/RW technicians to Con Edison personnel.	M. Miele	N/A	Complete	Three RW technicians and three HP technicians were hired.
Develop an Expectation and Standards document for HP/RW	M. Donegan	12/1/99	10/30/00	In progress
Develop Housekeeping standards for all areas owned by Health Physics and Rad Waste	M. Donegan	12/1/99	10/15/00	In progress
Provide benchmarking trips for Health Physics and Rad Waste personnel	M. Donegan	12/1/99	12/31/00 Complete	Complete- IP3, Hope Creek, & Virginia Power South Texas visited.
Effectively utilize the corrective action system and the RWP compliance program.	M. Donegan	12/1/99	12/31/00 Complete	CRS surrogate named- SAO-315 revised

**Action**



## Plan 2- Plant Radiation Exposure

Actions	Owner	Start Date	Completion Date	Current Status
<b>Dose Awareness and Practices</b>				
<b>Enhance dose awareness and worker performance.</b>				
The following activities support this action item.				
Develop more challenging department dose goals using finalized historical station data and benchmarking these goals against industry leaders.	Vic Nutter	10/1/99	10/29/99 Complete	Department goals and published-
Include the upcoming days dose estimate in the afternoon is being planning meeting documentation. Estimate and report dose in the daily meetings by work activity. (RWP) Have dose report generated earlier so previous days performance can be updated at the 0630 planning meeting	Dan Gately	10/1/99	10/29/99 Complete	Complete-Dose report generated earlier.
Improve presentation of dose performance information at the and radiologically controlled area entrance. posted.	Vic Nutter	10/1/99	10/29/99 Complete	Complete- Dose report trending graph being
Place station and department dose graphs in shop areas to coordinators	Dep't ALARA	10/1/99	11/15/99	Complete- Dep't
Communicate dose performance to the workers. boards are	Coordinators		Complete	named, and various Being updated monthly.
Eliminate areas in the radiologically controlled area that during cause workers to linger unnecessarily. briefings	M. Donegan	06/15/00	09/01/00 Complete	Complete- No VCCP's Outage, and non-outage will be done at HP-1.

Action Plan 2- Plant Radiation Exposure

Actions	Owner	Start Date	Completion Date	Current Status
<b>ALARA Evaluations</b>				
<b>Enhance the preparation and effectiveness of ALARA evaluations.</b> The following activities support this action.				
Separate the radiation work permit and ALARA evaluation first processes to allow more flexibility in the generation of procurement ALARA reviews- Prepare specification to separate documents.	Vic Nutter	10/1/99	10/30/00	To be completed in the phase of computer
Benchmark leading performers to identify the level of detail ALARA and rigor used when preparing ALARA evaluations.	Vic Nutter	10/1/99	1/31/00	Of the RWP process. Complete. Industry
			Complete	Trip Report published.
Consolidate related work activities to facilitate more efficient Coordinator is development of ALARA evaluations. group	Vic Nutter	10/1/99	12/31/99	Complete- RP
			Complete	reviewing schedule to
Develop work history files that will allow easy retrieval of were necessary data to assist in planning future work. Consider Support. electronic files where possible to facilitate data transfer to future ALARA evaluations.	Vic Nutter	10/1/99	12/31/99	activities. Complete- History files
			Complete	developed within Rad
Develop an ALARA evaluation log to provide an easy and is reference to identify packages and the status of the package Support. preparation and closeout.	Vic Nutter	10/1/99	12/31/99	Log has been completed
			Complete	located within Rad
Develop Work in Progress forms and increase the rigor and has been	Vic Nutter	10/1/99	12/31/99	Work- in-progress log

details of these assignments. Include form in the ALARA within RS procedure.			Complete	completed and located
Develop ALARA reevaluation forms to document changes to and projection when needed. Include form in the procedure.	Vic Nutter	10/1/99	6/30/00 Complete	Form developed, in use, SAO-303 is revised.

## Action Plan 2- Plant Radiation Exposure

Actions	Owner	Start Date	Completion Date	Current Status
<b>ALARA Evaluations (continued)</b>				
Develop a more stringent guidance for requiring the completion of post job reviews. Performance of post-job reviews should be the standard, not the exception.	Vic Nutter	10/1/99	12/31/99 Complete	Complete
<b>Radiation Work Permits</b>				
<b>Improve the Radiation Work Permit process to eliminate redundant efforts and unnecessary activities.</b> The following activities support this action item.				
Consolidate work activities that are of similar type and have reduced similar radiological risks to reduce the number of radiation RWP's work permits written.	Mike Donegan	10/1/99	06/30/00  Complete	Complete- Routine RWP's from 50 to 18. Outage reduced by 50%.
Make job specific radiation work permits valid for the and expected duration of the work activity. Discontinue the discontinue practice of weekly extension surveys and require surveys for anticipated or actual changes in radiological conditions.	Mike Donegan	10/1/99	06/30/00  Complete	Complete- Procedure revised  Computer changed to extensions.
Develop the ability to set electronic dosimeter alarm setpoints being set for individual radiation work permits. Lower the setpoints to feature raise worker awareness of radiation dose rates. Plan.	Mike Donegan	10/1/99	07/31/00  Complete	Setpoints were lowered- manually- The automatic will be in 2001 Business
Revise the radiation work permit request form to permit task prior to	Mike Donegan	10/1/99	N/A	Inappropriate to implement

(craft) specific man-hour and dose estimates. Provide

Will be

implemented concurrently with the

comments section to communicate necessary details.

system

additional columns to allow refined dose assessments and a

new RWP system.

Final phase of the new

## Action Plan 2- Plant Radiation Exposure

Actions	Owner	Start Date	Completion Date	Current Status
<b>Radiation Work Permits (continued)</b>				
Revise radiological survey retention practices to ensure they retention being are included in the radiation work permit file to support communication of radiological conditions to workers and for work history purposes.	Mike Donegan	10/1/99	12/31/99 Complete	Complete- 3 year kept on site.
Benchmark leading performers to compare and refine station Creek practices for preparing, maintaining, and terminating radiation work permits.	Mike Donegan	10/1/99	06/30/00 Complete	IP-3, Salem, and Hope and South Texas visited.
When on the work schedule, require submission of radiation implementation in work permit requests at T-2 prior to work start date to ensure an adequate time for review and preparation	Mike Donegan/ Bob Gillespie	10/1/99	06/30/00	Inconsistent meeting this objective
<b>RP Department Dose</b>				
RP department dose is high when compared to the industry. complete. Conduct an evaluation to identify any practices that could reduce this percentage.	Vic Nutter	12/17/99	12/31/00 Complete	Outage comparisons
Dose practices need to be improved to provide better Information to the workers. Items to include:				
Reduction of Electronic dosimeter setpoints	Repeat Item		Complete	
Install a lockout for personnel at 80% of the to administrative limit. remaining.	Vic Nutter	12/17/99	9/30/00 Complete	Action item deleted due Lockout at 100 mr.

RWP interface with electronic dosimetry.  
performed.

Repeat item.

Complete

Manually being

### Action Plan 3- Radiation Protection Instrumentation and Field Support

Actions	Owner	Start Date	Completion Date	Current Status
<b>Global Actions</b>				
Perform continuing training on labeling for H.P. technicians	Mike Donegan	12/1/99	9/1/00	Completed
Develop an Expectation and Standards document for H.P./R.W.	Mike Donegan	01/01/00	10/30/00	In progress
<b>Instrumentation</b>				
Rectify missing HP instruments missing on inventory- retire instruments if necessary. Benchmark to identify requirements for normal established.	T. Burns	12/1/99	9/1/00	Complete- Missing
and contingency operations, and document in SAO-310. Issue a monthly status report to include forecasting of cal. expirations			Complete	identified.- inventory
Address the condition reports which list poor quality of O2 check calibration sheets, and missing data on oxygen monitor sheet. sheet.	T. Burns	12/1/99	9/1/00	Complete- CR's closed-
			Complete	moved to watch duty
Ensure proper traceability of instrument use, both outage and revised. non-outage. This includes proper sign-out of instrumentation.	T. Burns	12/1/99	6/30/00	Complete-Procedure
			Complete	
Revise HP Instrument Inventory and Control procedure revised. (HP-3.034) to eliminate equipment no longer used.(I.e. dosimeters)	T. Burns	12/1/99	6/30/00	Complete- Procedure
			Complete	
Revise SAO-217 to eliminate unnecessary items on the M & TE monthly report.	M. Donegan	12/1/99	10/30/00	In progress
Maintain control of M & TE- Inventory must be up to date, and separated. non-conforming must be separate from conforming equipment. procured.	J. Baer	12/1/99	12/31/00	Inventory to be File cabinet being



Increase control and management attention to the Health Physics generated. Technical Library.	M. Donegan	12/1/99	10/30/00	In progress- new index
Procure spare parts to improve equipment repair.	T. Burns	6/30/99	12/31/99 Complete	Complete
Improve controlled copies of procedures in Instrument Shop	T. Burns	6/30/99	09/1/99 Complete	Complete

### Action Plan 3- Radiation Protection Instrumentation and Field Support

Actions	Owner	Start Date	Completion Date	Current Status
<b>Instrumentation (continued)</b>				
Revise Radiological Access Control Point Procedure (HP-3.101) so it reflects current inventory practice.	T. Burns	06/30/99	02/28/00 Complete	Complete.
Proceduralize investigation for instruments that fail response check.	M. Donegan	06/30/99	10/15/00	In progress
Implement control charts in the HP counting rooms.	M. Donegan	06/30/99	11/30/00	Excel program complete. Procedure revision in
progress. Computerize repair process tracking. Manual sheet	M. Donegan	06/30/99	09/30/00	Data in computer- to be developed.
Create an HP M & TE traveler sheet- place in procedure	M. Donegan	06/30/99	10/30/00	
Place a computer for technician use in the Instrument shop	T. Burns	06/30/99	12/31/99 Complete	Complete
Schedule preventative maintenance for the 81-12 irradiator Complete	T. Burns	06/30/99	07/31/00 Complete 12/31/00	Preventive Maintenance
Schedule and implement new equipment model replacement monitor for R.P. Instrumentation. E.g.- RM-25, RO-20, etc. finalized	M. Donegan	06/30/99		In progress- New portal Introduced- Schedule to be
30 day Canberra activity range revision not in any management allow tool cal.	M. Donegan	06/30/99	10/30/00	Procedure to be revised to control charts for the entire
Improve RP Instrument availability by 10%, while maintaining The minimum amounts required by SAO-310 (Outage also)	T. Burns	06/30/99	03/31/00 Complete	Complete- Instrumentation quantities > 10%.

Establish a formal instrument sharing program with Unit 3 teletectors, portal being shared	T. Burns	06/30/99	09/30/00 Complete	Complete- ED's, & Criticality monitor
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### Action Plan 3- Radiation Protection Instrumentation and Field Support

Actions	Owner	Start Date	Completion Date	Current Status
<b>Field Support</b>				
Radiological postings and labels are not consistent, and Supplemental inserts can distract attention from important information. Recommendations include:				
Ensure all radiological postings are in accordance with reviewed.	Mike Donegan	12/17/99	3/30/00	Complete- all signage
SAO-304 "Boundary Controls. Remove or incorporate into the SAO any additional signage.			Complete	
Install weatherproof postings in outside areas. installed	Mike Donegan	12/17/99	6/30/00	Waterproof signs
Review 10CFR20 and station procedures to ensure guidance for labeling is adequate.	Mike Donegan	12/17/99	Complete. 6/30/00 Complete	Review is complete
Benchmark INPO-recommended plants on labeling. incorporated.	Mike Donegan	12/17/99	6/30/00	Completed and
The Emergency Plan requires two technicians, and a MOU identifies the NYPA technician. Review Reg. Guide 0654, proceduralize the MOU, or identify alternative.	Mike Donegan	12/17/99	Complete 12/31/00	
SAO-300 should state managements expectations for the use of Unit 1 as a Radioactive Waste Storage Facility.	Mike Donegan	12/17/99	11/30/00	
Improve High radiation key control log by providing a supervisory review space, a space for management approval, and review with technicians the need for rigorous adherence to procedures on key control.	Mike Donegan	12/17/99	6/30/00 Complete	Complete

### ACTION Plan 3- Radiation Protection Instrumentation and Field Support

Actions	Owner	Start Date	Completion Date	Current Status
<b>Field Support (continued)</b>				
Have no backlog of radiological waste onsite (except PCB achieve Waste) on site by year end.	M. Donegan	01/01/00	12/31/00	Schedule established to goal by 11/15/00.
Reduce number of RWP's for the outage by 20% and reduction. Improve dose tracking.	M. Donegan	01/01/00	4/15/00 Complete	Complete- 50%
Revise procedures to allow workers to take TLD's home.	M. Donegan	01/31/00	7/30/00 Complete	Implemented.
Modify HP-1 for improved traffic flow. Use assistance changed to from design engineering. Relocate the RWP office to the HP count room. Combine the HP count room with Chemistry's.	M. Donegan	01/31/00	12/30/00	In progress- date after SGRP Outage.

#### Action Plan 4- Technological Support

Actions	Owner	Start Date	Completion Date	Current Status
Procurement of new Radiological Data System. this year.	Vic Nutter	N/A	10/30/00	System to be procured
Procurement of Merlin-Gerin interface with Electronic this year. Dosimeters to allow RWP specific alarm setpoints.	Vic Nutter	N/A	12/31/00	System to be procured

## Action Plan 5- Training

Actions	Owner	Start Date	Completion Date	Current Status
Form an experienced team of R.P. management and union working. personnel to assist the Training Improvement Program.	M. Miele	11/15/99	12/1/99 Complete	Team is formed &
Formalize and document training performed at staff revised. meetings, safety meetings, or other gatherings.	T. Jennings B. Richards	12/1/99	06/30/00 Complete	Complete-TRAD's
Evaluate methods to allow dosimetry personnel to attend be given Training together- Perhaps training another individual in R.P. support TLD issue.	V. Nutter M. Dampf	12/1/99	12/31/00 Complete	Complete- training to at EEC to
Have Rad Waste personnel evaluate the effectiveness of the current forklift course.	M. Donegan	12/1/99	12/31/00 Complete	Complete
Review need for RP labs in RP coursework progress	B. Richards J. Evangelista	12/1/99	12/31/00	Industry assessment in
Evaluate and ensure proper attendance at RP continuing expected Training. been 100% last 6 months	M. Miele	12/1/99	12/31/00 Compleete	Complete- Attendance is to be 100%, and has for the

# **Action Plan 6- Corrective Action**

<b>Actions</b>	<b>Owner</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Current Status</b>
Identify an R.P. CRS surrogate to monitor, trend , and Manage the corrective action process for Radiation Protection	M. Miele	11/15/99	12/1/99 Complete	Complete
Have all R.P. managers identify the surrogate within CRS	M. Dampf	11/15/99	01/01/00 Complete	Complete
Develop an implement a reduction program for all identified plan CR items graphs	M. Dampf	12/1/99	01/21/00  Complete	Complete- Reduction developed, and tracking  In Improvement plan
Manage the CR reduction program so that goals are achieved. reduction &  green book.	M. Dampf	02/27/00	12/31/00  Complete	Complete- >50%  Being reported in



## **Outage Planning Business Plan Update – 10/13/2000**

- **Refueling Outage Planning & Scheduling Manager** position filled with Mr. Terry Elam as of 5/1/2000. Position scheduled to be filled by 2/1/2000. Mr. Elam has been serving in this position as a contractor since 10/1/1999.
- **Lead SRO/Work Window Manager** position filled with Mr. Jon Mansell as of 5/1/2000. Position scheduled to be filled by 2/01/2000. Mr. Mansell has been serving in this position since 10/1/1999.
- **Mechanical Discipline Scheduler** position filled with Ms. Carol Petitt as of 3/6/2000. This position was scheduled to be filled by the end of the third quarter in 2000.
- **Administrative Assistant** position was filled by Ms. Julieanne MacDonald as of 3/1/2000. This position was scheduled to be filled by the end of the third quarter in 2000.

The following positions remain open:

- **NSSS Lead Discipline Scheduler**  
Due: 3<sup>rd</sup> Quarter 2000
- **I&C/Electrical Discipline Scheduler**  
Due: 3<sup>rd</sup> Quarter 2000
- **Permanent Outage Coordinator**  
Due: 3<sup>rd</sup> Quarter 2000

Outage Planning continues to be augmented with contract personnel to compensate for open scheduler positions.

## **Projects**

- **Optimize Integrated Safeguards Surveillance Test**  
Status: Complete
- **Upgrade ORAM Safe Shut Down Model & Link to Scheduling System Software**  
Status: Model Development Complete.
- **Develop Safety Functional Equipment Groups to Enhance ORAM/Scheduling System Capability**

Status: This enhancement will support the 2002 refueling outage schedule development effort. A modification to the purchase requisition to support resumption of this effort by General Physics was cut on 10/13/2000. Awaiting proposal from Advanced Decision Making Technologies (ADMT) for identified supplemental scope. Completion of this effort will extend into 1<sup>st</sup> quarter of 2001.



**INDIAN POINT 2**

**NUCLEAR SAFETY & LICENSING**

**YEAR 2000 BUSINESS PLAN, REV 1**

J. McCann

PLAN MANAGER:

SUBMITTED

DATE

J. BAUMSTARK

SENIOR MANAGEMENT SPONSOR

APPROVED

DATE

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# 1. Business Plan Summary

## NUCLEAR SAFETY & LICENSING

**OVERVIEW:** This is an update to the original 2000 Action Plan signed on January 4, 2000. This update incorporates several important improvements including: an analysis of the resources needed to support routine ongoing functions of the organization, more thorough evaluation of the resources needed to support projects/improvement efforts and use of the Project Request form, comparison of the total resource needs to the approved budget for the department and lastly several appendices providing helpful information. The update provides the changes in Department plans resulting from the Steam Generator Tube Failure event and the NRC action naming Indian Point 2 a "focus plant". Finally, this Business Plan update uses the format and provides the content requested by Business Services for the 2001 Business Plans providing an early trial of the new approach

**GOALS:** NS&L is directly responsible for or will make a significant contribution towards achieving the following **2000 Indian Point Goals:**

- Conduct the 2000 RFO in 45 days or less and within budget.
- Safely operate at 95% or greater capacity non-outage
- Operate within threshold regulator performance
- Identify opportunities for regulatory relief: John McCann
- Operate the plant within O&M and Capital budgets

### **EXPECTED 2000 RESULTS:**

- 1) Department functions will be clearly allocated into 3 well defined sections
- 2) The Improved Standard Tech Spec Project will be established using strong project management methods and work will be proceeding according to the project schedule.
- 3) Key IP 2 staff will have an improved understanding of the licensing and design basis.
- 4) A searchable, living commitment database will be in use for recording and tracking NRC commitments.
- 5) A plan for the application of cost effective risk informed regulatory developed using strong project management methods and work will be proceeding according to the project schedule.
- 6) The new NRC regulation for 10CFR50.59 will be integrated into site processes when issued
- 7) NS&L processes and procedures will be created or enhanced to address key department activities
- 8) PSA model will be upgraded to support more informed risk based decision making and support operational and regulatory related activities

## 2. Action Plans

### NUCLEAR SAFETY & LICENSING

Establishment of Three Section Organization with Clear Roles & Responsibilities				
GOAL	ACTIONS	OWNER	COMPLETION DATE	STATUS
Operate within threshold regulatory performance	Formally establish roles and responsibilities for the Nuclear Licensing and Safety Analysis Section	Goetchius	11/1/00	Open
	Formalize procedures for routine department activities: (e.g., processing of Tech spec changes, management of commitments, management of regulatory correspondence, communications, and filing)	Goetchius/Allen	9/31/00	Open
	Develop actions to improve correspondence quality and performance indicator	Goetchius/Allen	10/31/00	Open

Improved Licensing and Design Basis Understanding				
GOAL	ACTIONS	OWNER	COMPLETION DATE	STATUS
Operate within threshold regulator performance	Complete and put into use a searchable, living commitment database for recording and tracking NRC commitments. Transfer database from Configuration Management to Licensing	Allen	11/30/00	Ongoing

## NUCLEAR SAFETY & LICENSING ACTION PLANS

Improved Standard Technical Specifications				
GOAL	ACTIONS	OWNER	COMPLETION DATE	STATUS
Identify opportunities for regulatory relief	Complete draft of Improved Standard Tech Specs	Bill Blair	2/27/01	Open
	Complete reviews and approvals and submit to NRC	Bill Blair	5/25/01	Open
	Support NRC review and approval	Bill Blair	1/31/02	Open
	Program and procedure development and revision needed for implementation of ISTS	Bill Blair	1/31/02	Open
	Complete all training necessary to implement ISTS	Bill Blair	5/15/02	Open
	Complete all preparations and implement ISTS	Bill Blair	6/1/02	Open

Risk Informed Regulatory Action Plan				
GOAL	ACTIONS	OWNER	COMPLETION DATE	STATUS
Identify opportunities for regulatory relief	Hire staffing to develop & maintain the improved PSA	Gaynor	1/15/00	Open
	Develop improved shut down risk model	Gaynor	TBD	Open
	Upgrade PSA tools	Gaynor	6/1/00	Open
	Upgrade PSA Models	Gaynor	2/1/01	Open
	Improve station understanding in use of risk management tools	McCann	6/30/01	Open

## Identify Opportunities for Regulatory Relief

GOAL	ACTIONS	OWNER	COMPLETION DATE	STATUS
<b>Identify Opportunities for Regulatory Relief</b>	Remove the LOPAR reactor trip from station Technical Specifications	Goetchius	12/31/00	Ongoing
	Relocate the requirements pertaining to the toxic gas analyzers from Technical Specifications to the FSAR	Goetchius	06/01/00	Complete
	Relocate the requirements for SNSC and NFSC safety review from Technical Specifications to the QA Plan	Goetchius	06/01/00	Complete
	Amend Technical Specifications to permit on-line calibration of Individual Rod Position Indication	Goetchius	12/31/00	Ongoing
	Amend Technical Specifications to permit 24 hr grace period to perform missed surveillances	Goetchius	06/01/00	Complete
	Amend Technical Specifications to permit maintenance in bypass	Goetchius	12/31/00	Ongoing

### 3. Approved 2000 Budget

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT	AVE
<u>Human Resources</u>														
Management	12	12	12	13	13	14	15	15	16	16	16	17	171	14.25
Weekly	2	2	2	2	2	2	2	2	2	2	2	2	24	2
Summer/COOP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>Subtotal</u>	14	14	14	15	15	16	17	17	18	18	18	19	195	16.25
Overtime (Hours)	0	0	0	0	0	0	0	0	0	0	0	0	0	0



#### 4. Project Requests

The following Projects and Programs are being worked in 2000

Item	Project/Program Title	Estimated Con Ed Hours
4.1	Improved Standard Technical Specifications (Development Phase)	1200
4.2	Safety Monitor Enhancement Project	450
4.3	LOPAR and Over press and Over temp Delta Temp TS Changes	60
4.4	Enhance Department Processes and Procedures	80
4.5	Steam Generator Tube Failure Outage	1455
4.6	2000 RFO	1280
4.8	Implement Revised 10CFR50.59 Process	180
4.9	Steam Generator Replacement,	100
4.10	Power Uprate Preliminary Study	500
4.11	UFSAR Verification	1020
4.12	IP 2 PSA Model Upgrade	800
4.13	IP 2 PSA Model Update	900
4.14	IP 2 PSA Application Program	490
Total Estimated Con Ed Person Hours		8,515

\* Not included in the total. See Project Request, Notes

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> ITS Project (Development Phase)					<b>2) Project #:</b> 4.1				
<b>3) Description:</b> Develop revised Technical Specifications in the new, standard format, in accordance with the ITS Project Plan, to replace the current custom Technical Specifications and submit these specifications to the NRC for approval. Respond to NRC questions and make any supplemental submittals necessary to achieve NRC approval. Note, the hours and \$'s provided on this Project Request are very preliminary and are not based on a resource loaded project schedule. This project request will be revised as soon as a project plan is prepared.									
<b>4) Justification:</b> See accompanying ITS Project Plan									
<b>5) Indian Point 2 Goals Supported:</b> See accompanying ITS Project Plan									
<b>6) Budget:</b> 14,800 Con Ed Hours + \$1,065K Outside Support									
Dept	Action	2000		2001		2002 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L	ITS Vendor					0		0	
	Project Mgr	1,200		900		0		2,076	
	Staff Augment.								
Various	Project Team	4,850		6,000		0		10,899	
	ITS Reviews	1,450		400		0		1,810	
	Staff Augment.								
<b>TOTALS:</b>		7,500		7,300		0		14,800	
<b>7) Lead Department:</b> NS&L					<b>8) O &amp; M:</b> Capital: XM:				
<b>9) Proposed By:</b> William S. Blair						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> * Vendor contract has been approved and executed.  Key assumptions: (a) NS&L provides 1 Project Manager; (b) 6 other station departments provide 1 dedicated Project Team Member; (c) 2 other station departments provide 2 half-time Project Team Members; (d) 173 hrs/month/person; (e) Project Manager starts June, 2000; (f) Project Team starts September, 2000; (g) ITS submittal by June, 2001. Outside expenditures based on 90% of existing contract base scope work completed in 2000 (per schedule).									

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> Safety Monitor Enhancement Project					<b>2) Project #:</b> 4.2				
<b>3) Description:</b> Install Version 2.6 and complete verification and validation of the new version. Complete Level 2 (LERF) model for the Safety Monitor. Additional enhancements being planned are: moving the software from a PC to the network; adding the ability to download the plant schedule to the Safety Monitor and establishment of a shutdown PSA model.									
<b>4) Justification:</b>									
<b>5) Indian Point 2 Goals and Strategies Supported:</b> Operate within threshold regulator performance (G), Safely operate at 95% or greater capacity factor (G), Optimize Work Control Process (G), Identify opportunities for regulatory relief (G)									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L    ComAp	LERF			300				300	
	PC to NW					40		40	
	Dwnl Sched			150				150	
	SD PSA					TBD		TBD	
	Dwnl Sched			TBD				TBD	
<b>TOTALS:</b>				450		40		490	
<b>7) Lead Department:</b> Nuclear Safety & Licensing					<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>				
<b>9) Proposed By:</b> Doug Gaynor						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b>									

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> LOPAR & Over Press & Over Temp Delta Temp TS										<b>2) Project #:</b> 4.3			
<b>3) Description:</b> Remove the LOPAR and Over Pressure and Over Temperature Delta trips from the Tech. Specs and put them into the Core Operating Limits Report (COLR).													
<b>4) Justification:</b> The Control Rod Protection function is not longer needed in the Tech. Specs. It was added to the Tech Specs as an extra precaution to preclude component damage.													
<b>5) Indian Point 2 Goals Supported:</b> Identify opportunities for regulatory relief													
<b>6) Budget:</b>													
Dept	Account	1999 + Prior		2000		2001 + Future		Project Total					
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)				
NS&L				60						60			
<b>TOTALS:</b>				60						60			
<b>7) Lead Department:</b> Nuclear Safety & Licensing						<b>8) O &amp; M:</b>						<b>Capital:</b>	
						<b>XM:</b>							
<b>9) Proposed By:</b> Ed Goetchius						<b>Date:</b>							
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>							
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>							
<b>12) Notes:</b>													

**Indian Point 2**  
**2000 Project Request**

<b>1) Title: Enhance Department Processes and Procedures</b>						<b>2) Project #: 4.4</b>			
<b>3) Description:</b> <ul style="list-style-type: none"> <li>- Develop SAO for the management of License Amendments</li> <li>- Revise NSLAD-1 and develop a new NSLAD to support the management of License Amendments by the NS&amp;L department and provide guidance on regulatory correspondence of al types</li> <li>- Revise NSLAD -7 to incorporate new NEI commitment management guidance</li> <li>- Develop NRC Communication Plan</li> </ul>									
<b>4) Justification:</b> <ul style="list-style-type: none"> <li>- A NS&amp;L self assessment performed in 1998 and CR 199809212 identified the need for the License Amendment process to be developed</li> <li>- Other department procedures will require revision to support the development of the SAO for License Amendments</li> <li>- A communication plan for the NRC is needed to clearly define the roles and responsibilities of communicating with the regulator to support the effective management of NRC agency focus activities</li> </ul>									
<b>5) Indian Point 2 Goals Supported: OPERATE WITHIN THRESHOLD OF REGULATOR PERFORMANCE</b>									
<b>6) Budget:</b>									
Dept	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L				80				80	
								0	
								0	
								0	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>			80				80	
<b>7) Lead Department:</b> Nuclear Safety and Licensing						<b>8) O &amp; M:</b>			
						<b>Capital:</b>			
<b>9) Proposed By:</b> John McCann						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b> John McCann						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> Contractor (Hellums) full time for 12 weeks									

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> Steam Generator Tube Failure Outage					<b>2) Project #:</b> 4.5					
<b>3) Description:</b> NS & L support has been provided for the subject event and outage. One person has been dedicated full time to the SL-1 effort and ongoing licensing support, and two license amendments have been required.										
<b>4) Justification:</b> Support necessary to address the Steam Generator Tube Rupture event and outage.										
<b>5) Indian Point 2 Goals Supported:</b>										
<b>6) Budget:</b>										
Dept	Account	1999 + Prior		2000		2001 + Future		Project Total		
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	
NS & L				1455				1455		
<b>TOTALS:</b>				1455				1455		
<b>7) Lead Department:</b>					<b>8) O &amp; M:</b>					<b>Capital:</b>
					<b>XM:</b>					
<b>9) Proposed By:</b> John McCann						<b>Date:</b>				
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>				
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>				
<b>12) Notes</b>										

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> 2000 RFO					<b>2) Project #:</b> 4.6				
<b>3) Description:</b> Provide NS & L support for the 2000 RFO. Support included management coverage and shutdown risk analysis and support.									
<b>4) Justification:</b>									
<b>5) Indian Point 2 Goals Supported:</b>									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L	Mgmt Suprt SD Risk Contr Suprt			800 480				800 480	
	<b>TOTALS:</b>			1280				1280	
<b>7) Lead Department:</b> Outage Planning					<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>				
<b>9) Proposed By:</b> John McCann					<b>Date:</b>				
<b>10) Lead Dept. Mgr. Approval:</b>					<b>Date:</b>				
<b>11) 2000 Budget Approval By:</b>					<b>Date:</b>				
<b>12) Notes:</b> Contractor support provided to supplement Con Ed resources									

**Indian Point 2  
2000 Project Request**

<b>1) Title:</b> Implement Revised 10CFR50.59 Process				<b>2) Project #:</b> 4.7					
<b>3) Description:</b> The NRC is revising the regulation (10CFR50.59) which governs the process for making changes to the facility as described in the Safety Analysis Report. This project will provide for the revision of Indian Point 2 procedures and retraining of personnel who use this procedure to ensure timely compliance with the revised regulation.									
<b>4) Justification:</b> This project must be completed to maintain compliance with the anticipated revised NRC regulation									
<b>5) Indian Point 2 Goals and Strategies Supported:</b> Operate within threshold regulator performance (G), Safely Operate at 95% or greater capacity non-outage (G).									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L	Proced Rev & Devel Deliv of Trng			180				180	
Various	Trng-Requal			300				300	
	Trng-New Quals			1800				1800	
Nucl Trng									
	<b>TOTALS:</b>			2280				2280	
<b>7) Lead Department:</b> Nuclear Safety & Licensing					<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>				
<b>9) Proposed By:</b> C. Peart						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> Trng-Requal assumes 75 people are requalified @ 8 hrs each. Trng-New Quals assumes 75 people not previously qualified are qualified under the new process @ 24 hrs each. Deliv of Trng is for a contractor to provide the lesson plans and to deliver the training to personnel.									



**Indian Point 2  
2000 Project Request**

<b>1) Title:</b> Steam Generator Replacement					<b>2) Project #:</b> 4.8				
<b>3) Description:</b> Replace the original Westinghouse Model 44 Steam Generators with new replacement generators of improved design. The NS & L role in this project is to process the necessary Tech Spec Amendment.									
<b>4) Justification:</b> The existing original Steam Generators are subject to known degradation mechanisms and their remaining usable life is uncertain. Continued operation with these generators requires substantial inspection and repair costs as well as increased outage time. New Steam Generators will allow increased plant output.									
<b>5) Indian Point 2 Goals and Strategies Supported:</b> Steam Generator Replacement (S), Perform modifications necessary to support SG Replacement (G).									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L				100				100	
<b>TOTALS:</b>				100				100	
<b>7) Lead Department:</b> Steam Generator Replacement Project					<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>				
<b>9) Proposed By:</b> Ed Goetchius					<b>Date:</b>				
<b>10) Lead Dept. Mgr. Approval:</b>					<b>Date:</b>				
<b>11) 2000 Budget Approval By:</b>					<b>Date:</b>				
<b>12) Notes:</b>									

**Indian Point 2  
2000 Project Request**

<b>1) Title:</b> Power Uprate Preliminary Study						<b>2) Project #:</b> 4.9			
<b>3) Description:</b> This project will provide the feasibility study, the cost/benefit analysis and the engineering and safety analyses, the licensing submittal and support for its approval and modifications to the HP Turbine necessary to increase the power output of IP 2. The specific percentage uprate to be achieved by this project will be determined based on the results of the feasibility study currently underway.									
<b>4) Justification:</b> It is anticipated that the feasibility study and subsequent cost/benefit analysis will show that proceeding further with this project is economically justified.									
<b>5) Indian Point 2 Goals and Strategies Supported:</b>									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L	Feasib. Study			200				200	
	Vend Pres & Prep Bid spec			300				300	
Site Engr	HP Turb Bid			200				200	
	HP Des & Engr			450				450	
	<b>TOTALS:</b>			1450				1450	
<b>7) Lead Department:</b> Nuclear Safety & Licensing						<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>			
<b>9) Proposed By:</b> Art Ginsberg						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> It is assumed that the Steam Generators are replaced as a precondition for this project. The 2001 and beyond resources needed to complete this project will be determined after the feasibility study and cost/benefit analysis. Funds for this project are being provided by an approved R & D Project Appropriation.									

**Indian Point 2  
2000 Project Request**

<b>1) Title:</b> UFSAR Verification					<b>2) Project #:</b> 4.10				
<b>3) Description:</b> This is a comprehensive ongoing program to update the FSAR. After validation of the FSAR by the Configuration Management & Control organization, the NS&L department is responsible for the review and approval of the assigned FSAR technical information segments. In some case, where existing FSAR information cannot be readily verified, this includes resolving outstanding issues through use of the station Corrective Action Program.									
<b>4) Justification:</b> Regulatory requirement – 10 CFR 50.54(f).									
<b>5) Indian Point 2 Goals Supported:</b> Continue to verify and make available design and licensing basis information.									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS & L	PSA Grp			100				100	
	NLSA Grp			700				700	
	NSA Grp			220				220	
<b>TOTALS:</b>				1020				1020	
<b>7) Lead Department:</b> Configuration Management & Control					<b>8) O &amp; M:</b> Capital: XM:				
<b>9) Proposed By:</b> John McCann					<b>Date:</b>				
<b>10) Lead Dept. Mgr. Approval:</b>					<b>Date:</b>				
<b>11) 2000 Budget Approval By:</b>					<b>Date:</b>				
<b>12) Notes:</b> RA Grp-No hours									

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> IP 2 PSA Model Upgrade						<b>2) Project #:</b> 4.11			
<b>3) Description:</b> This project will upgrade the IP 2 PSA model including: replacement of the RCP Seal LOCA model, replacement of the Offsite Power Recovery model, providing a linked Internal Flooding model, addition of a Main Feedwater/Condensate Recovery model, review of the list of Initiating Events to assure completeness and improvements in the documentation of the PSA.									
<b>4) Justification:</b>									
<b>5) Indian Point 2 Goals Supported:</b>									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS & L				800		160		960	
<b>TOTALS:</b>				800		160		960	
<b>7) Lead Department:</b> Nuclear Safety & Licensing						<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>			
<b>9) Proposed By:</b> Doug Gaynor						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> Replace RCP Seal LOCA model & Offsite Power Recovery model (200+200 hrs); Link internal flooding model (250+100hrs); Add Main FW/Condensate recovery model(350hrs); Upgrade documentation(100+250hrs); Initiating Events completeness check (negl hrs); Independent review(50+100hrs). The estimates provided here are a very rough ballpark estimate only and have been doubled to a total of 3000 hours due to the high degree of uncertainty. This Project Request will be resubmitted once a project plan has been developed. It is assumed that 1/3 of the work is done by Con Ed Personnel and the rest by outside support including T&L									

**Indian Point 2**  
**2000 Project Request**

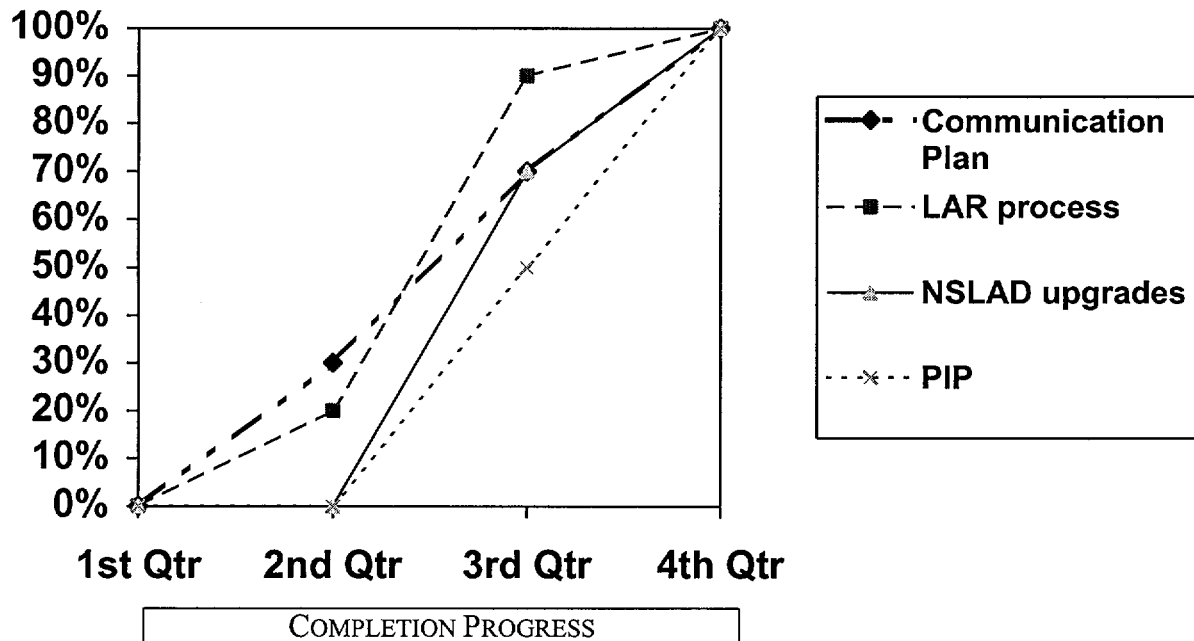
<b>1) Title:</b> IP 2 PSA Model Update						<b>2) Project #:</b> 4.12			
<b>3) Description:</b> This project will update the IP 2 PSA incorporating plant changes such as: Tech Spec, procedure and plant configuration changes; updating plant specific performance variables; reevaluating and requantification of initiating events; updating the Human Reliability Analysis; and updating the Common Cause Analysis									
<b>4) Justification:</b>									
<b>5) Indian Point 2 Goals Supported:</b>									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS&L				900		600		1500	
<b>TOTALS:</b>				900		600		1500	
<b>7) Lead Department:</b> Nuclear Safety & Licensing						<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>			
<b>9) Proposed By:</b> Doug Gaynor						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> Review plant changes & make necessary model changes(assume 50 changes, 1000hrs); update plant specific performance data(1000+120hrs); update industry data on initiating events(40+100Hrs); update human reliability analysis(250+400Hrs); update common cause analysis(200+300); Independent review(50+100Hrs); V&V of model changes(160Hrs). Due to the uncertainty in these estimates the total had been increased by ~15% to a total of 4200Hrs. This Project Request will be resubmitted once a project plan has been developed. It is assumed that 1/3 of the work is done by Con Ed Personnel and the rest by outside support including T&L									

**Indian Point 2  
2000 Project Request**

<b>1) Title:</b> IP 2 PSA Model & Application Controls					<b>2) Project #:</b> 4.13				
<b>3) Description:</b> This project will establish the tools and procedures for control of the PSA models and applications of the model. This includes: creation of a PSA Potential Change Database; establishment of links to appropriate processes and procedures; and creation of a PSA Applications Database. Training in the new and revised procedures is included. This project will end with implementation of the continuous review process									
<b>4) Justification:</b>									
<b>5) Indian Point 2 Goals Supported:</b>									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
NS & L	Chg DB			150		TBD		150	
	Appl DB			150			150		
	Proced			150			150		
	Links						TBD		
	Training			40			40		
	<b>TOTALS:</b>			490		TBD		490	
<b>7) Lead Department:</b> Nuclear Safety & Licensing					<b>8) O &amp; M:</b> <b>Capital:</b> <b>XM:</b>				
<b>9) Proposed By:</b> Doug Gaynor					<b>Date:</b>				
<b>10) Lead Dept. Mgr. Approval:</b>					<b>Date:</b>				
<b>11) 2000 Budget Approval By:</b>					<b>Date:</b>				
<b>12) Notes:</b>									

### 3. Performance Measures

#### Department/Process Improvements



#### Improvement Summary

In a NS&L self assessment performed in 1998 a number of improvements were identified for the department. NS&L management is taking action to address those recommendations as well as those actions related to the seeking of regulatory relief that have been identified since that time. The improvements for the department are being developed as part of the Performance Improvement Plan (PIP) for NS&L.

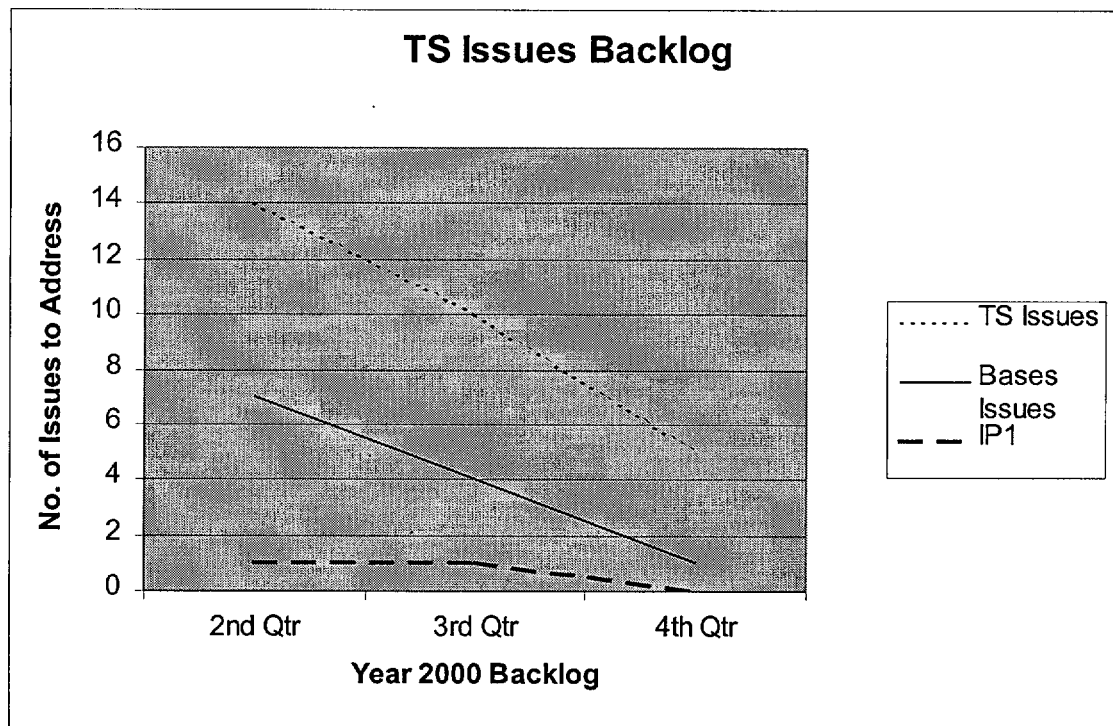
The PIP will contain the source of the recommendations, the recommendations, priority for completion of each, action plans developed with schedules based on priority, performance indicators, and progress reports.

In conjunction with the development of the PIP, NS&L management determined that the department processes needed immediate attention. First a site wide process was needed for the management of License Amendments. SAO-465, License Amendment Request (LAR), was directed to be developed. Further, additional attention needed to be focused upon the department procedures (NSLAD) to align with the new SAO-465 as well as be upgraded to current NEI guidance and more user friendly. The self assessment further indicated that NRC communications and responsibilities is a weakness. A NRC communication plan has been directed to be developed to delineate the roles and responsibilities of the IP2 senior management.

#### Performance Summary

Actions are underway to complete the activities as shown in 2000.

## NS&L Technical Specification/Bases Backlogs Issues Resolution



### Improvement Summary

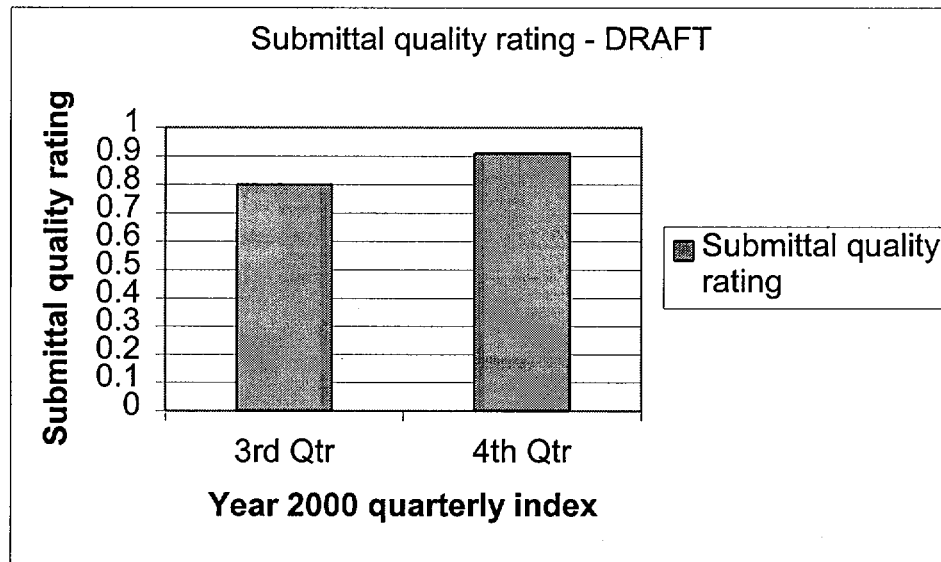
There is currently a backlog of TS amendments, TS Bases, and an IP1 issue which need to be submitted to the NRC to resolve administrative errors or as supplements to resolve incomplete amendment issues. There are currently 14 TS issues, 7 Bases issues, and 1 IP1 issue related to SNSC and NFSC review requirements.

### Goal

NS&L has targeted a goal of reducing the backlog to 5 TS Issue, 1 Bases Issue, and no IP1 issues by the end of the year.



## **NS&L NRC Submittal Quality Improvement**



### **Improvement Summary**

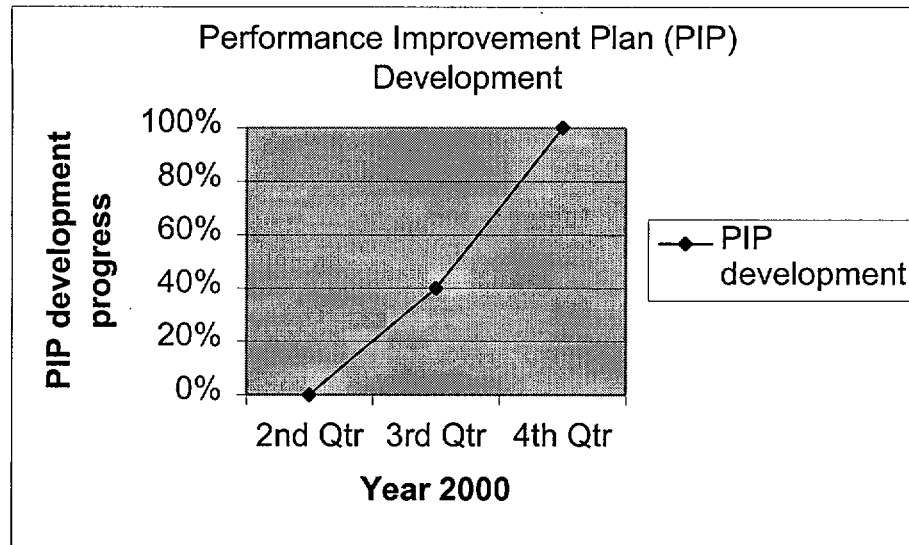
Submittal quality has been determined by NS&L management to be an issue that needs additional focus. As noted in the TS backlog performance indicator there are numerous amendments that need supplementing to address errors and there have been a number of CR

1. Meeting submittal schedule
2. The number of Requests for Additional Information (RAIs) that the NRC may request
3. Errors in technical information provided to NS&L by technical departments
4. Comments provided by senior management during their final reviews
5. Submittal administrative errors
6. Submittals are complete
7. Submittals accurately address the correspondence issues
8. Feed back from the NRC

### **Goal**

The NS&L goal for the submittal quality is ultimately .99. The year 2000 goal is .95 recognizing that the processes will require time for implementation and personnel to become familiar with the new requirements. Further, while on the NRC 'agency focus' list

## **NS&L Performance Improvement Plan (PIP) Development**



### **Summary**

In 1998 a self assessment of the NS&L department was performed. The results of the assessment identified numerous areas where improvements were needed. The following were the key identified weakness areas:

1. Management and leadership
2. Licensing activities (submittals)
3. Licensing document maintenance (inadequate processes)
4. Safety reviews (50.59 review deficiencies)
5. Training and qualifications

The current NS&L management has concluded that these issues have not been adequately addressed by previous actions and therefore a PIP is being created. The PIP will address each of these identified areas as well as any other areas that have since been highlighted.

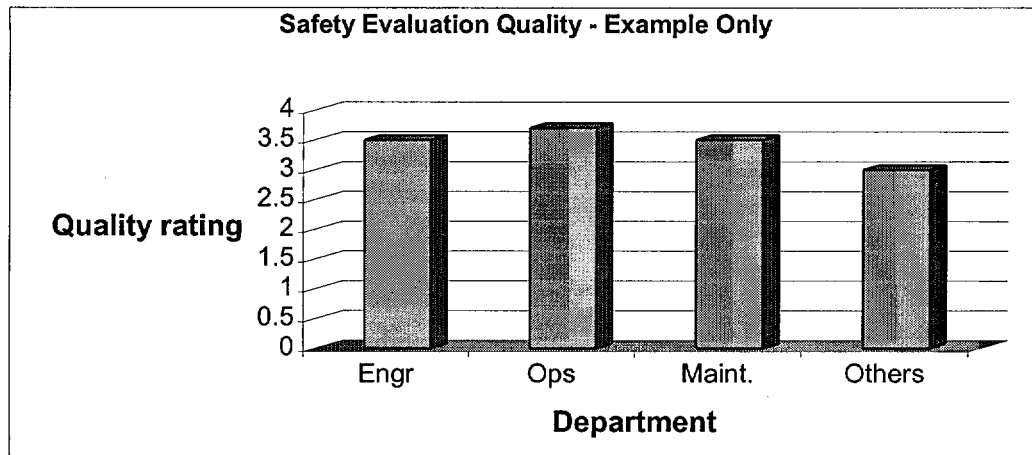
### **PIP Description**

The PIP will have prioritized activities which will include action plans, performance indicators, and assessments to determine progress. Activities will be categorized as 1, 2 or 3. Actions rated as 1 will be considered short term goals and focused for co

### **PIP Development Goal**

The goal is to have the PIP developed no later than the first quarter of FY 2001 and actions to be initiated during that quarter.

## **NS&L Safety Evaluation Quality Report**



### **Improvement Summary**

The safety evaluation process is an important element of an effective plant change process. Safety evaluations performed must be of a high quality. NS&L, as part of their performance indicator process will initiate a grading process for safety evaluations

1. Scope - does the SE clearly state the purpose and the justification for the change. Is the description of the change clear and unambiguous.
2. References - Are the appropriate references provided to support the review
3. Clarity - Each question answered must be clear, specific, and free of extraneous information. SE is a standalone document and the logic that supports the SE conclusions must be clear and reasonable to the reviewer.
4. SE answers – Conclusions are accurate, answers fully supported, address all SSC operability impact aspects.

### **Grading scores (1-4):**

- 4- Meets expectations
- 3 - Meets expectations with minor corrections needed
- 2 - The safety evaluation needs additional significant work but the SE conclusion is accurate
- 1 - The safety evaluation is unsatisfactory, incomplete, and below expectations

NOTE: This is provided only as an example. The actual grading/evaluation process will start in 10/00

## **6. Appendices**

### **6.1 Functional Responsibility**

The primary mission of the Nuclear Safety and Licensing Department is to provide the licensing engineering and nuclear safety analysis support required to ensure that the plant is operated in accordance with the terms of our USNRC Operating License. A secondary mission is to provide a strong and credible communications interface between the company and NRC stakeholders.

The Nuclear Safety and Licensing (NS&L) Department is responsible for providing the licensing engineering and nuclear safety analysis in support of the safe and efficient operation of Indian Point 2 and 1 stations. This includes the licensing engineering and safety analysis supporting the current licenses for IP 2 and IP 1 and for changes needed for continued safe and efficient operation.

A significant portion of this effort is directed toward the development and maintenance of Chapter 14, "Safety Analysis," of the FSAR, which is a highly specialized chapter which evaluates complex safety aspects of the plant and demonstrates that the plant can be operated safely and that exposures from credible accidents do not exceed the guidelines of 10 CFR 100.

NS&L is also responsible for regulatory programs such as: 50.59, Licensee Event Reporting, Notice of Violation Responses and all correspondence with the NRC.

NS&L is responsible for the IP 2 PSA and the use of PSA technologies to support safe and efficient station operation including implementation of the new NRC Regulatory process and risk informed regulatory initiatives.

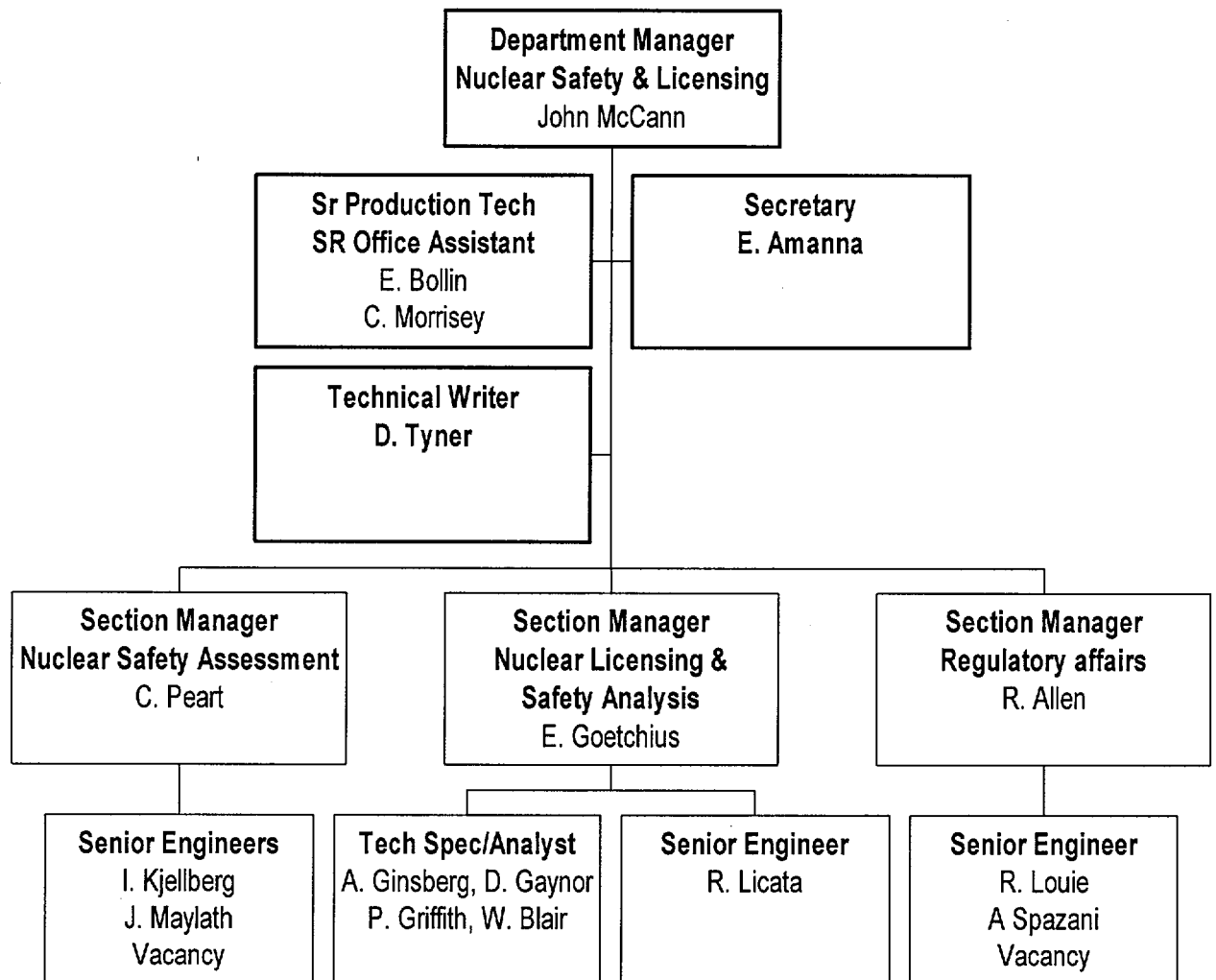
## 6.2 Personnel Information

Name	Title	Highest Degree	Professional License	Prof. Exper	Con Ed Experience
<b>MANAGEMENT</b>					
R. ALLEN	SECT MGR, REG AFFAIRS			30	19
E. AMANNA	SECRETARY	HS		27	21
W. BLAIR					
D. GAYNOR	TECH SPECIALIST/ANALYST	MS, MECH ENGR		27	27
A. GINSBERG	TECH SPECIALIST/ANALYST				
E. GOETCHIUS	SECT MGR, NUC Lic & SAFETY ANALYST	MS, ME	SRO, CHP	17	17
P. GRIFFITH	SR. ENGINEER	MS, MGMT SCIENCE		37	11
I. KJELLBERG	SR. ENGINEER	MS, MAR ENGR	PE-PA	32	16
R. LICATA	SR. ENGINEER	MS, MECH ENGR	NYS	29	10
R. LOUIE	SR. ENGINEER	BS, ME		22	10
J. MAYLATH	SR. ENGINEER	MS, EE	NYS	27	27
J. MCCANN	DEPARTMENT MANAGER				
C. PEART	SECT MGR., NUC SAFETY ASSESSMENT			23	9
A. SPAZANI	SR. ENGINEER	BT, EXPEC. MGMT	FAA, A&P	19	17
D. TYNER	TECHNICAL WRITER	AAS, BUS ADMIN		11	11
<b>WEEKLY</b>					
E. BOLLIN	SR PROD TECHNICIAN	AAS		30	30
C. MORRISEY	SR OFFICE ASSIST.	HS		27	27
<b>CONTRACTORS/TEMP</b>					
KARL MEYER		BA,		37	2
GREGORY HOFER		MSP&MS NE	WISCONSIN PE	25	3
WILLIAM MCTIGUE		BE	DELEWARE PE	15	2
<b>OPEN AND/OR REQUESTED</b>					
VACANT	SR ENGR-NUC SAFETY ASSMT				
VACANT	SR. ENGR-REG AFFAIRS				
<b>TOTAL</b>	<b>17 FILLED, 2 VACANCIES</b>			<b>435</b>	<b>259</b>

### *Authorized Positions*

	Management	Weekly	Totals
<b>1999 Budget</b>	12	2	14
<b>2000 Budget (EOY)</b>	17	2	19
<b>Change</b>	5	0	5

### 6.3 Organization Chart



## 6.4 Manpower Analysis

As can be seen in Section 6.6, "2000 Resource Plan," the total resources required to support both the baseline departmental workload and the project requests submitted in this Business Plan represents approximately 214 man-months of efforts. This represents an increase of approximately 19 man-months of work.

These additional resources are required, in large part because of the NRC's decision to place IP2 on the Agency Focus List. The letter notifying ConEd of the agency's decision identified several specific areas in which IP2's performance has been deficient. These areas are as follows:

- Communication and Coordination Weaknesses
- Engineering Support Shortcomings
- Equipment Reliability
- Corrective Actions Backlogs
- Operator knowledge
- Station training
- Procedural weaknesses
- Emergency preparedness weaknesses
- Corrective action program weaknesses
- Legacy issues

To successfully address each of these areas with the NRC there will be increased inspections, meetings, communications, correspondence, and interface requirements. NS&L, as the NRC interface for IP2, will be involved in all phases of the resolution of each of these issues. There will also be increased focus to improve each departments processes and backlog(s) reduction.

In addition, NS&L is also undertaking to upgrade the PSA model and 10CFR50.59 training. These projects are especially necessary during this period when IP2 will be subject to more NRC scrutiny to ensure the risk significance of any NRC inspection findings are accurately stated and that the station can quickly and successfully implement the new regulations governing the performance of 10CFR50.59 reviews.

This additional inspection support work, resulting primarily from the station's designation as an agency focus plant will require approximately 6700 man-hours of effort that was previously unbudgeted. NS&L has, by separate request sought authorization to hire approximately 4-5 experienced contractors to augment the ConEd staff for the remainder of the year.

This additional funding request for both the requested upgrades to the Probabilistic Safety Assessment model and the development of the new procedures and processes to support the new 10CFR50.59 requirements.

## 6.5 Operational Overview

This section covers routine, ongoing functions and activities of the organization.

<b>Item</b>	<b>Project/Program</b>	<b>Description</b>	<b>Estimated Con Ed Hours</b>
6.5.1	Condition Reports	Licensing-800 hrs (Heller 1/2X 30wks + Resol Anal Issues Reg Aff-650 hrs                      Saf Assmt 570 hrs	2020
6.5.2	Notice of Violation Responses	Prepare/assist with preparation of NOV responses, provide for internal reviews, approvals and submittal to NRC. Assume <u>6</u> NOV's responses to prepare.	400
6.5.3	Licensee Event Reports	Prepare/assist with preparation of LER responses, provide for internal reviews, approvals and submittal to NRC. Assume <u>15</u> LER's to prepare.	450
6.5.4	License/Tech Spec Ammendments	Prepare/assist with preparation of amendment requests, provide for internal review, approvals and submittal to NRC. Respond to RAI's and facilitate/coordinate implementation of approved revisions. Assume 10 change requests (beyond those associated w/ projects in Section 7). Outside Support is 1 Raytheon contractor.	600
6.5.5	NRC Correspondence	Process special NRC correspondence(NOV's, GL's, RAI's, RR's, etc.) and routine correspondence (MOR, Oper Lic Renewals, EOP/EP, etc.)	660
6.5.6	Safety Evaluations	Provide safety evaluations and unreviewed safety question evaluations of proposed facility changes tests and experiments. Provide reporting on such changes to the NRC. Assume 400 SE's /USQE's.(150 Screens @4 hrs ea + 250 full evaluations @ 24 hrs ea). Contractor support=4800 hrs/ 173.3 hrs/month	1800
6.5.7	Commitment Tracking	Administer the Commitment Tracking Process	300
6.5.8	Industry Organization Participation	Participation in NEI(APOC 200 Hrs), EPRI and WOG (RBTWG 200 Hrs, other WOG activities 300hrs) activities. Budget for Licensing Memberships	700



6.5.9	PSA Support for Other Projects	-Risk Informed ISI (100 Hrs) -Risk Informed MOV & AOV Programs (100 Hrs)	200
6.5.10	Routine Operational PSA Support	-Maintenance Rule (a) (4) Implementation (200 Hrs) -Maintenance Rule Expert Panel (100 Hrs) -Regulatory/operational support (400 hrs), Incr 600Hrs(Focus Plant) -Support NRC Revised Reactor Oversight Process (200 Hrs), Incr 400Hrs(Focus Plant)	1700
6.5.11	Safety Monitor Support	-Maintain reference databases (500 Hrs) -Respond to users questions/concerns (100 Hrs) -Participate in Users Group (100 Hrs)	700
6.5.12	SNSC & NFSC	Participation in and support for the Station Nuclear Safety Committee and the Nuclear Facilities Safety Committee. NS&L is responsible for the SNSC function and the Department Manager chairs this committee. -NFSC Secretary-Full Time, estimate 1800 Hrs -NFSC Chair-John McCann-estimate 7 hrs/wk X 40wks = 280 Hrs NS&L personnel also participate in the NFSC Subcommittees.	2480
6.5.13	E Plan Support	Time spent on training, drills and exercises	550
6.5.14	Miscellaneous	Communications, Petty Cash, Vehicles	
6.5.15	Training	Complete all continuing and qualification training including GET, ESP, etc. Lic 350 hrs + 50 hrs, SA 450 hrs, RA 275 hrs PSA Grp 1200Hrs, Dept Trng Coord 650Hrs	3000
6.5.16	NRC Liaison, QA Audit Support, Self Assessments	Support for NRC licensing and inspection activities, QA audits and to conduct department planned self-assessments.	2900
6.5.17	Technical Program Maintenance	-NRC License and Tech Spec Changes 500 hrs (SA) -LER Process MOV Prog 80 hrs(SA) -10CFR50.59 Process SBO Prog 100 hrs (SA) -Commitment Tracking and Database Maintenance Process 100 hrs (RA) -FSAR 220 hrs (SA) PSA Prog 100Hrs RISKMAN 500 Hrs	1600

6.5.18	Management & Supervision	Time spent in management and supervisory functions including planning, delegation and oversight of work. NLSA 1300Hrs, NSA 250Hrs, RA 150Hrs, PSA 400 + 500 Hrs	2600
6.5.19	Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation.	1300
6.5.20	Vacations, Holidays, Sick and Authorized Leave	V: 17 People X 17 Days ea X 8 hrs/day = 2300Hrs H: 17 People X 11Days ea X 8 hrs/day = 1500 Hrs S & AL: 17 People X 6 Days ea X 8 hrs/day = 800 hrs	4600
<b>Total Estimated Con Ed Person-Hours</b>			<b>28,560</b>

## 6.6 2000 Resource Plan

Section	Item	Estimated Con Ed Person- Months
5	OPERATIONAL OVERVIEW	165
7	Opportunities – Current Projects and Programs	49
5 + 7	Total Resources Needed (5 + 7)	214
	2000 Approved Budget	195
$\Delta$		19

# **Indian Point Training 2000 Business Plan**

## **Department and Section Goals**

# Indian Point Training

Indian Point Goal      Implement training program improvements to better support plant needs.

**Department Goal**      Perform a systematic evaluation of training effectiveness utilizing self-assessment, peer review, line and student feedback and benchmarking. (Academy Objective 8)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
63	IT	Vehec	Improve the training action request process so that needs are quickly identified and assessed for training needs.	Evaluate the Training Action Request Process and implement corrective actions. Determine the effectiveness of current training action tracking system and make improvements as identified.	Improve the timeliness of processing Training Action Requests.	12/31/2000 Not Started	This activity may require replacing the existing action tracking system. QA to conduct the evaluation as part of the annual training audit.

# Indian Point Training

Indian Point Goal      Implement technical training programs to develop fully qualified employees capable of raising the level of organizational performance.

**Department Goal**      Develop a five-year business plan that includes our mission, vision, schedule, and budget. (Academy Objective 2)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
29	TM	Stuart	Develop a business plan incorporating operations and technical sections' training plan.	Develop Business Plan.	Plan approved by Training Manager	10/15/2000 In Progress	Draft of 2001 Business Plan complete. Reviews in Progress. Approvals due October 2000. Date moved to correspond to budget process. (NS 9/27)
28	TT	Vogle	Develop a 5 yr business plan for technical training	Complete 5 year plan.	Plan approved by all line owners.	04/30/2000 Complete	Development of schedule and budget in progress. To be delivered to Tom Vehec for integration into a department plan by 4/30/00 (JJN 4/12).
27	OT	Nichols	Develop a 5 yr business plan for operations	Complete 5 year plan.	Plan approved by Operations Manager.	04/30/2000 Complete	Development of schedule and budget completed and approved by Ops manager. (JJN 5/8).
43	TM	Murphy	Complete staffing of Training department	Fill the position for: -Section Manager Training administration	Positions filled	02/28/2000 Complete	
56	OT	Nichols	Complete staffing of Operations Training	Hire three instructors.	Positions filled	12/31/2000 In Progress	Completed Staffing analysis and submitted analysis and Budget for approval. (JN 9/12)
41	TM	Murphy	Evaluate current staffing level for adequacy.	Benchmark other facilities for staffing levels per SAO-135. Utilize as basis for succession planning.	Benchmarking report completed per SAO-135.	03/30/2000 Complete	Benchmarking at Seabrook completed.

# Indian Point Training

1 IT	Vehec	Develop a career development /succession plan for the Training Department	Survey staff for desired career goals/opportunities. Develop career development plan format for each staff member. Facilitate completion with each section manager. Develop forecast model for vacancies/ key positions with potential candidates.	All staff personnel have completed career development plans. Potential candidates for key positions defined.	06/30/2000 Complete	Technical complete, operations completee (9/27/00 TV)
55 TT	Vogle	Completing staffing of Technical Training	Fill the positions for: -Clerical Staff (6/00) -I&C Instructor (3/00) - ESP Instructor (3/00) - Chemistry Instructor (1/00)	Positions filled	06/30/2000 Complete	Tom Graham (I&C) started 1/18/2000. Don Croulet (ESP) started 1/10/2000.  Frank Poplees Filling open Chemistry position. Beth Melanson

**Department Goal** Develop curriculum through the use of curriculum review committee feedback and subject matter experts that results in improved human performance. (Academy Objective 1,4)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
18	TT	Vogle	Perform a customer survey and cost/benefit analysis on additional mock-ups. Develop recommendations to senior management for budget submittal.	Benchmark other facilities per SAO-135. Develop a best practices and cost/benefit analysis.	Proposal approved by Training Manager.	12/31/2000 In Progress	Inquiry made to line managers with response due on 8/1 (RV 7/19)
17	TT	Vogle	Perform a cost-benefit analysis of extending current computer-based training to other areas. Develop recommendations to senior management for budget	Benchmark other facilities per SAO-135. Develop a best practices and cost/benefit analysis.	Proposal approved by Training Manager.	12/31/2000 In Progress	Early discussion have been held with Synesis on CBT. (RV 8/16)
7	OT	Nichols	Have a minimum of one CRC per program per quarter that addresses program content and approves continuing and initial training.	1st quarter CRC completed 3/9 (FMK)	Continuing training topics selected by	12/31/2000 In Progress	3rd quarter CRC scheduled for August (JJN 7/19) 3rd Quarter CRC completed, next CRC scheduled for September 2000 (JN 8/31)

# Indian Point Training

6 TT	Vogle	Have a minimum of one CRC per program per quarter that addresses program content and approves continuing and initial training.	Schedule all CRCs for year. Ensure CRC agenda address program content.	Continuing training topics selected by	12/31/2000 In Progress	The Supervisor CRC meetings have been scheduled monthly from now till May. All groups CRC's met week of 3/13/00. Maintenance CRC 4/18; Supervisor 4/5 (4/17 Vogle) CRC's being scheduled on a monthly basis. ( RV-8/2 ) Discipline-specific CRC held on a monthly basis. (RV 8/16)
47 TM	Murphy	Establish a senior management training council for oversight.	Write SAO.	Meetings scheduled for 2000 and implemented.	01/31/2000 Complete	Executive Training Council in SAO-502. Meeting every Monday.
12 IT	Murphy	Develop and implement a standard guideline for CRCs	Develop standard.	Standard approved.	02/28/2000 Complete	Standard and charter developed and included in SAO-502.
20 TT	Nichols	Using the SAT process, revise the OJT program to incorporate industry standards, and reduce the number of required signatures while improving	Benchmark other utilities under SAO-135. Revise program.	New program approved by CRC. Post training feedback indicates customer satisfaction.	04/30/2000 Complete	Draft revision to SAO 503 has been submitted for review.
9 OT	Nichols	Using the SAT process, revise the OJT program to reduce the number of required signatures while improving quality	Benchmark other utilities under SAO-135. Revise program.	New program approved by CRC. Post training feedback indicates customer satisfaction.	08/31/2000 Overdue	NPO conventional draft cards completed with a reduction of 50%, presently in review. Working on RO/SRO at present. (JJN 7/19)

**Department Goal** Each instructor has a thorough knowledge of instructional techniques and uses them to enhance learning during in-plant, classroom, laboratory and simulator training. (Academy Objective 3,5,6,7)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
15	IT	Vehec	Each instructor attends two instructional continuing development programs (MANTG, INPO or IP offered.) Internal courses require post-training effectiveness evaluation, external require documentation under benchamarking police (NPPS 22.)	Develop a continuing training schedule using instructor feedback and observations. Facilitate participation from section managers.	Post training feedback and observations used to determine effectiveness.	12/31/2000 In Progress	18 Training staff registered for MANTG workshop in May 2000.



# Indian Point Training

**Department Goal** Each line supervisor and manager has a working knowledge of the systematic approach to training, and uses it to improve workgroup performance. (Academy Objective 2)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
45	TT	Vogle	Develop a year 2001 training schedule	Develop a year 2001 training schedule which includes: - Specific Dates - Employee Names - Department Manager approval & commitment	Schedule approved by CRC	11/01/2000 In Progress	Rad Pro schedule submitted. (RV 8/16 ) I&C Submitted (RV 8/31) Engineering, Chemistry, Supervisor submitted (9/27/00)
46	OT	Nichols	Develop a year 2001 training schedule	Develop a year 2001 training schedule which includes: - Specific Dates - Employee Names - Department Manager approval & commitment	Schedule approved by CRC	11/01/2000 In Progress	Received draft 2001 schedule from operations, in review 6/8 (FJK)
35	OT	Nichols	Implement a OJT/OJE knowledge-base improvement program for all IP personnel (managers, supervisors and workers.)	Develop a program that meets the needs of the customer in improving his/her knowledge.	Post-training feedback indicates program effectiveness.	04/30/2000 Complete	-part of SAT classes (DM)
26	IT	Murphy	Implement a SAT knowledge-base improvement program for all IP personnel (managers, supervisors and workers.)	Develop a program that meets the needs of the customer in improving his/her knowledge.	Post-training feedback indicates program effectiveness.	06/01/2000 Complete	-part of SAT classes (DM)
42	TT	Vogle	Implement a OJT/OJE knowledge-base improvement program for all IP personnel (managers, supervisors and workers.)	Develop a program that meets the needs of the customer in improving his/her knowledge.	Post-training feedback indicates program effectiveness.	12/31/2000 In Progress	OJT/OJE classes being conducted. SAT classes part of continuing training (RV 8/31)
37	TT	Vogle	Involve subject matter experts from the line in initial and continuing training.	Schedule SME's to participate in continuing training.	SME's participate in two classes per year per program.	12/31/2000 In Progress	SME's being utilized for ESP Continuing Training.
36	OT	Nichols	Involve subject matter experts from the line in initial and continuing training.	Schedule SME's to participate in continuing training.	SME's participate in one class per cycle.	12/31/2000 In Progress	6 SME's being used in cycle 2 operator requalification training. (3/29/00 FMK) At least one SME scheduled for cycle 3-with the possibility of 3 total. 5/9 FJK

# Indian Point Training

**Department Goal** Implement a benchmarking strategy to gather and implement industry best practices while developing our staff. (Academy Objective 1,3)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
13	IT	Vehec	All instructional staff and managers perform at least one benchmarking trip per year.	Each staff member schedules a benchmarking opportunity. All trips performed under SAO-135 benchmarking process.	All staff members complete a benchmarking trip	12/31/2000 In Progress	Both operations and technical training have been to Seabrook to benchmark programs and assist in an operations examination. Instructional staff attended MANTG conference. (JJN 7/5)

**Department Goal** Implement a facilities improvement plan to enhance the learning environment and improve our professional image. (Academy Objective 2)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
31	OT	Nichols	Develop a schedule to re-host the simulator to PC's.	Develop project proposal to include cost/benefit analysis.	Project proposal approved by the Training Manager.	09/01/2000 Complete	Simulator re-host included in computer applications 2001 Budget, project plan and schedule in development. (JN 8/31)
30	IT	Murphy	Develop a business plan incorporating a facilities improvement strategy.	Benchmark industry for good practices and tools. Develop cost/benefit analysis for facility improvement.	Plan approved by Training Manager	04/30/2000 Complete	Funding and proposal approved.
44	TM	Murphy	Evaluate and implement, as appropriate, sharing of Training facilities with IP3.	Evaluate operations and technical programs for possible combinations. Review training needs for building sharing.		12/31/2000 Complete	

**Department Goal** Implement a single system to manage the systematic approach to training process. (Academy Objective 5)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
2	IT	Vehec	Establish a link between qualification matrix and SAT management system	Establish a process (electronic or manual) that updates the qualification matrix when programs/classes are	On-site qualification matrix is easily accessible and up to date for line owners.	06/01/2000 Complete	Registration system has been installed and data input is in progress. (6/7 TV)
32	OT	Nichols	Clean up the action tracking section of SAT management system and organize into SAT based categories.	Print and review all action tracking system items. Archive closed items, assign open items to staff.	action tracking system re-designed and catalogued by owner.	09/01/2000 Complete	Taskmaster Action Tracking operational. All items reviewed by the Ops Training Manager and assigned. (JJN 7/5)

Tuesday, October 03, 2000

# Indian Point Training

19 RM Vogle Complete assigned actions of the Training Improvement Plan. All task matrices reviewed for accuracy and content, updated, data entered and maintained in SAT management system. All task matrices updated and data entry complete. 09/01/2000 Complete Task to training matrices are now available for all Technical Training disciplines. This item is complete.

**Department Goal** Instructors are recognized as subject matter experts by their peers and their customers. (Academy Objective 3)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
39	OT	Nichols	Each instructor performs 12 hours per quarter on watch.	Develop monitoring program. Revise procedure to institutionalize requirement.	Each instructor identifies and implements one program change based on in-plant time.	12/31/2000 In Progress	Instructor in-plant time continuing to be monitored. (3/29/00 FMK)
40	TT	Vogle	Each instructor performs 10 hours per quarter in your primary discipline at the station.	Develop monitoring program. Revise procedure to institutionalize requirement.	Each instructor identifies and implements one program change based on in-plant time.	12/31/2000 In Progress	In progress. Instructors identifying in-plant time on necessary data sheet from Training Program Description. Requirement identified during Staff Meeting. This will be developed as a new performance indicator. (RV 8/16)
14	OT	Nichols	Each instructor attends technical continuing training for the discipline he/she is qualified to instruct in.	Schedule all instructors for technical training. Perform technical training on development week between continuing training cycles.	All instructors pass annual examination.	12/31/2000 In Progress	Instructors continuing to attend requal training. (FJK 4/11)
21	TT	Vogle	Each instructor attends technical continuing training for the discipline he/she is qualified to instruct in.	Schedule all instructors for technical training.	Participate in a minimum of 80 hours of technical development training per year.	12/31/2000 In Progress	In progress. Instructors attending various classes and making benchmarking trips.

**Department Goal** Perform a systematic evaluation of training effectiveness utilizing self-assessment, peer review, line and student feedback and benchmarking. (Academy Objective 8)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
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# Indian Point Training

5 OT	Nichols	Review all weaknesses identified in the Technical Programs and develop CRC approved action plans to	Perform review of all operations programs against the technical programs problem matrix. Bin each problem under an academy objective. Write a CR and develop an action plan to address each item.	Review completed, living ASER updated and CR's/action plans developed.	12/03/1999 Complete	Review has been completed. CR has been written to document and has been included in ASER file.
50 RM	Vogle	Complete assigned actions of the Training Improvement Plan.	Complete Root Cause Analysis of Problems	Root cause approved by CARB	12/31/1999 Complete	Root Cause Analysis completed 1/14/2000. Scheduled for CARB review 1/24/2000. Second root cause (organizational review) completed and approved by CARB.
8 OT	Nichols	Have zero findings in 71-001 NRC Program Inspection	Perform self-evaluation to include 71-001 parameters.	Complete self-evaluation and address all findings prior to the 71-001 audit.	08/15/2000 Complete	Self evaluation completed and draft report issued (JJN 8/15/00)
52 OT	Nichols	Determine the effectiveness of operations programs corrective actions since last accreditation.	Perform Self Assessments of six Operator Programs	Living ASER approved by Training Manager	08/15/2000 Complete	Self-evaluation completed and draft report issued. (JJN 8/15)
53 TM	Vehec	Determine the effectiveness of technical programs corrective actions.	Focused self assessment to confirm effectiveness of Training Improvement Plan actions.	Self assessments completed and approved by VP-Operations.	09/30/2000 Complete	Independent self-assessment of the TIP completed. Corrective actions identified and in progress.
4 TT	Vogle	Complete assigned actions of the Training Improvement Plan.	Complete self assessments of technical programs with line assistance	Self Assessments completed	11/12/1999 Complete	
51 RM	Vogle	Complete assigned actions of the Training Improvement Plan.	Complete Development of Training Improvement Plan	Training Improvement Plan completed and approved by Training Manager	02/04/2000 Complete	Training Improvement Plan has been developed and approved
24 OT	Nichols	Develop and implement performance indicators that include the use of student feedback for program and content changes.	Benchmark industry. Develop and publish performance indicators. Indicate clear linkage between performance indicators and training	Program changes, course changes, new materials developed to improve performance.	01/31/2000 Complete	

# Indian Point Training

49 RM	Vogle	Complete assigned actions of the Training Improvement Plan.	Complete Cross Program Reviews	Program reviews completed and approved by Training Manager	12/02/1999	Complete	Cross Program Reviews have been completed.
10 IT	Vehec	Develop a department common, electronic feedback process	Develop an electronic feedback and analysis program.	An increase of feedback by 25%	09/01/2000	Complete	Development of new forms is complete. Instructor development database is in use. Performance Indicators have been changed to better track feedback. (9/27/00)
54 RM	Vogle	Complete assigned actions of the Training Improvement Plan.	Perform a comprehensive review of training records. Verify and Validate all training records. Reorganize and update as necessary.	Records review completed.	04/30/2000	Complete	An action plan has been developed for upgrade of existing records management system. It is incorporated into the Training Improvement Plan.
38 IT	Vehec	Develop a peer observation and feedback process for instructor skills between IP2, IP3, technical and operations	Revise procedure to give guidelines for peer feedback process. Develop and maintain tracking mechanism for input into instructor continuing	Peer and supervisory feedback aid in determining instructor continuing training content.	06/01/2000	Complete	Instructor incumbent review completed, feedback has been analyzed and continuing training topics have been identified (6/7)
16 IT	Vehec	Implement a self-assessment two-year plan that includes at least one full evaluation to academy objectives.	Develop self-assessment plan that includes support from line and peer utilities.	Plan approved by training manager.	06/01/2000	Complete	Included in TRAD-105
25 IT	Vehec	Develop and implement performance indicators that include the use of student feedback for program and content changes.	Benchmark industry. Develop and publish performance indicators. Indicate clear linkage between performance indicators and training	Program changes, course changes, new materials developed to improve performance.	05/10/2000	Complete	Draft list of required indicators developed from INPO good practices and new training procedures. Due date extended from 1/31 to 5/10/00 to correspond with the implementation schedule for new training procedures. (TV 4/27)

**Department Goal** Perform customer satisfaction surveys to gauge our performance. (Academy Objective 8)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
33	IT	Vehec	Develop a 06/00 customer satisfaction survey to gauge impact of training improvement plan	Benchmark other facilities; develop questionnaire. Develop action plan from results to address feedback.	60% of the line organizations respond to questionnaire. Action plan approved by Training Manager.	05/01/2000	Complete
							Survey delivered to all dept managers at 5/1 ETC. Results have been distributed to ETC.

## Indian Point Training

23	TT	Vogle	Use operating experience from INPO website, IP corrective action system, NRC website and other applicable sources in all training classes.	Provide guidance on use of OE in lesson materials. Provide training on use of INPO website.	OE used in lesson materials as noted by observations.	06/01/2000	Complete	Guidance for inclusion of OE included in TRADs
34	IT	Vehec	Develop a 12/00 customer satisfaction survey to gauge impact of training improvement plan	Benchmark other facilities; develop questionnaire. Develop action plan from results to address feedback.	60% of the line organizations respond to questionnaire. Action plan approved by Training Manager.	11/01/2000	Not Started	

**Department Goal** Revise and streamline our station training procedures using the systematic approach to training process as the backbone. Align station training procedures with there applicable Academy Documents (ACADs.) (Academy Objective 5)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status	
48	TM	Murphy	Establish a SAO-level procedure to incorporate the systematic approach to training into station procedures and processes.	Write SAO	SAO approved.	05/31/2000	Complete	SAO-502 revised and in review

**Department Goal** Support Plant training and qualification needs by providing quality initial and continuing training programs.

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
57	TT	Vogle	Provide initial training courses as scheduled for the: Chemistry, Radiation Protection, Maintenance, Instrument and Control, Engineering Support Personnel, and Maint/I&C Supervisors	Develop/revise and implement initial technical training programs as per the schedule.	Training Provided as needed and scheduled.	12/31/2000	In Progress
59	TT	Vogle	Develop examination questions for approved lesson plan objectives and populate a functional and approved exam bank.	Examination questions developed and entered into approved examination bank. Implement and populate an examination bank for all technical training programs.	Exam Bank populated and used by all technical training disciplines.	12/31/2000	Not Started Database software purchased. (9/27/00)

# Indian Point Training

58	TT	Vogle	Develop required continuing technical training materials identified for scheduled first cycle continuing training for FY2001.	Develop continuing training materials as identified by Curriculum Review Committees for FY2001 Technical Training programs for first cycle of 2001.	All materials developed, reviewed and approved.	12/31/2000	Not Started
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**Department Goal** Use operating experience (both internal and external) whenever possible. (Academy Objective 8)

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
22	OT	Nichols	Use operating experience from INPO website, IP corrective action system, NRC website and other applicable sources in all training classes.	Provide guidance on use of OE in lesson materials. Provide training on use of INPO website.	OE used in lesson materials as noted by observations.	04/01/2000 Complete	93% of the feedback forms received indicated that operating experience is being used in classes.
3	IT	Vehec	Train station personnel on how to access INPO OE website and perform data searches for just-in-time training and pre-job	Develop a program that meets the needs of the customer in improving his/her knowledge.	INPO utility "hits" number raises. Use of OE in pre-job briefs observed.	09/01/2000 Complete	Attended INPO presentation at the MANTG conference, obtaining training materila from INPO. INPO Website training scheduled for Instructor Continuing Training, Fall 00 (7/00 TV) Last of instructor training classes on INPO/Training Web sites conducted 8/16. (TV

# Indian Point Training

Indian Point Goal      Implement operations training programs to develop fully qualified employees capable of raising the level of organizational performance.

**Department Goal**      Support Plant training and qualification needs by providing quality initial and continuing training programs.

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
60	OT	Nichols	Revise Operations Training TPD to reflect current industry standards.	Review and revise all operations training program descriptions.	Operations Training Program Descriptions revised and approved.	12/31/2000	Not Started
61	OT	Nichols	Review and revise as necessary the job/task analysis for all operations training programs.	Review and revise, as necessary, the job/task analysis for all operations training programs.	JTA revised and approved by line and training management.	12/31/2000	Not Started
62	OT	Nichols	Scheduled NPO class started.	Conduct initial training class for nuclear plant operators. Class scheduled to begin in November 2000 and extend into 2001.	NPO class conducted as scheduled for the remainder of FY2000.	12/31/2000	Not Started



# Indian Point Training

Indian Point Goal      Develop and institute a program that enhances community relations.

**Department Goal**      Implement an Indian Point 2 outreach program that hosts local community groups with the goal of educating them in nuclear power and its benefits.

#	Section	Owner	Section Goal	Implementing	Measure	Due	Status
11	IT	Vehec	Facilitate at least three visits to IP-2 for local community groups	Develop standard program to be used for visits. Schedule visits and perform post-visit follow-up to improve program.	Three visits accomplished with positive feedback from visiting group.	12/31/2000	In Progress

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Develop leadership skills plant-wide; demonstrate SWS's are part of the management team given authority commensurate with their position.	Benjamin	Benchmark Industry For Leadership Expectations. Information being incorporated into the Supervisors Handbook		Complete
Operations Leadership	Clarify and communicate the role of the FIN team.	Benjamin	1. Performance indicators are being reviewed and will focus on scope control, which falls in line with emergent work and priority 2 work orders. These indicators will show how the schedule is changing and which work groups are affecting it from the T-2 week which is when the schedule is frozen up to and including T-0. Separate indicators will be used for the execution week and the changes made within the schedule including any emergent work. Due 06/30. 2. Daily adherence performance indicators were started June 1 and distributed daily with the Plant Status sheet.	FIN Duties defined in SAO-204, revision 19	Complete
Operations Leadership	Station priorities are set by operations.	Benjamin	Establish and communicate operations expectations for work group interfaces, i.e., work control processes etc. Expectations issued at Production Meeting. Work Control related interfaces included in recent revision to SAO-204		Complete
Operations Leadership	Develop leadership skills plant-wide; demonstrate SWS's are part of the management team given authority commensurate with their position.	Benjamin	Issue Supervisors Handbook. Draft reviewed at Shift Managers' meeting. Three SMs are reviewing and revising document for final release at next Shift Managers meeting.	Release of Handbook	Complete
Operations Leadership	Define SWS (Shift Manager) role and responsibility including; Owns daily schedule, Monitor personnel performance, Ops standards and expectations, Crew Training, field activities (MBWA), CCR presence and M-Rule.	Dean	Discipline on daily schedule/improve schedule ownership	Expectations communicated to SMs will be incorporated into the next revision of the Standards Document.	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Define SWS (Shift Manager) role and responsibility including; Owns daily schedule, Monitor personnel performance, Ops standards and expectations, Crew Training, field activities (MBWA), CCR presence and M-Rule.	Dean	1. SWS administers morning meeting <done> 2. Remove unnecessary tasks (keys, checks, phone#s) <done, some items carried to specific tasks> 3. Visits other plants <in progress, captured> 4. Define Shift Manager role <done> 5. Expand role of SFS <done> 6. Define supervisory expectations		Complete
Operations Leadership	1. Continue to ensure that watch turnovers and Start of Watch meetings continue to meet our Standards and needs through the Operations Observation program. 2. By use of benchmarking trips determine best practices for turnovers and watch meetings to improve our capability to do work.	Dean	1. This will continue to be monitored through the Operations Observation Program. 2. Benchmarking was covered under OP.1-3.		Complete
Operations Leadership	Instill trust and teamwork vertically in the organization.	Dean	Modify CCR phones to eliminate distractions; SWS phone auto forward (mail and ring) to clerk.	Establish SPOC to evaluate cost/benefit analysis	Complete
Operations Leadership	The CCR formality needs to be improved and self corrected. There were several instances where CCR formality did not meet our standards.	Dean	Reinforce to all personnel (including station management) the "golden hour" turnover rule.	<not developed>	Complete
Operations Leadership	Some of the LCO's were longer in duration than they needed to be due to scheduling errors or communication errors.	Dean	Develop a process to formally track compensatory action on a comprehensive list for shift turnovers and mode changes. Source: IPPE	<not developed>	Complete
Operations Leadership	Review and streamline the shutdown and startup sequences to minimize their impact on the duration of the outage.	Dean	Review and streamline the shutdown and startup sequences to minimize their impact on the duration of the outage. Table top review by Orzo and H. Primrose complete. Durr completed simulator validation week ending 3/25	<not developed>	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Listening to employees and keeping them informed.	Dean	<ol style="list-style-type: none"> <li>1. Empower crews to champion benchmarking initiatives. - All SM's to submit a list of committed actions with due dates - Performance to committed actions tracked and inputs into SM performance appraisal</li> <li>2. Develop a communication plan to keep operations group informed of station policies and activities.</li> </ol>		Complete
Operations Leadership	Individual performance monitoring and feedback.	Dean	<ol style="list-style-type: none"> <li>1. Ensure that SM's are aware that supervisory presence in the field is the primary defense against operating errors, by 7/99.</li> <li>2. Ensure watch management perform regular field observations and provide immediate feedback to operators, ongoing.</li> <li>3. Establish and communicate expectation that SM's discuss expectations regularly with their crews, by 7/99.</li> <li>4. Establish and communicate expectation that SM's are responsible for crew training performance, complete.</li> <li>5. Establish and communicate expectation defining supervisor file for individual performance monitoring, by 9/99.</li> </ol>		Complete
Operations Leadership	Clear standards consistently emphasized.	Dean	<ol style="list-style-type: none"> <li>1. Ensure that SM's consistently enforce all standards, in-plant as well as in training (simulator), by 8/99.</li> <li>2. Establish monthly staff meetings with Shift Managers by 6/99.</li> <li>3. Communicate standards and expectations discussed in Ferrick responses to the operators, and ensure they are integrated into daily work practices. Dates as noted in Ferrick response.</li> </ol>		Complete
Training & Qualification	Staffing and scheduling of personnel-short term goals	Durr	<p>Establish a stable, yearly schedule to allow vacation planning. 11/24/99 Complete 5 watch selection - NOT MET. 12/07/99 - complete personnel assignments. 12/15/99- issue schedule and vacationpick list. 01/10/99 vacations picked. 01/30/2000 - vacations approved</p>	<p>12/15/99 -publish schedule. 01/10/2000 - Vacations picked. 1/30/2000 - Approvals completed</p>	Complete
Operations Leadership	Instill trust and teamwork vertically in the organization.	Ferrick	<p>Captains call w/Site Execs; allow for watchstanders to attend VP meetings. &lt;Town hall meetings&gt;</p>	Town Hall meetings	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	1. Continue to encourage the questioning attitude and encourage other personnel to do the same. 2. Identify and document near misses with the Condition reporting System.	Ferrick	1. There are no specific plans to address this. 2. The watch crews have been given the expectation to document near misses with CRS. Post job briefs are being used to discuss if a near miss has occurred.		Complete
Operations Leadership	Continue to encourage the use of pre-job briefs utilizing the job lead as the leader of the brief.	Ferrick	There are no specific plans. Pre job briefs will continue to be monitored via supervisory oversight and Operations Observation Program.		Complete
Operations Leadership	Tools to do our job.	Ferrick	Evaluate either manning tool room 24/7 or providing operations access via card reader.	<not developed>	Complete
Operations Leadership	Reduce station work order backlog.	Ferrick	Identify FIN resources	FIN Staffed	Complete
Trainign & Qualification	Operations reactivity management, meets or exceeds the present standards. It was noted by one of the peers, that there plant had just been evaluated by INPO, and their Reactivity Management practices which are similar to ours was seen as not up to the present industry standard. Pursue from other utilities what there standard is and institute the required changes to bring IP2 up to or exceed the industry standard. Some of the industry leaders had provided their directives to IP3, which the assessment team obtained copies of.	Ferrick	Per Operations management review and INPO evaluation, there are no specific actions needed.		Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	<p>1. Many unscheduled operations activities could be scheduled. Schedule and resource load operations activities that use our resources, for example; involved evolutions, bulk deliveries, and PMT's.</p> <p>2. Resource load all activities that need operators to support, such as Travelling Screen PM's performed by House Maintenance.</p> <p>3. Develop and implement a written succession plan to include training and qualification for operations personnel. Include rotational assignments and benchmarking trips.</p> <p>4. Schedule meetings so that prepared representation from operations can be arranged.</p> <p>5. Benchmark and identify required staffing needs for a 5 watch self relieving watch rotation for a single unit station. Develop and implement a staffing plan to achieve this.</p> <p>6. Develop and plan and schedule for 1999 for operations, to include; benchmarking trips, peer visits, self assessments, INPO audits, NRC exams and audits, etc</p>	Ferrick	<p>1. Operations activities are presently being scheduled. This includes tagouts, lubrications, and Ops PM's. PMT's are being evaluated to be included in scheduled activities.</p> <p>2. Included in 1.</p> <p>3. Operations has written a staffing plan to address these items.</p> <p>4. There are no plans to address this item.</p> <p>5. Operations has written a staffing plan to address these items.</p> <p>6. The Operations web page has a yearly schedule for the station which includes these items.</p>		Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	<p>1. Operations Management should schedule on a yearly basis the required quarterly assessments and ensure that the full Self-Assessment is scheduled every three years. Along with scheduling the assessments, a team should be scheduled and have the adequate time needed (as determined by the OM) to prepare and train for the assessment. Include the facilities needed to meet these goals, such as computers, procedures, and supplies.</p> <p>2. Benchmark industry leaders in the Self Assessment process to put together an industry leading Self Assessment program.</p>	Ferrick	The second quarter assessment was an external audit performed by Martin/Sigmon Consulting Services Inc. The third quarter assessment will be performed in Generation Support and fourth quarter will be done in Operations Planning. Assessment teams and specific dates will be determined later. Quality Assurance has rewritten SAO-140 Self Assessments, to establish a station wide standard for the performance of Self Assessments.	Determine team members, assign team lead.	Complete
Operations Leadership	Reduce station work order backlog.	Ferrick	Finalize maint procedure for Tool Pouch and Minor Maint. Track backlog (progress/effectiveness)		Complete
Operations Leadership	Instill trust and teamwork vertically in the organization.	Ferrick	<p>1. Make trng meeting w/Ops Mgr more interactive &lt;done&gt;</p> <p>2. OM/AOM attend day/night SOWM on some routine &lt;done&gt;</p> <p>3. Turnover pay for RO's &lt;done&gt;</p> <p>4. Develop station communications std &lt;done&gt;</p> <p>5. Communicate work control info daily &lt;done&gt;</p> <p>6. Internet access for all personnel &lt;done&gt;</p> <p>7. Pager forwarding from station phones &lt;pager database&gt;</p> <p>8. Fax machine/copier in field offices &lt;done&gt;</p> <p>9. Dedicated numbers in CCR &lt;done&gt;</p> <p>10. Move drills to simulator &lt;done&gt;</p> <p>11. Computer access</p>	<not developed>	Complete
Training & Qualification	Develop leadership skills plant-wide; demonstrate SWS's are part of the management team given authority commensurate with their position.	Ferrick	Establish Leadership Expectations : Prepare individual SM development plans.	Individual Shift Manager development plan complete	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Communications Equipment (upgrade) and Communications Process (improvement).	Ferrick	AOM/WWM confer with SWS prior to SOWM to review resources and equipment status (0630 meeting) 4. Dept web page 5. Problem solving meetings	<not developed>	Complete
Operations Leadership	Improve communications within operations.	Ferrick	Periodically have upper management attend Start of Watch meetings to reinforce standards respond to concerns.	<not developed>	Complete
Training & Qualification	Clear, written plans for qualification.	Ferrick	A staffing plan has been developed and is under review. It outlines the personnel plan for the next 2-3 years. This plan includes: - NPO staffing and qualification, - License class planning for 1999-2000, - Transition to CRS, and - Transition to five shift rotation. Once this is approved, a five-year plan will be developed.	2-3 year Project Staffing plan issued	Complete
Operations Leadership	Focus and follow-up.	Ferrick	1. Complete Assisted Self-Assessment Plan and communicate to operations staff and watch sections. 2. Compile, analyze and prioritize actions/commitments into a set of goals for 1999 and beyond. These actions will incorporate self-assessments, IPPE, Bear Mountain, etc.	The Operations Department Improvement Plan and Business Plan have been generated. These plans prioritize the actions for the department fro 2000, and are linked to the budget where appropriate. These plans, and other department's plans, have been communicated to station personnel through a series of meetings. In addition, these plans have been made available on the Indian Point web page.	Complete
Operations Leadership	Provide highly visible signs or status boards to heighten sensitivity to shutdown risk.	Ferrick	Completed per IPPE	<not developed>	Complete
Training & Qualification	Visible, effective ownership of training.	Ferrick	Revise guidance for Operations training requirements to demonstrate involvement by 7/99.	Complete and communicate OAD-31	Complete



# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Some of the LCO's were longer in duration than they needed to be due to scheduling errors or communication errors.	Ferrick	Reinforce with all station personnel the need to; properly schedule, work, and test all safeguards and Technical Specifications required equipment in a timely manner to prevent excessive out of service time. Institutionalize the LCO check-off form.	<not developed>	Complete
Operations Leadership	Improve the time effectiveness of the Start of Watch Meeting	Ferrick	Start of Watch Meeting to commence at 07:30		Complete
Operations Leadership	Individual performance monitoring and feedback.	Ferrick	Perform an administrative burden assessment of the Shift Manager and Control Room Supervisor positions. Work is in progress on this assessment and should be completed by new due date of 8/31/2000. Assessment completed with the following results - The Labeling SAO was revised and issued to eliminate the SM approval of labeling requests. We have requested T&P to remove the SM approval for scheduled surveillance tests and allow the CRS to authorize scheduled tests (CTS 00-247 to TP-SQ-11.015). Proposed to allow the CRS to sign as reviewer for DCRs that do not contain Tech Spec readings. The CRS is already reviewing and the SM adds no safety value by signing (CTS 00-510 to .OAD 3 and GSAD 9). A rev to SAO-206 has been drafted that will remove the SM and WE from the TFC approval process and change their roles in the implementation of TFC installation to be similar to approving any other work activity in the station. Rev to SAO-219 which allows other positions to perform PJBs has been issued. Rev to SAO-105 which reduced the number of area work permits was issued. Auto tour implementation for NPOs has reduced admin burden on OPS Staff and increased accuracy. Drafted changes to OPS DSRs that will eliminate PT-D1 and PT-D5 (implement when get PDAs for Autotour updated so that we minimize differences and chance for confusion. Transfer responsibility for HR scheduling away from SM (under review by OPS Management and HR). New tasks will be added to the business plan to evaluate and track completion as applicable.		Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Individual performance monitoring and feedback.	Ferrick	Transfer responsibility for HR scheduling away from SM (under review by OPS Management and HR) This is not practical until watch sections are staffed such that they can self relieve. No additional actions taken in 2000 on this issue.		Closed
Operations Leadership	Ownership of Plant conditions.	Ferrick	The IPPE established baseline expectations for station housekeeping and ownership. These items will be reviewed and operations expectations developed for both operations and station groups regarding housekeeping and plant material condition by 9/99.		Complete
Operations Leadership	Upgrade guidance on operator logkeeping to address recommendations of CR advisors.	Ferrick	Review and Revise OAD-3	<not developed>	Complete
Operations Leadership	1. Ensure all operators are cognizant of the requirements to hold post-job briefs and the format required to be used and the documentation of lessons learned. 2. Revise the pre-job brief criteria to identify when a post-job brief is required to be performed. 3. Have a post-job brief card made and distributed, as we have for pre-job briefs. The peer from Catawba Nuclear Station left the assessment team a card that they wear on their badges that has pre-job brief topics on one side and post-job brief topics on the other side.	Gorman	1. SAO-235 Communications, has been issued. This gives the criteria for post having a post job brief. Operators have been trained on SAO-235. 2. Covered in SAO-235. 3. A Post Job brief card will be developed and distributed.	Develop post-job brief aid from SAO-235. Have cards printed and distributed. Post-Job briefs trended through Ops Observation program	Complete
Procedures	Procedure Ownership.	Gorman	Procedures are presently being assigned to the watch. There are no EOPs, OADs, GSADs, SAOs, Graphs included. Also some DCRs/DSRs are included but not all. I assigned strictly by volume but stayed with procedure grouping numbers. The B Crew is at 100 which is higher then the others (@80), but B got Water Factory stuff which drops out in September and the numbers should be pretty even.	All procedures assigned to a watch section. Process for procedural review and expectations communicated.	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Procedures	V&V Process.	Gorman	Institute a more formal method of reviewing procedure changes. GSAD-16, Rev. 0, Procedure Validation and Verification was issued effective 12/30/98 and have been used for new procedures and major revisions. procedures.		Complete
Procedures	Change process.	Gorman	During the week ending May 15, 1999 changes were made to SAO-100, Indian Point Station Procedure Policy and OAD-27 Temporary Procedure Change, which allow for Limited Scope Revisions to operating procedures to be performed by the Watch without using the TPC process and waiting for Generation Support to revise procedures. A safety evaluation screening process was added to ensure compliance with UFSAR and Licensing Basis Documents. Additional changes to the TPC process was the ability to track temporary TPCs to the corrective action and not rewrite TPCs if a procedure is revised. Status: complete.		Complete
Procedures	Reduce Procedural Complexity.	Gorman	We have gone to a verbatim compliance standard, which has required that more procedures are written and more steps are added to procedures. We have revised GSAD-9, Writer's Guide, to reduce the visual complexity of procedures. We have also been breaking procedures into two parts either by Unit, e.g. the Waste Disposal System SOPs have been divided between Unit and Unit 2 or by outage mode, e.g. the Service Water SOP has been broken into two parts, one for normal operations above 3450 degrees and one for operation below 350 degrees. We have The V&V process will provide specific , structured feedback as to which procedures will be revised due to complexity. Cannot establish a date as no resources have been identified.	Develop plan to perform V&V that includes funding, timetable and milestones.	Complete
Procedures	Procedure Backlog	Gorman	Develop a plan to workdown the CTS backlog	<not developed>	Open
Procedures	Systematically review, and revise as needed, all Operations Administrative Directives (OAD) to incorporate new standards and expectations, and improve technical content.	Gorman	Systematically review, and revise as needed, all Operations Administrative Directives (OAD) to incorporate new standards and expectations, and improve technical content.	<not developed>	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Individual performance monitoring and feedback.	Gorman	A rev to SAO-206 has been drafted that will remove the SM and WE from the TFC approval process and change their roles in the implementation of TFC installation to be similar to approving any other work activity in the station.		Open
Configuration Control	Develop a plan to systematically identify component labeling deficiencies.	Gorman	Develop a focus group (SPOC) to ensure correct labeling and process to easil correct both label and plant database.	Program developed & funding approved	Complete
Procedures	Compliance expectations.	Gorman	SAO-133, Procedure Use and Technical Specification Adherence and Use, was revised during the week ending 5/15/99 with compliance standards for procedures which are to classified as Reference Use, Information Use and Continuous Use. SAO-133 consolidated the procedure adherence standards that were in SAO-100 and SAO-133 and put them in one place. Schedule to incorporate the procedure classifications into current procedure set is due by 11/99.		Complete
Procedures	Increase the use of two-column format in Abnormal Operating Instructions (AOIs), as appropriate.	Gorman	Increase the use of two-column format in Abnormal Operating Instructions (AOIs), as appropriate.	20 AOI's to be revised to 2-column format.	Open
Operations Leadership	Individual performance monitoring and feedback.	Gorman	Drafted changes to OPS DSRs that will eliminate PT-D1.		Open
Configuration Control	Improve the process for Operations procedure control to eliminate presence in the control room of wrong revisions, out of date procedures, late distribution, etc.	Gorman	Improve the process for Operations procedure control to eliminate presence in the control room of wrong revisions, out of date procedures, late distribution, etc.	<not developed>	Complete
Procedures	Develop a process for Verification & Validation of Operations and Surveillance procedures. Include requirement for field walk downs by qualified user.	Gorman	Develop procedure and process. Schedule (including resource allocation) to complete V&V	Develop a schedule with funding, a timetable and milestones.	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Procedures	Conduct an INPO Assist Visit on Operating Procedures and develop plans to implement appropriate actions.	Gorman	Conduct an INPO Assist Visit on Operating Procedures and develop plans to implement appropriate actions.	<not developed>	Complete
Operations Leadership	Individual performance monitoring and feedback.	Gorman	Proposed to allow the CRS to sign as reviewer for DCRs that do not contain Tech Spec readings. The CRS is already reviewing and the SM adds no safety value by signing (CTS 00-510 to OAD 3 and GSAD 9).		Open
Configuration Control	Configuration control improvement. Source: Bear Mountain; IPPE	Jawor	Computerize caution tag system. Should implement week of 12/13. On target.	Program Developed. V&V - 12/15/1999. Load historical data - 12/31/1999	Complete
Operations Leadership	The CCR formality needs to be improved and self corrected. There are several instances where CCR formality did not meet our standards.	Jawor	Change access route for spare operators to enter the kitchen and locker room area of the CCR without having to go through the operating area. Operators have access to the locker room and kitchen through the Unit 1 flight panel, which reduces traffic through the operating area of the control room. (11/99)	Access route revised	Complete
Operations Leadership	Develop a department assessment plan.	Mohre	Benchmark industry leaders in the Self Assessment process to put together an industry leading Self Assessment program and schedule. Evaluate current program against industry leading programs such as San Onofre. Refine our program based on benchmarking and shift feedback. Benchmarking information gathered from recent NEI benchmarking initiative. Participated in GPU sponsored SA conference. Reviewed INPO 97-010 information, finding captured in CR 199901772.	Develop an OAD for Operations Assessment. OAD-43, rev 0. issued 08/31/99	Complete
Operations Leadership	Improve communications within operations.	Mohre	When initiatives such as those made at the Bear Mountain conferences, or other corrective actions are made, such as Self Assessments, determine if they conform to and fit within the Station or department goals, then initiate and track the actions. Communicate these to Operations personnel.	Strategic Plan published	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Configuration Control	Some of the LCO's were longer in duration than they needed to be due to scheduling errors or communication errors.	Mohre	Perform industry benchmarking (including IP-3) for computerized LCO and equipment out of service tracking methods. IP3 has provided copies of their present LCO management software, presently with Gorman. IP3 has also provided a copy of their Operations integrated software package (LCO, narrative & equipment logs, protective tagging)	Develop cost-benefit analysis for participation in IP-3's initiative.	Complete
Operations Leadership	1. Continue to communicate the need for self identification and correction of deficiencies in our own performance. Encourage others such as station managers, HM, I&C, Engineering, to observe operations. 2. Work to understand and use performance indicators to continue improving performance.	Mohre	The Operations Observation program includes having other department personnel perform observations on a regular basis as well as operations personnel. Performance indicators are developed and trended using the information collected via the observations. This program is under review for full re-implement and improvement.	Schedule released for management observations of Operational Activities on 3/1/00.	Complete
Operations Leadership	Self-assessments (frequent with feedback and specific actions)	Mohre	1. Schedule Operations Self-Assessments for 1999 and 2000 with resources and functional areas. 2. Ensure recommendations are incorporated into IP2 CAP.	First qtr. assessment of Ops Planning deferred due to outage.	Complete
Operations Leadership	Improve communications within operations.	Mohre	When long duration initiatives are not completed, canceled, or changed, communicate the reasons to all operations personnel so they can understand the reason for those changes.	Develop communication process to watch (such as web page)	Complete
Configuration Control	Systematically review all caution tags with the objective to move instructions to operator aids and/or procedures.	Mohre	Develop revised expectations/procedural guidance for use of caution tags.	<not developed>	Complete
Operations Leadership	Improve communications within operations.	Mohre	Evaluate good practices brought back from benchmarking trips, and implement the ones that are feasible. If not implemented, communicate the reasons to the initiators. SAO-135, NPPS #022, issued 10/26/99 provides station wide guidance for performing benchmarking. No action required	Include benchmarking process in assessment OAD.	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Training & Qualification	Quality and number of instructors.	Nichols	Operation continues to participate in the interviewing of new instructor candidates and candidates for the Ops Training Manager position. The staffing plan addresses freeing up rotational assignments but they are not identified by name. Career planning for those individuals that have expressed interest in the instructor position will be developed once the staffing plan is complete. Mike Cosentino has completed Instrucotr qualifications and is assisting the 2000 ILO Systems instructors	Develop rotation plan	Complete
Training & Qualification	Well staffed SRO class ASAP.	Nichols	Posting sheets for internal have been completed. Internal posting and external recruitment for this class are in hold pending approval of the staffing plan (note that HR is already looking for candidates, we have hired one). Approval of staffing plan and budget (early hires) still needs to be addressed. Class started the first week in January (GFES). Systems instruction began on 4/10, with the final SRO candidate on site and attending class.	Class started	Complete
Operations Leadership	Effectiveness of training assessments.	Nichols	OAD-31 revision will address real-time observation, inspection and expectations for training that will be tracked and trended under the operations observation program. Annual training assessments have also been defined in OAD-31.	Complete OAD-31	Complete
Training & Qualification	NPO qualification process and progress.	Nichols	Short term qualification issues in this area are addressed under the staffing plan to by in place by 9/99. Process monitoring concerns have been addressed in the OAD-31 revision. This includes ownership of the qualification process and required monitoring and completion dates.	Complete OAD-31	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Training & Qualification	Line ownership of training.	Nichols	<p>OAD-31 will be revised from Operations OJT to Operations Training Program. This revision has been drafted and includes:</p> <ul style="list-style-type: none"> <li>- Expectation for observation of training,</li> <li>- Requirement for all new position candidates (new NPO's and position upgrades) be assigned a watch prior to start of training,</li> <li>- Watch section responsibilities for new candidate mentoring, monitoring,</li> <li>- Definition of line-ownership of training include clear expectations for watch sections and management,</li> <li>- Operations expectations for the performance of training (on-time, use of controlled materials, etc),</li> <li>- Watch section ownership of training tools (simulator, labs, etc) and associated expectations</li> </ul> <p>This revision is due complete by 7/99.</p>	OAD-31 completed	Complete
Operations Leadership	Refine our Operations Self-Assessment Program.	Nichols	Encourage others such as station managers, HM, I&C, Engineering, to observe operations.	<not developed>	Complete
Operations Leadership	Instill trust and teamwork vertically in the organization.	Nichols	Benchmark other plants	Benchmark trips scheduled	Complete
Operations Leadership	Develop expectations for and schedule peer trips for each watch crew.	Nichols	Schedule all watch crews for benchmarking trips in 1999.	All crews scheduled	Complete



# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	<p>1. Develop Operations Department mission, vision, core values, and goals. These should be readily available to all watch personnel, as well as the status of our performance against them.</p> <p>2. Ensure that when a policy statement, or reinforcement of a standard, is made by upper management, all personnel receive the same message. Use of the Night Order Book should not be used to communicate policy changes.</p> <p>3. When long duration initiatives are not completed, canceled, or changed, communicate the reasons to all operations personnel so they can understand the reason for those changes.</p> <p>4. When initiatives such as those made at the Bear Mountain conferences, or other corrective actions are made, such as Self Assessments, determine if they conform to and fit within the Station or department goals, then initiate and track the actions. Communicate these to Operations personnel.</p> <p>5. Evaluate good practices brought back from benchmarking trips, and implement the ones that are feasible. If not implemented, communicate the reasons to the initiators.</p> <p>6. Periodically evaluate and communicate the status of ongoing or scheduled initiatives.</p> <p>7. Periodically have upper management attend Start of Watch meetings to reinforce standards respond to concerns.</p>	Nichols	<p>1. This has been completed and is posted on the Operations department web site.</p> <p>2. The NOB use has been limited and will not be used to communicate policy. Formal policy changes will be made via; Shift Manager meetings, training, discussions with watch crews by Shift Manager or OM/AOM, or required reading.</p> <p>3 &amp; 4. The Operations Manager is compiling actions from all sources; IPPE, Bear Mountain conference, and Self Assessments. This will be prioritized, planned, and scheduled. The actions, owners, and due dates will be posted on the Operations web site.</p> <p>5. Bench marking trips have been completed by five of six watch crews. The crews have been empowered to champion at least one initiative from their trips. An administrative directive will be written to establish a policy for benchmarking.</p> <p>6. Included in 3 &amp; 4.</p> <p>7. The OM/AOM will be attending more Start of Watch meetings to be able to respond to operator concerns.</p>	Complete OAD on self-assessment, include benchmarking guidance.	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Improve communications within operations.	Nichols	Develop Operations Department mission, vision, core values, and goals. These should be readily available to all watch personnel, as well as the status of our performance against them.		Complete
Training & Qualification	Staffing and scheduling of personnel-long term goals	Nichols	Develop staffing plan for 5 watch self-relieving crews, Staff work control to reduce watch burden, NPO qualified WTP and 3 Rover/watch by year end.	Staffing Plan	Complete
Operations Leadership	Communications Equipment (upgrade) and Communications Process (improvement).	Nichols	Operations Dept web page	<not developed>	Complete
Operations Leadership	Operations Resources area for improvement.	Nichols	Develop and plan and schedule for 1999 for operations, to include; benchmarking trips, peer visits, self assessments, INPO audits, NRC exams and audits, etc.	<not developed>	Complete
Operations Leadership	Some of the LCO's were longer in duration than they needed to be due to scheduling errors or communication errors.	Primrose	Revise the weekly schedule to a user-friendly format. Provide schedule for shift review at T-3.	Shift Manager acceptance of new schedule format.	Complete
Operations Leadership	The CCR formality needs to be improved and self corrected. There were several instances where CCR formality did not meet our standards.	Primrose	Clarify/define the CCR activity indicators (H/M/L) and implement consistently.	<not developed>	Complete
Operations Leadership	Reduce station work order backlog.	Primrose	No adds after T-4 Freeze mtg unless they meet the criteria for emergent work.	SAO-204 revision	Complete
Operations Leadership	Some of the LCO's were longer in duration than they needed to be due to scheduling errors or communication errors.	Primrose	Identify all LCO's associated with surveillance tests to prevent entering different LCO's for same equipment.	Associate LCO's in database with surv's	Complete
Configuration Control	Reduce station CCRDI's and Operator Work Arouds.	Primrose	Ensure these Work Orders are added on the work schedule. New revision to SAO-204 to re-prioritize these activities	SAO-204, revision 19 issued	complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Reduce station work order backlog.	Primrose	Expand ops planning to include Ops test reviews & planning. To be completed by the end of the first full quarter surveillance schedule after unit returned to service from the RFO.	<not developed>	Complete
Operations Leadership	LCO Manager role clearly defined.	Primrose	<p>A Work Management Directive has been established by the Production Group:</p> <ul style="list-style-type: none"> <li>- Define voluntary LCO's</li> <li>- Preparations and requirements to enter the LCO are defined</li> <li>- Execution of voluntary LCO's will be managed by the Work Week Manager</li> </ul> <p>The above directive is an interim measure to continue voluntary LCO's, Mark Ederer has been given the task to prepare a report and corrective actions associated with the repeat SL-2 regarding LCO management problems.</p>	LCO manager defined in the revision 19, of SAO-204.	Complete
Operations Leadership	Provide meaningful work group interface with Operations. Source: Martin/Sigmon Assisted Self-Assessment	Primrose	Start of the Watch meetings are now started at 0730 and end at 0750, this has allowed the work groups to begin work earlier than in the past by at least 40 minutes. Status: complete		Complete

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PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Provide a predictable and stable schedule.	Primrose	<p>1. A meeting was held with the Production Group, Ops Planning, WWM, and Unit Coordinators to provide expectations and support regarding emergent work and priority 2 work orders. Priority 2 work orders along with SAO-204 are being reviewed to determine whether a change to the SAO or reclassification of some work orders is needed.</p> <p>2. Priority 2 work orders will be placed on the schedule within 3 weeks of its inception and it will be incumbent upon the work group to plan and execute on schedule. Complete review of priority 2 work orders and procedure update to be done by June 30.</p> <p>3. Attached to the Plan of the Day are the lists of activities that require briefings. This list includes the activity, the time of the brief and the work group. The work groups and the SWS review these briefings at the 0630 meeting. Status: complete.</p> <p>4. The duration of Operations PM's were recorded and have been entered into the database which creates the Operations schedule. Resource loading of Operations activities is in progress. High workload days are reviewed on the scheduled and extra people are scheduled accordingly.</p> <p>5. The SWS now is receiving a copy of the Station schedule for the next 3 weeks so that they have a chance to review for their upcoming shifts. The Station schedule had required 16 signatures prior to be issuing, now it only requires 3 signatures, Ops manager, Work Control Manager and the Work Week Manager. A copy is given to the watch once it is signed for Shift review. Status: complete</p> <p>6. The work order backlog is currently being grouped differently than our normal way of doing business, this grouping consists of three major categories. There are approx. 2200 work orders that are being reviewed.</p> <ul style="list-style-type: none"> <li>- Tagouts required for scheduled surveillance's will be given a schedule due date according to the week the surveillance is to be done. Complete by the end of May 31.</li> <li>- This group will include both minor tagouts and any work that would require an Area permit which can be done no matter what week of the 12 week schedule it is placed in. This grouping will by far have the highest number of work orders in it and will allow maintenance to be able to fill their schedules.</li> <li>- Any work that can be or is required to be done at one</li> </ul>		Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
			time will be grouped together and will be scheduled depending on the time of year that it is required. Examples of these grouping are Winterization, Heating Steam, River Water, and Fire Protection.		
Operations Leadership	Standards and expectations include other departments.	Schoen	Revise operations standards (in standards handbook and where applicable in OADs) to include expectations for performance from interfacing departments. Standards and Expectations revised and under review. 2/12/00 release 1. Revise Operations Standards Handbook by 01/00 2. Develop area-specific standards (Work Control, Training, and Operations Supervisory) by 9/99. Catawba contacted for benchmarking information.	Revise Ops Std Handbook. Complete OAD-31 for Ops Trng. Complete Supv. Handbook.	Complete
Operations Leadership	The CCR formality needs to be improved and self-corrected. There were several instances where CCR formality did not meet our standards.	Schoen	Review existing Operations Standards against industry standards. Revise as appropriate. Catawba contacted regarding Control room formality, reactivity management and interfacing with other departments. Control room formality standards do not need improvement, based on benchmarking efforts. Enforcement of present standards is required	Revision of Operations Control Room formality standards is not required	Complete
Operations Leadership	Reactivity Management. Operations reactivity management, meets or exceeds the present standards. It was noted by one of the peers, that there plant had just been evaluated by INPO, and their Reactivity Management practices which are similar to ours was seen as not up to the present industry standard.	Schoen	Pursue from other utilities what there standard is and institute the required changes to bring IP2 up to or exceed the industry standard. Some of the industry leaders had provided their directives to IP3, which the assessment team obtained copies of. Oad and Standards reviewed by O'Donnell, comments forwarded to GS.	Revise Reactivity Management Procedure OR define basis for no revision	Complete
Operations Leadership	Improve post job brief process to capture lessons-learned for future pre-job briefs.	Smith	Identify a utility with an in-place process that is willing to share the process. Develop a method and expectation to capture data learned.	<not developed>	Complete

# 2000 Operations Business Plan Summary

PS Strategic Goal	Operations Goal	Owner	Implementing Action	Measure	Status
Operations Leadership	Establish expectations and methods to delegate tasks to the lowest effective level (job responsibility to the job practitioner). Review against benchamrking results.	Smith	Review Role of Control Room Personnel to ensure CRS increases supervising oversight. 4/11 Shift Manager meeting discussed continued re-enforcemetn and coaching to have the CRSs consistantly delegate more responsibilities to the reactor operators. A new task was created to perform an administrative burden assessment of the SM and CRS positions, due 7/31/00	CRS position established. Key behaviors for delegation expectations defined	Complete
Operations Leadership	Individual performance monitoring and feedback.	T&P/ Gor	We have requested T&P to remove the SM approval for scheduled surveillance tests and allow the CRS to authorize scheduled tests (CTS 00-247 to TP-SQ-11.015).		Open
Configuration Control	Communications Equipment (upgrade) and Communications Process (improvement).	Townsen	Computerize all watchstations including standard software (computer-based log taking to be evaluated). Watch stations are computerized. Electronic equipment log taking implementaion in progress, through SAIC. Classroom training has been completed. Parallel logs to be performed for one month. Currently Beta Testing the system to ensure that all NPOs have the opportunity to use the system prior to full implementation. Full implementation expected by end of August. Implementation of computerized logkeeping for field operators completed 8/31/00.	Complete evaluation of computerized logs.	Complete
Operations Leadership	Communications Equipment (upgrade) and Communications Process (improvement).	Townsen	Cellular system for plant operations (Modification in process, FPX-99-12704-F). 12/01/99 - project review, safety evaluation & SNSC approval. 01/01/00 - Phase 1 testing. 02/1/00 - 10 cell installation. 3/11/00 - system programming. 3/11/00 - plant testing. 04/01/00- turnover to plant. Installation on hold due to personnel unavailability. Construction and Corporate personnel will complete installation in the fall. Equipment acquisition and engineering work continue. The phone system is currently being installed.	Cellular phone system in service	Open

## **SITE ENGINEERING IMPROVEMENT PLAN UPDATE - 9/28/00**

The following are the updates for the four Site Engineering Improvement Plans:

- System Engineering
- Fire Protection
- Environmental Qualification
- Modification Optimization.

### **SYSTEM ENGINEERING IMPROVEMENT PLAN**

- The upgrade of System Notebooks (Item 4.2) is almost complete. The remaining three notebooks (HVAC Diesel Generator Building & Containment Cooling, IVSW, and Weld Channel) will be complete by 9/30.
- Copies of several notebooks are included for your review. They are:
  - 440V
  - Post Accident Containment Air Sampling
  - CVCS
  - Reactor Protection
  - Main Turbine/Lube Oil
  - AOV Program
  - Station Diesel Generators
  - Reactor Coolant System
  - Sodium Hypochlorite

### **FIRE PROTECTION IMPROVEMENT PLAN**

#### **Phase 2 Update**

Sciencetech has been awarded the contract to complete the Phase 2 portion of the Fire Protection Improvement Plan. As a result of the kickoff meeting which was held on May 10<sup>th</sup>, Sciencetech revised the project schedule to first concentrate on the tasks (Tasks 1, 2, 4 & 7) associated with the triennial NRC audit, which is scheduled for January 2001. The entire project is scheduled for completion by 12/22/00

#### **1. Overall Project Completion Status**

As of 9/25/00, the project duration is approximately 58% complete and project work is approximately 58% complete (basis: MS Project *Project Summary Report* calculation).

#### **2. Accomplishments during biweekly reporting period**

Individual task progress is shown per the attached task summary status report.

### 3. Task schedule

#### Task 1 - Upgrade Safe-Shutdown Analysis Documentation/Database

The initial deliverable of Task 1A (Develop Safe-Shutdown Component Index) was received on 9/12/00. Task 1B (Rebaseline Safe-Shutdown Cable List) is 40% complete, a change of 15% from the last update. Task 1C (Safe Shutdown Raceway/Routing List) is 60% complete, a change of 20% from the last update.

#### Task 2 - Revalidation of Safe-Shutdown Procedure AOI 27.1.9

Overall, the task is 33% complete. There has been no progress on this task since the previous update. This will not impact the completion date.

#### Task 3 – Upgrade Surveillance Program

The initial deliverables of Task 3A (Develop revision to PI-V17) are 65% complete and Task 3C (Verify Surveillance Tests Established for all FP/ASSS Equipment) is 95% complete. There has been no progress on these tasks since the previous update. This will not impact the completion date.

The initial deliverable of Task 3B (Compile and update associated circuits basis) is 50% complete, a change of 15% from the last update.

Overall, Task 3 is 66% complete.

#### Task 4 - Hydraulic Calculations

This task is 99% complete.

#### Task 5 - Codes of Record

The major initial deliverable of Task 5 is 80% complete. Overall, the task is 21% complete. There has been no progress on this task since the previous update. This will not impact the completion date.

#### Task 6 - FP Classification Effort

The initial combined deliverable of Task 6A (Complete Development of Enhanced FP List) is 98% complete, an increase of 3% since the last update. Task 6B (Identify tagging information for equipment w/o tags) is 98% complete, an increase of 8% since the last update. Overall, Task 6 is 78% complete, an increase of 5% since the last update.



#### Task 8 - OP-290-1 Procedural Issues

The initial deliverable of Task 8 is 65% complete, an increase of 40% since the last update. Overall, the task is 35% complete, an increase of 21% since the last update.

#### 4. Items pending Con Edison resolution/input

None

### ENVIRONMENTAL QUALIFICATION IMPROVEMENT PLAN

This joint project with IP3, to implement the EPRI EQ Management System, is underway. Weekly status meetings are being conducted with the IP3 EQMS project team.

For Phase 2, Iepson Consulting Enterprises (ICE) was selected to prepare 25 Plant Qualification Evaluations. A Project Kickoff meeting held September 6. A project schedule, which was prepared by ICE, was discussed and finalized at this meeting. ICE also collected the necessary design inputs to complete the project.

Latest update:

Con Ed received two Plant Qualification Evaluations and two Generic Qualification Evaluations from Iepson Consulting for review and comments. Con Edison is reviewing these documents.

ICE incorporated Con Edison's comments on two previously submitted GQEs. These GQEs are accepted as final, to be used for IP2 applications as part of the EQ Program Improvement Plan.

### MODIFICATION OPTIMIZATION

Modification process improvement 'Implementation Phase':

**Recent Progress:** The following is an update of aspects of the process improvement effort that are presently underway in accordance with the Modification Process Optimization Implementation Phase schedule:

#### **(a) Tracking of Engineering Issues through the station CR system**

- The Development of the 'Preliminary' CR Master Flow chart has been completed.
- Bruce Mackenzie of the Corrective Action Group has provided us with a draft of SL3 *Action Codes* for us to consider for use.

- WE are still pursuing establishment of support schedules from both the CAG and Computer Applications organizations.
- (a) **Engineering Review Checklist Development**
- The development of the Draft Engineering Review Checklist (ERC) for items that are within the bounds of Controlled Plant Equipment has been completed.
  - Work continues on the detailed Desktop Guideline associated with the Engineering Review Checklist (ERC).
- (a) **Engineering Action Request (EAR) Process Improvements**
- Collection of Industry Guidance and Benchmarking on this issue has been completed.
  - A revised method of EAR Prioritization is presently being developed. A meeting with the station Probabilistic Safety Assessment (PSA) expert was held to discuss this issue. Input is presently being incorporated.
  - A meeting with the Business Services Organization was held to fully understand the way that we presently prioritize Requests so that all applicable aspects are captured.
  - Margaret Byrd started 9/25 (P/T) to assist with this aspect of the project.
- (a) **Engineering Change Process Improvements**
- *DEVELOP DE-SQ-12.501 "Engineering Change Process Overview"* – Draft of this 'new' procedure is presently being developed, however, the ultimate completion of this draft is dependent upon the completion of the process flows that are being developed through item (a), Tracking of Engineering Issues through the station CR system.
    - *DEVELOP Engineering Reply – Engineering Change mechanism*
      - ⇒ Collection of Industry Guidance and Benchmarking on this issue has been completed.
      - ⇒ The Criteria for the use of this program has been established.
      - ⇒ The Procedural steps required for implementation of this Engineering Change mechanism continue to be developed.
    - *DEVELOP Commercial Controls Program –*
      - ⇒ Collection of Industry Guidance and Benchmarking on this issue has been completed.
      - ⇒ The Criteria for the use of this program has been established.
      - ⇒ The development of the 'Draft' Procedure of this program was completed on 9/15 and is now being evaluated internally within the team.
    - *REVISE DE-SQ-12.512 Design Changes*
      - ⇒ Collection of Industry Guidance and Benchmarking on this issue has been completed.
      - ⇒ The Criteria for the use of this program has been established.

⇒ The significant rewrite of this procedure has begun, following the completion of the 'draft' Commercial Controls procedure mentioned above.

(a) **ESP Continuing Training module on 'Modification Process Optimization'**

- Training module for presentation at the third session of ESP has been developed, reviewed and approved. Presentation to Engineering Support (ESP) Personnel in the 3<sup>rd</sup> session of ESP Continuing Training begins the week of 9/25/00.

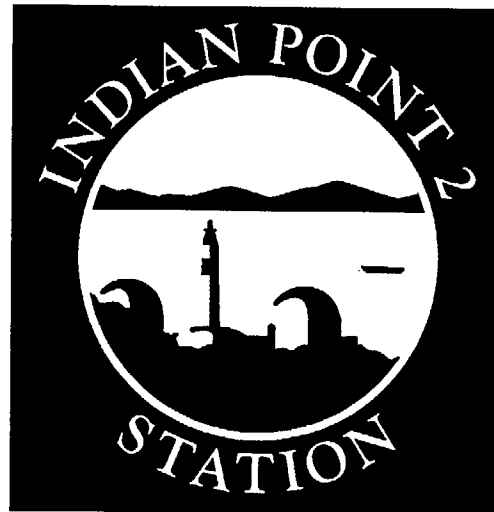
(a) **Impacted Procedure Review/Approval Processing**

- Organizations that interface with Engineering through the Modification Process have been contacted to identify the entire population of station Upper Tier (i.e., SAO's) and Lower Tier (i.e., Organizational level Administrative Directives) that will be impacted through the process improvements that will be resulting from this project.

(a) **Drawing / Document Control Program Improvement**

- A 'White Paper' has been developed in response to the deficiencies associated with the station's Drawing/Documentation system, as outlined in CR200001089 (SL2).
- The approach to prioritization of the station drawings/documents, as outlined in the 'White Paper' response, will be reviewed by station management through the CARB group.

Date: 10/25/00  
Time: 7:42 AM



**INDIAN POINT 2**  
**CORRECTIVE ACTION PROGRAM (CAP)**  
**BUSINESS PLAN**

Revision 2

Plan Manager: P. Russell

Submitted: \_\_\_\_\_ Date: \_\_\_\_\_

Senior Management Sponsor: R. Masse

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# **CORRECTIVE ACTION PROGRAM**

## **Business Plan**

Senior Management Sponsor: A. Blind

### **Introduction**

Ownership and execution of the Corrective Action Program must be improved to support station operations and maintenance. Previous actions taken to address Indian Point Program for Excellence (IPPE), Section 5, QA, Self Assessment and Corrective Action Program, have not been fully effective. Conditions adverse to quality must be prevented where appropriate, identified when they occur, and corrected when identified. The problem statements describe the primary issues facing Indian Point 2 (IP2) personnel in achieving an active questioning attitude and an effective condition resolution culture. This Corrective Action Program Business plan delineates the actions needed to address these problem statements.

### **Problem Statements**

- 1) Condition Report timeliness and contents are inconsistent.
- 2) Condition Report screening and evaluations for operability do not clearly document the basis for determinations.
- 3) Condition Report resolutions and root cause analyses are not timely and fail to identify and correct true root causes.
- 4) Condition Report corrective actions do not prevent event recurrence.
- 5) Trending and reporting processes do not highlight significant issues, degrading conditions and precursors to events.
- 6) Proper level of management support and understanding has not been provided for the Corrective Action Program.
- 7) Self-assessment efforts fail to identify problems or generate effective remedial actions.
- 8) Operating experience program is not fully effective
- 9) Human Performance Program is not fully effective
- 10) Performance indicator program is lagging industry standards

### **Objectives**

The objective of this Business plan is to provide continuous improvement in the implementation of the Corrective Action Program at Indian Point 2 by:

- 1) Affirming and continually reinforcing ownership of the corrective action program by all Indian Point 2 employees and contractors through frequent communications, management interaction, and strong oversight by the Corrective Action Review Board (CARB), Station Nuclear Safety Committee (SNSC), Quality Assurance (QA) and the Nuclear Facilities Safety Committee (NFSC).
- 2) Familiarize IP 2 personnel with the corrective actions process changes, management expectations for condition reporting, management support for effective problem resolution and the need and process for providing feedback concerning corrective action programmatic issues and observations.
- 3) Conducting training and mentoring of key personnel and groups, including the Corrective Action Group (CAG), Corrective Action Review Board (CARB), and personnel conducting operability determinations to appropriately categorize conditions, to conduct operability and reportability determinations, and to review the adequacy of condition report resolutions.
- 4) Establishing effective root cause investigators to address Significant Conditions Adverse to Quality (SL-1/SL-2) to established standards for quality and effectiveness.

Date: 10/25/00

\*\*\* - Indicates committed action in response to NRC Integrated Inspection Report 99-011, dated March 30, 2000.

## **CORRECTIVE ACTION PROGRAM**

### **Business Plan**

- 5) Training, mentoring, and supporting personnel in the investigation of Conditions Adverse to Quality (SL-3/SL-4) to reach credible solutions appropriate to the significance for the reported condition.
- 6) Displaying performance indicators and managing performance to decrease and avoid large backlogs and to develop precursor baseline information for the identification of developing or potential programmatic degradation.
- 7) Developing a long range schedule of coordinated self evaluations, peer evaluations, and Quality Assurance surveillance's to assess the adequacy of the corrective action process, it's implementation at all levels, and potential areas for improvement.

### **Expected Results**

- 1) Personnel in all levels of the IP 2 organization report conditions when conditions or situations are observed which do not meet individual expectations for the conduct of activities and operations at a nuclear power plant. Reporting of conditions is encouraged, self-identified where possible and solicited across organizational lines.
- 2) Operability and reporting determinations are made such that equipment operability or condition reportability requirements are well documented in the screening process.
- 3) Condition Reports are appropriately prioritized, based on importance and investigation requirements, to assure higher risk significant conditions are adequately addressed.
- 4) Condition Report investigation and root cause analyses are completed to the correct level of detail, significant similar and common conditions are identified, and recommended corrective actions are appropriate to resolve the condition and prevent or significantly reduce the probability of recurrence.
- 5) Management involvement in the screening, resolution, and approval of condition reports is proactive with a high level of integrity. Management expectations for accuracy, completeness, timeliness are known throughout IP 2.
- 6) Alternate viewpoints are respected and encouraged, even though they may not be a part of the final solution. Condition reports are written factually, without punitive or accusatory overtones.
- 7) Backlogs are reduced. Conditions receive appropriate interim compensatory measures.
- 8) Conditions are trended to identify repetitive situations, precursors to human, programmatic, or organizational failures, and other conclusions that can provide insight to the corrective action process. Trends are identified to management and addressed.
- 9) Self assessments, peer evaluations, employee feedback, and Performance Assurance audits are consciously scheduled and supported to identify areas of improvement and to reinforce areas of superior performance.
- 10) Confidence is developed within Quality Assurance, the NFSC, regulators, and the IP 2 population that conditions adverse to quality at Indian Point 2 are prevented where reasonable, identified when observed, and corrected once identified.

# CORRECTIVE ACTION PROGRAM

## Business Plan

### Problem Statement 1

Owner: P. Russell

Condition Report timeliness and contents are inconsistent.

### Contributing Factors

- Lack of management involvement in communicating the importance of the CA program.
- Policies, program definition, and procedures are not clear and concise.
- Corrective action process training and individual understanding was inadequate.
- Broad ramification including extent of condition, generic implications, and transportability (applicability to other program and process) are not identified in Conditions Reports.
- The Operating Experience program is ineffective in identifying potential problems suggested by internal or external operating experience.

### Source Documents

- Indian Point Program for Excellence, Revision 0, dated 11/17/98
- NRC TEAM INSPECTION REPORT 50-247/98-18 dated January 29, 1999
- Martin/Sigmond Operations Assessment Report, dated March 1999
- Martin/Sigmond Maintenance Assessment Report, dated August 1999
- NRC Plant Performance Review for Indian Point 2, dated September 30, 1999
- NRC Plant Performance Review for Indian Point 2, April 9, 1999
- IP 2 QA Audit Report No. 99-09-C, Corrective Action – First Half 1999, dated September 15, 1999
- CRs 199906643 and 199906868, August 1999 Reactor Trip Event and Subsequent Recovery Plans

### Actions

#### **a. Process and Organizational Actions**

- \*\*\*1. As part of the self-assessment, [See PS 7] perform interviews with site personnel to determine the cause of lack of management involvement in communicating the importance of the CA program.
- \*\*\*2. Obtain results from the assessment and develop appropriate action plans to address the issue of lack of management involvement.
- 3. Assess process for rescreening/upgrading CR Significance level when additional information is added.
- 4. Establish a method for CAG to periodically assess the quality of the C/R initiator input.

<u>Owner</u>	<u>Status</u>
Russell	Complete
Russell	Complete
Hinrichs	09-30-00
Macheski	12-30-00

#### **b. Procedure Changes**

- 1. Revise SAO-112 to support SAO-204 changes.
- 2. Establish CAG implementing procedures.

Hayes	05-15-00
Hinrichs	10-30-00

# CORRECTIVE ACTION PROGRAM

## Business Plan

### Actions

Owner      Status

#### **c. Training**

- |  |          |          |
|--|----------|----------|
| ***1. Develop memo for transmittal by P. Russell to Department Heads reinforcing management expectations for problem recognition and resolution.   | Russell  | 04-17-00 |
| ***2. Implement first line supervisor training and reinforcement strategy for CR initiation. (Requirement for first line supervisor attendance of CRS training to be included in memo developed in c.1 above.) | Pavlinik | Complete |

#### **d. Management Expectations and Communications**

- |   |             |          |
|---|-------------|----------|
| ***1. Provide site-wide communications to disseminate expectations for factual condition identification and reporting. Implement plan for periodically reinforcing these expectations.              | Russell     | 04-17-00 |
| 2. CARB implement process to provide feedback on SL-1s to condition report initiators and investigators to reinforce management expectations. (CARC provide similar feedback on SL-2s and SL-3s.)   | All<br>CARB | Complete |
| 3. Survey selected personnel periodically to assess quality of initiation.  | Macheski    | 09-01-00 |
| 4. Establish a Corrective Action Program newsletter for significant internal experience and external operating experience, including summaries of CARB reviewed root causes and corrective actions. | Russell     | Complete |
| 5. Assess CR initiation and timeliness of resolution.   | Hale        | Complete |

#### **Additional Performance Indicators**

- |   |         |          |
|---|---------|----------|
| • Numbers of condition reports /yr.                                       | Tumicki | 04-30-00 |
| • Department self-identification ratio site wide                          | Tumicki | 04-30-00 |
| • Soon to be overdue evaluations and ICAs                                 | Tumicki | 04-30-00 |
| • % of condition reports classified as needing a root cause analysis      | Tumicki | 04-30-00 |
| • % of condition reports classified as needing an apparent cause analysis | Tumicki | 04-30-00 |



# CORRECTIVE ACTION PROGRAM

## Business Plan

### Problem Statement 2

Owner: G. Hinrichs/J. Ferrick

Condition Report screening and evaluations for operability do not clearly document the basis for determinations.

### Contributing Factors

- Weaknesses were identified in the procedures for Corrective Action and Operability Determination.
- Failures to initiate operability determinations and inappropriate operability determinations were identified.
- Lack of knowledge of the GL 91-18, Rev 1, process.

### Source Documents

- NRC Letter, INTERIM RESULTS FROM THE FOLLOW-UP INSPECTION TO THE AUGMENTED INSPECTION TEAM, dated October 12, 1999
- QA Assessment details

### Actions

#### **a. Process and Organizational Actions**

1. Review backlog for operability issues.
2. Validate CAP Operability computer code sets Operability requirements/status properly and that open operability data is accurate.
3. Assess program interfaces between operability determination process and corrective action program.

#### Owner

#### Status

Hinrichs	Complete
Hinrichs	04-20-00
Hinrichs	04-20-00

#### **b. Procedure Changes**

- \*\*\*1. Assess existing process to identify areas of potential enhancements to provide clearer guidance in effectively implementing the operability evaluations in accordance with GL 91-18, Rev 1. This may entail consolidating the requirements currently in the following procedures:

- a) SAO-112, Corrective Action Program
- b) SAO-460, 10CFR50.59 Safety Evaluations
- c) SE-SQ-12.317, Equipment Operability Assessments
- d) OAD 41, Operator Burden Program
- e) OAD 15, Policy for Conduct of Operations
- f) SAO-204, Work Control

Honma	04-28-00
Hinrichs	

- \*\*\*2. Recommend changes and implement or coordinate implementation, as applicable.

Hinrichs	06-01-00
----------	----------

#### **c. Training**

- \*\*\*1. Coordinate development and implementation of Operability training (i.e., GL91-18, R1) for Operations, Engineering and CARB.

Russell	08-31-00
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- \*\*\*2. Provide training on procedure changes.

Russell	08-31-00
---------	----------

Date: 10/25/00

Page 6 of 21

\*\*\* - Indicates committed action in response to NRC Integrated Inspection Report 99-011, dated March 30, 2000.

**CORRECTIVE ACTION PROGRAM**  
**Business Plan**

**Actions**

**Owner**    **Status**  
Training

**d. Management Expectations and Communications**

1. Sample CRs for accuracy, timeliness and correctness for identification of requirement for Operability Reviews and Determinations.
2. Provide coordination and guidance for the screening of duplicate or overlapping responsibilities and issues.

Macheski    06-30-00

Hinrichs    12-01-00

**Additional Performance Indicators**

- Operability Determination quality

Tumicki    10-01-00

# CORRECTIVE ACTION PROGRAM

## Business Plan

### **Problem Statement 3**

**Owner: P. Russell**

Condition Report resolutions and root cause analyses are not timely and fail to identify and correct true root causes.

### **Contributing Factors**

- Root cause evaluations do not always determine the root cause of the problem and other associated causes.
- Inadequate guidance led to ineffective performance of common cause analyses, trend analyses, or collective significance analysis.
- Ineffective implementation causes omission of important attributes including items such as important safety significance, interim compensatory actions, impacts on risk and design basis event response, nature of barriers, error reduction, alternative causes, and other issues.

### **Source Documents**

- Martin/Sigmond Operations Assessment Report, dated March 1999
- Martin/Sigmond Maintenance Assessment Report, dated August 1999
- IP 2 QA Audit Report No. 99-09-C, Corrective Action – First Half 1999, dated September 15, 1999
- Indian Point Program for Excellence, Revision 0, dated 11/17/98
- NRC TEAM INSPECTION REPORT 50-247/98-18 dated January 29, 1999
- NRC Plant Performance Review for Indian Point 2, April 9, 1999
- NFSC Q&RA Subcommittee input.
- INPO, Principles for Effective Self-Assessment and Corrective Action Programs, dated 12/99

### **Actions**

#### **a. Process and Organizational Actions**

1. Reassess the current qualification requirements for certifying personnel for performing root cause evaluations.
2. Review INPO document entitled, Principles for Effective Self-Assessment and Corrective Action Program and incorporate the appropriate principles into SAO-112.
3. Assess SAO-112 to determine if it ensures that root causes identify, from a human performance standpoint, how consequences of behaviors are associated with the causes.
4. Review ICAs backlog and consolidate where applicable to reduce potential for overlap.
5. Drive Root Cause Analyses to closure by incorporating investigation schedules into station schedule.
6. Implement management improvements for event condition evaluation, Root Cause Analysis, and corrective action backlogs.

<b><u>Owner</u></b>	<b><u>Status</u></b>
Hinrichs	06-01-00
Hayes	10-06-00
English	12-04-00
Owners	07-10-00
Russell	06-01-00
Russell	Complete

#### **b. Procedure Changes**

1. Implement Root Cause Quality Metrics Index
2. Revise SAO-112, as applicable, to incorporate principles identified in a.2. above.

Russell	Complete
Hayes	10-06-00

Date: 10/25/00

\*\*\* - Indicates committed action in response to NRC Integrated Inspection Report 99-011, dated March 30, 2000.

## CORRECTIVE ACTION PROGRAM

### Business Plan

#### Actions

##### **c. Training**

1. Implement remedial basic level training for root cause investigators.	Hinrichs	09-29-00
2. Conduct appropriate training to CARB/SNSC members (ie., root cause evaluations, extent of condition, and operability and reportability reviews).	Hinrichs	10-31-00
3. Establish root cause continuing training and recertification process.	Hinrichs	10-31-00

##### **d. Management Expectations and Communications**

1. Implement grading through Quality Index Review.	Macheski	05-01-00
2. Conduct a peer comparison of select completed root cause and apparent cause investigations.	Russell	12-31-00

##### **Additional Performance Indicators**

• Open Root Cause Evaluations	Tumicki	Complete
• Number of Root Cause Analyses	Tumicki	04-30-00
• Number of Apparent Cause Analyses	Tumicki	04-30-00
• Root Cause Quality	Tumicki	06-01-00
• Apparent Cause Evaluation Quality	Tumicki	08-01-00

# CORRECTIVE ACTION PROGRAM

## Business Plan

### **Problem Statement 4**

**Owner: P. Russell**

Corrective actions taken have not prevented event recurrence.

### **Contributing Factors**

- Weaknesses were identified in the procedures for the effective implementation of Condition Reports corrective actions.
- Confusion was noted in CR resolutions and evaluation assignments.
- Lack of management ownership was demonstrated for prioritization and implementation of corrective actions

### **Source Documents**

- Indian Point Program for Excellence, Revision 0, dated 11/17/98
- NRC TEAM INSPECTION REPORT 50-247/98-18 dated January 29, 1999
- Martin/Sigmond Operations Assessment Report, dated March 1999
- Martin/Sigmond Maintenance Assessment Report, dated August 1999
- NRC Plant Performance Review for Indian Point 2, dated September 30, 1999
- NRC Plant Performance Review for Indian Point 2, April 9, 1999
- IP 2 QA Audit Report No. 99-09-C, Corrective Action – First Half 1999, dated September 15, 1999
- CRs 199906643 and 199906868, August 1999 Reactor Trip Event and Subsequent Recovery Plans

### **Actions**

#### **a. Process and Organizational Actions**

1. Manager accountability for accurate CR closure.
2. Implement the process for performing effectiveness review of SL-1/SL-2 CRs.
3. CARB monitor and review effectiveness of SL1/SL2 CRs and associated corrective actions post implementation. Include in revision to CARB charter – see PS 6.
4. Complete common cause analysis and document deficiencies in CRS.
5. Develop plans and proceduralize to address future common cause analysis.

<b><u>Owner</u></b>	<b><u>Status</u></b>
All	04-17-00
Russell	Complete
Russell	12-30-00
Spaziani	Complete
Russell	10-01-00

#### **b. Procedure Changes**

1. TBD

#### **c. Training**

1. Identify skill requirements for Corrective Action Group personnel and implement appropriate CAG personnel training.
2. Develop and implement CARB training in accordance with training matrix for CARB representatives.

Macheski	08-04-00
Russell	08-18-00

## CORRECTIVE ACTION PROGRAM

### Business Plan

#### Actions

##### **d. Management Expectations and Communications**

1. Assess to see if we can improve the grading of closed condition reports and feedback to originators and investigators.
2. Highlight Corrective Action ages to focus action.
3. Provide guidance for corrective action deferral and due date extension decisions to explicitly consider the safety basis for the delay.
4. Evaluate SAO-112 for extension process improvements.

#### Owner

#### Status

Hale	Complete
Pavlinik	04-17-00
Russell	Complete
Hayes	06-01-00

##### **Additional Performance Indicators**

- Ratio of Corrective Actions completed as scheduled
- Department CA items overdue
- Up coming due ICAs & evaluations

Tumicki	06-01-00
Tumicki	Complete
Tumicki	Complete

# CORRECTIVE ACTION PROGRAM

## Business Plan

### **Problem Statement 5**

**Owner: P. Russell**

Trending and reporting processes do not highlight significant issues, degrading conditions and precursors to events.

### **Contributing Factors**

- Trending and reporting is awkward and labor-intensive.
- Heavy personal communications and checking compensates for cumbersome and inefficient information management technology.
- Available trending and reporting information is not being effectively utilized.

### **Source Documents**

- Indian Point Program for Excellence, Revision 0, dated 11/17/98
- NRC TEAM INSPECTION REPORT 50-247/98-18 dated January 29, 1999
- Martin/Sigmond Operations Assessment Report, dated March 1999
- Martin/Sigmond Maintenance Assessment Report, dated August 1999
- NRC Plant Performance Review for Indian Point 2, April 9, 1999
- NRC Plant Performance Review for Indian Point 2, dated September 30, 1999
- CRs 199906643 and 199906868, Reactor Trip Event and Subsequent Recovery Plans
- NRC Augmented Inspection Team – Reactor Trip with Complications – Report No. 50-24799-08, dated October 19, 1999

### **Actions**

#### **a. Process and Organizational Actions**

1. Implement improved trend-coding system.
2. Distribute a monthly set of Performance indicators to department managers.
3. Present collective analysis trend reports to CARB.
4. CAG to perform cause evaluations for potential adverse trends or adverse trends.
5. CAG to perform sample review of open condition reports for top 5 risk significant systems to:
  - a. evaluate if negative trend exists,
  - b. determine if appropriate and timely action(s) are being taken for repetitive issues, and
  - c. determine if a trend exists for repetitive issues requiring initiation of a trend CR.
6. Develop site-wide performance indicator system.
7. Implement CAP trending and performance monitoring for event common cause and event precursors.
8. Update CRS so that names and organizations match the organizational charts.

<b><u>Owner</u></b>	<b><u>Status</u></b>
Russell	09-15-00
Pavlinik	04-17-00
Mecchi	Complete
Tumicki	05-26-00
Russell	06-15-00
Tumicki	10-01-00
Russell	12-01-00
Tumicki	06-30-00

#### **b. Procedure Changes**

1. Develop desktop guide for trending methodology including routine report generation.

Tumicki 09-22-00

## CORRECTIVE ACTION PROGRAM

### Business Plan

#### Actions

##### **c. Training**

1. TBD

#### Owner

#### Status

##### **d. Management Expectations and Communications**

1. Trend CAP processes for CR initiation trends and issues not reported in a timely manner.
2. Link Corrective Action Trend Report with self-assessments to identify high problem rate areas (Departments and problem areas).
3. Define the Metric Set (monthly Report to include Dept level performance) and identify which metrics should be influenced by the implementation of CAP.

Hinrichs 11-03-00

Macheski 11-03-00

Tumicki 09-08-00

##### **Additional Performance Indicators**

- Event Code Trend Charts
- Periodic Collective Analysis Trend Reports

Tumicki 06-01-00

Tumicki 06-01-00



# CORRECTIVE ACTION PROGRAM

## Business Plan

### Problem Statement 6

Owner: P. Russell

Proper level of management support has not been provided for the Corrective Action Program.

### Contributing Factors

- Feedback is not obtained to indicate the success in the identification of problems.
- Implementation of corrective actions are not timely which creates backlog.
- Limited understanding by managers of the resources necessary to effectively address identified problems.
- Ineffective interdepartmental cooperation/teamwork often leaves items requiring the involvement of multiple organizations open for unreasonable periods of time.
- Multiple ownership of the deficient issue causes confusion.
- The lowering of the threshold for problem identification has increased the workload.
- Management standards and expectations for a corrective action program have not been established, communicated, nor reinforced.
- Personal ownership of the Corrective Action program does not exist.
- Benefits of a rigorous program are not understood or recognized by management and staff.

### Source Documents

- Indian Point Program for Excellence, Revision 0, dated 11/17/98
- NRC TEAM INSPECTION REPORT 50-247/98-18 dated January 29, 1999
- Martin/Sigmond Operations Assessment Report, dated March 1999
- Martin/Sigmond Maintenance Assessment Report, dated August 1999
- NRC Plant Performance Review for Indian Point 2, April 9, 1999
- NRC Plant Performance Review for Indian Point 2, dated September 30, 1999
- CR 199907676, Reactor Trip Event and Subsequent Recovery Plans
- NRC Augmented Inspection Team – Reactor Trip with Complications – Report No. 50-24799-08, dated October 19, 1999
- Rev 3 Recovery Plan

### Actions

#### **a. Process and Organizational Actions**

1. Establish clear guidance for acceptable age of ICAs based on significance.
2. Reinforce management expectations for resolution of CRs.
3. Require line departments to include CAP in self-assessments.
4. Implement daily review of CRs by plant management team.
5. Assess CARB definition and charter in SAO-112 and CAG –20.200 for discrepancies and inconsistencies.
6. Verify CARB oversight requirements are being executed.

<u>Owner</u>	<u>Status</u>
Russell	Complete
Russell	Complete
Macheski	10-06-00
NQA	
Spaziani	Complete
Hinrichs	10-06-00
Russell	Complete

Date: 10/25/00

\*\*\* - Indicates committed action in response to NRC Integrated Inspection Report 99-011, dated March 30, 2000.

# CORRECTIVE ACTION PROGRAM

## Business Plan

### Actions

	<u>Owner</u>	<u>Status</u>
7. Effective Quality Assurance audit and surveillance of CAP activities in all departments.	Hinrichs	06-01-00
8. Assess department resources required to reduce existing CRS backlog, reassign as appropriate, and maintain backlog at levels consistent with closure priorities and due date commitments.	Russell	06-01-00
9. Each DM will communicate expectations for evaluating and implementing corrective actions.	Russell	04-17-00

### **b. Procedure Changes**

1. Revise SAO-112 and CAG-20.200, as required, to incorporate changes identified in a.5. above.	Hinrichs	06-01-00
---	----------	----------

### **c. Training**

1. Identify training plan for CARB member (i.e., 50.59, Operability Determinative Process, Risk Assessment).	Russell	Complete
2. Implement CRS overview training.	Russell	Complete

### **d. Management Expectations and Communications**

1. Prepare a memo to site management, which establishes:	Russell	04-17-00
a. Expectations for evaluating and implementing corrective actions		
b. Department goals for measuring timeliness of completing actions		
2. Conduct self-assessment of CR program.	Hale	Complete
3. Implement CAP newsletter which will summarize	Russell	Complete
- significant CRs generated for the month	/All	
- status of workoff of CR backlog		
- noteworthy industry events/issues (OEs)		
4. Identify qualified candidates for open CAG positions and make offers for employment.	Russell	Complete
5. Budget and support establishment of Region I Corrective Action Program Associations.	Hinrichs	02-01-01

### **Additional Performance Indicators**

• Condition Reports with subject Corrective Action Process	Tumicki	04-30-00
• Tracking of CAP related CRS resulting from department self-assessments	Tumicki	04-30-00

# CORRECTIVE ACTION PROGRAM

## Business Plan

### Problem Statement 7

Self-assessment efforts fail to proactively identify problems or generate effective remedial actions.

Owner: P. Russell

### Contributing Factors

- Self-assessment was not effective in promptly identifying adverse conditions.
- IP 2 personnel have not been successful at recognizing and addressing their own problems.

### Source Documents

- Martin/Sigmond Operations Assessment Report, dated March 1999
- Martin/Sigmond Maintenance Assessment Report, dated August 1999
- INPO, Principles for Effective Self-Assessment and Corrective Action Programs, dated 12/99

### Actions

#### **a. Process and Organizational Actions**

1. Assign a self-assessment coordinator
2. Target a peer assessment or INPO Assist to validate enhanced process
- \*\*\*3. Conduct a Corrective Actions Process Programmatic Area Assessment
- \*\*\*4. Coordinate site efforts for INPO Assist visit.
- \*\*\*5. Evaluate Self-Assessment deficiencies and improvements noted during the process programmatic area assessments.
6. Develop follow-up plan for conduct of Corrective Actions Functional Area Self-Assessments.
7. Review and revise corrective action procedures to include additional implementation details suggested by INPO assist visit.
8. Benchmark corrective action processes at other plants. Consider plan to develop common process with IP3.

<u>Owner</u>	<u>Status</u>
Russell	Complete
Russell	Complete
Hale	Complete
Hayes	05-05-00
Russell	Complete

Macheski	06/30/00
Hinrichs	07-15-00

Hinrichs	12-31-00
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#### **b. Procedure Changes**

1. Provide input and assist in revising SAO-140, Indian Point Self-Assessment Plan.

Russell	Complete
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#### **c. Training**

1. Benchmark self-assessment training and incorporate into continuous training

Macheski	12-31-00
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**CORRECTIVE ACTION PROGRAM**  
**Business Plan**

**Actions**

**d. Management Expectations and Communications**

	<b><u>Owner</u></b>	<b><u>Status</u></b>
1. Implement self-assessment trending and cross-functional/common cause evaluation processes via the CAP.	Russell	11-01-00
2. Establish self-assessment support and field observation process.	Russell	11-01-00
3. Develop a scorecard for self-assessment reports	All	
	Russell	11-01-00
4. Develop a means for monitoring self-assessment action item effectiveness.	Russell	12-31-00

**Additional Performance Indicators**

• Self Assessment Condition Reports	Tumicki	06-30-00
• Condition Report Self Identification Ratio	Tumicki	06-30-00

# CORRECTIVE ACTION PROGRAM

## Business Plan

### **Problem Statement 8**

Operating Experience Program is not fully effective.

**Owner: M. Blatt**

### **Contributing Factors**

- Although initial screening by the OE Project Manager is timely, source documents assigned to some departments are significantly overdue on review for applicability here.
- Responses often lack specificity in descriptions of evaluations or follow-up actions completed.
- The Condition Reporting System (CRS), and the way we use it, is not well suited to the needs of tracking and evaluating events that occurred elsewhere.
- Awareness and use of communication mechanisms in addition to or instead of formal training should be enhanced as a means to disseminate OE information quickly, efficiently and appropriately.

### **Source Documents**

- Surveillance Report 99-SR-040, "Operating Experience Review" dated 11-18-99.
- CRs 199906643 and 199906868, Reactor Trip Event and Subsequent Recovery Plans.

### **Actions**

#### **a. Process and Organizational Actions**

1. Develop and implement a unique identifier field on CRS for OE items.
2. Have planners and system engineers be allowed access to the INPO news lists.

#### **Owner**

#### **Status**

Blatt 02-01-01  
Blatt 07-28-00

#### **b. Procedure Changes**

1. TBD

#### **c. Training**

1. Increase training for line OE evaluators or assignees on SAO-112 closeout requirements to ensure that the CRS OE evaluations are closed out properly.

Blatt 07-28-00

#### **d. Management Expectations and Communications**

1. Develop a web site newsletter slot specifically for OE, so people can have access to this information resource.

Reynolds 04-17-00

### **Additional Performance Indicators**

- Numbers of OE CRs per year

Tumicki 03-24-01

# CORRECTIVE ACTION PROGRAM

## Business Plan

### **Problem Statement 9**

Error Reduction Program is not fully effective

**Owner: C. English**

### **Contributing Factors**

- Policies, program definitions, and procedures are not clean and concise.
- Human Performance process training and individual understanding was inadequate.
- Lack of management involvement in communicating the importance of the Human Performance Program.

### **Source Documents**

- CRs 199906643 and 199906868, Reactor Trip Event and Subsequent Recovery Plans.

### **Actions**

#### **a. Process and Organizational Actions**

	<b><u>Owner</u></b>	<b><u>Status</u></b>
1. Hire Identify qualified candidate for Human Performance (H-P) Program Manager position and make offer.	Russell	Complete
2. Set schedule for seven H-P site-wide training sessions.	Russell	Complete
***3. Set up INPO assist visit for Human Performance.	Russell	Complete
4. Establish Charter for Indian Point 2 H-P task force.	English	08/31/00
5. Establish H-P Task Force to include representatives from Operations, Training, Maintenance, CAG, Engineering, and Security.	English	05/31/00
6. Benchmark other plants (e.g. Dresden Station) for H-P Initiatives.	English	07/31/00
7. Implement "Event Free Clock" program at IP2. Merge IP2/IP3 "event free clocks" into one program. Establish additional metrics for H-P programs.	English	09-30-00 09-30-00 09-30-00
8. Establish charter for Region I Human Performance Program Association First Region I H-P Program Meeting @ Learning Center.	English	09-30-00 12-30-00
***9. Review INPO information for ideas/methods which can be used @ IP2	English	06-30-00

#### **b. Procedure Changes**

1. TBD (H-P Program Manager needs time to evaluate)	English	TBD
---	---------	-----

#### **c. Training**

***1. INPO "Excellence in Human Performance" training session.	English	Complete
• "train the trainer"	English	06-30-00
• "train the site"	English	12-30-00

**CORRECTIVE ACTION PROGRAM**  
**Business Plan**

**Actions**

**d. Management Expectations and Communications**

- \*\*\*1. Perform INPO assist visit (Effectiveness review benchmark).
- \*\*\*2. Perform IP2 Self Assessment
- \*\*\*3. Attend EPRI workshop - "Industry Error Reduction Review Techniques, Methods, and Efforts".
- \*\*\*4. Perform follow-up IP2 Self Assessment

**Owner**

**Status**

English	Complete
English	08-18-00
English	09-13-00
English	12-15-00

**Additional Performance Indicators**

- \*\*\*1. Create monthly error reduction metric.
- \*\*\*2. Develop additional tools to measure error reduction effectiveness based on EPRI workshop.

English	06-30-00
English	12-30-00

# CORRECTIVE ACTION PROGRAM

## Business Plan

### **Problem Statement 10**

**Owner: C. English**

Performance Indicator (PI) Program is lagging in development to meet industry standards. IP2 lacks a formal program to support the PI requirements that are being implemented by the USNRC in the first quarter of 2000.

### **Contributing Factors**

- Lack of management involvement in recognizing and/or communicating the importance of and the immediate need for a Performance Indicator Program
- Policies, program definition, and procedures do not exist.
- Training of this new program has not been conducted.
- The USNRC is currently revising their reactor oversight process to rely heavily on the use of Performance Indicators.

### **Source Documents**

- NEI-99-02, Draft Rev D, Regulatory Assessment Performance Indicator Guideline, dated 11-152-99.
- SECY 99-007, "Recommendations for Reactor Oversight Process Improvements", dated 01/08/99
- SECY 99-007A, "Recommendations for Reactor Oversight Process Improvements (follow-up to SECY-99-007)", dated 03/22/99
- NUREG-1649, "New NRC Reactor Inspection and Oversight Program", first revision, dated 05/11/99

### **Actions**

#### **a. Process and Organizational Actions**

1. Establish Project Team.
2. Establish Project Plan.

#### **Owner**

#### **Status**

English  
English

Complete  
Complete

#### **b. Procedure Changes**

1. Establish Procedures/Processes

English

Complete

#### **c. Training**

1. Conduct Site Wide Training.

English

06-30-00

#### **d. Management Expectations and Communications**

1. Communicate to "off-site" customers.

English

TBD

### **Additional Performance Indicators**

- TBD

English

TBD





**INDIAN POINT 2**

**EMERGENCY PLANNING**

**YEAR 2000 BUSINESS PLAN, Rev 1**

PLAN MANAGER:

F. INZIRILLO

SUBMITTED: \_\_\_\_\_

DATE: \_\_\_\_\_

Senior Management Sponsor:

J. Baumstark

Approved: \_\_\_\_\_

Date: \_\_\_\_\_

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## 1. Functional Responsibility

The Emergency Planning organization ensures that station and local government personnel are properly prepared to respond to a radiological emergency. Key responsibilities include: the Emergency Plan, Emergency Response Facilities, Emergency Response organization, the Emergency Notification System and Nuclear Environmental Monitoring.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>Professional Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
BURNS	SR. PLNG ANAL/ENGR	HS	SRO	27	27
BYSTER	SR. PLNG ANAL/ENGR	BS		37	27
FERRARO	SR. ENGINEER	MBA		32	32
INZIRILLO	SECTION MANAGER	MBA	SRO	24	17
HUGHES	SR. SPECIALIST	BS		15	14
<b>WEEKLY</b>					
HEWITT	SR NUCL ENVIR TECH				
METTEY	SR NUCL ENVIR TECH				
WASSMAN	SR TYPIST	HS		18	11
<b>CONTRACTORS</b>					
WALKER					
LEE					
DAUS(50%)					
HALE					
<b>OPEN AND/OR REQUESTED</b>					
2 EP STAFF					
1 ENV SUPV					
1 ENV TECH					
<b>TOTALS</b>	<b>16 TOTAL, 8 FILLED + 4 CONTRACTOR + 4 VACANT</b>				

### Authorized Positions

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
<b>1999 Budget</b>	4	4	8
<b>2000 Budget</b>	4	4	8
<b>Change</b>			

Approval has been given to fill the open positions in 2000

### 3. Section Mission Statement

The Emergency Preparedness organization's mission is to ensure the facilities, equipment and personnel necessary to successfully respond to a nuclear emergency at Indian Point Units 1 & 2 are in place and maintained in a high state of readiness. Accomplishment of this mission requires extensive cooperation and mutual support between Con Edison, NYPA (who has responsibility for Indian Point 3) and local, state and federal officials.

### 4. Manpower Analysis

#### 2000 Manpower Analysis

<b>ONGOING/CONTINUING</b>	
Off Site Emergency Preparedness Activities	15
On Site Emergency Preparedness Activities	81.5
Drills & Annual Emergency Exercise	10
Radiological Environmental Monitoring Program & SCBA Maintenance	30
<b>IMPROVEMENT</b>	
Broad Scope Emergency Preparedness Functions	44.5
ERO Mobilization	1.75
Off-site notification	1
On-site Technical Assessment and Support	7.24
On-site Operational Support	3.5
Off-site Organization Support	2.0
Off-site Radiological Protection	3.0
<b>Total</b>	<b>199.5</b>
<b>Full Time Equivalents (FTE)</b>	<b>16</b>

## 5. Operational Overview- Ongoing/Continuing Department Functions and Activities

Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed	Budgeted Support
<b>5.1</b>	<b>Off Site Emergency Preparedness Activities</b>			<b>(000)</b>	<b>(000)</b>
5.1.0	Fee to State Disaster Preparedness (NYS DPC Chapter 708 Fees, Payment to NYS Division of Military & Naval Affairs), Sept				
5.1.1	Emergency Plan Programs Off Site: Hudson Valley hospital Ctr, Phelps Memorial Hospital, Four County Coord Sal, Revise Evac time estimate, RMC Hospital Trng, FEMA Exercise scenario/planning consultant =				
5.1.2	Communications (MIDAS & Sirens) Siren Verification Testing, K ea Mar and Sept Testg & Maint Svcs-Sirens and Site Rad Monit System (Reqn 879-00042), /yr, assume 7 months in 2000,	2			
5.1.3	Conduct of Off Site Training	4			
5.1.4	Joint News Center Procedures, Training & Facility Maintenance (Prev responsibility of Media Relat)	6			
5.1.5	Maintain Off Site State and County Contact	3			
5.1.6	Putnam County Emerg Prep. ( Pd in Mar)				
5.1.7	FEMA Fees ( Covered in Responsibility Code 262, Nuclear Fees, Licenses, etc., Account 01938. in Feb 98, in Jan 99, in Mar 00)				
5.18	County Bus Driver Training ( Orange County, Rockland County, Westchester County)				
<b>5.1</b>	<b>Total Resources</b>	<b>15</b>			

Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed (000)	Budgeted Support (000)
<b>5.2</b>	<b>On Site Emergency Preparedness Activities</b>				
5.2.0	Emergency Plan Program On Site: NYS Reg. Guide 1.101 S/D EAL Project , Drill/Exercise Contract Support-4 scenarios, 6 drills =				
5.2.1	Equipment Servicing: Siren Verification(?) syst Upgrade , Portal Monitors for Counties(4) , MIDAS . Conduct of Facility Inventories =	1			
5.2.2	Payment to NYPA: Joint New Ctr Facility , JNC/County Communications , Four County TLDs & Misc. NYPA Equip Charges , Met Tower/Met Program =				
5.2.3	Income From NYPA				
5.2.4	Communications (NP Only , Misc NP/NYPA , NP/NYPA ) =				
5.2.5.	Electricity , All Other Maint (Bldg costs) , Materials & Supplies , Petty Cash =				
5.2.6	Vehicles				
5.2.7	QA Audit Involvement & Support for NRC Inspections	2			
5.2.8	Maintain Performance Indicators	1.5			
5.2.9	Pager & Cell Phone costs (covered in 5.2.4?)				
5.2.10	Training of Emergency Plan Staff (6.10 & 6.11)(\$'s in 5.2.0?)	6			
5.2.11	Conduct of Training by EP Staff: Operators 3, SAMG 3	6			
5.2.12	Management & Supervision	18			
5.2.13	Maintain Procedures and Training Records	4			
5.2.14	Department Clerical Support Budgeted Labor Dollars (7 Positions)	10			
	Labor Adjustment ( 4 New Management Positions-Section Manager for 12 months, Environmental Section Supervisor 6 months, 2 EP Staff Positions for 14 months in 2000)				
5.2.15	Vacations, Holidays, Sick and Other Leave	30			
5.2.16	Emergent Work (EP Staff Months & \$'s for OT Support from Others				
5.2.17	CRS Work	3			
<b>5.2</b>	<b>Total Resources</b>	<b>81.5</b>			

Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed	Budgeted Support
<b>5.3</b>	<b>Drills &amp; Annual Emergency Exercise</b>			(000)	(000)
5.3.0	Conduct ERO Mini Drills	4			
5.3.1	Preparation for and Conduct of Annual Emergency Exercise	6			
5.3.2					
<b>5.3</b>	<b>Total Resources</b>	<b>10</b>			<b>0</b>
<b>5.4</b>	<b>Radiological Environmental Monitoring Program &amp; SCBA Maintenance</b>				
5.4.0	Spiked Environmental Samples (Analytics, PO 7-03134, 4 Yr, contract, spent in 97, spent in 98, spent in 99				
5.4.1	Nuclear Environmental Monitoring Lab Service				
5.4.2	Collection of Environmental Samples ( Assume 3 people spend 10 months of their year on this and the SCBA work. The remaining 2 months each per year is V/H/S and Training	24			
5.4.3	SCBA Maintenance Work	6			
<b>5.4</b>	<b>Total Resources</b>	<b>30</b>			
	Additional Contractor Resources to supplement Con Ed EP Staff months, needed to complete Section 5 work = 6 months work (136.5- 96 months in budget - 12 months Section Mgr - 6 months Enviro Supvr - 14 months 2 new EP Staff ) X /month				
	<b>Section 5 Totals, Ongoing/Continuing Department Functions and Activities</b>	<b>136.5</b>			
<b>Grand Total Section 5 \$'s =</b>					

6. *Department Personnel Technical Expertise*

- Dose Assessment
- Airborne Activity Determination
- Protective Action Recommendation
- Classification of Emergencies
- Media Relations
- Telecommunications
- Computer Applications
- Plant Operations
- Plant Simulation
- Plant Radiological Assessment



## 7. Opportunities – Improvement Projects and Programs

The following Action Items are the improvement projects and programs contained in the **IP 2 Emergency Preparedness Management Action Plan, April 2000**. The Action Items are organized under seven key emergency preparedness functions and were extracted directly from the Management Action Plan. The information contained in the Business Plan is intended to show the allocation of resources necessary to accomplish the Action Items and to show their timing in terms of years. Note, all resource numbers in this Section are preliminary estimates. For additional detail, see the Management Action Plan.

Action Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed	Outside Support Budgeted
7.1	Broad Scope Emergency Preparedness Functions	00	01	(000)	(000)
7.1.1	Combine IP2 and IP3 Emergency Plans		4		
7.1.2	Revise IP2 Emergency Plan to reflect ERO and facility changes	1			
7.1.3	Perform training on and conduct drills to demonstrate performance in key areas of change and improvement made through 3/28/00	6			
7.1.4	Revise and consolidate Emergency Plan Implementing Procedures per the EP procedure consolidation plan	7	2		
7.1.5	Develop EP Web site to include procedures and programs to allow ease of access for E-Plan implementation.	0.25			
7.1.6	Establish a minimum of three on-call emergency response organization teams	3.0			
7.1.7	Develop Emergency Preparedness Administrative Program Documents	4.5	2.0		
7.1.8	Implement an Improved Emergency Drill & Exercise Program	1.5	1.5		
7.1.9	Implement an Improved Emergency Facility & Equipment Check Surveillance Program		1.5		
7.1.10	Implement an Improved Self-Assessment & Performance Indicators Process	7.0	0		
7.1.11	Implement Joint News Center Organizational & Facility Improvements	3.5			
7.1.12	Implement an Improved Emergency Preparedness Training Program	10.0	3.0		
7.1.13	Develop & Implement a Transitional EP Department Staffing Plan	0.75	1.0		
7.1	<b>Total Resources</b>	<b>44.5</b>	<b>15</b>		

Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed	Outside Support Budgeted
<b>7.2</b>	<b>ERO Mobilization</b>	00	01	(000)	(000)
7.2.1	Revise the process for the tracking of qualified ERO personnel				
7.2.2	Acquire, install and test ERO mobilization hardware (Dialogics)	1			
7.2.3	Establish new contract for the supply of improved capability E-Plan beepers.	0.75			
7.2.4	Develop emergency preparedness surveillance procedure for pager tests				
<b>7.2</b>	<b>Total Resources</b>	<b>1.75</b>			

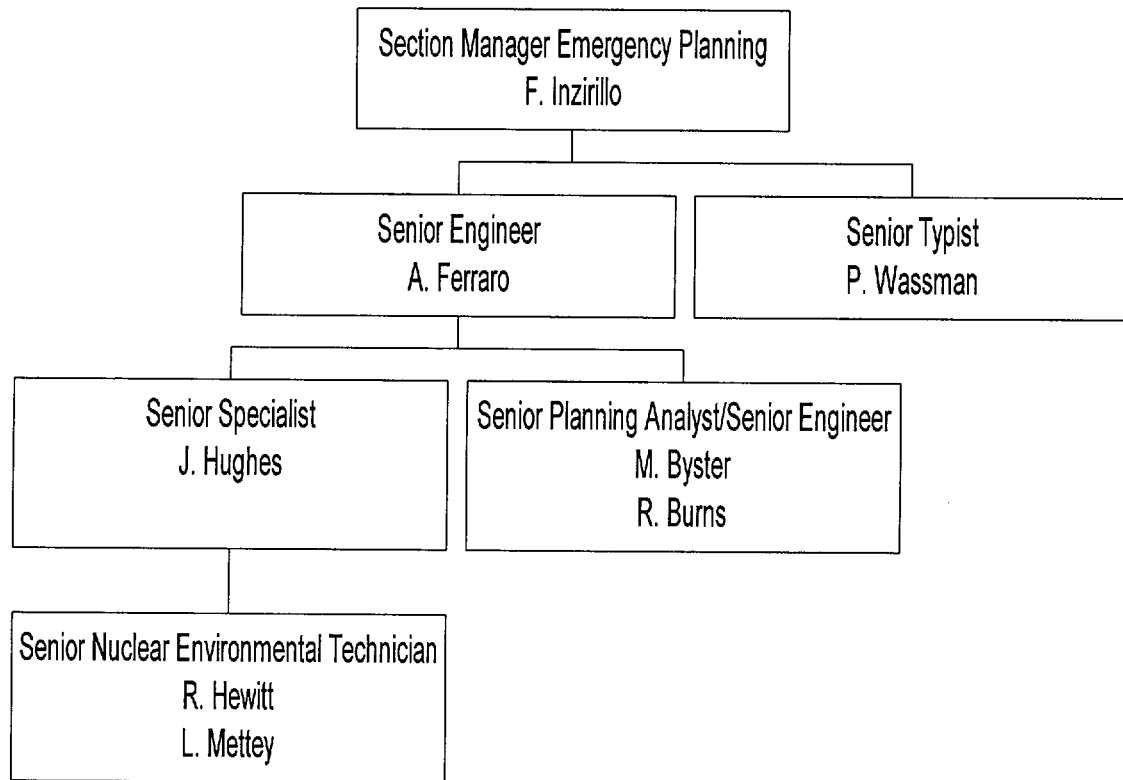
<b>7.3</b>	<b>Off-site notification</b>	00	01	(000)	(000)
7.3.1	Design & implement process for back-up notification to state and county Emergency organizations.	0.5			
7.3.2	Work with State and Counties to Revise form 30a the NY State Radiological Emergency notification form to address the issue of a radiological release below technical specifications				
7.3.3	Install Radiological Emergency Communications (RECS) phone in Buchanan Police Station				
7.3.4	Perform siren verification system upgrade assessment.	0.5			
<b>7.3</b>	<b>Total Resources</b>	<b>1</b>			

Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed	Outside Support Budgeted
<b>7.4</b>	<b>On-site Technical Assessment and Support</b>	<b>00</b>	<b>01</b>	<b>(000)</b>	<b>(000)</b>
7.4.1	Implement new core damage assessment procedure and software		2		
7.4.2	Revise process for the manning of the Emergency Notification System (ENS) and Health Physics Network (HPN) phones in the Technical Support Center.				
7.4.3	Perform MEANS Program Upgrade	2.0			
7.4.4	Improve ERO proficiency in assessing and utilizing emergency plant information	0.25			
7.4.5	Improve SAMG Program Maintenance and Training	3.0	1.0		
7.4.6	Perform Emergency Action Level Upgrades	2.0			
<b>7.4</b>	<b>Total Resources</b>	<b>7.25</b>	<b>3.0</b>		

<b>7.5</b>	<b>On-site Operational Support</b>	<b>00</b>	<b>01</b>	<b>(000)</b>	<b>(000)</b>
7.5.1	Revise procedures for facility relocation in event of habitability issue	1.0	0.25		
7.5.2	Improve Site Security EP Program Support	2.0			
7.5.3	Resolve plant PA system issues for informing personnel of accountability	0.5			
7.5.4	Develop permanent site signage for accountability instructions.				
<b>7.5</b>	<b>Total Resources</b>	<b>3.5</b>	<b>0.25</b>		

Item	Description	Con Ed EP Staff Months	Other Con Ed Staff Months	Unbudgeted Support Needed	Outside Support Budgeted
7.6	Off-site Organization Support	00	01	(000)	(000)
7.6.1	Work with IPCA to develop Emergency Response Data System (ERDS) surveillance tests.	0.5			
7.6.2	Establish Emergency Offsite Technical Advisor Program	1.0	0.5		
7.6.3	Develop/revise emergency preparedness surveillance procedures: Communication System Tests	0.5			
7.6.4	Refurbish EOF		1.0		
7.6	Total Resources	2.0	1.5		
7.7	Off-site Radiological Protection				
7.7.1	MIDAS & Reuter Stokes System Remediation Program	2.5			
7.7.2	Prepare a check-list for identifying all potential release paths to be evaluated in an off normal event				
7.7.3	Revise and implement offsite monitor training program.	0.5			
7.7.4	Develop personnel monitoring and decontamination procedures and processes in support of site evacuation				
7.7	Total Resources	3.0			
Grand Total Section 7: Improvement Projects & Programs		63	20		

## 9. Organization Chart



**10. 2000 Resource Plan**

Total Section 5, Ongoing/Continuing Department Functions and Activities	Con Ed EP Staff Months	Con Ed EP Staff Dollars (000)	Outside Support Dollars (000)	Total Dollars (000)
Total Resources Needed	136.5			
Total Resources Budget	96.0			
<b>Additional Resources Needed</b>	<b>32.0*</b>			

\* 8.5 Months to be provided by additional contractor support

Total Section 7, Improvement Projects & Programs	Contractor Staff Months 00	Contractor Staff Dollars (000)	Other Outside Support Dollars (000)	Total Dollars (000)
Total Resources Needed	63			
Total Resources Budget	0			
<b>Additional Resources Needed</b>	<b>63</b>			

Note, the numbers shown in the Section 7 Table are preliminary estimates.

<b>Total Additional Resources</b>				
<b>Grand Total Resources Needed In 2000</b>				

### **INDIAN POINT - WORK CONTROL**

Department Manager: Robert Gillespie

#### **INTRODUCTION**

The mission of the Work Control organization is to manage and continuously improve the work control process so that all work groups are realizing increased productivity rates, while at the same time providing for the highest standards possible in the areas of Nuclear, Industrial, and Radiological Safety, and the plant's physical material condition. This will be achieved through the development and management of a single daily integrated schedule that identifies and coordinates all plant work action items, and that provides for clear responsibilities and accountabilities for all groups that develop and implement the schedule.

- » Optimize work-control processes.

#### **ASSESSMENT**

Several organizations, internally and externally, contributed to the assessment of the Work Control process. The Institute of Nuclear Power Operations, Nuclear Regulatory Commission, Quality Assurance, Martin/Sigmon Consulting Services, and self-assessments all contributed to identifying weaknesses in our programs. The following assessments were made as a result of these inputs:

- 1) *Ownership*: The station work management process is not being effectively implemented because of insufficient ownership, staff qualifications, and discipline to follow the process.
- 2) *Process*: The station work management process is described in various documents across several departments, and in many cases only informally described which results in a lack of understanding of the process and individual roles.
- 3) *Accountability*: Station personnel do not hold each other accountable for implementation. A consequence of this is demonstrated by excessive amounts of emergent work being added to the frozen schedule.
- 4) *Backlogs*: Key backlogs of work items remain relatively high, and are not being reduced at a rate to minimize challenges to the operators. These include Control Room Deficiencies, Temporary Modification/Field Changes older than 6-months, Operator Work Arounds, Tech Spec surveillances in grace, and Preventive Maintenance work orders in grace.

## (

## (





Owner	Due Date	Status
-------	----------	--------

- Page 2



## Indian Point - Work Control Action Plan Detail

### 2) **Process:** scheduled completion date 11/00

<div>  Post Maintenance Testing program upgrade including ownership for making determinations, procedures, test documentation, and who/when performed.         </div>			
2.1.1	Develop draft outline of proposed new PMT testing program, responsibilities, and required new/revised procedures	Shalabi/Bergren	09/07/2000 In-Progress
2.1.2	Obtain comments/incorporate from Engineering, Operations, Maintenance, and Work Control	Shalabi/Barlok	09/01/2000
2.1.3	Develop and approve implementation schedule for incorporating revised process	Poirier/Ferrick	10/01/2000
2.1.4	Complete implementation schedule as approved	Poirier/Ferrick	TBD
<div>  SAO-204, Work Control Process procedure (Revision 19) upgrade, associated computer/support upgrades (tagging, minor maintenance expansion,) and station training.         </div>			
2.2.1	Complete final draft of Revision 19	Benjamin	11/22/1999 Complete
2.2.2	Obtain Department manager/SNSC approval for Rev 19 of SAO-204	Benjamin	01/13/2000 Complete
2.2.3	Develop Training materials for station awareness of revision	Benjamin	01/15/2000 Complete
2.2.4	Conduct training of appropriate station staff	Benjamin	01/30/2000 Complete
2.2.5	Revise SAO-251 to integrate with SAO-204 revision	J. Dorn	01/30/2000 Complete
2.2.6	Revise SAO-105, and appropriate OADs to integrate with SAO-204 revision	Ferrick	01/30/2000 Complete
2.2.7	Revise SAO-112 to integrate with SAO-204 revision	Russell	01/30/2000 Complete
2.2.8	Incorporate required changes to PPMIS Tables	Benjamin	01/15/2000 Complete
<div>  Working with IP3, identify suitable "reference" plant work management system to replicate at both sites including procedures, computer software, training, and staffing.         </div>			
2.3.1	Identify core team members from IP2 and IP3	Shalabi/Poirier	07/01/2000 Cancelled
2.3.2	Conduct Benchmarking of best industry practices	Shalabi	12/15/2000 In Progress
2.3.3	Complete INPO Assistance Visist with core team regarding Work Management process	Shalabi	09/01/2000 Deffered 2001
2.3.4	Prepare an action plan, and identify budget requirements to replace the Work Management PPMIS software	Shalabi	10/01/2000 Cancelled
<div>  Improve work process documentation by consolidating all requirements, expectations, and accountabilities into a single work process manual and distribute/control the manual electronically.         </div>			
2.4.1	Design an electronic distribution and control method for the consolidated Work Process Manual	Shalabi	07/15/2000 Complete
2.4.2	Develop, approve and distribute the requirements for the administration and control of the Work Process Manual	Shalabi	07/15/2000 Complete
2.4.3	Develop an initial table of contents for the Work Process Manual	Shalabi	07/15/2000 Complete
2.4.4	Develop "Introduction" Chapter directives for the Work Process Manual	Shalabi	07/15/2000 Complete
2.4.5	Develop "Glossary of Terms" Chapter directives for the Work Process Manual	Shalabi	11/15/2000
2.4.6	Develop "Initiation" Chapter directives for the Work Process Manual	Healy	11/15/2000
2.4.7	Develop "Planning" Chapter directives for the Work Process Manual	T. Poirier/Santis	11/15/2000
2.4.8	Develop "Scheduling" Chapter directives for the Work Process Manual	Cubeta	11/15/2000
2.4.9	Develop "Execution" Chapter directives for the Work Process Manual	Cubeta	11/15/2000
2.4.10	Develop "Closeout/Analysis/Review" Chapter directives for the Work Process Manual	T.Poirier/Ops	11/15/2000
2.4.11	Develop "Continuous Improvement" Chapter directives for the Work Process Manual	T.Poirier	11/15/2000
2.4.12	Develop "Data" Chapter directives for the Work Process Manual	T.Poirier/Shalabi	11/15/2000
2.4.13	Revise SAO-204 to eliminate details contained in Work Process Manual	Shalabi	11/30/2000
2.4.14	Revise SAO-251 to eliminate details contained in Work Process Manual	T. Poirier	11/30/2000
2.4.15	Revise SAO-105 to eliminate details contained in Work Process Manual	Ferrick	11/30/2000
2.4.16	Revise SAO-112 to eliminate details contained in Work Process Manual	Russell	11/30/2000
2.4.17	Obtain Contractor support/services to assist in project	Shalabi	09/15/2000 In-Progress

## Indian Point - Work Control Action Plan Detail

<div> <div>Upgrade Primavera P3 software performance to allow multiple users in projects.</div> <div> <div>2.5.1 Evaluate/determine potential solutions to slow software response problems</div> <div>2.5.2 Develop/determine plan of action for selected solution</div> </div> </div>				Gillespie/Huestis	12/15/1999	Complete
				Gillespie/Huestis	01/15/2000	Complete
<div> <div>Fill a Work Process Coordinator position that facilitates the resolution of process changes as the work management process matures.</div> <div> <div>2.6.1 Post Job Opening</div> <div>2.6.2 Interview/select candidate</div> <div>2.6.3 Prepare training plan/schedule for job incumbent</div> <div>2.6.4 Complete indoctrination of job incumbent</div> </div> </div>				Gillespie	01/15/2000	Complete
				Gillespie	02/17/2000	Complete
				Gillespie	09/07/2000	In-Progress
				Gillespie	06/15/2000	
<b>3) Accountability: scheduled completion date 11/00</b>						
<div> <div>Upgrade work week critiques including, report detail/content, performance statistics/metrics, meeting conduct/attendance, and use of CRS.</div> <div> <div>3.1.1 Obtain Duty Work Week Manager Cell Phone</div> <div>3.1.2 Develop work process manual directive outline expectations for the performance of weekly critiques</div> <div>3.1.3 Obtain industry benchmarking data regarding critiques and identify improvement opportunities - Self Assessment</div> <div>3.1.4 Develop trend methods using CRS and prepare trend reports for common cause schedule impacts for line managers</div> </div> </div>				Cubeta	12/01/1999	Complete
				Cubeta	12/15/2000	
				Cubeta	12/15/2000	
				Cubeta	12/15/2000	
<div> <div>Improve performance metrics – revise and implement metrics that align to personnel and work group accountabilities.</div> <div> <div>3.2.1 Develop T-6 to T-2 planning preparation performance metrics</div> <div>3.2.2 Develop T-2 to T-0 planning preparation performance metrics</div> <div>3.2.3 Develop Average Age of work orders, by category reports</div> <div>3.2.4 Develop Outstanding PMTs and average Age reports</div> <div>3.2.5 Develop Craft Utilization/Productivity weekly reports</div> <div>3.2.6 Develop Work Control Department CRS weekly metrics (open, coming due, overdue, evaluations and ICAs)</div> <div>3.2.7 Availability of Work Scheduled to Craft T-12 to T-0</div> <div>3.2.8 Identify areas of planning which need to be monitored</div> <div>3.2.9 Determine "critical" points in the work management process and develop metrics that monitor flow through critical points - self assessment activity</div> </div> </div>				Shalabi	09/15/2000	In-Progress
				Shalabi	10/01/2000	
				Shalabi	09/01/2000	In-Progress
				D. Poirier	06/15/2000	Complete
				Shalabi	10/20/2000	
				D. Poirier	06/15/2000	Complete
				Comp. Analyst	10/30/2000	
				Shalabi	11/01/2000	
				Shalabi	11/01/2000	
<div> <div>Identify, develop, and maintain work management reports that meet the needs of the customers.</div> <div> <div>3.3.1 Job Completion Rates by Craft, and exception reports</div> <div>3.3.2 Self Assessment Activity</div> </div> </div>				Cubeta	04/01/2000	Complete
				Cubeta	12/01/2000	
<div> <div>Clarify ownership and responsibilities for Preventive Maintenance, PDM, and Surveillance programs between WC/Eng/MT/Ops.</div> <div> <div>3.4.1 Determine if ICPM's require PM Task Sheets to be developed - yes</div> <div>3.4.2 For required ICPM's, Develop PM Task Sheets for each ICPM</div> <div>3.4.3 Update PM Program (PPMIS) to include ICPM's</div> <div>3.4.4 Incorporate ICPM Task Sheets into SAROS</div> </div> </div>				D. Poirier/Sys E	02/01/2000	Complete
				Chinoran/Sys En	10/01/2000	In-progress
				Chinoransky	11/01/2000	
				Chinoransky	10/15/2000	

## Indian Point - Work Control Action Plan Detail

3.4.5	Determine business rules for which repetitive activities will require work orders	Barlok/Shalabi	06/01/2000	Complete
3.4.6	Revise Work Management databases (I.e., Test95, PPMIS PM Program) to reflect business rules	Chinoransky	11/01/2000	Complete
3.4.7	Revise SAO-250 to include ownership & responsibilities for all repetitive activities programs (not just PMs)	Chinoransky	12/01/2000	
3.4.8	Update PM Program (PPMIS) to include all PDM activities	Chinoransky	07/01/2000	Complete
3.4.9	Generate PDM Work Orders to cover PDM activities which will be due within 6-months	Chinoransky	08/01/2000	Complete
☞	Develop/implement daily site management and teamwork package that communicates site priorities and schedules.			
3.5.1	Redesign Indian Point 0800 and 0630 meeting agenda to incorporate industry practices	Gillespie	12/01/1999	Complete
3.5.2	Develop Production measures/reports that continuously display the stations production performance	Gillespie	12/01/1999	Complete
3.5.3	Expand "Special Topics" to include station issues that management needs to continuously monitor	Gillespie	01/30/2000	Complete
3.5.4	Reassess effectiveness of meeting changes and develop improvement action plans-2nd QTR Self-Assessment	Cubeta	12/01/2000	
3.5.5	Designate a single owner for the preparation and management of meeting Packages	Cubeta	04/15/2000	Complete
3.5.6	Determine feasibility of distributing packages electronically daily	Cubeta	02/01/2000	Cmplt/Revisit
☞	Hire a work management Computer Analyst for report writing/database management, and as an interim measure to make the IP2 computer systems work more effectively and efficiently.			
3.6.1	Post Job Opening	Gillespie	01/15/2000	Complete
3.6.2	Interview/select candidate	Shalabi	06/01/2000	In-Prog/Redo
3.6.3	Prepare training plan/schedule for job incumbent	Shalabi	07/01/2000	Complete
3.6.4	Complete indoctrination of job incumbent	Shalabi	08/01/2000	
☞	Designate a Supervising Work Week Manager to establish and maintain consistent procedures/expectations for performance.			
3.7.1	Develop Position Guide addendum	Gillespie	01/15/2000	Cancelled
3.7.2	Interview/select candidate	Gillespie	02/01/2000	Cancelled
<b>4) Backlogs: scheduled completion date 09/00</b>				
☞	Establish clear accountability to provide each discipline work crew a resource loaded, stable, predictable work schedule with minimum last-minute assignments that fully utilizes crew resources.			
4.1.1	Establish an operations single point of contact and consistency in priority/schedule item management	Cubeta	11/01/2000	
4.1.2	Discipline section managers and Ops Shift Manager sign and provide approval of weekly schedule	Cubeta	10/01/2000	
4.1.3	Determine available space for staff additions	Gillespie/Weathe	07/01/2000	Complete
☞	Establish and maintain overall operating cycle and 52-week integrated schedule that incorporates all Surveillance, PM, and special plant evolution requirements.			
4.2.1	Establish improved system work window codes and project codes	Healy	07/15/2000	
4.2.2	Establish a team to check duplication and field validate the entire PPMIS backlog	Healy	07/15/2000	
4.2.3	Develop validation guidelines, training materials, and train the validation team	Healy	07/30/2000	
4.2.4	Complete validation of PPMIS work order backlog	Healy	09/30/2000	
4.2.5	Identify the backlog of Work Orders not entered into complete status which are the responsibilities of other dept	Healy	09/30/2000	
4.2.6	Track Work Order closure with appropriate performance indicators that identify responsible departments	Healy/Sahlabi	09/30/2000	
4.2.7	Develop and implement a maintenance backlog reduction plan for all maintenance categories	Healy	09/30/2000	

## Indian Point - Work Control Action Plan Detail

Expand integrated station schedule to include some "soft" activities. Initially expand to include Training, and Engineering support station work.			
4.3.1	Integrate Engineering support activities into weekly schedule	Cubeta	09/15/2000
4.3.2	Integrate Training requirements/resource impacts into weekly schedule	Cubeta	09/15/2000
Hire Schedulers to perform discipline scheduling (HM, I&C, OPS, Support).			
4.4.1	Post Job Opening	Gillespie	05/30/2000 In-Progress
4.4.2	Interview/select candidate	Gillespie	07/30/2000
4.4.3	Prepare training plan/schedule for job incumbent	Gillespie	08/30/2000
4.4.4	Complete indoctrination of job incumbent	Gillespie	09/30/2000
Hire a Unit Scheduler to integrate discipline schedules and maintain overall cycle schedule.			
4.5.1	Post Job Opening	Gillespie	05/30/2000 In-Progress
4.5.2	Interview/select candidate	Gillespie	07/30/2000
4.5.3	Prepare training plan/schedule for job incumbent	Gillespie	08/30/2000
4.5.4	Complete indoctrination of job incumbent	Gillespie	09/30/2000
Hire a Scheduling Supervisor that oversees and directs the development of discipline specific weekly and daily work schedules.			
4.6.1	Post Job Opening	Gillespie	05/15/2000 In-Progress
4.6.2	Interview/select candidate	Gillespie	07/15/2000
4.6.3	Prepare training plan/schedule for job incumbent	Gillespie	08/15/2000
4.6.4	Complete indoctrination of job incumbent	Gillespie	09/01/2000
Development and establishment of Forced Outage Scope, schedules, and implementation procedures			
4.7.1	Develop a Forced Outage Management Guide using Duane Arnold and Sequoyah stations as models	Cubeta	12/15/2000 In Progress
4.7.2	Develop schedules for different modes of operation as well as durations	Cubeta	12/30/1999 Complete
4.7.3	Perform weekly review of Forced Outage Work project-184	Cubeta	12/01/1999 Complete
4.7.4	Present Biweekly Forced Outage Readiness at 0800 Management Meeting	Cubeta	12/01/1999 Complete

### NOTE:

Due dates shown as "To Be Determined" (TBD) require additional staff work (defined in the detailed action plan) before full implementation of changes can be forecasted.

## Indian Point - Work Control Action Plan Detail

### **RESULTS TO BE ACHIEVED**

- \* Station "Meeting" efficiency/effectiveness improvements (Topics/Time goal = 1.0)
- \* Surveillances "in-grace" essentially eliminated (LT or EQ 2)
- \* Overall station backlog trend improving, and contents well understood (CM LT 200; OTR LT 1000; AVG AGE of CM LT 6 months; AVG AGE of OTR LT 12 months)
- \* Operator burdens/distractions reduced (CCRDI's, Operator Work Arounds, and TFCs greater than 6 months)
  - CCRDI's LT or EQ 20
  - Operator Work Arounds LT or EQ 8
  - TFCs greater than 6 months LT or EQ 20
- \* Availability of work for weekly schedules increased (GT or EQ 50 CM/OTR "Scheduled" WO's per week to HM; 15 to I&C)
- \* Job completion rates increased (GT or EQ 90%)
- \* Craft utilization/productivity increased (GT or EQ 3.0 based on All Sched Acty/MT Craft)
- \* Backlog of outstanding PMTs eliminated (Zero PMTs outstanding GT 30 days of job Cmpl't)
- \* Engineering support needed to plan station work identified and scheduled
- \* Station understanding of production standards and work management procedures/processes well established.
- \* Staff work completed that is necessary to implement a multimillion dollar work management software and process upgrade in early 2001.
- \* Improved performance in implementation of Condition Reporting System (initiation of CRS items, and in addressing CRS items in a timely fashion). (Zero overdue CRS items in Work Control)
- \* Improved LCO and Maintenance Rule Risk significant system out of service times. (Baseline Data created)
- \* Improved Human Performance

# Maintenance Improvement Plan

**Senior Management Sponsor: R. Masse**

**Plan Manager: T. Poirier**

## **Introduction:**

Indian Point 2 Maintenance Department performance must be improved to support safe, reliable, long-term operation and maintenance of the plant. Maintenance management, programs, processes and procedures must be more effective, as there are a number of management, organizational, training, and administrative issues that are seriously impacting the ability of people to do their jobs. Following are areas for improvement that describe the primary concerns facing Maintenance. This Maintenance Improvement Plan describes the actions needed to address these areas for improvement.

## **Areas for Improvement:**

1. Training  
Maintenance Management does not take active ownership of the training and qualification programs for Maintenance personnel. The lack of adequate numbers of qualified workers, is a major factor in the inability to resource-load and implement a predictable work schedule.
2. Instrumentation and Controls Preventive Maintenance Program  
Current preventive maintenance procedures do not support an effective preventive maintenance program. Instrumentation and Controls preventive maintenance activities are not currently scheduled by Work Control and many will be coming due for accomplishment.
3. Planning Work Packages  
Work packages are not consistently of a high quality. No planning standards exist for Instrumentation and Control work. An insufficient amount of planned work is currently available to support high worker productivity and improving plant materiel conditions.
4. Performance Indicators  
There is currently no set of performance indicators to provide adequate visibility of work package timeliness and quality, measures of work productivity, training and qualification progress, and other work management issues.
5. Standards and Expectations  
Although technical standards for selected work exist in various documents, a clear set of Maintenance Standards and Expectations for worker performance does not exist to support day-to-day work situations or in making job observations and coaching.
6. Work Management  
An organizational commitment to a predictable, resource-loaded schedule that results in proper craft utilization and improves plant materiel condition is not apparent.
7. Management Effectiveness  
The maintenance management team is spending insufficient time on internal Maintenance Department issues. Clear reporting arrangements and a clear accountability structure for the department does not exist.

## **Maintenance Improvement Plan**

### **Expected Results:**

1. Maintenance management and supervision provides continuously improving leadership. Management standards and expectations are clearly articulated. All personnel understand their roles, responsibilities, and accountabilities. Maintenance interfaces with other plant organizations is improved through effective communications.
2. The Maintenance Organization utilizes effective performance indicators to monitor work and continuously improve performance.
3. The entire Maintenance Organization has an ownership for all training and qualification programs and understands their importance.
4. Maintenance work packages are developed well in advance of scheduled work, are walked down maintenance personnel, provide consistent and clear instructions, reduce human errors and provide reliable equipment performance.
5. Work Control and Maintenance Planning processes provide effective work management to support efficient work practices. Maintenance work backlogs are reduced and maintained within established goals.
6. Full utilization of the talent pool results in areas of improvement being addressed and a culture of continuous improvement being adopted by Maintenance.
7. Maintenance is organized to effectively support Operations and staffed with a sufficient number of qualified personnel to perform projected base work.

## Maintenance Improvement Plan

### Area for Improvement: 1 – Training

Owner: Vern Perry

Maintenance Management does not take active ownership of the training and qualification programs for Maintenance personnel. The lack of adequate numbers of qualified workers, is a major factor in the inability to resource-load and implement a predictable work schedule.

#### Contributing Factors:

- Recent assessments of Maintenance found no real evidence of “line ownership of training”.
- Maintenance managers and supervisors are unclear as to what line ownership of training looks like.
- Reporting relationships and roles and responsibilities are not clear in several areas.
- The training/qualification matrixes are cumbersome.
- Many mechanics and technicians lack basic or essential qualifications to perform tasks.
- There is no training and qualification program for Planners.
- Re-qualification training is no longer performed on a six-week cycle (or suitable alternative).
- Insufficient skills’ training is provided.

#### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation



**Action Plan:**

Actions	Owner	Start Date	Completion Date	Current Status
<p>1. Assign a dedicated team to condense, and simplify the Maintenance Qualification Matrixes. Insure consideration of the following Committee recommendations:</p> <ul style="list-style-type: none"> <li>Benchmark other utilities.</li> <li>Define responsibilities and accountabilities for updating matrices. (mechanical, electrical, and Instrumentation and Controls disciplines should use same format)</li> <li>Ensure matrix is easy to access and use.</li> <li>Incorporate multiple tasks.</li> <li>Include all surveillances.</li> <li>Validate existing qualifications. (grandfathered Qualifications. May not be applicable [i.e. rigging, confined space, scaffolding])</li> <li>Identify minimum number of qualified technicians for complex/critical tasks. (i.e. reactor logic tests, diesel overhauls, complex preventive maintenance activities)</li> <li>Include line management observations of on the job training/on the job evaluations.</li> <li>Team should include technicians, supervisors and training personnel.</li> <li>Perform periodic assessments of the task matrix.</li> </ul>	Naku / Kelly Spry	12-1-99	<p>4/1/00</p> <p>3/17/00</p> <p>3/17/00</p> <p>3/17/00</p> <p>3/17/00</p> <p>3/15/00</p>	<p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p>
<p>2. Revise the Maintenance re-qualification program to provide more appropriate training in support of craft needs. Insure consideration of the following Committee recommendations:</p> <ul style="list-style-type: none"> <li>Include more hands-on skills training, less discussion topics.</li> <li>Ensure input from line management is required.</li> <li>Evaluate difficulty, impact, and frequency of tasks performed as part of re-qualification index.</li> <li>Re-qualification of tasks are performed in conjunction with scheduled work.</li> <li>Develop a set of proficiency requirements for re-qualifications.</li> </ul>	Naku / Kelly	12/1/99	<p>4/1/00</p> <p>4/1/00</p> <p>4/1/00</p> <p>5/30/00</p> <p>Prior to next delivery</p> <p>Prior to next delivery</p>	<p>Complete</p> <p>Complete</p> <p>Complete</p> <p>Complete</p> <p>On-going</p> <p>On-going</p>

Actions	Owner	Start Date	Completion Date	Current Status
3. Develop a list of topics to be trained by performing tasks (Task Oriented Training). Obtain input from work groups.	Neville	12/1/99	4/1/00	Complete
4. Develop a process to track qualification status, including a Qualification Card for all personnel that lists required training with provisions for sign-offs when individual requirements are completed. Include provisions for promotional training.	Murphy	12/1/99	4/30/00	Complete
5. Develop a training and qualification program for planners. Insure consideration of the following Committee recommendations: <ul style="list-style-type: none"> <li>Utilize matrix format consistent with craft.</li> <li>Benchmark other utilities for their program.</li> <li>Perform task analysis of the job.</li> <li>Define requirements/experience required for planners.</li> <li>Include provisions for training and qualifying technicians as planners to plan their own work.</li> </ul>	Planning Manager	2/1/00	6/1/00	Overdue
6. Simplify and clearly define the on the job training/on the job evaluation process. Insure consideration of the following Committee recommendations: <ul style="list-style-type: none"> <li>Coordinate on the job evaluations with scheduled work.</li> <li>Assign responsibilities for on the job training/on the job evaluations to work groups. (including evaluation of prerequisites [training signs on the job training/on the job evaluation form last] )</li> </ul>	Perry	12/1/99	4/1/00	Complete
7. Improve continuing training programs to more effectively support needs of the craft. Insure consideration of the following Committee recommendations: <ul style="list-style-type: none"> <li>Establish a formal routine for structured training with management commitment and supervisor observations and accountability.</li> <li>Provide task-oriented training with routine input from work force.</li> <li>Utilize work group subject matter experts.</li> <li>Require critical feedback from attendees, and publish feedback.</li> <li>Provide provisions for supervisors to conduct training.</li> </ul>	Perry	1/1/00	7/1/00	Complete  Complete Complete Complete
8. Provide complete and timely training schedules. Schedule training one year in advance. Develop and publish performance indicators to monitor training schedule adherence.	Murphy	11/15/99	1/1/00	Complete

Actions	Owner	Start Date	Completion Date	Current Status
9. Institute and Communicate the promotional program requirements to incumbents. <ul style="list-style-type: none"> <li>Establish time frames for completion of initial training with accountability</li> <li>Schedule promotional prerequisites</li> <li>Schedule promotional testing</li> </ul>	Perry	12/1/99	12/1/00	On-going
10. Communicate training program requirements, methods and descriptions to all personnel affected.	Murphy	12/1/99	3/1/00	Complete
11. Establish technical training in supervisors functional areas of responsibility	Parker / O'Brien	12/1/99	12/1/00	Complete
12. Departments that require the training should allocate budgeted funding to training (pay for it)	Perry / Walsh	6/00	11/00	Complete
13. Establish and define Training Administrator responsibilities	Perry	1/1/00	3/1/00	Complete

## Maintenance Improvement Plan

### Area for Improvement: 2 – Instrumentation and Controls Preventive Maintenance Program      Owner: Erin Woody

Current preventive maintenance procedures do not support an effective preventive maintenance program. Instrumentation and Controls preventive maintenance activities are not currently scheduled by Work Control and many will be coming due for accomplishment.

Maintenance Management does not take active ownership of the training and qualification programs for Maintenance personnel. The lack of adequate numbers of qualified workers, especially Instrumentation and Controls technicians, is a major factor in the inability to resource-load and implement a predictable work schedule.

#### Contributing Factors:

- Higher priority work has taken a priority over preventive maintenance.
- Existing preventive maintenance procedures were prepared by contractors with little involvement by Con Ed technicians, and have not been validated nor used in the field.
- The work control process has not supported scheduling of preventive maintenance activities.
- Most preventive maintenance work was last accomplished during an extended outage, where time and resources were available.
- No systematic process exists to verify necessity, scope, and frequency of preventive maintenance activities.

#### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation

#### Action Plan:

Actions	Owner	Start Date	Completion Date	Current Status
1. Engineering evaluate the Instrumentation and Controls Preventive Maintenance task sheets with consideration for the following <ul style="list-style-type: none"><li>• Preventive maintenance frequency</li><li>• Preventive maintenance scope</li></ul>	Ventosa	12/1/99	12/1/00	On-going (agreement reached with system engineering)
2. Work Control schedules Instrumentation and Controls preventive maintenance activities	D. Poirier	12/1/99	2/1/00	Complete 2/25/00

3. Re-institute performance of Instrumentation and Controls Preventive Maintenance activities <ul style="list-style-type: none"> <li>utilize the existing process to verify and validate the preventive maintenance procedures</li> <li>establish verification and validation guidelines</li> </ul>	O'Brien	2/1/00	Complete	Complete  On-going Complete
4. Provide Instrumentation and Controls technical writer to Procedure group for the development and revision to I&C Procedures	Dorn	2/1/00	12/31/00	Complete 2/7/00
5. Consider establishment of a functional group for performance of preventive maintenance activities	O'Brien	12/1/99	1/1/00	Complete 1/5/00

## Maintenance Improvement Plan

### Area for Improvement: 3 – Planning Work Packages

Owner: PK Parker

Work packages are not consistently of a high quality. An insufficient amount of planned work is currently available to support high worker productivity and improving plant material conditions.

#### Contributing Factors:

- Work planners do not have a full-time supervisor/manager, and reporting relationships for the planners are not clear.
- Different standards exist for Electrical/Mechanical and Instrumentation and Controls work packages.
- There are no performance indicators to give visibility of work package timeliness and quality.
- There is no training or qualification for planners.
- There is not a large inventory of planned work available.
- Insufficient Instrumentation and Controls' planners are assigned.

#### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation

**Action Plan:**

<b>Actions</b>	<b>Owner</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Current Status</b>
1. Establish Maintenance Planning Manager position. Insure consideration of the following Committee recommendations: <ul style="list-style-type: none"> <li>Establish clear accountability and responsibility with in the planning organization</li> <li>Insure one planning standard with in the Maintenance department</li> <li>Dedicated planners to outage scope</li> </ul>	Parker	01/01/00	3/1/00	Overdue-Recruitment of I&C Planners continues to be an issue On-going Complete 2/1/00
2. Assign a dedicated team of planners and technicians with QA oversight to address the development or adoption of current planning standards established in the Maintenance Administrative Directive's and Instrumentation and Controls Administrative Directive's.	Planning Manager	3/1/00	8/1/00	Overdue
3. Increase Reservoir of Ready work. The committee suggests the use of the following internal resources: <ul style="list-style-type: none"> <li>Temporary Occupation Change Mechanics to planning positions</li> <li>Train present Instrumentation and Controls Technicians to plan.</li> <li>Re-institute Senior Nuclear Maintenance Technician title</li> </ul>	Parker	1/1/00	3/1/00	Complete 3/1/00 Complete 2/15/00 Overdue-With Human Resources for approval with Local 1--2
4. Establish expectations and standards for information included on the work order <ul style="list-style-type: none"> <li>Take advantage of work order categorization (i.e. tool pouch, minor maintenance)</li> </ul>	Gillespie	1/1/00	3/1/00	Complete 2/1/00
5. Incorporate Post Maintenance Testing in work packages prior to packages being deemed Ready to Work	Poirier / Ventosa	1/1/00	4/1/00	Complete
6. Establish a Feedback process that insures field comments are considered for inclusion into procedures, work packages, surveillances, and post maintenance test's and the originator is aware of the comments disposition.	Parker / O'Brien	1/1/00	4/1/00	Overdue-Communication to staff. Software has been developed, training is required.

7. Staff the procedure group with personnel in areas of technical competency (i.e. Instrumentation and Controls, Mechanical, Electrical, Administrative)	Poirier	1/1/00	2/7/00	Complete
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## Maintenance Improvement Plan

**Area for Improvement: 4 – Performance Indicators**

**Owner: John Dorn**

There is currently no set of performance indicators to provide adequate visibility of work package timeliness and quality, measures of work productivity, training and qualification progress, and other work management issues.

### Contributing Factors:

- Performance indicators are not generally developed and used by Indian Point 2 management to monitor performance and trends.
- There is little awareness of what high performing nuclear plants use to give visibility of work management issues to the production team and management.

### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation

### Action Plan:

Actions	Owner	Start Date	Completion Date	Current Status
1. Provide training on existing Performance Indicators so Maintenance Department personnel have an understanding of what they mean and how to access them.	Poirier	12/1/99	4/1/00	Overdue
2. Assign dedicated team to benchmark industry Performance Indicators <ul style="list-style-type: none"><li>• Identify Performance Indicators for Planning</li><li>• Identify Performance Indicators for Production</li><li>• Establish Training Performance Indicators to include a Qualification Indicator</li></ul>	Boardman	12/1/00	8/1/00	Overdue

<p>3. Performance Indicator structure should be established that clearly identifies performance at the following levels:</p> <ul style="list-style-type: none"> <li>• Department</li> <li>• Work Crew</li> </ul>	Dorn	12/1/00	8/1/00	Overdue
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## Maintenance Improvement Plan

### Area for Improvement: 5 – Standards and Expectations

Owner: Tom Poirier

Although technical standards for selected work exist in various documents, a clear set of Maintenance Standards and Expectations for worker performance does not exist to support day-to-day work situations or in making job observations and coaching.

#### Contributing Factors:

- Many supervisors and workers are unclear of what the Maintenance Department work practice standards are.
- Some work practice standards exist, but are embedded in a large volume of administrative documents, and not useful in day-to-day work situations.
- Standards and expectations are not routinely communicated or reinforced through job observations.

#### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation

#### Action Plan:

Actions	Owner	Start Date	Completion Date	Current Status
1. Consolidate Maintenance Sections Technical Standards.	Poirier	1/1/00	12/1/00	On-going
2. Assign a dedicated team to benchmark other utilities or corporations and develop a pocket reference of standards and expectations.	Poirier	1/1/00	4/1/00	Complete
3. Establish expectations for the use of the Management Observation Program. <ul style="list-style-type: none"><li>• Establish a tracking mechanism with performance indicators</li></ul>	Parker / O'Brien	12/15/99	12/1/00	On-going

## Maintenance Improvement Plan

### Area for Improvement: 6 – Work Management

Owner: Patrick O'Brien/PK Parker

An organizational commitment to a predictable, resource-loaded schedule that results in proper craft utilization and improves plant materiel condition is not apparent.

#### Contributing Factors:

- Equipment problems and distractions repeatedly challenge operations, most of which have had a long history.
- There is not an organizational commitment to providing a predictable, resource-loaded schedule.
- Expectations of the various work groups for each other are very low, with little ownership and accountability.

#### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation

#### Action Plan:

Actions	Owner	Start Date	Completion Date	Current Status
1. Work Week Critique <ul style="list-style-type: none"><li>• Communicate results of critique with work crews</li><li>• Publish critique minutes in morning plant status E-mail</li><li>• Establish expectation for timeliness of morning meeting minutes</li><li>• Utilize critique minutes as an agenda for face to face discussions with Manager</li></ul>	O'Brien / Parker	12/01/99	01/15/00	Complete

2. Define Work Week Manager Roles, Responsibilities and Authority <ul style="list-style-type: none"> <li>• Work week Managers follow chain of command when problems arise</li> <li>• Establish expectation preventing Work Week Managers from working one level below (perceived schedule pressure)</li> </ul>	Gillespie	12/1/99	1/31/00	Complete
3. Resource Load Schedule <ul style="list-style-type: none"> <li>• Establish and publish a single Schedule that demonstrates the resources available: (i.e. Human Resource Schedule , Training schedule , Station 12 week Schedule and the station calendar )</li> <li>• Establish a database that tracks the amount of resources it takes to perform a task.</li> </ul>	Gillespie	1/1/00	6/1/00	Overdue
4. Utilize Fix It Now to fullest <ul style="list-style-type: none"> <li>• Instrumentation and Controls to Fin</li> </ul>	O'Brien / Parker	12/1/99	1/1/00	Complete
5. Establish a system to supplement 12 - week schedule that enables work crews to utilize available work from parking lots A&B.	Gillespie / Parker / O'Brien	12/1/99	1/1/00	Complete

## Maintenance Improvement Plan

### Area for Improvement: 7 – Management Effectiveness

Owner: Tom Poirier

The Maintenance management team is spending insufficient time on internal Maintenance Department issues. Clear reporting arrangements and a clear accountability structure for the department does not exist.

#### Contributing Factors:

- Several managers are currently in new, temporary, or acting positions.
- Managers appear too preoccupied with meetings and external affairs and do not attend to Maintenance Department issues.
- No fixed crews exist in Instrumentation and Controls.
- Reporting relationships for some supervisors are unclear.
- Planners do not have a supervisor, and it is not clear to them to whom they report.

#### Source Documents:

- Maintenance Self-Assessments (January 1998 to present)
- NRC Inspection Reports (January 1999 to present)
- September 1999 Martin/Sigmon Maintenance Assessment
- QA Audit Reports (January 1999 to present)
- April 1999 INPO Plant Evaluation

#### Action Plan:

Actions	Owner	Start Date	Completion Date	Current Status
1. Establish a management skills training program <ul style="list-style-type: none"><li>• Soft skills training</li><li>• Resource utilization training</li></ul>	Murphy	12/1/99	1/31/00	Complete
2. Maintain stability and permanence in Management positions <ul style="list-style-type: none"><li>• Commit to stay in position long enough to see results</li><li>• 3 year plan</li></ul>	Poirier	12/1/99	1/31/00	Complete

3. Maintenance organizational structure is unclear <ul style="list-style-type: none"> <li>• Develop organizational chart defining the various section relationship</li> <li>• Establish consistency among titles</li> <li>• Define Roles and Responsibilities</li> </ul>	Poirier	1/1/00	4/1/00	Complete
4. Management Availability <ul style="list-style-type: none"> <li>• Reduce the amount of Meetings</li> <li>• Establish supervisory accountability for responsiveness to craft.</li> <li>• Establish Management scheduled office time.</li> <li>• Establish routine/scheduled face to face shop talks with work crews and administrative staff</li> </ul>	Poirier	12/1/99	1/31/00	Complete
5. Maintenance Work Groups <ul style="list-style-type: none"> <li>• Assign personnel to a permanent supervisor</li> <li>• Supervisor and personnel rotate together</li> <li>• Consider assigned areas of functional responsibility to work groups (i.e. surveillance's, preventive maintenance activities, Central Control Room Deficiencies etc.)</li> </ul>	Parker / O'Brien	1/1/00	4/1/00	Complete
6. Define Roles, Responsibilities and Authority <ul style="list-style-type: none"> <li>• Define the Coordinators role to remove barriers encountered by first line supervisors to accomplish scheduled work.</li> <li>• Establish expectation preventing Coordinators / Managers from working one level below and Micro-managing work crews.</li> </ul>	Parker / O'Brien	12/1/99	4/1/00	On-going
7. Utilize Temporary Occupation Change process to cover supervision for training and vacations. <ul style="list-style-type: none"> <li>• Determine why Senior craft persons do not desire promotion to management.</li> </ul>	Poirier	12/1/99	1/31/00	Complete

# MATERIAL PROCUREMENT

10/25/0

Strategic Goal	Workgroup Goal	Owner	Implementing Action	Measure	Due Date	Status	Completed Date
Conduct 2000 RFO on time and within budget.	Assure that no scheduled job is not completed due to the lack of material or implementing services.	Phillips	1. Assure that all material for scheduled work is ready for use by March 31, 2000. 2. Assure that all service contracts are in place by March 31, 2000	Work Order on Material Hold and Materials tracking System	3/31/00	Complete	Working due to advancement of outage start date.
Upgrade information systems	Investigate the system used by IP#3 for their Procurement Engineering function.	Zitzlesberger	Investigate the system used by IP3 Procurement Engineering and develop a recommendation regarding the adoption of their system including a budget estimate.	Recommendation and Budgets estimate complete.	8/1/00	Open	
Upgrade information systems	Upgrade and to the extent practical integrate the various systems used by the Procurement Engineers and Purchasing.	Mayer	1. Place the PQA Vendor Evaluations and NUPIC Evaluations on a drive available to all Procurement Engineers. 2. Integrate the vendor evaluation request into the programs commonly used by the Procurement Engineers. 3. Develop a single platform for Procurement Engineers data and forms to make their work more efficient.	Completion of items 1 and 2 and a plan and budget for 3.	12/1/00	Open	
Develop fully qualified plant personnel	Have personnel qualified to perform new fuel inspection.	Landwaard	Have two receipt inspectors trained at Westinghouse to perform new fuel inspection.	Completion training.	2/15/00	Complete	1/27/00
Develop fully qualified plant personnel	Assure that more station personnel are trained in the elements of the Procurement Process.	DiUglio	Provide at least four training classes for station personnel on the Procurement Process. Preferably two of those classes will be offered prior to the RFO. Revised down to two from four due to the availability of open class time.	Presentation of the four classes.	12/1/00	Open One class given 4/3-4/00	
Develop fully qualified plant personnel	Assure that all personnel in the Material Procurement department receive training in 2000.	Phillips	Have all Material Procurement personnel receive at least three days of technical or administrative training in addition to mandated training. Examples would be for people too receive Plant System training or Word training.	All department personnel have received the three days training.	12/1/00	Open	
Optimize the Work Control process.	Develop and begin implementation of a plan for a Contract Administration function.	Phillips	1. Develop a plan for creating a Contract Administration function. 2. Benchmark at least two other utilities or companies considered world class in Contract Administration. 3. Initiate the Contract Administration function.	Completed the Benchmarking , plan development and begun implementation.	10/1/00	Open	
Optimize the Work Control process.	Benchmark other utilities or businesses to identify improvements to the supply chain process.	Grehl	Benchmark at least three other businesses considered world class in supply chain area and identify at least three specific action items for improvement.	Completing the benchmarking and identifying the areas of improvement	12/1/00	Open	
Improve Communications	Provide more information to all station personnel on the procurement process	DiUglio	Add at least three features to the Material Procurement WEB Site, e.g. Invoice Tracking, Template Specifications, How to Instructions.	Completing the additional features to the WEB Site	9/31/00	Open	
Improve Communications	Provide more information to all station personnel on the procurement process	DiUglio	Develop a plan and Budget to include Video process features in the Material Procurement WEB site.	Plan and Budget ready for use in 2001 Budget process.	8/15/00	Open	
Improve Self Assessments	Conduct at least one outside assisted self-assessment.	Grehl	Using an outside consultant or other utility conduct an assessment that focuses on either cycle time improvement or improved cost savings.	Completing the assessment and identifying areas for improvement.	8/1/00	Open	
Improve Self Assessments	Conduct the required self-assessments.	Phillips	Conduct at least three self-assessments using the Performance Improvement Through Teams (PITT) process.	Completing the assessments and identifying areas for improvement.	12/1/00	Open	



# MATERIAL PROCUREMENT

Strategic Goal	Workgroup Goal	Owner	Implementing Action	Measure	Due Date	Status	Completed Date
Operate within Plant budget	Develop a plan for parts level declassification's.	Zitzelsberger	Evaluate how we might reinitiate the declassification of parts of Class A components and develop a plan for implementation.	Publication of a plan.	12/1/00	Open	
Operate within Plant budget	Reduce IP carrying costs through inventory reduction.	Owen	Dispose of at least of stock materials and in order point reductions.	Achieving projected disposals and reductions.	12/1/00	Open	
Operate within Plant budget	Make savings in the purchasing process.	Grehl	Obtain at least seven percent saving on purchases place in 2000.	Achieving the projected savings.	12/30/00	Open	
Continue IP2/IP3 Synergies	Continue the process of integration in the Purchasing functions.	Grehl	Develop single procedures for Purchasing.	Complete the drafting of a single set of procedures.	12/1/00	Open	
Continue IP2/IP3 Synergies	Initiate the process to integrate the Procurement Engineering and receipt inspection functions.	Zitzelsberger	Investigate the IP3 Procurement Engineering and Receipt inspection Process and propose how we could develop a single process. The Entergy process should be included in the evaluation.	Completion of the evaluation and the proposal of a plan of action.	8/1/00	Open	
Continue IP2/IP3 Synergies	Initiate the process to integrate the Warehouse functions.	Owen	Investigate how the Warehouse functions and propose how we could develop a single process. The Entergy process should be included in the evaluation.	Completion of the evaluation and the proposal of a plan of action.	8/1/00	Open	
Continue IP2/IP3 Synergies	Initiate the process to integrate the Materials Management functions.	Owen	Investigate how the Materials Management functions and propose how we could develop a single process. The Entergy process should be included in the evaluation.	Completion of the evaluation and the proposal of a plan of action.	8/1/00	Open	

## COMMUNICATIONS

DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
INTERNAL COMMUNICATIONS	Support and reflect the Indian Point 2 Mission to station personnel through timely, effective methods of all methods of communications. Maintain high standards of all methods of communications and provide electronic feedback through hyperlink – measure success of Newsletter by submitting to local Newsletter agency for review	Brovanski DelSonno/Monahan		On-going  Towers-Perrin reviewed on 5/1/00
	Encourage use of electronic communication methods including Indian Point 2 web site and make necessary enhancements that emphasize timeliness, preserving the environment, cost effectiveness and easy access for employee interaction	DelSonno/Monahan	4/30/00	3/3/00 – Additional kiosks placed throughout facility on & off site
	Provide timely accurate information to employees utilizing appropriate communication vehicles(email, web site, newsletter, special updates, electronic message boards, screen saver messages on kiosks) in anticipation of and response to major issues, concerns and rumors	DelSonno/Monahan	Screen Saver message due 6/30/00	On-going Unable to utilize screen saver message system
	Organize communication liaisons from various operating groups to provide human interest stories and special event projects during outage periods	DelSonno	9/30/00	On-going
	Assist employees with station tours, information requests and encourage use of audio visual equipment for presentation to school groups and organizations	Brovanski/DelSonno		On-going
	Develop Alert Documentation book for senior management use and preparation for testimony	Brovanski		3/15/00
	Implement top priority procedures with senior management to inform employees of "breaking news" stories prior to public release	Brovanski/DelSonno		On-going

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DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
<b>INTERNAL COMMUNICATIONS CONT'D.</b>	Create and implement successful Outage Communication Plan that reflects Indian Point 2 vision and mission of safety and teamwork	DelSonno	1/31/00	Implementation during forced outage of 2/15/00
	Create and Implement successful Steam Generator Replacement Communication Plan	DelSonno		8/15/00
	Communicate regularly with Indian Point 2 senior management and receive direction/focus for communication with employees and the public – Town Hall Mtgs.	Brovarski/ DelSonno		On-going
	Ensure that employee interest, safety, technical achievements are publicized through Corporate Communications on the company web page – Con Ed 2000	DelSonno		On-going
	Attend/participate in business forums, community and cultural events of strategic interest and provide accurate information on Indian Point 2 and nuclear power via Chamber of Commerce network	Brovarski/DelSonno		On-going
<b>EXTERNAL COMMUNICATIONS</b>	Support community and cultural events through funding exhibiting a “good neighbor” policy	Brovarski DelSonno		On-going
	Provide periodic updates to local officials via telephone, facsimile and one on one meetings; assist in addressing priorities and concerns in a timely manner by directing area of concern to subject matter expert	Brovarski DelSonno		On-going
	Participate in national and regional meetings promoting nuclear power – NEI/WIN	Brovarski		On-going Attend NEI conference in Sept. and October
	Maintain annual/periodic review of Media Relations JNC plan for changes/improvements work with Emergency Planning and Media Relations for all changes	Brovarski/Media Relations/ Emergency Planning	9/15/00	On-going – currently scheduled to incorporate JNC plan into EP with consultant acquired by EP funds

# COMMUNICATIONS

DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
<b>EXTERNAL COMMUNICATIONS CONT'D.</b>          <b>NEWS MEDIA RELATIONS</b>	Support efforts of Emergency Planning for scheduled drills and training and communicate to station personnel via various communication methods	Brovarski DelSonno/Monahan		On-going
	Update computer equipment and install networking system at JNC	Brovarski/Lucashuk	9/30/00	
	Seek corporate support of not-for-profit events that will foster "good will" within the four counties surrounding Indian Point 2	Brovarski	On-going	Peekskill Cortlandt chamber events Hudson Valley Hospital fundraisers 4/30/00 Scheduled for early fall in conjunction with IP3 in 2001
	Upgrade audiovisual capabilities of EAL's for use at JNC	Brovarski/Monahan		
	Host "Elected Official's Day" in conjunction with NYPA annually as a method of networking and education of nuclear power	Brovarski DelSonno	On-going	
	Establish and cultivate relationships with local media to encourage positive news stories, i.e. Cortlandt Observer, Peekskill Herald and Women's News	Brovarski/ DelSonno		Cortlandt Observer/ Peekskill Cortlandt Herald
	Partner with Indian Point 3 on "newsworthy stories" on areas of joint interest	Brovarski/ DelSonno		On-going
	Provide 24/7 support to Corporate Media Relations with station specific information	Brovarski DelSonno		On-going
	Host "Media Day" annually as a networking and education session on nuclear power and familiarity with Joint News Center	Brovarski DelSonno		Scheduled with IP 3 for early November '00

# COMMUNICATIONS

DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
OUTREACH EDUCATION	Develop various academic levels of nuclear energy presentations for local communities, schools, professional societies, organizations and foreign visitors	Specialist		Pending till position filled
	Organize a voluntary "Ambassador Program" of Indian Point 2 employees who will support station tours	DelSonno/ Specialist		6/30/00 Pending till pos. filled
	Provide annual training for Ambassador Program on nuclear power	DelSonno/ Specialist		Pending till pos. filled
	Upgrade audio visual communications in auditorium for use by company personnel and community groups	Monahan	3/31/00 – delayed – new date 8/15/00	Completed - 8/15/00
	Respond to various student requests for nuclear information	DelSonno		On-going
	Coordinate with local Navy recruitment office to provide career information and tours with Indian Point 2 personnel	Brovarski/Specialist		5/31/00
	Develop touch screen programs on nuclear power for use by visitors and employees	Specialist/ Monahan		Pending till position filled
	Act as resource center for schools on nuclear information	Specialist		Pending till position filled
	Provide classroom presentations upon request	Brovarski/Specialist		On-going

# COMMUNICATIONS

DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
KEY EVENT COMMUNICATIONS	Provide 24/7 media related support to Corporate Media Relations	Brovarski/ DelSonno		On-going
	Advise senior management of need for briefings and communications with employees to discuss heightened conditions or serious events immediately after station condition is stable and or plan of action has been developed	Brovarski/ DelSonno		On-going
	Utilize subject matter experts and senior management to acquire information during a station emergency condition to support accurate media information	Brovarski/ DelSonno		On-going
	Monitor news media reporting and inform Corporate Media Relations of inaccuracies	Brovarski/ DelSonno		On-going
	Develop talking points for presentations and or station status during emergency conditions	Brovarski/ Specialist		On-going
	Oversee operation of facility including maintenance support and upgrades	Brovarski		On-going
	Manage and schedule use of facility by station personnel and outside organizations – Goal – use by outside organization once a month	Brovarski	Pending Approval of CNO and completion of upgrade	
INDIAN POINT ENERGY EDUCATION CENTER	Coordinate scheduled tours to community groups, schools and professional societies – Goal - three tours per month	Brovarski/Specialist		Pending till position filled

# COMMUNICATIONS

DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
<b>INDIAN POINT ENERGY EDUCATION CENTER CONT'D.</b>	Develop and maintain tracking mechanism for visitor/tour traffic	Specialist	Pending till position filled	NEI/WIN
	Develop educational community and professional mailing list for invitation for educational tour/presentation of Indian Point 2 – Goal - mailing list of four county area schools, community and civic groups	Specialist	Pending till position filled	
	Develop Indian Point 2 literature and information package for distribution upon request using NEI publications	Specialist	Pending till position filled	
	Benchmark with world class nuclear facilities for educational exhibits in 2001	Specialist	Pending till position filled	
	Attend industry workshops on nuclear issues to maintain high level of information			
	Schedule Communication Liaison assignments for 2001 for special newsletter articles	Brovarski/ Sr. Specialist	On-going Pending till position filled	
	Benchmark with Con Edison Times production staff	DelSonno	9/30/00	
	Contact INPO/NEI for criteria of internal communication methods	DelSonno	9/30/00	
	Develop literature inventory for literature distribution and tracking	DelSonno	9/30/00	
		DelSonno	9/30/00	

# COMMUNICATIONS

DESCRIPTION	ACTION	RESPONSIBLE PARTIES	DATE DUE	COMPLETED
<b>INDIAN POINT ENERGY EDUCATION CENTER CONT'D.</b>	Arrange for display of all literature in Command Post with instructions on how to acquire	DelSonno	9/30/00	
	Set methodology for senior management to report information to internal communications immediately after important meetings and presentations for station personnel, i.e. NRC, INPO PSC meetings	DelSonno	9/30/00	
	Incorporate information in morning highlights, corporate highlights, town hall meetings and station newsletter	DelSonno	9/30/00	
	Provide plan for Business Expo 2000	DelSonno	9/30/00	



**INDIAN POINT - COMPUTER APPLICATION**

Response to 15

Average Human Resources		(\$000) O & M
<u>M</u>	<u>W</u>	

**GOAL/MISSION**

Leverage Information Technology as a key part of the Station's business strategy to operate more efficiently; reliably and safely; reduce cost; improve communications and facilitate a closer IT link to plant operations by integrating successful information systems across Indian Point. Our goal is to balance new development with the maintenance of existing systems. We will provide the best new technologies available, to help station personnel become more productive. We will maintain a high level of user support to ensure that our software and hardware remains easy to use and achieve these goals while maintaining cost efficiency and environmental excellence.

**ASSESSMENT**

Assessments for Computer Applications have been conducted by Northeast Energy Alliance, internal QA, Utility Simulator User Group and user feedback via our support center and Help Desk. In addition, we have benchmarked our processes and systems against ot

1. The existing technical support functions lack state-of-the-art capability, tools and expertise.
2. Existing legacy systems are difficult and expensive to maintain and there is a shortage of qualified resources within our organization.
3. Due to growth and utilization, the current network infrastructure is not capable of handling further expansion needs.
4. There is a lack of tools and programs to provide balance of plant data collection for Operations and technical support organizations.
5. The station does not have an integrated electronic document management system.
6. There is lack of configuration management control for application deployment and infrastructure, including digital controllers.
7. Several user applications currently reside on hardware and software platforms that are obsolete.
8. There is no contingency or disaster recovery plan for onsite systems.
9. Computer infrastructure, plant process computer systems, simulator and desktop computing need ongoing maintenance support in terms of in-house and out of house resources.
10. There are no resources allocated to support the Engineering move to Park Place.

**2000 PROJECTIONS**

<b>17</b>	<b>6</b>
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**INDIAN POINT - COMPUTER APPLICATION**

Response to 15

Average Human Resources		(\$000) O & M
<u>M</u>	<u>W</u>	
17	6	

**2000 BASE BUDGET**

**2000 PROJECTS**

**Items 1-6 under the Assessments area, are all capital related initiatives and therefore the O&M expenditure required is to develop plans for these initiatives. A goal to develop plans for these initiatives is targeted for completion by 3/2000, as part of**

1. Scoping for combined Security System for IP2/IP3
2. Develop a Tagout Program in Client/Server
3. Development of Forms 42a, b, and c using real plant data for emergency planning.
4. Develop a Disasater Recovery Plan for On-Site Computer Systems
5. Work Management system replacement scoping( Comp Appl portion)
6. Scoping for Assessment items 1 to 6.

**Computer infrastructure, plant process computer systems, simulator and desktop computing need ongoing maintenance support in terms of in-house and out of house resources.**

- ☐ Computer system parts, operating system upgrades, network maintenance and monitoring, office automation, material and supplies, Primavera maintenance, and Intel based server support.
- ☐ DEC computer service contracts, Health Physics maintenance, FileNet/Saros maintenance, Compaq Servers, DEC Hubs, routers, and Giga Switches.
- ☐ Simulator maintenance and testing, Proteus, RMS and Whole Body Counting, SAS hardware and software maintenance and simulator modifications for CCR fidelity.
- ☐ Maintenance and support for all desktop computing, including PC's, printers, scanners, and supporting network devices, routers, bridges, plotters, gateways to mainframe and other infrastructure supporting tools.

**2000 BUDGET**

<u>17</u>	<u>6</u>	
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**RESULTS/MEASURES OF EFFECTIVENESS**

For Items 1-6 develop appropriation and funding requirements for approval. Identified a station goal targeted for 3/2000.

**INDIAN POINT - COMPUTER APPLICATION**

Response to 15

Average Human Resources		(\$000) O & M
<u>M</u>	<u>W</u>	

Develop contingency and disaster recovery plans for every computer system. Targeted for 6/2000.

Maintain availability of all systems at 99% or better.

Response to user support help desk calls improved with a backlog of 20 per month.

Plant modifications in SAS, Proteus and Simulator are implemented after six months of plant implementation.

Maintain Simulator discrepancies at or below 100.

Maintain the local area network up-time at 99.5% or better.

Facilitate PC deployment in support of the upcoming outage; 1 day turnaround

Reduce the number of CR's to less than 5 per computer system per year.

Percent implementation of the FileNet/Saros imaging system in the station, with use of the Intranet.

Percent of applications converted to Client/Server type environment.

Percent of applications and digital controllers being V & V'd.



**INDIAN POINT 2**

**CONFIGURATION MANAGEMENT AND CONTROL**

**YEAR 2000 BUSINESS PLAN; Rev. 1**

GERALD RYFF

PLAN MANAGER:

SUBMITTED

DATE

JAMES BAUMSTARK

SENIOR MANAGEMENT SPONSOR

APPROVED

DATE

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## 1. Functional Responsibility

Configuration Management and Control delivers accurate technical information in a quick effective way to those who require it. CM&C manages various Design and License Basis projects, including the FSAR verification project, the Design Basis Document project, the Licensing Basis Review project and the Setpoint Reconstitution project. CM&C provides and maintains a FSAR verification database, a Component Function database, the SPIN Setpoint database and the Operating Equipment (OE) database and is responsible for the procedures and processes for maintaining these documents and associated databases.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>Con Ed Experience</u>	<u>Total Related Experience</u>
<b>MANAGEMENT</b>					
RYFF	DEPARTMENT MANAGER	BE ELECTRICAL ENGINEERING	PROF. ENG. IN NYS	29	30
AMMIRATO	DEPARTMENT MANAGER	MS, METAL. ENGINEERING	NYS CERT. OF INTERN ENGINEERING	19	26
BARTMANN	ENGINEER	MSME	0653109	28	28
BOGHOSIAN	SR. ENGINEER	BS ENGINEERING	TX STATE P.E.	0	30
BLOSS	PROJECT SPECIALIST	ASSOC. NUC. ENGINEERING	N/A	0	19
BROWN	ENGINEER	BE, ME	N/A	18	26
CARBON	ASSOC. SPECIALIST	HS	N/A	25	25
CONRAD	SR. SPECIALIST	BS, GEOLOGY; MBA	N/A	13	18
ELLWANGER	PRINCIPAL ENGINEER	B. CH. ENGINEERING	P. E.	17	40
FAVINO	SPECIALIST	AAS	N/A	15	19
LIBERATORI	DEPARTMENT MANAGER	BS-ME	NYS P.E.	27	27
PICCININNI	SYSTEMS SPECIALIST	HS	N/A	27	27
QUIRK	PRINCIPAL ENGINEER	MS NUCLEAR ENGINEERING	SR. REACTOR OPERATOR	37	37
REMSHAW	PROJECT MANAGER	MBA; MS NUC. ENG.	N/A	30	33
SMALLPAGE	SR. SPECIALIST	HS	N/A	0.5	24
<b>TOTALS</b>	<b>15 MANAGEMENT</b>	-	-	<b>285.5 YRS</b>	<b>409 YRS</b>

<b>WEEKLY</b>					
KEENE	SR. CLERK	-	-	-	-
LETTMODEN	NUC. PRODUCTION TECHNICIAN	-	-	-	-
<b>TOTALS (WEEKLY)</b>	<b>2 WEEKLY</b>	-	-	-	-
<b>CONTRACTORS</b>					
DBD GROUP - 3	-	-	-	-	-
SET POINT GROUP - 4	-	-	-	-	-
OE GROUP - 1	-	-	-	-	-
FSAR GROUP - 12	-	-	-	-	-
<b>TOTAL(CONTRACT)</b>	<b>20 CONTRACTORS</b>	-	-	-	-
<b>OPEN POSITIONS</b>					
SECTION MANAGER, CM (M)	-	-	-	-	-
SR. ENGINEER, FSAR (M)	-	-	-	-	-
SR. ENGINEER, OE (M)	-	-	-	-	-
(M)	-	-	-	-	-
(M)	-	-	-	-	-
TECHNICIAN, FSAR (W)	-	-	-	-	-
CLERK, DBD (W)	-	-	-	-	-
<b>TOTALS OPEN</b>	<b>5 MANAGEMENT 2 WEEKLY</b>	-	-	-	-

**Authorized Positions**

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
2000 Starting Budget	17	2	19
2000 Ending Budget	20	4	24
<b>Current</b>	<b>15</b>	<b>2</b>	<b>17</b>
<b>Open</b>	<b>5</b>	<b>2</b>	<b>7</b>

**3. Mission Statement**

To provide configuration management and control services to Nuclear Power for safe, reliable, and efficient operation and maintenance of Indian Point Units 1 and 2.

#### 4. Resource Use Analysis

##### 1999 CM&C Manhour Analysis

Personnel	Setpoint Control	OE Update	DBD Update	FSAR Update	Mod Coord. & Tracking	Procedures /SAOs/ SpecialProj	Budget/ Proj.Mgmt./ Training/ Optic Imag.	GET / Cont. Training	Subj. Matter Expert	Total Estimated Man-hrs
Con Ed	1750	1750	5250	1750	1750	1750	1750	9720	100	25,570
Contractor	10,000	5250	3850	30,600	NA	NA	NA	NA	NA	49,700
<b>TOTALS</b>	<b>11,750</b>	<b>7000</b>	<b>9100</b>	<b>32,350</b>	<b>1750</b>	<b>1750</b>	<b>1750</b>	<b>9720</b>	<b>100</b>	<b>75,270</b>



5. **Operational Overview --** This section covers routine, ongoing functions and activities of the organization.

	<u>Project/Program</u>	<u>Project/Program Description</u>	<u>Estimated Con Ed Hrs.</u>	<u>Estimated Outside Support \$\$ (000)</u>
5.1	Setpoint Control Program	Resolve CRS issues. Currently there are 200 open CRs, most of which deal with Grade 3, 4 & 5 set points. Many (60%) will be resolved as a result of Grade 3/4 set point project. New CRs (3-5 per month) are received. Between backlog and new CRs, staff augmentation is required. Estimated effort per CR is 80 man-hours. Equivalent of two full time persons currently required.  Maintain the setpoint database (SPIN) and oversee program implementation and usage. This function may begin in 2002, estimated at 1200 hrs. per year.	480	
5.2	Operational Equipment (OE) Program	Review Modifications and work orders, and update and maintain the OE database in PPMIS, and the TNMS database. Oversee and administer program implementation and usage.	3500	
5.3	Design Basis Document (DBD) Program	Maintain Design Basis Documents current. See Project 7.3.	0	
5.4	FSAR Program	Maintain FSAR current. See Project 7.2.	0	
5.5	Modification Coordinating & Tracking	Coordinate Mod reviews/ maintain Mod Tracking System up to date.	1850	
5.6	Emergency Plan Participation	Emergency Plan Drills/ training	200	
5.7	CR resolution	Investigate and complete CRs	1750 (OE)	
5.8	Mgmt. & Supervision	Time spent in management and supervisory functions; including planning, delegation and oversight (Gerry = 1400 Hrs, Frank = 300, Vinnie = 160)	1860	
5.9	Training	Complete all continuing and qualification training including GET, ESP, etc.; ESP = 13 people @ 120 Hrs; GET = 17 people @ 4 Hrs.; Dept. training coordination = 300 Hrs.; Contractors = 20 people X 80 Hrs. X	2300	

5.10	Subject Matter Expert Training	DBD, FSAR	600	FSAR Training ?
5.11	Vacation/Holiday/Sick/FMLA/LTD	V = 2620 Hrs. (based on vacation allotted to 17 people on payroll; H = 17 people x 10 Hol. x 8 Hrs. = 1360 Hrs.; Sick = 17 people x 5 days ea. X 8 Hrs = 680 Hrs.; FMLA = 480 Hrs.; LTD = 1 person = 1750 Hrs.	6900	
5.12	Requests for Info, emergent work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation Assume 5% of 17 personnel hours.	1600	
5.13	NRC Insp. & QA Audit support; Self Assessments	Setpoint Group = 400 Hrs. NRC Insp., 200 Hrs. QA Audits	1200	
5.14	Dept. Business functions	POs contracts, invoices, Budget tracking and projections; SAOs/Procedures	1200	
5.15	Operating Experience; Benchmarking and Industry Conferences	L. Liberatori = 200 Hrs. WOG; Setpoint Group = 160 Hrs. Industry Conferences; V. Ammirato; R. Brown = 130 Hrs.	630	
<b>Total Estimated Hours / \$</b>			24,070 Hrs.	

## 6. Knowledge

- FSAR
- Licensing Bases
- Setpoint Control
- Testing
- Project Management
- Mod Tracking
- Procedures/SAOs
- Operating Equipment/ TNMS
- Proprietary Material
- Commitment Tracking
- Electrical Device Tagging
- CRS Resolution
- Training
- Design Bases
- Heat Exchanger Eddy Current

## 7. Opportunities – Current Projects and Programs

(Provide a table of projects and programs that are beyond the normal ongoing efforts listed in section 5, that are being carried over into 2000 or that are to be started in 2000.)

<b>Project/Program Title</b>	<b>Engineer/ Manager/ Specialist</b>	<b>Estimated Hours (Con Ed)</b>	<b>Estimated Outside Support \$ (000)</b>
7.1. Licensing commitment Verification Project	C. Dumsday	0	
7.2. UFSAR Verification Project	L. Liberatori	4820	
7.3. Design Basis Documentation – a. Implementation Phase b. Maintenance Phase	V. Ammirato	9078	
7.4. IP2 Tech. Spec. Drift Reval. & Set Point Calculations	J. Ellwanger	740	
7.5. EOP Set Points, ERGs Rev.	J. Ellwanger	624	
7.6. Instrument History Performance Analysis	J. Ellwanger	40	
7.7. EOP Set Points/ Rev. 1D of the ERGs	J. Ellwanger	150	
7.8. Set Point Calculations	J. Ellwanger	500	
7.9. Provide Electrical components in OE Database	F. Piccininni	320	
7.10. Configuration Control SAO development	S. Favino	500	
7.11. Optical Imaging; provide Design Basis documents, Calculations to station	V. Conrad	300	
7.12. Support NP Engineering move from 4 Irving Place to 1 Park Place	S. Favino	440	
7.13. Configuration Management Conference	V. Conrad	850	
7.14. 2000 RFO: a. Eddy Current Heat Exch. – oversight and supervise contractors b. FCU – oversight and supervise c. Battery Replacement Project d. Main Transformer Project e. FME Guard – RX Cavity and SFP	V. Conrad G. Ryff V. Ammirato L. Lettmoden	1180	
7.15 Develop Budget Projection Database	V. Conrad	200	
7.16 Improved Standard Tech. Specs.		0	
7.17 OE Data Migration Project	F. Piccininni	1250	
7.18 S/G Outage – RHR Interlock	J. Ellwanger		
7.19 Design Basis Documentation- Optical Linked References	V. Ammirato	1750	
7.20 UFSAR Chapter 14 NETSAID	L. Liberatori	200	
<b>Total Estimated Hours/ \$</b>	<b>-</b>	<b>22,942 Hrs.</b>	

**Indian Point 2**  
**2000 Project Request**

- 1) Title:** Licensing Commitment Verification Project **2) Project #:** 7.1
- 3) Description:** This project will categorize the Indian Point 2 NRC commitments identified by Turner and Harper Associates as either "living" or "one-time". The project will also identify the documents which implement "living" Indian Point 2, NRC commitments. Where such documents cannot be found a Condition Report will be submitted. As it is assumed there will be few such Condition Reports, this project does not include resolution of these condition reports. This project will include the identification and verification of new commitments generated since completion of the Turner and Harper effort. Processes and procedures will be developed for use and maintenance of the database by the responsible Indian Point organizations.
- 4) Justification:** This project will ensure that NRC commitments with ongoing significance to the facility are appropriately incorporated into station documents such that they continue to be met. It will also provide a mechanism for managing changes to commitments into the future.
- 5) Indian Point 2 Goals Supported:** Operate within threshold regulator performance. Continue to verify and make available design and licensing basis information.

**6) Budget:**

Dept.	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
CM&C	Classify Commitments								
	Verification								
	6/99-12/00 Commitments								
	Database Dev.								
	Procedures								
	Project Mgr.							0	
NS&L	Acceptance			200				200	
								0	
	<b>TOTALS:</b>	0		200		0		200	

**7) Lead Department:** Configuration Management & Control

**8) O & M:** X

**Capital:**

**XM:**

**9) Proposed By:** C. Dumsday

**Date:**

**11) Lead Dept. Mgr. Approval:**

**Date:**

**12) 2001 Budget Approval By:**

**Date:**

**13) Notes:**

Resources above reflect verification of all living commitments. Re-evaluation will be made after approx. 1/3 of the commitments are verified. Development of training materials and conduct of the training is included in the UFSAR Verification project as it is anticipated this training will be developed and conducted concurrently. In 2001 it is anticipated that this will be turned over to NS&L for go forward tracking of IP 2 commitments.

**Indian Point 2**  
**2000 Project Request**

<b>1) Title:</b> UFSAR Verification Project						<b>2) Project #:</b> 7.2			
<b>3) Description:</b> This project will verify the accuracy and completeness of the UFSAR and provide a fully electronic UFSAR, a Component Function Database, and provide for the resolution of Condition Reports generated as a result of the verification effort. The UFSAR and CFD will be accurate and complete up through December 31, 2000.									
<b>4) Justification:</b> NRC regulations require that the UFSAR be kept current and complete. Previous processes and practices were not adequate to keep the original FSAR current and complete to today's standards.									
<b>5) Indian Point 2 Goals Supported:</b> Continue to verify and make available design and licensing basis information. Operate within threshold regulator performance.									
<b>6) Budget:</b>									
Dept	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
CM&C	Verif. & CFD, 1/1-4/30								
	UFSAR Verif, 5/1-12/31								
	Proced & Trng								
	Ch1-13, Review	1400		1200				2,600	
	Ch1-13, CR's Rev	1400		1200				2,600	
	Ch14 Verification	1400		920				2,320	
	UFSAR Rev 15	1200						1,200	
	Pending & Recon			300		500		800	
	UFSAR Rev 16			1200				1,200	
Nuc Trng	Training Carried into 2001								
<b>TOTALS:</b>		5,400		4,820		500		10,720	
<b>7) Lead Department:</b> Configuration Management & Control						<b>8) O &amp; M:</b> X <b>Capital:</b> XM:			
<b>9) Proposed By:</b> Carl Dumsday/Lou Liberatori						<b>Date:</b>			
<b>10) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>11) 2000 Budget Approval By:</b>						<b>Date:</b>			
<b>12) Notes:</b> Non risk significant UFSAR verification will extend to 2001. UFSAR verification work associated with DBDs to be written in 2001 and 2002 will require some on going verification and UFSAR close out work.									

**Indian Point 2**  
**2000 Project Request**

1) Title: Design Basis Documentation -Implementation Phase 2) Project #: 7.3.a

3) Description: Commitments made to NRC in response to the Oct. 1997 5.54f letter require preparation of 22 system related DBDs and several topical DBDs. 6 DBDs were written in 1999 and 9 DBDs are to be completed in 2000 7 in '01 and 5 in '02. Selection and sequencing of the systems were based on their PSA risk ranking.

4) Justification: Engineering - In order to operate within the design parameters of the plant and to perform modifications to IP2, such as the impending steam generator replacement, the existing design basis of IP2 must be known. The Implementation Phase provides a roadmap to existing documents and identifies controlled references. Operations - The DBDs will facilitate the preparation of abnormal assessments as well as aid in the operability/reportability determinations.

5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt	A1961	7200		5550		5550		18300	
Design Eng'g				800		576		1376	
System Eng'g				800		256		1056	
S&L				700		224		924	
Ops -Watch Eng				550		176		726	
								0	
								0	
								0	
	<b>TOTALS:</b>	7200		8400		6782		22382	

7) Lead Department: Config. Mgmt/DBD

8) O & M:

Capital:

XM:

9) Proposed By: V. Ammirato

Date: 05/12/00

10) Relationship to Other Projects: Design Engineering, System Engineering, NS&L, Watch Engineers

a) Other Internal Resources Required:

b) Other External Resources Required:

11) Lead Dept. Mgr. Approval:

Date:

12) 2001 Budget Approval By:

Date:

13) Notes: The ECS Cable Separation DBD is a Con Edison generated document and will be revised by Design Engineering. The estimate for this effort based on typical rates and hours are 320 man-hrs will be needed to support this effort alone.

**NAME**  
**DBD PROJECT IMPLEMENTATION PHASE**

**HOURS**

**NSSS**

AMMIRATO	800
BARTMANN	450
BLOSS	150
BOGHOSIAN	200
LETTMODEN	400
<b>subtotal</b>	<b>2000</b>

**BOP**

AMMIRATO	200
BARTMANN	450
BLOSS	150
<b>BOGHOSIAN</b>	<b>800</b>
LETTMODEN	400
<b>subtotal</b>	<b>2000</b>

**subtotal 4000**

**CRS/RESOLUTION/  
RECONSTITUTION**

AMMIRATO	300
BARTMANN	450
BLOSS	300
BOGHOSIAN	300
LETTMODEN	200
<b>subtotal</b>	<b>1550</b>

**5550**

**PROCESS PROCEDURES**

AMMIRATO	300
BARTMANN	0
<b>BLOSS</b>	<b>900</b>
BOGHOSIAN	250
LETTMODEN	400
<b>subtotal</b>	<b>1850</b>

**TOTAL 1850**

**7400**

**DBD MAINTENANCE  
PHASE**

**PROGRAM UPDATES**

AMMIRATO	200
BOGHOSIAN	250
BARTMANN	450
BLOSS	300
LETTMODEN	400
<b>subtotal</b>	<b>1600</b>

**TOTAL 1600**

TASKS	<u>Design Eng'g.</u>	<u>System Eng'g</u>	<u>NS&amp;L</u>	<u>Watch Eng'r</u>	
Attend Boundary/documentation mtg.		8	8	8	8
Review and provide comments					
Section 1.0 - System Description	4	4	4		4
Section 2.0 - Boundaries	2	2	2		2
Section 3.0 - Regulatory			6		
Section 5.1& 5.2 System Function	6	6	2		4
Attend Interim Meeting	4	4	4		4
Review					
Section 5.3 - System Requirements	4	4	4		4
Section 4.0 - Codes and standards	4	4	4		4
Section 6.0 - Operation Design Basis	4	4	4		4
Section 7.0 - Maintenance Design	4	4	2		
Appendix A	4	4	2		
Appendix B	4	4	2		
Appendix C	4	4	2		
Component Function Matrix	4	4	2		2
Con Ed Final Document Review		8	8	8	8
	64	64	56	44	<b>TOTAL</b>

Project: Design Basis Documentation Program

Project Manager: Vincent J. Ammirato

#### Project description:

**Background** – Before the mandated NRC requirement, IP2 realized the need to generate Design Basis Documents. The DBDs prepared by Burns & Roe fulfilled this requirement, but were not of sufficient detail to be of use to all IP2 disciplines

**Implementation Phase** – Based on the 1997 50.54(f) commitment letter to the NRC, Con Edison agreed to upgrade the original 22 DBDs as well as prepare 5 additional topical/system DBDs. Because of the extensive amount of revision required to the DBDs, the upgrade has resulted in a complete rewrite of the existing 22 DBDs. New contracts were awarded to Westinghouse Electric, the original NSSS supplier and Raytheon Nuclear, the original architect/engineer of record formerly United Engineers and Constructors.

Selection and sequencing of the systems were based on their risk ranking from the station PSA and the availability of design basis authors.

In order to provide guidance on the preparation, review and revision of the DBDs; a writers guide, a reviewers guide, and various procedures have been prepared.

**Maintenance Phase** –The information will be available controlled to the user via the Intranet. The first six DBDs, are available electronically "Read Only" on the Indian Point 2 web page. Any Con



Edison employee and all authorized contractors may access the DBD documents along with the associated Major Component Database.

It is the goal of this group to make all of the supporting reference information available via the web page to any end user at their PC therefore minimizing the need for search of hardcopy only supporting information.

Relationship to other projects: It should be noted that an extensive effort exists to validate the IP2 FSAR. It should be understood that this effort is not a duplicate nor a substitute for the DBDs. Simply, the DBDs provide a roadmap to all design basis information, while validated FSAR contains a small portion of design basis information. The efforts complement each other.

The database portion of the DBDs, namely the Major Component Database was designed to mesh with the Component Function Matrix database, which is another effort derived from the 50.54(f) effort.

Finally, a third effort that has supported the DBD preparation while at the same time supporting ad hoc design document requests is the Westinghouse Design Document Program II. This effort consists of a consortium of nine Westinghouse PWR utilities who have joined in a Westinghouse Owners Group committee to identify, retrieve, index and capture generic and plant specific design basis information. The culmination of this effort is much awaited deliverable on optical platter which should contains close to 15,000 documents on 27 different Westinghouse shop orders.

Resources:                      Hrs. / \$

Internal – The Design Basis Documentation program requires a dedicated group to manage the creation of the DBDs during the project phase. The DBD group acts as a clearing house for comments between various user groups with the Westinghouse Electric and Raytheon Nuclear, facilitates the recovery of Con Edison: calculations, modifications, nuclear commitments and drawings. The group also facilitates boundary and documentation meetings between the respective engineering groups and the vendor.

During the program phase, the Design Basis Documentation group will be responsible for serving in a custodial role – maintaining the consistency and quality of the DBDs during the change process. Coordinating the update process and identifying weaknesses in the process will be one of its main roles.

External – The Westinghouse contract has a value of                      and is a T&M contract. It is funded for the remainder of 2000.

The Raytheon contract has a value of                      . Due to the fixed nature, the contractor effort is not known. The cost for three BOP DBDs has been funded for 2000. An additional                      is required in 2000 for Raytheon to start the 2001 delivery DBDs to meet our NRC commitment. In 2001 it is anticipated that the funding will be                      for Raytheon and                      for the balance of the Westinghouse DBD contract. An unknown amount will need to be funded for the topical DBD, Cable separation in 2001.

**Indian Point 2  
2000 Project Request**

1) Title: Design Basis Documentation - Maintenance Phase

2) Project #: 7.3.b

3) Description: Based on the 1997 50.54(f) commitment to the NRC, Con Edison agreed to redo the original 22 DBDs as well as prepare additional topical/system DBDs. Contracts have been awarded to Westinghouse Electric Co. and Raytheon Nuclear, the original NSSS and Architect Engineer. Selection and sequencing of the systems were based on their PSA risk ranking.

4) Justification: Engineering - - In order to operate within the design parameters of the plant and to perform modifications to IP2, such as the impending steam generator replacement, the existing design basis of IP2 must be known.

5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt	A1961			3528		5688		9216	
Design Eng'g				1008		2268		3276	
System Eng'g				1224		2754		3978	
NS&L				432		972		972	
Ops -Watch Eng				432		972		1404	
								0	
								0	
								0	
	<b>TOTALS:</b>	0		6624		12654		18846	

7) Lead Department: Config. Mgmt/DBD

8) O & M: Capital:  
XM:

9) Proposed By: V. Ammirato

Date: 05/12/00

10) Relationship to Other Projects: Design Engineering, System Engineering, NS&L, Watch Engineers

a) Other Internal Resources Required:

b) Other External Resources Required:

11) Lead Dept. Mgr. Approval:

Date:

12) 2001 Budget Approval By:

Date:

13) Notes: To meet the Training needs of the group 1800 man-hrs will be devoted to this activity. See attached spreadsheet on "Training".

<u>ACTIVITY</u>		<u>HOURS</u>	<u>FREQ.</u>	<u>GROUP TOTAL</u>
GET/RST	ALL	8	yearly	40
Town Hall Mtg.	ALL	2	every 60d	60
Continuing Trng	ALL	8	every 90d	108
<b>TODDVILLE</b>				
Intro	gb, wb	40	once	80
Systems	gb, wb	160	once	320
Operability	va,sb,gb,wb	16	once	64
Safety Eval	va,sb,gb,wb	16	once	64

### Special Trng

#### **Learning Center**

vja	ALL	16	2	32
sb	ALL	16	2	32
gb	ALL	8	2	16
wb	ALL	8	2	16
II	ALL	8	2	16
CM Conference	ALL	144	1	720
Outage support	vja		every 2 yr	200
WOG Committee	vja	16	2	32

<u>TASK</u>	<u>GROUP</u>	<u>TOTAL Estimated</u>	<u>CHANGES /YR</u>	<u>1800 #of DBDs</u>	<u>2000 #of DBDs</u>	<u>2001</u>
		<u>Hours</u>		<u>s</u>	<u>Manhrs</u>	<u>Manhrs</u>
Prepare PCN Form	SE/DE/NS&L/OPS/DBD	2	12	24	12	288
Mark Up of DBD Page	SE/DE/NS&L/OPS/DBD	2	12	24	12	288
Provide supporting Ref Documents	SE/DE/NS&L/OPS/DBD	2	12	24	12	288
Obtain PCN Number	SE/DE/NS&L/OPS/DBD					
Review by Orig Group Mgr.	SE/DE/NS&L/OPS/DBD	0.5	12	6	12	72
Review by Sys Eng'r.	SE	2	12	24	12	288
Approval by Design Engineer	DE	0.5	12	6	12	72
					<b>1,296</b>	<b>27</b>
Review and Accept by DBD Mgr.	DBD	4	12	48	12	576
Incorporate PCN into DBD	DBD	4	12	48	12	576
Issue Revised DBD	DBD	4	12	48	12	576
					<b>1,728</b>	<b>27</b>
					<b>3,024</b>	<b>3,888</b>
						<b>6,804</b>

***Indian Point 2***  
**2000 Project Request**

**1) Title: IP2 Tech. Spec. Drift Reval. & Set Point Calculations**

**2) Project #: 7.4**

**3) Description:**

**This project revalidates (and improves) the drift values used in the original extension of the operating cycle to 24 months permitting revised plant set points and improved operating margin. Project will also recalculate current Tech. Spec. LSSS values using reduced drift values and will also provide Allowable Values for use in Improved Tech. specs.**

**4) Justification:**

**Implementation of NRC GL 91-04 permitted extension of the operating cycle to 24 months. This implementation also resulted in a commitment to the NRC to evaluate and validate instrument drift on an RFO basis. This project is evaluating the 1993, 1995 & 1997 RFO surveillance data satisfying the NRC commitment and coincidentally reducing instrument loop errors.**

**5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information.**

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		<b>Project Total</b>	
		Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)
Outage Mgmt									
Config. Mgmt	C1961	2080		740		740		3560	
	TOTALS:	2080		740		740		3560	

7) **Lead Department:** Config. Mgmt./Set Points

**8) O & M:**

**Capital:**

**XM:**

9) Proposed By: J. Ellwanger

Date: 05/10/00

10) Relationship to Other Projects: 1) Improved Technical Specifications 2) EOPs

a) Other Internal Resources Required: None

**b) Other External Resources Required: None**

**1) Lead Dept. Mgr. Approval:**

Date:

**12) 2001 Budget Approval By:**

**Date:**

**(3) Notes: The above funds for out-of-house support in 2000 and 2001 include one contractor in a staff augmentation capacity full time for these two years @ \_\_\_\_\_ per year. The remaining funds are budgeted for Westinghouse and are not under contract. \_\_\_\_\_ is allocated for NSSS non-RPS/ESFAS functions in 2000 and \_\_\_\_\_ in 2001 for BOP Tech. Spec. drift and calcs in 2001. Con Ed manager budgeted at 40% of time in 2000 and 2001. See attached Gantt chart.**

See Gantt Chart icon for details →

Gather Instrument Cal Data	12w	Fri 01/01/99	Thu 03/25/99	
Research WO's	40w	Fri 03/26/99	Thu 12/30/99	1
Perform Drift Evaluations	48w	Fri 03/26/99	Thu 02/24/00	1
Update RPS & ESFAS Set Point Calcs	30w	Mon 02/28/00	Fri 09/22/00	
Write WCAP	12w	Mon 09/25/00	Fri 12/15/00	4
Review/Revise Test Procedures	13w	Fri 09/01/00	Thu 11/30/00	
Write Operability Manual	13w	Mon 12/04/00	Fri 03/02/01	
Update Remaining NSSS Set Point Calcs	39w	Mon 09/25/00	Fri 06/22/01	
Review/Revise Test Procedures	13w	Mon 03/26/01	Fri 06/22/01	
Revise WCAP	4w	Mon 06/25/01	Fri 07/20/01	"8,9FF"
Update Remaining TS Set Point Calcs	18w	Mon 06/25/01	Fri 10/26/01	8
Review/Revise Test Procedures	5w	Mon 09/24/01	Fri 10/26/01	11FF
Write Topical Report	3w	Mon 10/08/01	Fri 10/26/01	11FF



Instrument Loop Error  
Reval.mp...

**Indian Point 2  
2000 Project Request**

1) Title: EOP Set Points, ERGs Rev. 1A/B

2) Project #: 7.5

3) Description: During the course of verifying and validating the current EOP set points (Operator Action Values) in 1999, it was discovered that the set point basis was either missing or did not justify the values used. In 2000, a project was initiated to establish EOP Set Point Bases that were adequate for Verification & Validation of the current EOP set points which are based on Rev. 1A/1B of the ERGs.

4) Justification: SAO-452 requires that EOP Set Points be validated and verified. A commitment has been made to the NRC to verify and validate current set points by July 2000.

5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing information.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)
Config. Mgmt.	C1961	120		624		0		744	
Gen. Supp.				120				220	
	<b>TOTALS:</b>	120		744		0		964	

7) Lead Department: Config. Mgmt./Set Points

8) O & M:

Capital:

XM:

9) Proposed By: J. Ellwanger

Date:

10) Relationship to Other Projects: Maintenance of EOP set points

a) Other Internal Resources Required:

None

b) Other External Resources

Required: None

11) Lead Dept. Mgr. Approval:

Date:

12) 2001 Budget Approval By:

Date:

13) Notes: The project was undertaken late in 1999 with the majority of the cost being in 2000. The Con Ed hours in 2000 represent 30% of the St. Pt. Manager's time. Outside costs in 2000 represent staff augmentation of one contractor full time for 3/4 of the year @ \_\_\_\_\_, an outside contractor for EOP review @ \_\_\_\_\_ and the remainder to Westinghouse who is doing the primary contractor work. this effort is expected to be concluded in September of 2000.

See Gantt Chart icon for details →

Define Phase 1 & 2 Setpoints	23d	Wed 12/01/99	Fri 12/31/99		Westinghouse
Create initial Calc Update	21d	Mon 01/03/00	Mon 01/31/00	1	Westinghouse
Perform Phase 1 Calcs	100d	Tue 02/01/00	Mon 06/19/00	2	Westinghouse
Consultant Calc Review	109d	Tue 02/01/00	Fri 06/30/00	2	Kevin White
Perform Phase 2 Calcs	54d	Tue 06/20/00	Fri 09/01/00	3	Westinghouse
Write Topical Report	40d	Mon 08/07/00	Fri 09/29/00	"5FS-20d,9FS-10d"	Westinghouse
Revise EOP's	40d	Mon 10/02/00	Fri 11/24/00	6	Generation Support
RVLIS Operability Assessment	30d	Mon 05/22/00	Fri 06/30/00		Westinghouse
Perform RVLIS Calcs	30d	Mon 07/03/00	Fri 08/11/00	8	Westinghouse
Contract Staff Support	218d	Wed 12/01/99	Fri 09/29/00		Contractor Staff Support
Project Management	258d	Wed 12/01/99	Fri 11/24/00		Project Manager[30%]



EOP Set Points, ERG's  
1A,B.mpp...

***Indian Point 2***  
**2000 Project Request**

1) Title: Instrument History Performance Analysis (IHPA)	2) Project #: 7.6
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**2) Project #: 7.6**

3) **Description:** This is a software program which performs a function similar to efforts of Westinghouse in analyzing drift data from surveillance tests and projecting the magnitude of the drift into the future with a reliability and confidence level.

4) **Justification:** By extending the operating cycle to 24 months using the provisions of NRC Generic Letter 91-04, IP-2 committed itself to the NRC to evaluation and trending of data from each RFO surveillance test to confirm that actual and projected drift had not become excessive. Through 1997, this effort had been performed by Westinghouse at a substantial cost. The intent of the computer program is to do this effort in house and avoid high expenditures in the future. Set Points (Config. Mgmt.) is proceeding to load the computer program with data going back to 1986 and ultimately 1993, 1995 and 1997 to enhance statistics. The program will then be transferred to Plant Engineering for evaluation of 2000 RFO data per VP direction.

5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information.

6) Budget:

Department	Account	1999 + Prior		2000		2001 + Future		<b>Project Total</b>	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt.	C1961	80		40		40		160	
Plant Engineering								160	
	<b>TOTALS:</b>	80		40		40		320	

**7) Lead Department: Config. Mgmt./Set Points**

8) O & M:

<b>Capital:</b>	
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<b>XM:</b>
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9) Proposed By: J. Ellwanger

Date: \_\_\_\_\_

10) Relationship to Other Projects: Confirmation of drift is fundamental to the verification and validation effort performed by Set Points. Drift values are an input to all error calculations.

a) Other Internal Resources Required: None

**b) Other External Resources Required: None**

11) Lead Dept. Mgr. Approval: \_\_\_\_\_

Date: \_\_\_\_\_

**12) 2001 Budget Approval By:** \_\_\_\_\_

Date:

13) Notes: The above budget reflects purchase ( ) of the computer program in 1999. The funds in 2000 provide for a clerk for eight months ( ) to load data from 1986 into the program. This clerical task, under the supervision of Set Points, will continue into 2001 for three months and result in data loading through the 1997 RFO. Assuming transfer of the program to Plant Engineering in 2001, for clerical loading of the 2000RFO has been budgeted. Three man months ( ) of contractor support to review the computer output for each surveillance test has been budgeted. This can be eliminated if Plant Engineering pursues this effort in house.



Recommend being Postponed  
Until 2001 or later

**2) Project #: 7.7**

**4) Justification: The current EOPs are based upon a combination of Rev. 1A and 1B of the ERGs. Most of the industry has updated their EOPs to reflect revision 1C of the ERGs. Con Ed has delayed their efforts in this area to take advantage of work being done by the WOG and will update the IP-2 EOPs to revision 1D of the ERGs.**

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		<b>Project Total</b>	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt.	C1961			150		416		566	
Gen. Supp.				80		416		496	
	<b>TOTALS:</b>			230		832		1062	

<b>Capital:</b>	
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**XM:**

Date: May 23, 2000

**b) Other External Resources Required: None**

Date:

Date:

13) Notes: The above budget reflects initiation in the fall of 1999, in order to meet a completion date of July 2001. The 2000 Config. Mgmt. figures represent 30% of the Con Ed Manager's time for 3 months, two months of contractor support and \_\_\_\_\_ for Westinghouse. In 2001, 40% of the Manager's time is allocated through July 1st, one full time contractor for staff augmentation and \_\_\_\_\_ for Westinghouse. Generation Support activity in 2000 is minimal at 80 hours over three months but increase in 2001 to 40% of a person with \_\_\_\_\_ for contractor support to revise the EOPs as new set points are generated.

**Indian Point 2**  
**2000 Project Request**

1) Title: Set Point Calculations

2) Project #: 7.8

3) Description: This project provides for error calculations to support the selection of set points in those instances where Design Engineering is unable to provide form in-house resources.

4) Justification: Per SAO-452, Design Engineering is to provide the resources to perform calculations to support the selection of set points. Insufficient in-house resources exist to accomplish this task so that outside resources are necessary. Since to a large degree this constitutes reconstitution of design basis, the work is justifiably supported by Configuration Management

5) Indian Point 2 Goals Supported: Reconstitution of design basis

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt.	C1961	80		500		500		1,080	
								0	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	80		500		500		1,080	

7) Lead Department: Config. Mgmt./Set Points

8) O & M:

Capital:

XM:

9) Proposed By: J. Ellwanger

Date: 05/10/00

10) Relationship to Other Projects: EOPs, Test & Performance

a) Other Internal Resources Required:

TBD

b) Other External Resources Required:

None

11) Lead Dept. Mgr. Approval:

Date:

12) 2001 Budget Approval By:

Date:

13) Notes: in 1999, calculations were performed to support NIS source, intermediate, and power range trip setpoints. In 2000, contracts have been let with Westinghouse (for NSSS scope) and Sargent & Lundy (for BOP scope). To date funds have been expended to support a change in the RHR interlock set points (arising from tube rupture event) and in support of test procedures (PT-R13 & 14). This funding is budgeted for unanticipated events.

***Indian Point 2***  
**2000 Project Request**

**Title: Provide Electrical Components in OE Database**

**2) Project #: 7.9**

**3) Description:** This project plan is to capture all electrical devices in the controlled PPMIS/OE Database. It will include an estimated 4600 tags as a result of the 50.54f project with the Component Function Database. Additionally, an estimated 2600 IPIL (Indian Point Instrumentation List) that were identified as a result of the 1999 Y2K Project. Additionally, it will capture any outliers such as EOP and Proteus tag numbers.

**4) Justification:** To continue with Configuration Management & Controls goals and to provide full plant data access. To assure Work Control can initiate Work Orders for real tags, eliminating generic tag numbers. To continue to pass this tag data into all application validations; ex. SPIN Databases, PPMIS/OE, TNMS, SPIN, CRS, Mod Tracking, NPMEL and the Beta version of IPMEL (WEB version).

5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside e \$s (000)
Config. Mgmt.		0		320		320		640	
Gen. Support								0	
Design Eng.								0	
Site Eng.								0	
P&L								0	
								0	
								0	
								0	
TOTALS:		0		320		320		640	

7) Lead Department:  
Configuration Management/Operating Equipment

8) O & M: X

<b>Capital:</b>	
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**XM:**

9) Proposed By: F. Piccininni

**Date:**  
**05/25/00**

**10) Relationship to Other Projects:** In joint effort of Generation Support's 2001 Field Labeling Project.

**a) Other Internal Resources Required:** Generation Support, Design Engineering, NS&L and Site Engineering

**b) Other External Resources Required:** None

**11) Lead Dept. Mgr. Approval:**

Date:

**12) 2001 Budget Approval By:**

Date:

**13) Notes:**

***Indian Point 2***  
**2000 Project Request**

1) Title: Configuration Control SAO development

**2) Project #: 7.10**

3) **Description:**

Establish configuration control responsibilities for all the groups at IP2, to ensure the proper maintenance and control of plant configuration.

**4) Justification:**

**5) Indian Point 2 Goals Supported:** Continue to verify and make available design and licensing basis information.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		<b>Project Total</b>	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outsi de \$s (000)
Config. Mgmt.	E1959	100		500		0		600	
								0	
								0	
								0	
								0	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	100		500		0		600	

**7) Lead Department: Configuration Management and Control**

8) O &amp; M:

**Capital:**

**XM:**

**9) Proposed By: S. Favino**

Date: 05/25/00

### 10) Relationship to Other Projects:

**a) Other Internal Resources Required:**

**b) Other External Resources Required:**

**11) Lead Dept. Mgr. Approval:**

Date:

**12) 2001 Budget Approval By:**

Date:

**13) Notes:**

**Indian Point 2  
2000 Project Request**

**1) Title: Optical Imaging**

**2) Project #: 7.11**

**Description:** This project will provide Indian Point 2 with an optical imaging records system. The project includes: continue scanning of selected hard copy records into the optical system; providing users access to the optical system via the IP2 network; gaining NRC approval of the system to meet the regulatory requirements and establishment of the processes and procedures to use and maintain the system.

**4) Justification:** Provide design basis information in a quick and easily retrievable way to all those who need it. In 1999 the selection, purchase and setup of the hardware and software; scanning of some legacy records and creation of the Web site were accomplished. The resulting system will be computer access to design records and other legacy records reducing the recall time from Iron Mountain, Iron Mtn. Storage costs, and deterioration of records. An additional expected result is a better engineered document based on motivation due to ease of legacy record retrieval.

**5) Indian Point 2 Goals Supported:** Formalize and initiate a plan for upgrading information systems including replacement of plant and work control information systems. Provide design basis information in an easily retrievable format.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt.	J1959	2000		300		0		2300	
Regulatory Affairs		0		80		0		80	
Computer Apps.		200		520		0		720	
Records Mgmt.		200		500		0		700	
Quality Assurance		40		40		0		80	
Scanning Personnel				2080		0		0	
								0	
								0	
	<b>TOTALS:</b>	2440		3520		0		3880	

**7) Lead Department: Configuration Management and Control**

**8) O & M:**

**Capital:**

**XM:**

**9) Proposed By: V. Conrad**

**Date: 05/25/00**

**10) Relationship to Other Projects:** This project provides the legal and structural environment for other scanning projects within Configuration Mgmt., Records Management and the station.

**a) Other Internal Resources Required:** Possible purchase of new server – see above.

**b) Other External Resources Required:**

**11) Lead Dept. Mgr. Approval:**

**Date:**

**12) 2001 Budget Approval By:**

**Date:**

**13) Notes :**

**Indian Point 2  
2000 Project Request**

<b>1) Title:</b> Support NP Engineering Move to 1 Park Place					<b>2) Project #:</b> 7.12				
<b>3) Description:</b> Assist NP Engineering in filing or properly dispositioning Engineering files moved from 4 Irving Place to 1 Park Place. Approximately 1000 boxes were sent to the Old Simulator from Irving Place for temporary storage. Files are either sent to Iron Mountain for storage, or organized and filed appropriately at 1 Park Place, Peekskill, NY.									
<b>4) Justification:</b> NP Engineering required support in their relocation from 4 Irving Place, NYC, to 1 Park Place, Peekskill. Configuration Management is providing temporary support for organizing and filing of all Eng. Files at 1 Park Place, and preparing files for shipment to Iron Mountain for storage.									
<b>5) Indian Point 2 Goals Supported:</b> Improve the working environment for all persons at Indian Point.									
<b>6) Budget:</b>									
Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt.	89428	10		40		0		50	
Config. Mgmt.	E1959	200		400		0		600	
Design Eng.		100		200		0		300	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	310		640		0		950	
<b>7) Lead Department:</b> Configuration Management & Control					<b>8) O &amp; M:</b> X		<b>Capital:</b>		
					XM:				
<b>9) Proposed By:</b> S. Favino						<b>Date:</b>			
<b>10) Relationship to Other Projects:</b> Optical imaging effort - provide Calculations to Records Management for optical scanning.									
<b>a) Other Internal Resources Required:</b> Design Engineering group									
<b>b) Other External Resources Required:</b> None									
<b>11) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>12) 2001 Budget Approval By:</b>						<b>Date:</b>			
<b>13) Notes:</b> Shipment of NP Engineering files from 4 Irving Place, NYC, to the Old Simulator storage area began in August 1999. A total of 1000+ boxes and several file cabinets of files were sent to the Old Simulator for temporary storage. 80% of the boxes have been dispositioned to Park Place or Iron Mountain. The remainder should be prepared for shipment to Iron mountain. The current contract for temporary outside workers expires on June 30, 2000.									

**Indian Point 2  
2000 Project Request**

<b>1) Title: Configuration Management Conference</b>						<b>2) Project #: 7.13</b>			
<b>3) Description: The Configuration Management Manager Conference is being hosted by Con Edison this year.</b>									
<b>4) Justification: Foster Design Basis and Licensing Knowledge. Gather a community of experts to discuss the latest issues in configuration management such as risk assessment.</b>									
<b>5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information.</b>									
<b>6) Budget: 25,000</b>									
Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
Config. Mgt.	94536	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Conrad				300				300	
Ryff				300				300	
Runners				150				150	
Clerical				100				100	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	0		850		yes		850	
<b>7) Lead Department: Configuration Management</b>					<b>8) O &amp; M:</b>		<b>Capital:</b>		
					<b>XM:</b>				
<b>9) Proposed By: Gerald Ryff</b>						<b>Date: 5/22/00</b>			
<b>10) Relationship to Other Projects: This is an industry event.</b>									
<b>a) Other Internal Resources Required: Possible records management for copies. Other plant personnel as speakers.</b>									
<b>b) Other External Resources Required:</b>									
<b>11) Lead Dept. Mgr. Approval:</b>						<b>Date:</b>			
<b>12) 2001 Budget Approval By:</b>						<b>Date:</b>			
<b>13) Notes:</b>									

**Indian Point 2**  
**2000 Project Request**

**1) Title:** 2000 RFO **2) Project #:** 7.14

**3) Description:** This project covers the support provided by CM&C to the 2000 RFO. Support from other parts of the IP2 organization shall be covered in other business plans.

**4) Justification:** The support provided is needed to accomplish important RFO work.

**5) Indian Point 2 Goals Supported:** Conduct the 2000 RFO in 45 days or less and within budget. Safely operate at 95% or capacity non-outage.

**6) Budget:**

Department	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
CM&C	HX EC Tests	0		500		0		500	
	FCU Maintenance	0		80		0		80	
	Battery Replacement	0		200		0		200	
	All Xfmers (except GT)	0		200		0		200	
	FME Guard	0		200		0		200	
								0	
								0	
								0	
	<b>TOTALS:</b>	0		1180		0		1180	

**7) Lead Department:** Outage  
Planning

**8) O & M:**

**Capital:**

**XM:**

**9) Proposed By:** V. Conrad; G. Ryff; V. Ammirato; L. Lettmoden

**Date:**

**10) Relationship to Other Projects:**

**a) Other Internal Resources Required:**

**b) Other External Resources Required:**

**11) Lead Dept. Mgr. Approval:**

**Date:**

**12) 2001 Budget Approval By:**

**Date:**

**13) Notes:**



**Indian Point 2**  
**2000 Project Request**

- 1) Title: Cost Management Database 2) Project #: 7.15
- 3) Description: Develop an Access database to provide real time cost incurrence and projection capabilities.
- 4) Justification: To provide a mechanism to balance the budget , project future costs, and enable planning when new project arise during the year. Streamline the budget accrual estimates and provide an easy way to project future projects and expenditures
- 5) Indian Point 2 Goals Supported: Operate within O&M and capital budgets.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside \$\$ (000)	Con Ed Hrs.	Outside e \$\$ (000)
Computer Apps	C1960	0		0		0		0	
Config Mgt.	F1959	0		200		0		200	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	0		200		0		200	

- 7) Lead Department: Configuration Management 8) O & M: X Capital: XM:

- 9) Proposed By: Virginia Conrad Date: 5/22/00
- 10) Relationship to Other Projects:

a) Other Internal Resources Required: Training of individuals responsible for budgets. Upkeep by individual budget people - should reduce their work load.

b) Other External Resources Required: Periodic database updates.

- 11) Lead Dept. Mgr. Approval: Date:
- 12) 2001 Budget Approval By: Date:

13) Notes:

**Indian Point 2**  
**2000 Project Request**

- 1) Title: Set Points-Improved Technical Specifications 2) Project #: 7.16
- 3) Description: IP-2 has engaged in a project to convert from custom Technical Specifications to the Westinghouse version of the Improved Technical Specifications. Other projects, notably the Drift Evaluation and Set Point Project, as well as the Non-RPS/ESFAS Set Point Project have included the development of Allowable Values for incorporation into the Improved Technical Specification, these scopes have been developed with minimal input from the Improved Technical Specification project. Additional effort for the Set Point Group is anticipated in 2001 and 2002 but of an indeterminate nature.
- 4) Justification: By NRC letter dated May 21, 1999, to NEI, the NRC advised the industry that the Allowable Value (as defined by the individual NSSS vendors) would constitute the Limiting Safety Setting (LSSS) as defined by 10CFR 50.36. This is in lieu of the "trip set point" currently used in the IP-2 custom Technical Specifications. This requires generation of Allowable values for the planned IP-2 Improved Technical Specifications.

5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing information

6) Budget:

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt.	C1961					?		?	
TOTALS:									

7) Lead Department: Configuration Mgmt./Set Points 8) O & M: Capital:  
XM:

9) Proposed By: J. Ellwanger Date:

10) Relationship to Other Projects: Improved Tech. Specs.

a) Other Internal Resources Required:

b) Other External Resources Required: None

11) Lead Dept. Mgr. Approval: Date:

12) 2001 Budget Approval By: Date:

13) Notes:

**Indian Point 2**  
**2000 Project Request**

<b>1) Title: OE Data Migration Project</b>					<b>2) Project #: 7.17</b>				
<b>3) Description: Configuration Management's OE Section has over the past two years engaged in a project to migrate Con Edison's mainframe data to local IP SQLSERVER databases. This has been done in phases and will continue this year and into 2001.</b>									
<b>4) Justification: As the IP2 Network started to become a better alternative than the IBM mainframe environment, and with the abandonment of the Con Edison's CMS, it was required that we replace those mainframe applications with local IP2 applications. But, in the big picture of Configuration Management and Control, it has become very apparent that IP2 is a stand alone entity. Therefore, this project has already begun to bring much data down to IP2 local databases for quick and easy access, such as Queries tools or Web based queries. Though we are still very much dependant on the PPMIS IMS application, we have already brought down much of the DB2 data that is extracted from PPMIS. We must continue, however, with the possibility of the sale of IP2.</b>									
<b>5) Indian Point 2 Goals Supported:</b>									
<b>6) Budget:</b>									
Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Configuration Mgmt.	E1959	0		1250		1000		2250	
IPCA								0	
R								0	
								0	
								0	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	0		1250		1000		2250	
<b>7) Lead Department: Configuration Management and Control</b>					<b>8) O &amp; M:</b>		<b>Capital:</b>		
					<b>XM:</b>				
<b>9) Proposed By: F. Piccininni</b>					<b>Date:</b>				
<b>10) Relationship to Other Projects:</b>									
<b>a) Other Internal Resources Required:</b>									
<b>b) Other External Resources Required:</b>									
<b>11) Lead Dept. Mgr. Approval:</b>					<b>Date:</b>				
<b>12) 2001 Budget Approval By:</b>					<b>Date:</b>				
<b>13) Notes:</b>									

***Indian Point 2***  
**2000 Project Request**

1) Title: Steam Generator Outage – RHR Interlock	2) Project #: 7.18
--	--------------------

<b>3) Description:</b>	
------------------------	--

4) Justification:
-------------------

5) Indian Point 2 Goals Supported:
------------------------------------

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Configuration Mgmt.		0							
								0	
								0	
								0	
								0	
								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	0							

7) Lead Department: Configuration Management and Control	8) O & M:	Capital:
	XM:	

9) Proposed By: J. Ellwanger	Date:
------------------------------	-------

Date: \_\_\_\_\_

---

---

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Date: \_\_\_\_\_

Date: \_\_\_\_\_

---

**Indian Point 2**  
**2000 Project Request**

- 1) Title: Design Basis Documentation -Optical Linked References      2) Project #: 7.19
- 3) Description: One of the byproducts of the 50.54(f) effort is the delivery of design basis reference materials. This project is to optically scan and hypertext-link the delivered references to the DBD document.
- 4) Justification: In order to facilitate access of design basis information to the end user, the design basis documents are electronically available on the Indian Point 2 website. This project will further enhance the ability of the end user to not only access the design basis document but its references as well. This will be done as resources allow.
- 5) Indian Point 2 Goals Supported: Continue to verify and make available design and licensing basis information.

**6) Budget:**

Department	Account	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
Config. Mgmt	A1961			1750		5250		7000	
Design Eng'g								0	
System Eng'g								0	
NS&L								0	
Ops -Watch Eng								0	
								0	
								0	
								0	
	<b>TOTALS:</b>	0		1750		5250		7000	

- 7) Lead Department: Config. Mgmt/DBD
- 8) O & M:      Capital:      XM:

- 9) Proposed By: V. Ammirato      Date: 05/25/00
- 10) Relationship to Other Projects: Design Engineering, System Engineering, NS&L, Watch Engineers

a) Other Internal Resources Required:

b) Other External Resources Required:

- 11) Lead Dept. Mgr. Approval:      Date:
- 12) 2001 Budget Approval By:      Date:

13) Notes: Year 2000    34 vol. of references x 300pgs/vol x 5min/scan x 1Hr/60min = 850 hrs.to scan  
assume same amount of time to hypertext link      = 850 hrs. to link  
Year 2001 we will receive 12 DBDs.      Total = 1700 hrs.  
Assume      5ref/dbd x 300pgs/ref x 5min/scan x 1Hr/60min = 1500 hrs. to scan  
assume same amount of time to hypertext link      = 1500 hrs. to link  
Year 2002 we will receive 9 DBDs      Total = 3000 hrs.  
same assumptions      Therefore Total = 2250 hrs.

**Indian Point 2  
2000 Project Request**

1) Title: UFSAR Chapter 14 Safety Analysis Input Verification and Database Development ("NETSAID")

2) Project #: 7.20

3) Description:

Westinghouse to identify and document the input assumptions for the IP2 UFSAR Chapter 14 analyses, verify the input assumptions, populate the database ("NETSAID") being developed under Phase I of this project, and provide copies of "calculations of record" and other mutually agreed upon documentation as part of the final deliverables.

4) Justification:

To provide a database to capture the accident analysis input assumptions so that plant configuration and operations and procedures can be confirmed to be consistent with same.

5) Indian Point 2 Goals Supported:

Continue to verify and make available design and licensing basis information.

6) Budget:

Department	Activity	1999 + Prior		2000		2001 + Future		Project Total	
		Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)	Con Ed Hrs.	Outside \$s (000)
CM&C	1.) Develop Database	200						200	
	2.) Perform input identification/verify and populate database			200		800		1000	
	<b>TOTALS:</b>	0		200		800		1000	

7) Lead Department:

Configuration Management and Control

8) O & M: X

Capital:

XM:

9) Proposed By: L. Liberatori

Date:

10) Relationship to Other Projects: Is supplemental to and will rely in part on some of the Westinghouse work done for the UFSAR Chapter 14 Verification Project.

a) Other Internal Resources Required: Potential reviews by NS&L and Computer Applications

b) Other External Resources Required:

11) Lead Dept. Mgr. Approval:

Date:

12) 2001 Budget Approval By:

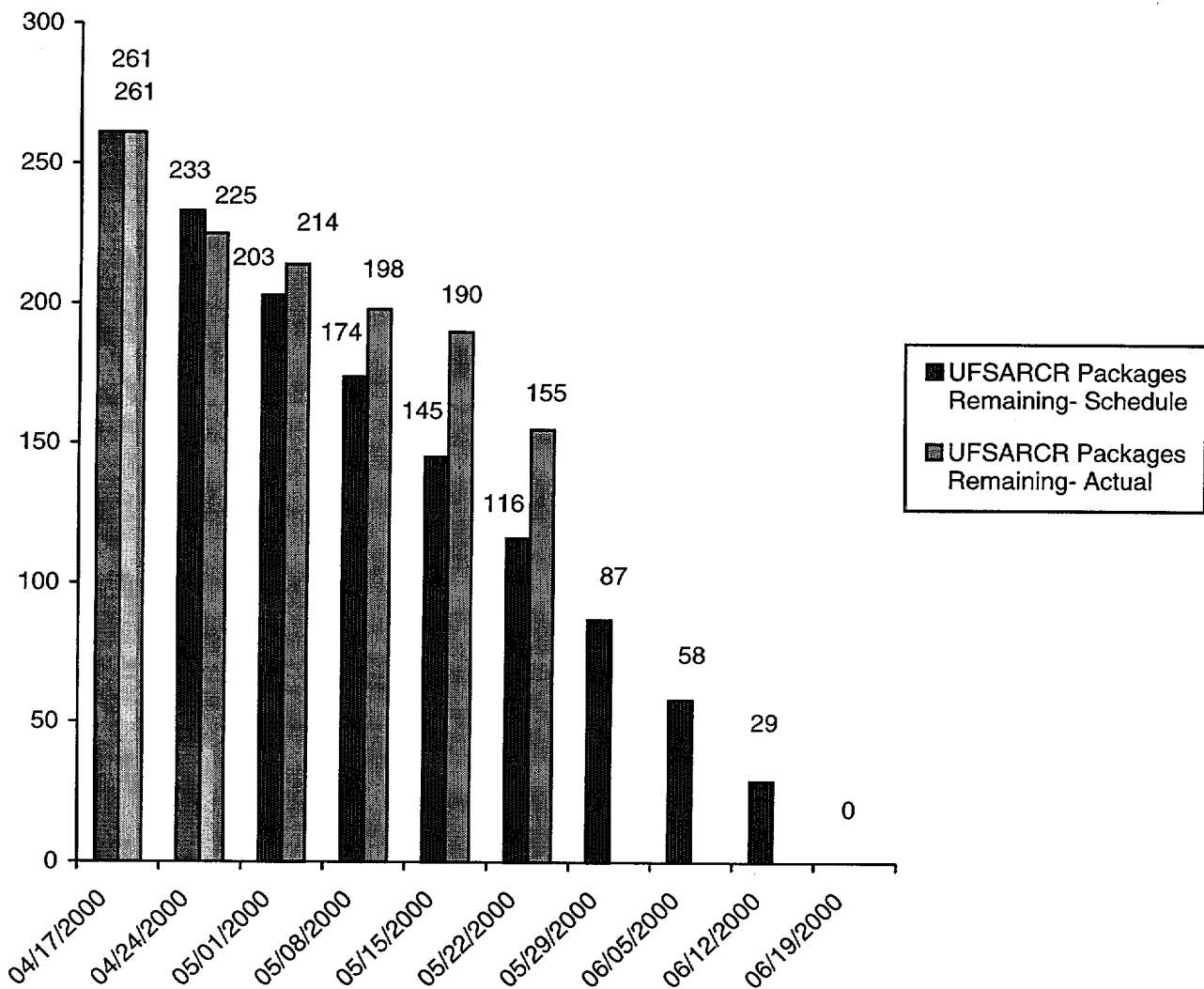
Date:

13) Notes: This project will go forward on a phased basis. Phase 1 will begin this year and look at one or two accident sequences. Based on the results and insights gained, phase two will go forward in 2001.

8. Performance Measures:

**UFSAR Verification Project  
Review and Approval of Chapter 1-13 UFSAR Change  
Requests (UFSARCR)**

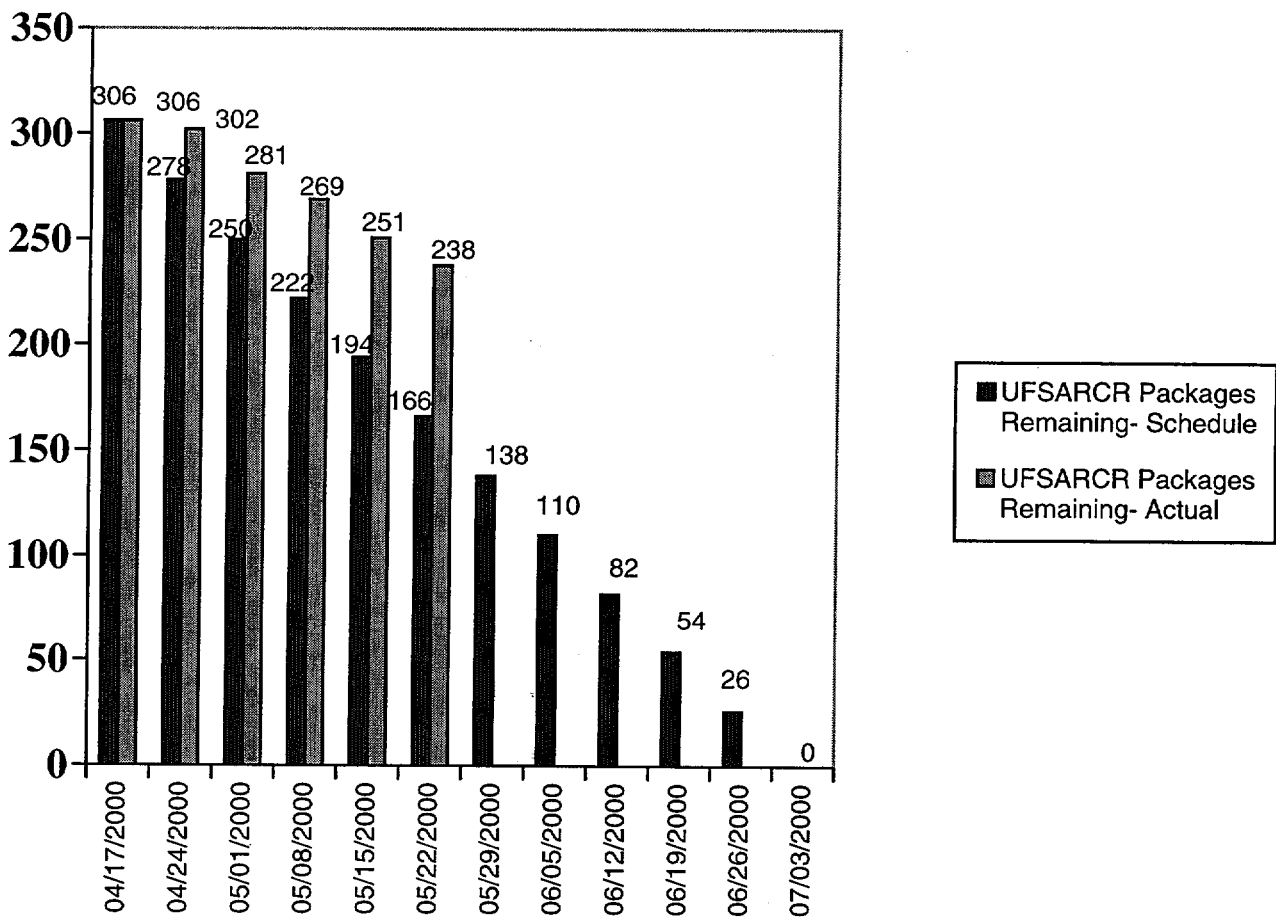
**SPPRT REVIEW**



**Note: The workdown curve indicates 261 UFSARCRs remaining on 4/17/00. Additional UFSAR changes are initiated when Pending and Reconstitution Condition Reports are resolved. The plot of "UFSARCR Packages Remaining- Actual" considers this increased scope of work.**

# UFSAR Verification Project Review and Approval of Chapter 1-13 UFSAR Change Requests (UFSARCR)

## NS&L APPROVAL

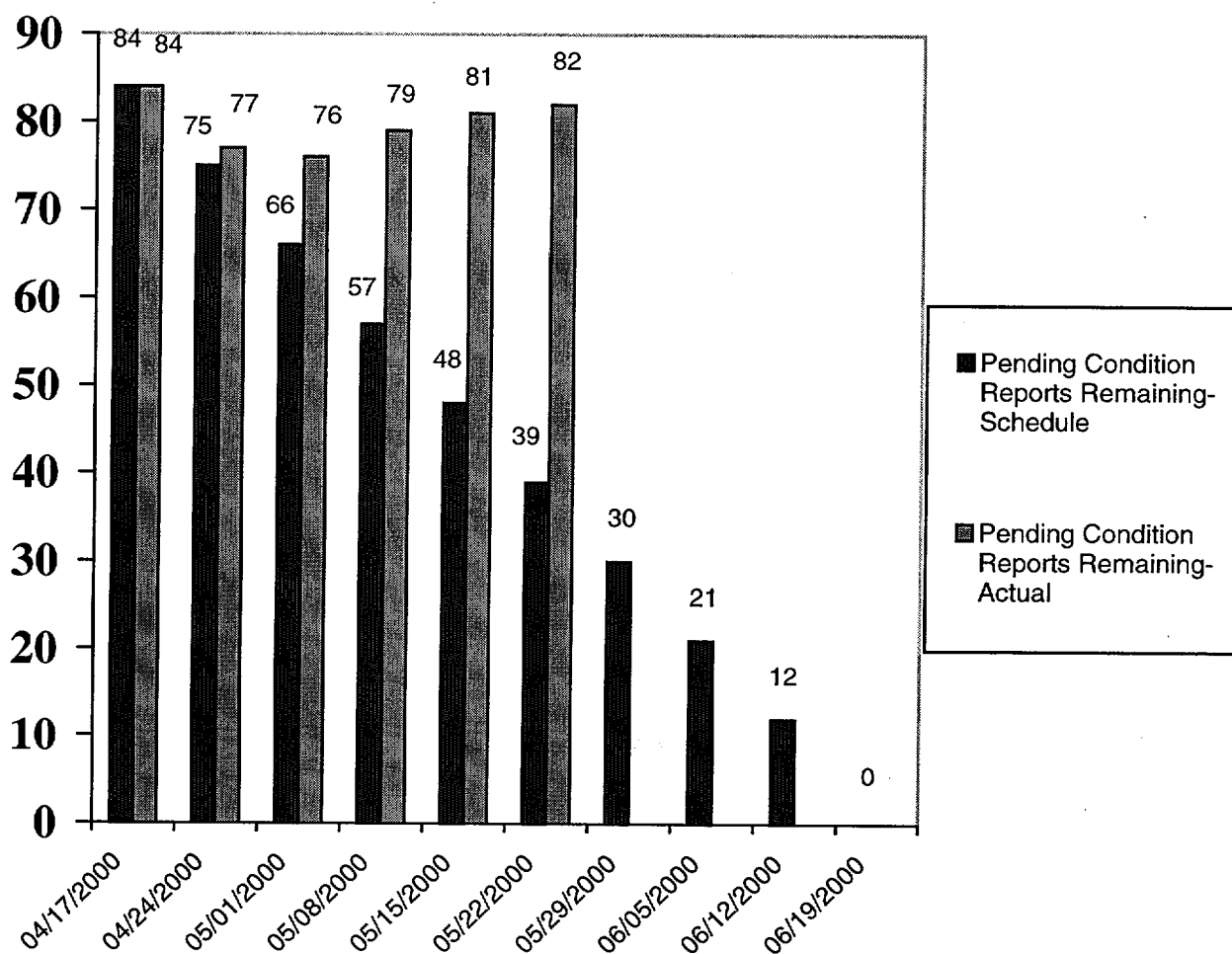


**Note:** The workdown curve indicates 306 UFSARCRs remaining on 4/17/00. Additional UFSAR changes are initiated when Pending and Reconstitution Condition Reports are resolved. The plot of “UFSARCR Packages Remaining- Actual” considers this increased scope of work



## UFSAR Verification Project Resolution of UFSAR Condition Reports

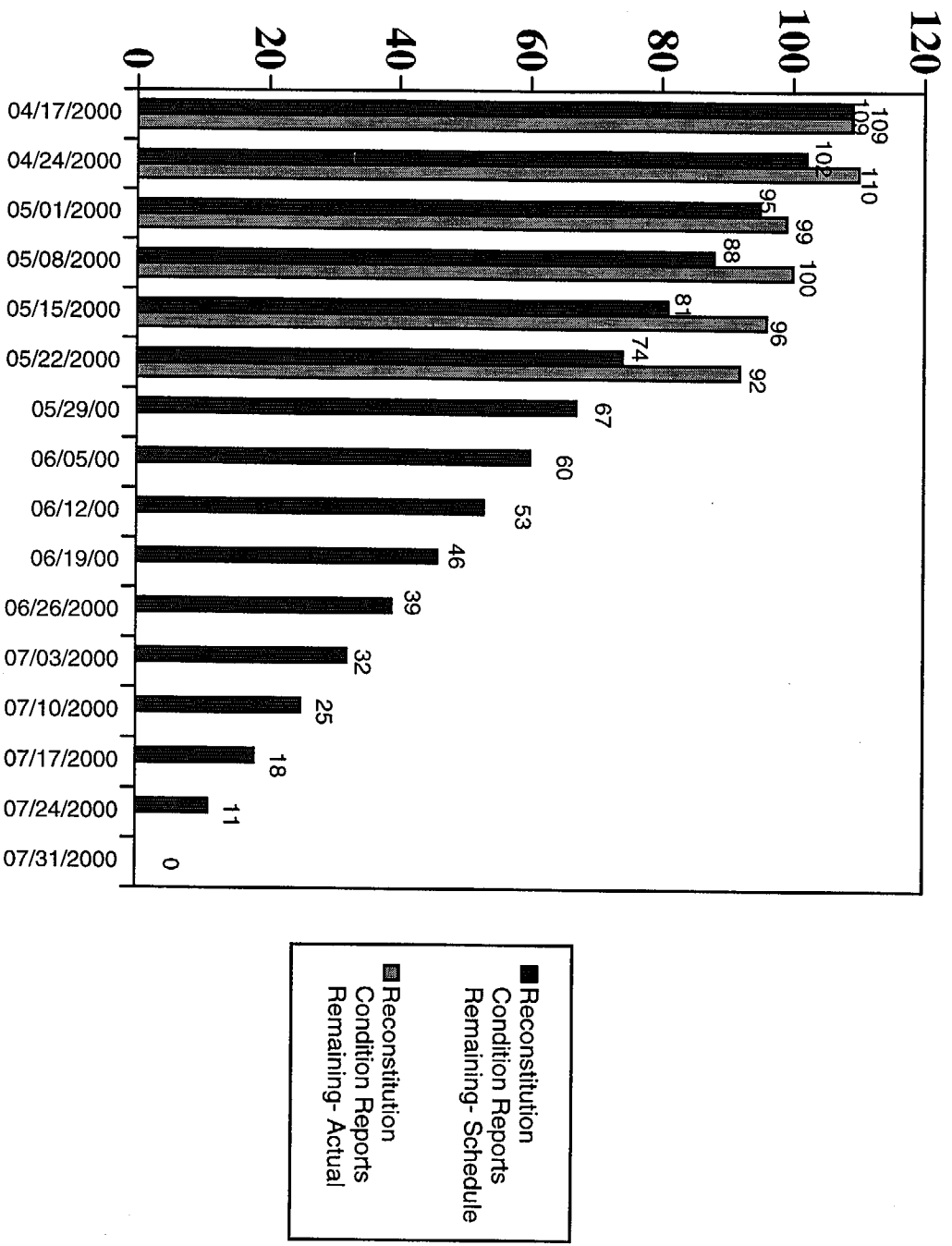
### Pending Condition Reports- Plant Responsibility



Note: The resolution of Pending Condition Reports may require a change to the plant and/or a change to the UFSAR

# UFSAR Verification Project Resolution of UFSAR Condition Reports

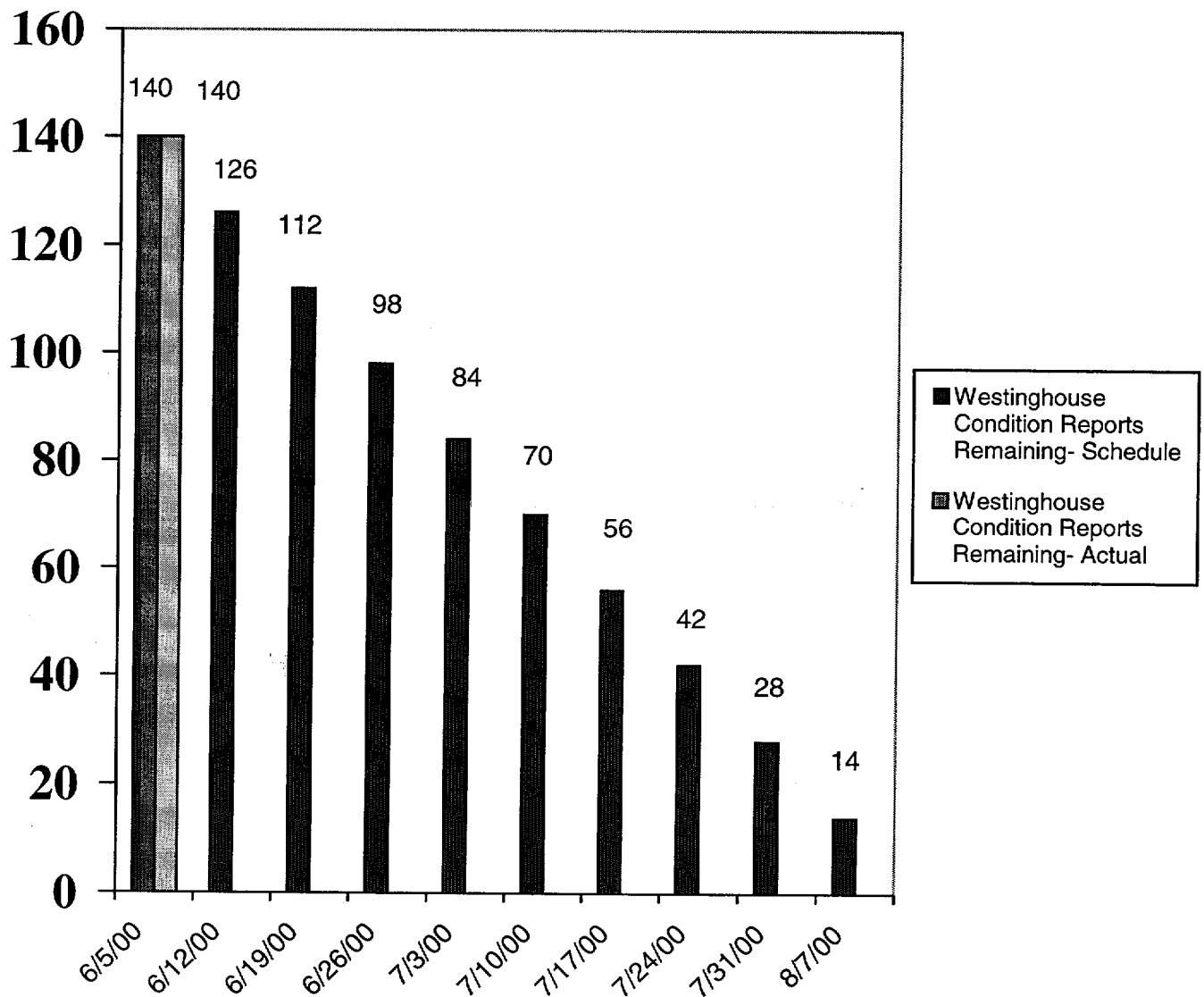
## Reconstitution Condition Reports – Plant Responsibility



Note: The resolution of Reconstitution Condition Reports may require a change and/or a change to the UFSAR

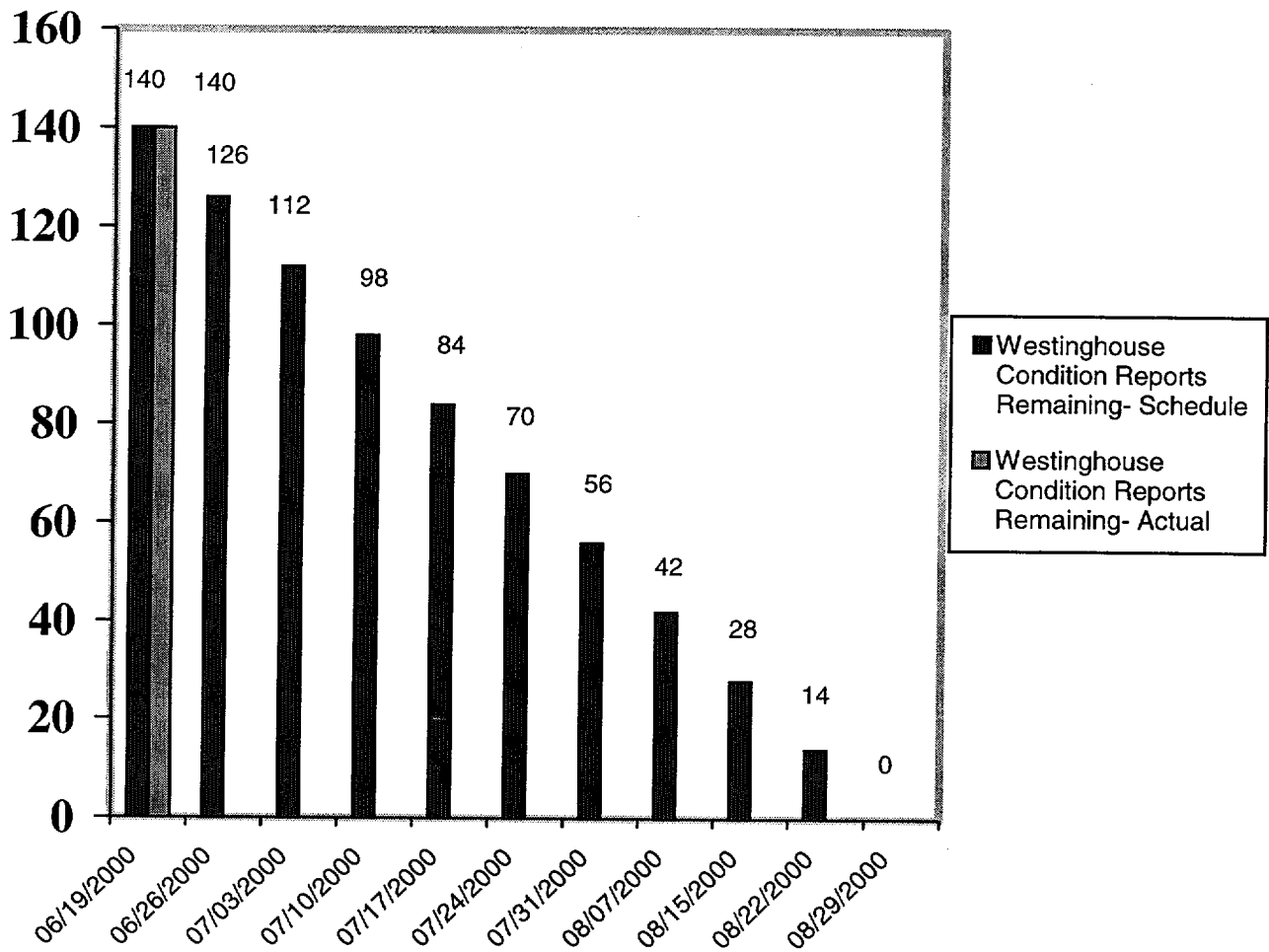
# UFSAR Verification Project Review and Approval of Chapter 14 UFSAR Change Requests (UFSARCR)

## SPPRT REVIEW



# UFSAR Verification Project Review and Approval of Chapter 14 UFSAR Change Requests (UFSARCR)

## NS&L APPROVAL



## DBD IMPLEMENTATION PHASE

### BUSINESS PLAN

<u>COMMITMENTS</u>	<u>DUE DATE</u>	<u>BUSINESS PLAN</u>	<u>DATE</u>
Issue six (6) DBDs	07/01/1999	Issue six (6) DBDs	COMPLETED
Issue six (6) DBDs	12/31/1999	DELAYED FUNDING	POSTPONED
Issue six (6) DBDs	12/31/2000	Issue nine (9) DBDs	12/31/2000
Issue six (6) DBDs	12/31/2001	Issue eleven (11) DBDs	12/31/2001
Issue three (3) DBDs	12/31/2002	Issue one (1) DBD	12/31/2002

## **Status of Setpoints as per the requirements of SAO-452:**

✓ To date 586 items have been "green" flagged in the SPIN database. Green flagged means the devices have been "validated" to a source document based upon the grade assigned to the device and "verified" as being implemented in an approved plant procedure. An additional 139 devices have gone through the process of validation but are not presently tested in a plant implementing procedure and as such have been left "red" flagged in SPIN. The break down by grade is:

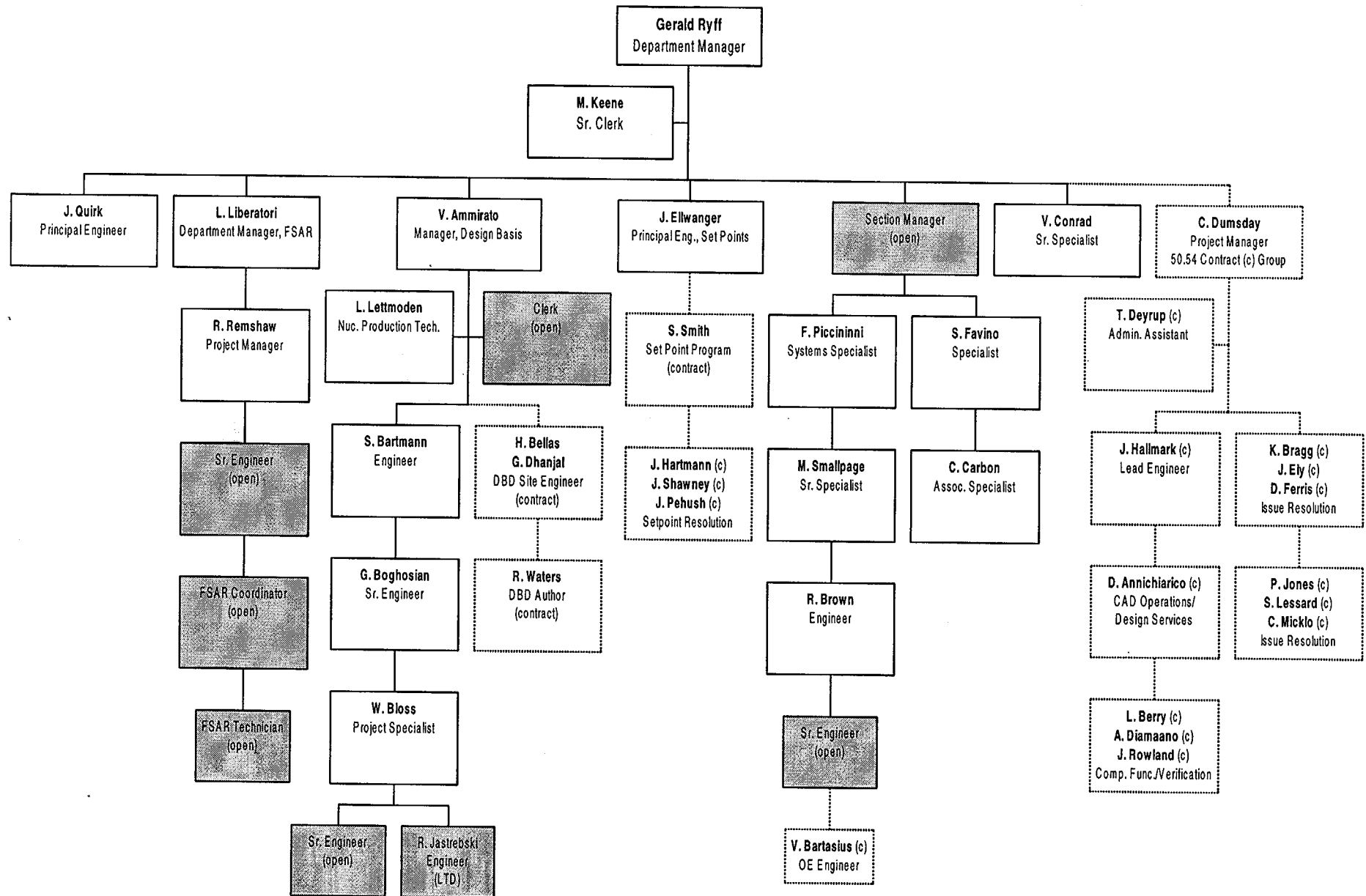
- Grade 1 - 226 green, 4 red
- Grade 2 - 1 green, 82 red
- Grade 3 - 68 green, 5 red
- Grade 4 - 288 green, 36 red
- Grade 5 - 3 green, 12 red

The Setpoint Control Group also Owns or has ICAs assigned to, a total of 286 CR's. 77 of these CR's have completed.

✓ Twelve additional CR's are in the review process for SPIN update and closure.

The one fact that I can not provide is how many setpoints there will be per grade at the completion of this project. With the exception of Grade 1 devices WE do not have a solid number for the other grades.

# Configuration Management and Control Organization Chart



**10. 2000 Resource Plan**

Section	Item	Estimated Con Ed Person-Months	Con Ed Labor Dollars (000)	Estimated Outside Support \$'s (000)	Total Estimated Dollars (000)
5	OPERATIONAL OVERVIEW	139			
7	Opportunities – Current Projects and Programs	132			
5 + 7	Total Resources Needed (5 + 7)	271		*	
	2000 Approved Budget	261			
$\Delta$		10			

\* The            number has the following assumptions built in:  
 Deferral of            of DBD contract payments into 2001  
 Project 7.13 is deferred past 2000 (            )  
 Project 7.18 gets charged to the outage account (            )  
 Miscellaneous expenses of            are absorbed into the CM budget by efficiencies.

The Con Ed labor shortfall will be made up by casual overtime through the year.





**INDIAN POINT 2**  
**DEPARTMENT OFFICE**  
**YEAR 2000 BUSINESS PLAN, REV 1**

James Tuohy  
PLAN MANAGER:

JAMES BAUMSTARK  
SENIOR MANAGEMENT SPONSOR

*J. Tuohy*  
SUBMITTED

*J. Baumstark*  
APPROVED

*4/28/00*  
DATE

*4/28/00*  
DATE

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## **1. Functional Responsibility**

The Department Office provides technical and administrative support to the Design Engineering department of Nuclear Power. Functions include: estimating, engineering contract administration, budget performance, vendor evaluation, maintaining and updating Engineering operations procedures, monitoring engineering training programs, monitoring Engineering Services Requests, and reducing Engineering backlogs.

Our first priority is to satisfy our customer, Indian Points 1 and 2. We prioritize our workload by coordinating our efforts with Indian Point departments. These departments, including Site Engineering, Operations, Maintenance and Nuclear Projects, determine the station priorities using our input in order to maximize the Engineering support effort. Our project lists and work assignments are based on these priorities. We continue to improve work processes for developing engineering work packages with efficiency and high quality.

The Design Services section, which is part of the Department Office, was created in 1999 to maintain a standardized structure for work done by designers. It's main objective is to assign and monitor work required of designers by engineers in various sections of Design Engineering. It acts as point of reference for maintaining computer applications for Design Engineering. Design Services is also responsible for coordinating the issuing of as-built drawings and non-package (CR) related drawings. In addition, Design Services provides preliminary estimates of cost for projects and modifications for Design Engineering.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>AE Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
TUOHY	DEPARTMENT MANAGER	BSEE	-	15	15
INGRAVALLO	SUPERVISOR	BS	-	-	26
KATZ	ADMINISTRATOR	MS	-	-	25
WAN	SENIOR ENGINEER	MSIE	-	-	26
<b>WEEKLY</b>					
VORAS	SENIOR ENGINEERING ESTIMATOR	BS ECONOMICS	-	-	29
GOODFLEISCH	SR ENGR TECH	HS	-	-	33
<b>CONTRACTORS</b>					
SHEIKH	PROJECT COORDINATOR	BS	-	2	-
<b>OPEN AND/OR REQUESTED</b>					
PROJECT SCHEDULER	-	-	-	-	-
MANAGEMENT SECRETARY	-	-	-	-	-
DESIGNER A	-	-	-	-	-
CLERK	-	-	-	-	-
<b>TOTALS</b>	<b>10 TOTAL, 7 FILLED, 1 CONTR</b>	-	-	<b>17</b>	<b>154</b>

### Authorized Positions

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
<b>1999 Budget</b>	7	3	10
<b>2000 Budget</b>	6	4	10
<b>Change</b>	<b>-1</b>	<b>+1</b>	<b>0</b>

### 3. **Mission Statement**

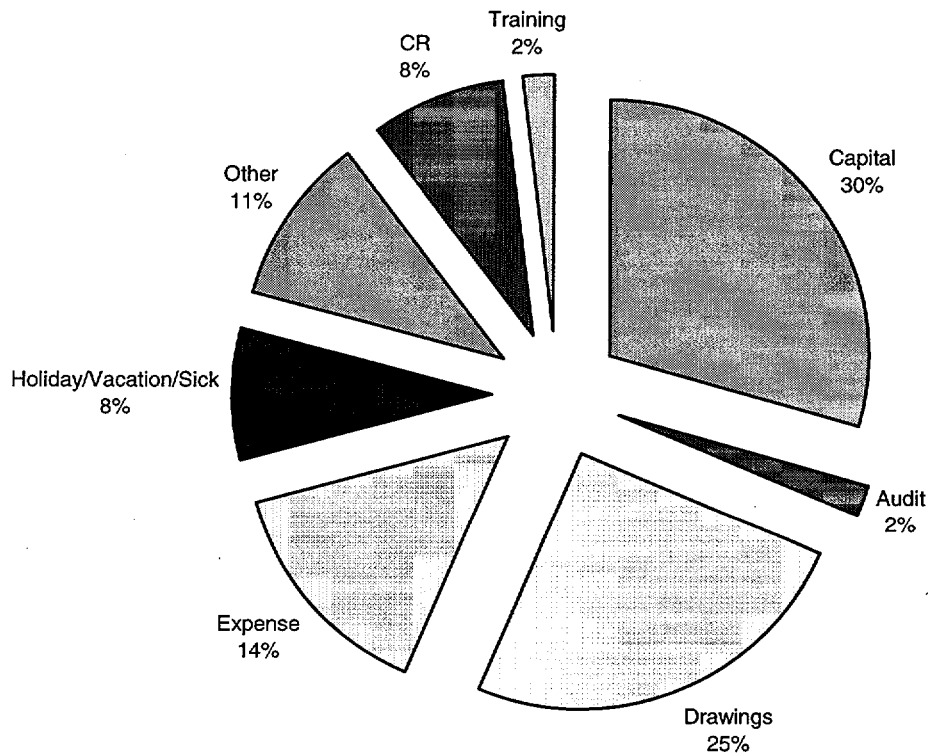
The mission of the Department Office is to provide technical and administrative guidance to Design Engineering. This office is committed to providing Indian Point with safe, economic, and environmentally sound engineering in order to fulfill our vision of becoming a "world-class" nuclear operator.

#### 4. Manpower Analysis

##### 1999 Manpower Analysis based on EPMIS2K data.

Capital	5,915
Audit	400
Drawings	5,000
Expense	2,900
Holiday/Vacation/Sick	1,680
Other	2,113
CR	1,668
Training	373
<b>Total</b>	<b>20,049</b>
Full Time Equivalents (FTE)	9.6
Production Hours/FTE	1913.4

*\*Data not input consistently in 1999*



## 5. Operational Overview

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.1. Condition Reports	Complete 100 CRs that contain evaluations/drawing updates, SL3s, RFIs, FCAs, and ICAs. Beginning of year inventory: 47 Projected incoming: 10/month Assume 20 hours/item. Use outside services to reduce ICA drawing related backlog.	2,740 + *	2,740 + *
5.2. Temporary Facility Changes	Monitor Temporary Facility Change process and backlog reduction.	350	350
5.3. Requests for Engineering Service/Engineering Service Requests	Monitor RES/ESR process and backlog reduction. Monitor project process and backlog reduction.	840	840
5.4. Work Orders	Monitor Work Order process and backlog reduction.	840	840
5.5. Reports of Installations	Monitor ROI process and backlog reduction.	800 + **	800 + **

\* is unfunded.

\*\* to be budgeted as an outage expenditure.

<b>Project/Program</b>	<b>Description</b>	<b>Full Work Scope Estimated Hours</b>	<b>Reduced Work Scope Based On 2000 Budget</b>
5.6. Management & Supervision	Time spent in management and supervisory functions including planning, delegation and oversight of work.	1,800	1,800
5.7. Project Estimating	Support Engineering in preparing construction estimates for RESs and major projects.	1,750	1,750
5.8. Department Budgets, Administration of Engineering Contracts	Evaluate and allocate funds for the department. Administer and track engineering contracts.	700	700
5.9. Training	Complete continuing training and qualification training (GET, ESP, etc.) as required including observation of ESP training. 5 people @ 120 hours	600	600
5.10. NRC Inspection and QA Audit Support, Self Assessments	Time spent in responding to QA Audits, and Self-Assessments.	200	200



Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.11. Project Closeout	Project file closeout and records storage.	875	875
5.12. Administrative Services	Purchase office supplies, provide clerical support, and coordinate follow-engineering follow-up items for the Department Office and Facilities Projects and Programs.	1,750	1,750
5.13. Training Coordination	Administrative and technical support for Design Engineering training, including preparation and delivery of selected training.	500	500
5.14. Processes and Procedures Support	Update Design Engineering processes and procedures.	1,000	<u>500</u>
5.15. Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation. Assume 5% of personnel hours. (10 people @ 1750 hours each)	875	875

<b>Project/Program</b>	<b>Description</b>	<b>Full Work Scope Estimated Hours</b>	<b>Reduced Work Scope Based On 2000 Budget</b>
5.16.Engineering Data Bases and Metaphase Support	Organize and manage data bases for tracking Engineering work hours, Work Orders on Engineering Hold, Condition Reports, ROIs/DMDs, and RESs/ESRs. Provide Metaphase support for designers.	1,250	1,250
5.17.Project Scheduling	Provide project scheduling for the department's major projects.  <i>The services of an engineer within the Mechanical Projects and Programs section is presently being utilized to provide the project scheduling function. Thus, the hours for this function are in the Mechanical Projects and Programs 2000 Business Plan.</i>	N/A	N/A
<b>Total Estimated Hours</b>		<b>16,870</b>	<b>16,370</b>
<b>Total Estimated Dollars</b>			
<b>Full Time Equivalent People @ 1750 Hours Each</b>		<b>9.6</b>	<b>9.4</b>

6. **Equipment/Materials Expertise**

- Procurement
- Estimating
- Training
- Electrical Engineering
- Cable Separation
- AutoCAD – Rev. 14
- CAD ESP
- WARS
- TNMS

## 7. Opportunities – Current Projects and Programs

The following Projects and Programs are being worked in 2000 to support continued plant operations and to prepare for the 2000 refueling outage.

Project/Program Title	Full Work Scope Estimated Hours	Full Work Scope Estimated Outside Support	Reduced Work Scope Based On 2000 Budget	Reduced Estimated Outside Support Based On 2000 Budget
7.1. Modification Process Optimization	800	*	400	*
7.2. Standardization of Design Work	200	-	200	-
7.3. Streamlining the Hierarchy of Drawings	1,000	-	<u>500</u>	-
7.4. Maintenance and Instruction of Design Engineering Computer Applications (i.e. Metaphase, etc.) and Systems	600		600	
7.5. Develop Cross Training Program for Designers	160	-	160	-
7.6. Training Program Development	800	-	800	-
<b>Total Estimated Hours</b>	<b>3,560</b>	-	<b>2,660</b>	-
<b>Full Time Equivalent People @ 1750Hours Each</b>	<b>2.0</b>	-	<b>1.5</b>	-
<b>Total Estimated Dollars</b>	-		-	

*\*Note: Process Optimization is a joint Design and Site Engineering Project. included in the Plant Engineering portion of the Site Engineering budget.*

*funding for procedure development for process changes is*

7.1. Modification Process Optimization

Modification process optimization efforts are continuing to identify and implement specific process improvements. The schedule for completion of this effort is shown in Attachment 1. This schedule shows completion of items associated with Revision 3 of the IP2 8/31/99 Event Recovery Plan. This project is a joint effort between Site and Design Engineering. Each of the Design Engineering Sections has allocated resources in their business plans for support of this project. Milestones achieved in the first quarter of the year have significantly improved the equivalency process as well as the process for making value-packing changes. The scanning and indexing of licensing basis documentation has been completed and engineers have been trained in the use of web-based systems to retrieve this information. Additional, improvements being made this year include changes to the minor change process in addition to the drawing update process.

7.2. Standardization of Design Work

There are currently various procedures that are being used by designers. There are plans to develop DG-03 as a procedure for the use of Metaphase. Design Services also plans on development of DG-04 as a procedure for the use of WARS. Design Services and IR are coordinating their efforts to develop a new discipline code that will be used to expand the CCR drawings in order to incorporate the LL drawings. An ongoing effort will be initiated with Kinetics Decisions (WARS) to enhance the link between Metaphase and WARS.

7.3. Streamlining the Hierarchy of Drawings

Design Services will be reviewing the present structure of drawing hierarchy. We will benchmark other utilities to establish a high level of drawing organization. Presently, we are reviewing the NIRMA Drawing Management Program, as well as, the IP3 Drawing System. The goal is to minimize the number of drawings required for modifications therefore reducing the ROI effort. The goal is also to streamline the process of updating drawings to enhance overall efficiencies. The schedule for achieving this process improvement is shown with Attachment 1.

7.4. Maintenance and Instruction of Design Engineering Computer Applications and Systems

With the advancements in technology and its increased use within our work processes, it has become important to have quick access to computer applications expertise on location that is trained in AutoCAD, Cad Overlay, WARS, TNMS, NT Station management and maintenance, and networking systems. These applications are used daily by Design Engineering and are the backbone of our physical design work. A full time management person within the department office previously provided this expertise. This position has since undergone attrition. In the future, the responsibilities of this position will be disseminated to the Designer A, Project Scheduler, and Design Services Supervisor. is needed this year for various Metaphase enhancement initiatives being undertaken with the IR and Substation organizations.

7.5. Develop Cross Training Program for Designers

Administer a new program that will be developed through the use of A/E's knowledge base in cross training designers in various disciplines. Arrange additional training in electrical schematic and digital controls for I&C and electrical projects.

7.6. Training Program Development

Provide support for improvements in the ESP needed by the Design Engineering organization. Work includes development of qualification guides, confirmation and update of training records and qualification of OJE mentor(s).

Benchmark and develop new engineering task list consistent with industry practice and ACAD guidelines. Oversee section training programs. Provide department input to Training Improvement Plan, Accreditation Report, and Training Program Description. Obtain SME input and oversee development of Qualification Cards.

7.6.1 Engineering Support Program Reaccreditation

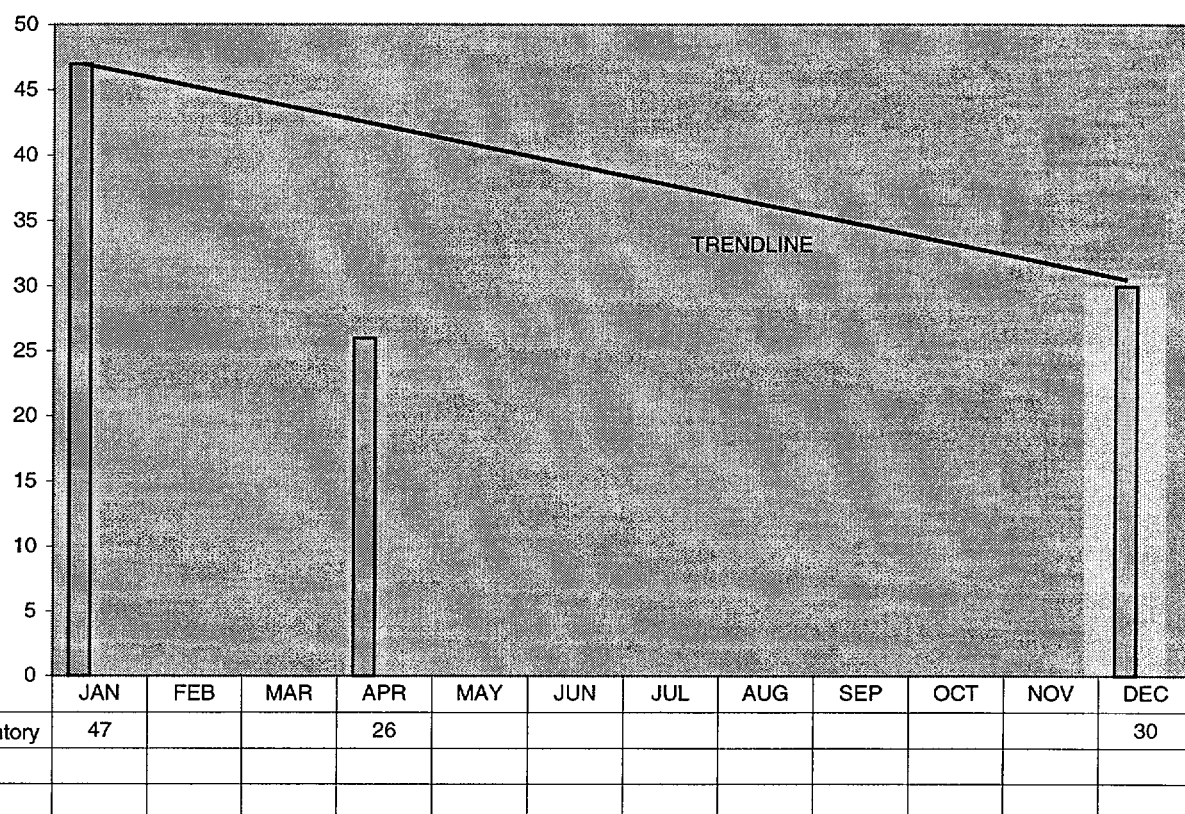
The IP 2 Technical Training Programs, which includes the Engineering Support Program (ESP), are scheduled for reaccreditation in 2000. In addition to proper functioning of the program, reaccreditation relies on conduct of a thorough program self evaluation and timely correction of any problems found. The Design Engineering organization is a key participant in the ESP and will be supporting the reaccreditation effort. Therefore, the Design Engineering organization establishes the goal of reaccrediting the ESP in 2000.

## 8. Performance Measures

### 8.1. Condition Reports

#### 8.1.1. Department Office

*Condition Report Status*



#### Indicator Description

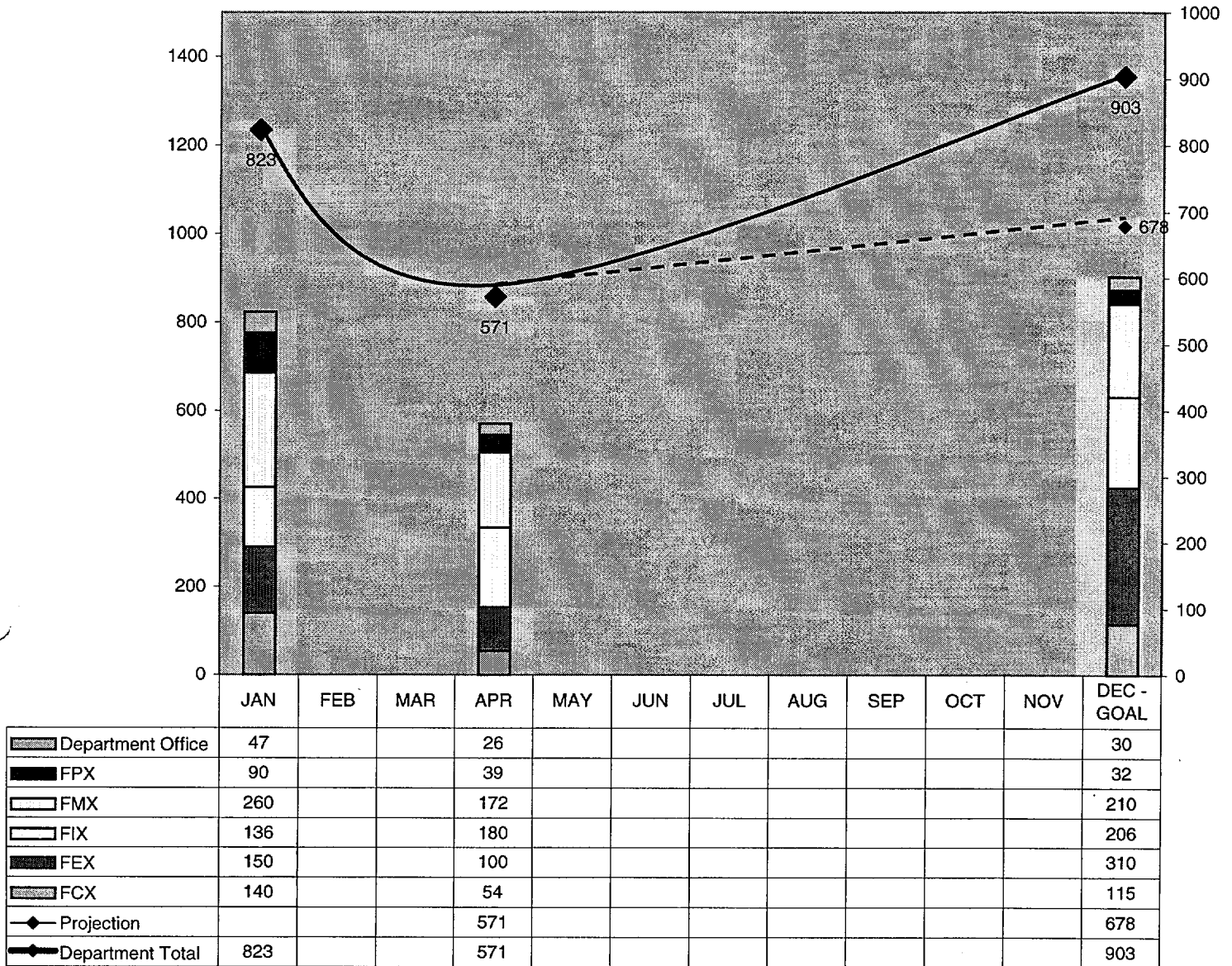
Goals for the reduction of Condition Reports assigned to the section are specified above. An increase in inventories from 47 to 30 is expected for the Year 2000 due to a lack of resources. We anticipated 120 incoming items for the Year 2000. The section goal is to complete 137 items during the course of this year.

#### Analysis

Beginning of year inventory	47
To be received for the year (10/month)	120
Planned to be completed for the year	(137)
End of the year projection	30

8.1.2. Department Overview  
Indicator Description

Condition Report Status



NOTE The above projection is based on the Open ICA Indicator on page 19.

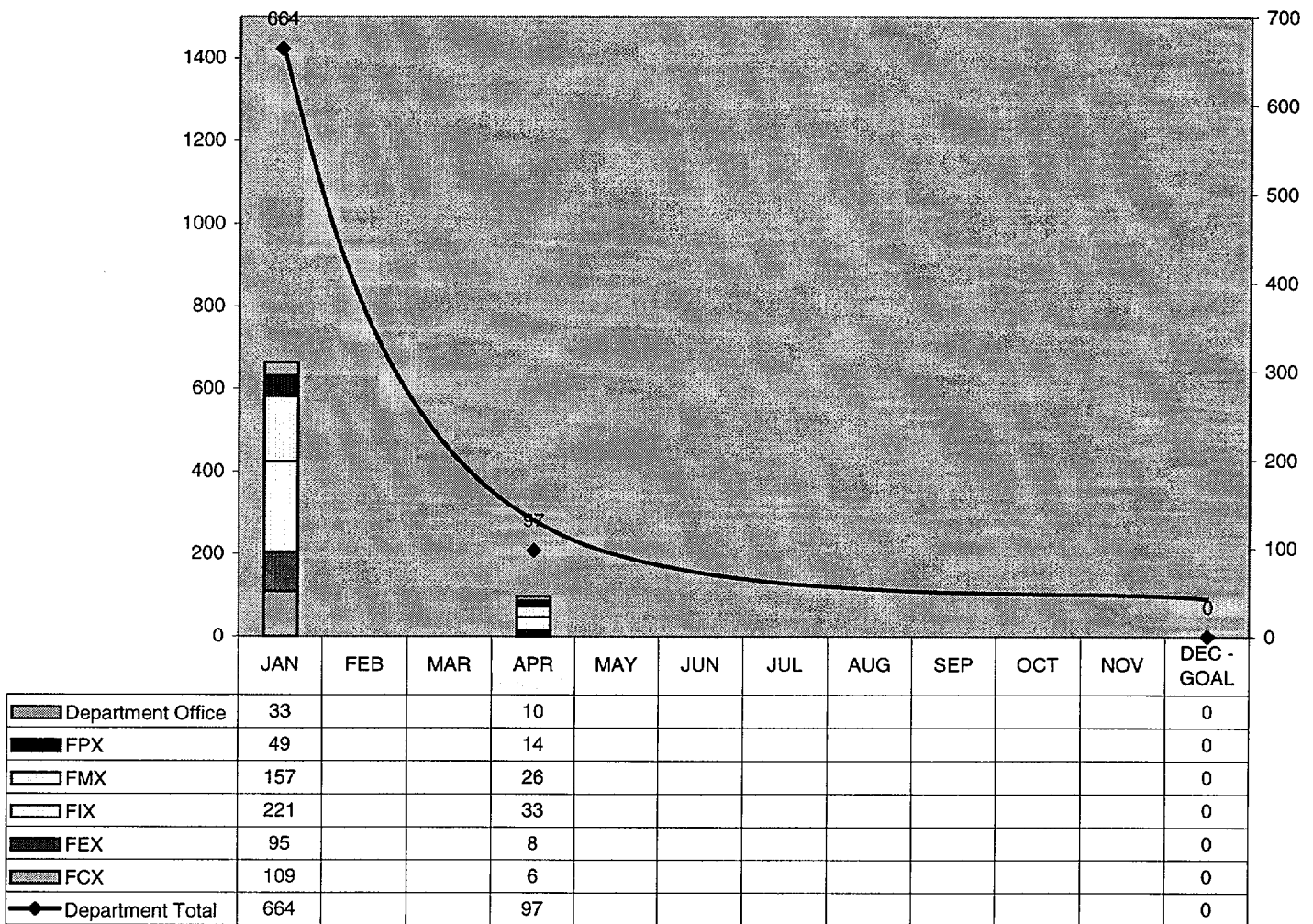
In 1999 Design Engineering was assigned 717 SL's and 696 ICA's. Also, the Department closed 780 SL's and 464 ICA's resulting in a net increase of 169 items for a total of 823 Condition Reports in inventory at the start of 2000. For 2000, Design Engineering has allocated 37,290 hours to address RFI's, SL's and ICA's. Based on the assumptions used and as shown on the following graphs, the projected end of year 2000 inventory shows a significant reduction for overdue items and open SL evaluations, but a levelized trend for open ICAs.



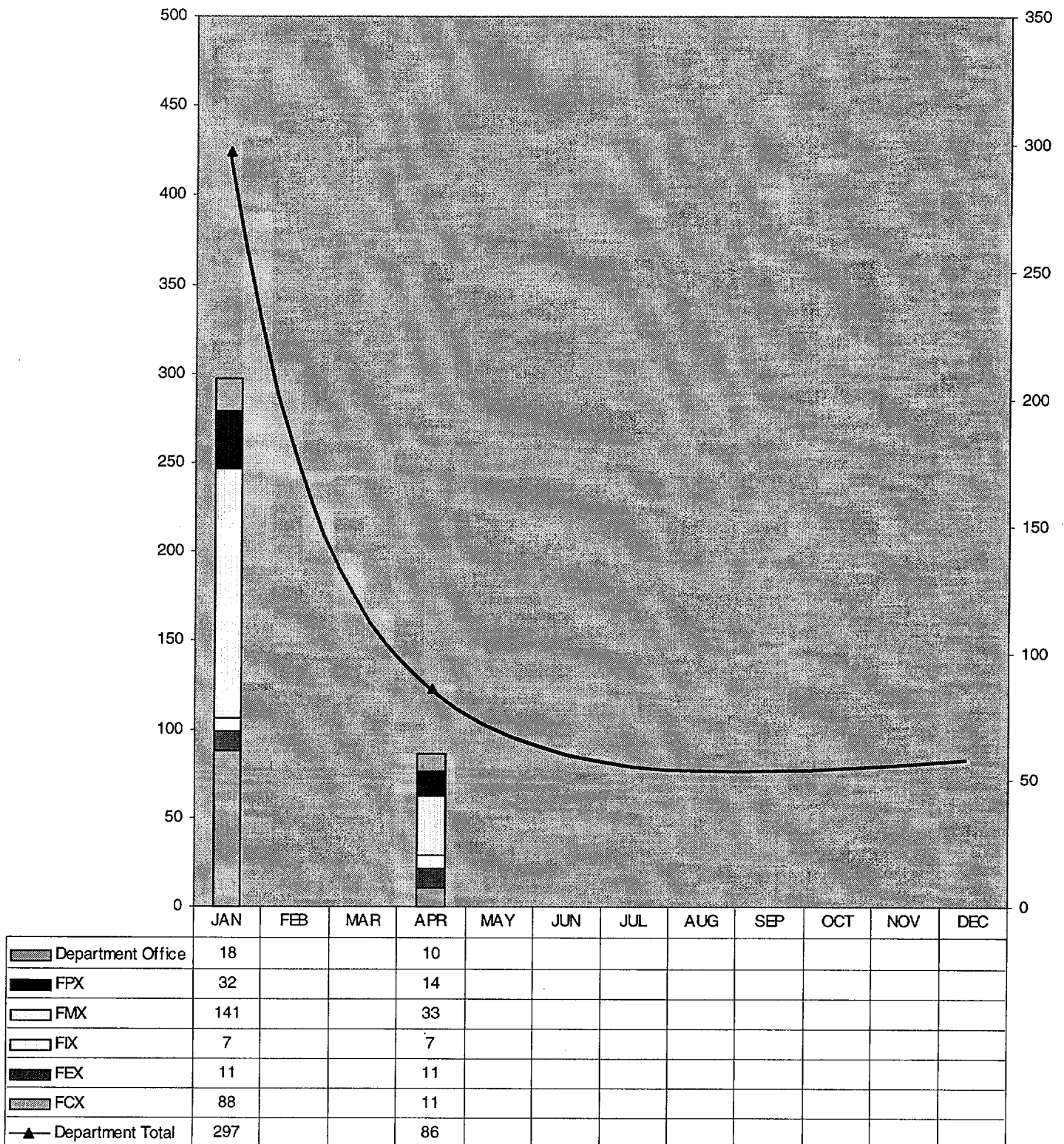
There are approximately 400 drawing related ICA's for the entire Department. A contract was awarded in the last quarter of 1999 with additional contracts to be awarded at mid and last quarters of this year to achieve a level trend with respect to open ICAs for Design Engineering. More significant reductions in the open ICA backlog for the Design Engineering Department are expected to be achievable in Year 2001 based on process improvements being pursued this year as described in Section 7.

Another important aspect of performance in this area in 2000 is to reduce the percentage of overdue items to insignificant levels. Early in the year the Design Engineering percent overdue was greater than 50% of our backlog total. The goal is to reduce the overdue percentage to less than 5% by the end of July and to less than 1% by the end of December.

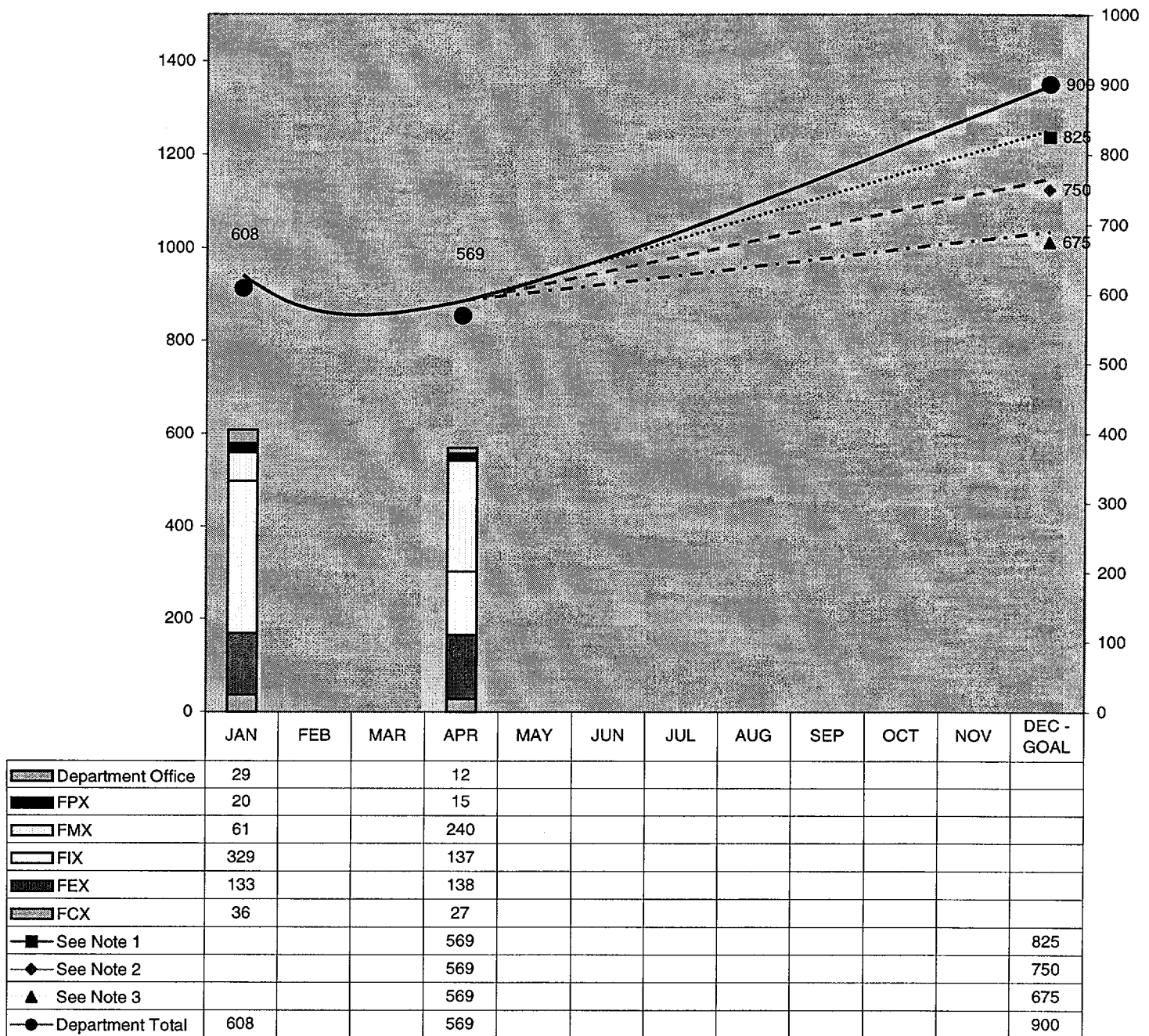
**Overdue Condition Reports  
Department Summary**



*Open SL3*  
*Department Summary*



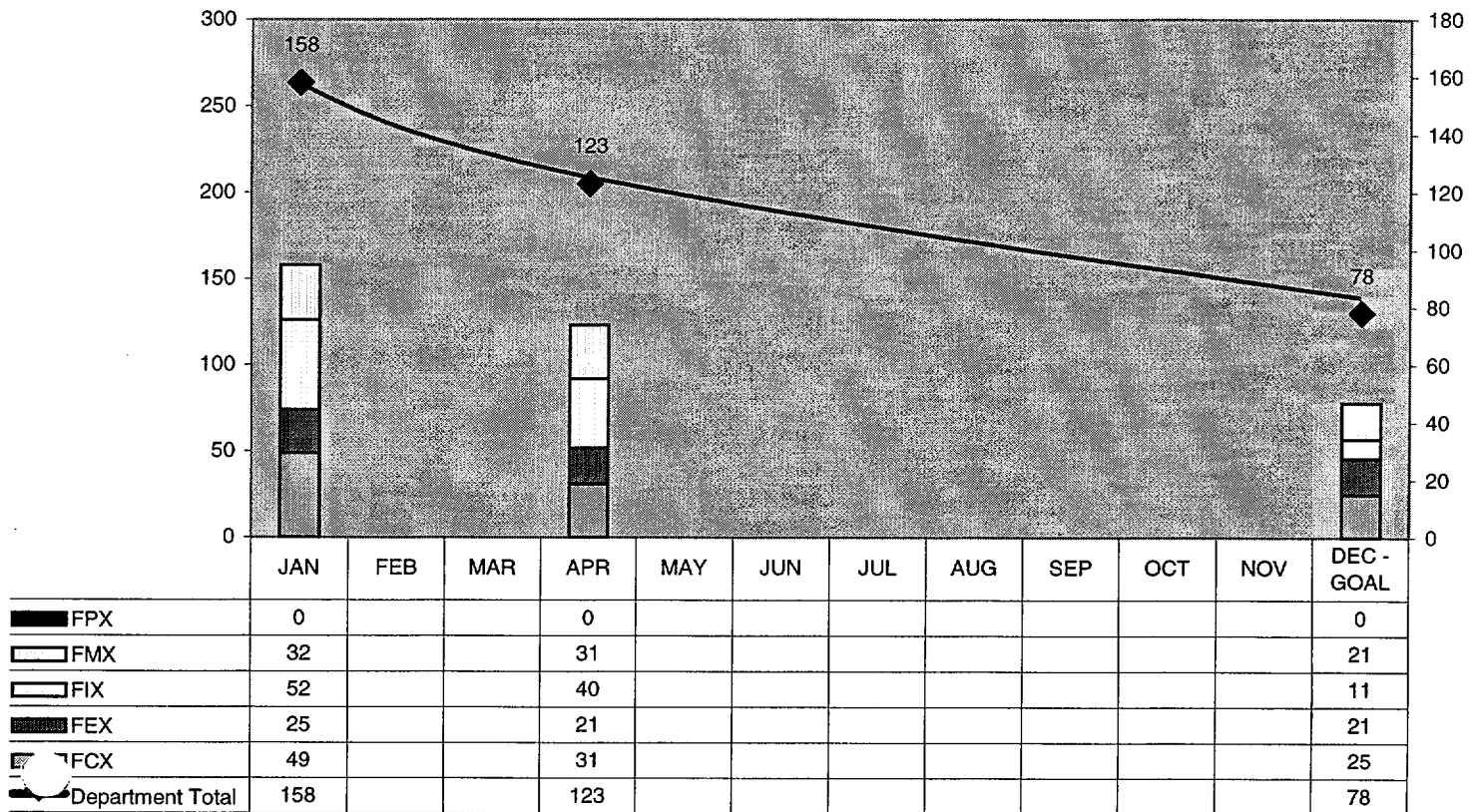
*Open ICA  
Department Summary*



- Note 1 The backlog reduction to 825 will be achieved by completion of contract presently underway with an outside vendor.
- Note 2 Additional budget of \_\_\_\_\_ is being utilized in the 2<sup>nd</sup> to 3<sup>rd</sup> quarter to achieve a reduction of approximately 75 drawing related ICAs.
- Note 3 Additional budget of \_\_\_\_\_ will be utilized in the 3<sup>rd</sup> to 4<sup>th</sup> quarter to achieve a further reduction of approximately 75 drawing related ICAs.

## 8.2. Requests for Engineering Service/Engineering Service Requests – Department Overview

*RES/ESR Status*



### Indicator Description

At the start of 2000 there were 158 Engineering Service Requests open in Design Engineering (status = Section Head Held + Engineer Assigned). Recognizing the importance of addressing these service requests in a timely fashion, the Design Engineering Business Plans allocate 6,300 hours to reduce the inventory of these requests. Based on the assumptions used, the projected end of year 2000 inventory is 78 requests. Thus, the goal is to reduce the inventory to 78 by the end of the year with none more than 2 years old.

### Analysis

Beginning of year inventory	158
Received during the first quarter of the year	15
Completed at the end of the first quarter	(50)
To be received for the remainder of the year	60
Planned to be completed for the remainder of the year	(73)
Additional reduction based on effort to review and filter	(32)
End of the year projection	78

Requests for Engineering Service/Engineering Service Requests (RESs/ESRs) are recommendations for enhancements that are received from various organizations at the IP2. Design Engineering evaluates these RESs/ESRs to the extent necessary to develop a conceptual modification approach and preliminary cost

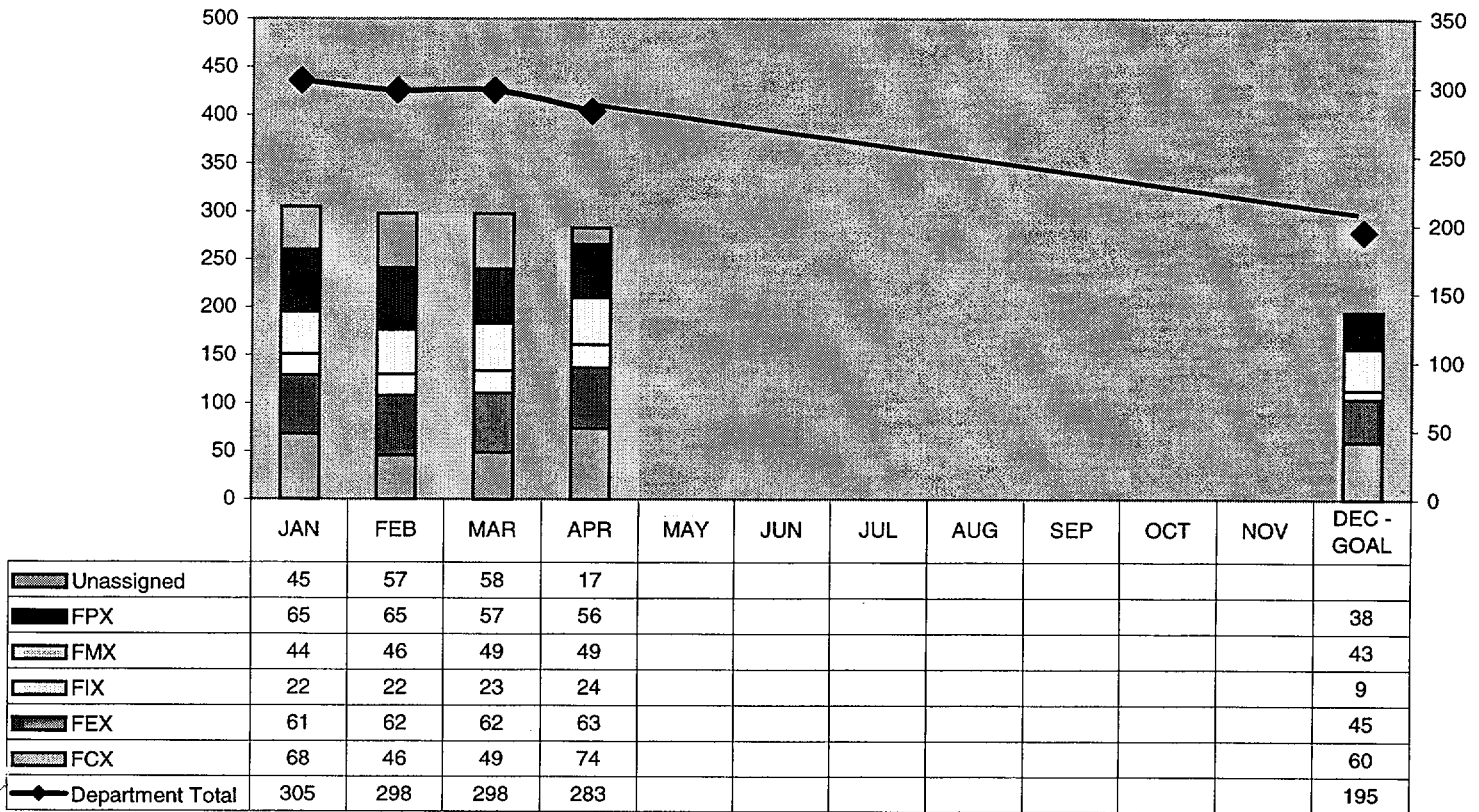


estimate. This information is used as a basis for determining whether the RES should be converted to a project, which is then prioritized and scheduled as part of the Plant Five-Year Project Program.

Presently, there are 320 projects on the active project list. This number has been consistently trending upwards as a result of projects being added at a rate considerably in excess to that of the available resources in the Design Engineering Department. Section 7 of each Design Engineering Section's 2000 Business Plan delineates the specific projects that are to be completed this year. An initiative is underway with Site Engineering and the Station to review and reduce the total number of open projects to approximately 100. Only those projects that can be completed with our present allocated resources within the next 1-5 years will remain on the Scheduled Project List.

### 8.3. Work Orders on Engineering Hold – Department Overview

*Work Order Status*



#### Indicator Description

The reduction in Work Orders will be achieved by allocation of the resources described in Section 5.4, which will allow the completion of 21 Work Orders. An additional reduction (~8) is anticipated this year as a result of our effort to review/filter all Work Orders. This review will determine where Work Orders can be dispositioned based on one of the following:

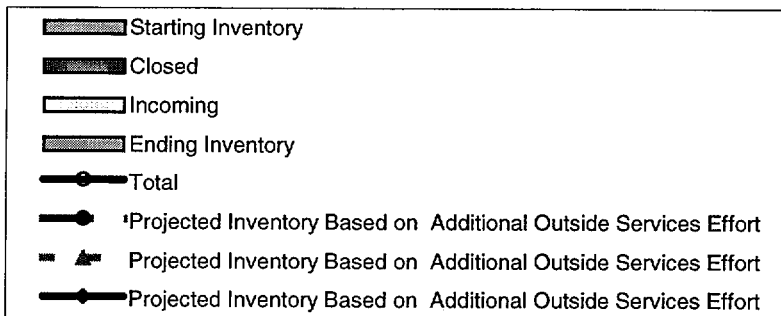
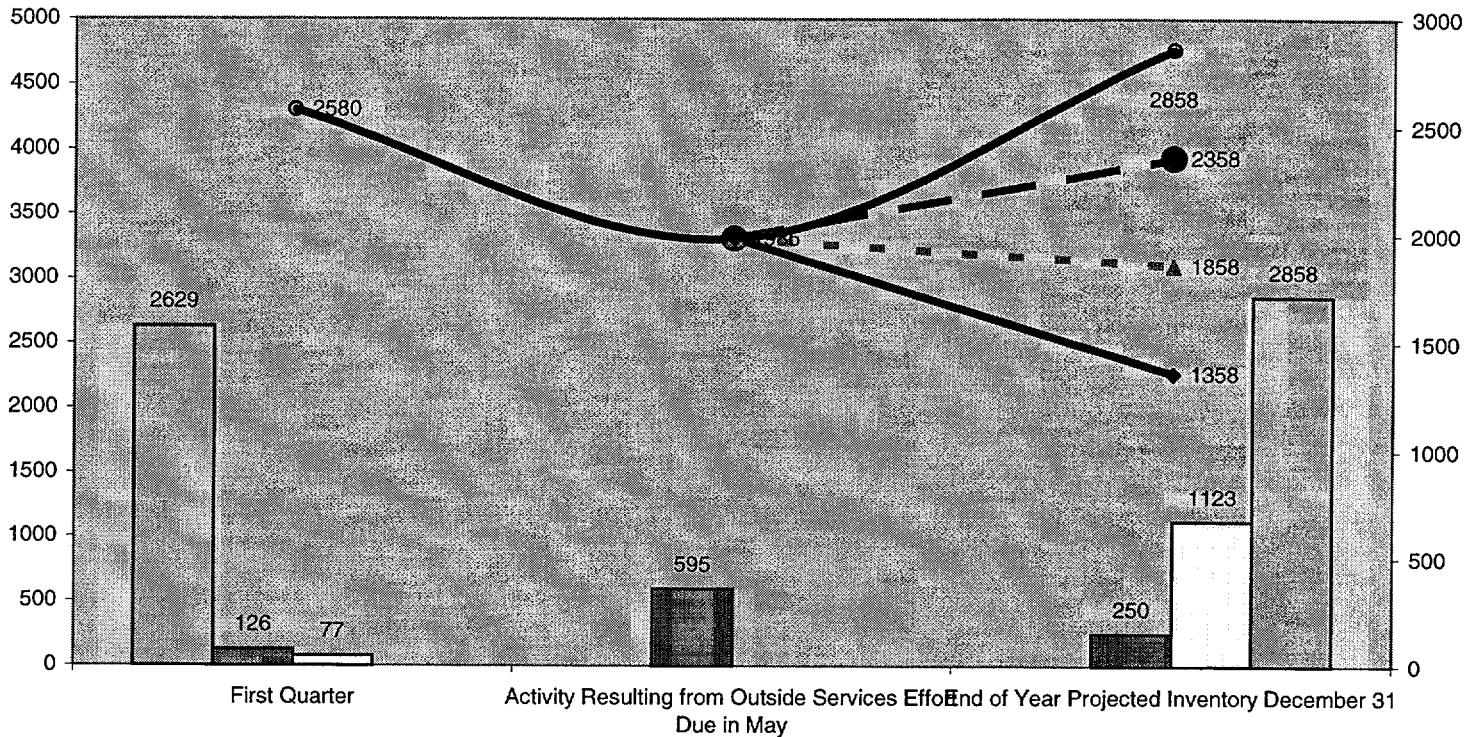
- insufficient value added
- clarification of improper assignment
- other

#### Analysis

Beginning of year inventory (not including <i>unassigned</i> items)	260
Received during the first quarter of the year	34
Completed at the end of the first quarter	(28)
To be received for the remainder of the year	84
Planned to be completed for the remainder of the year	(77)
Additional reduction based on effort to review and filter	(78)
Revised end of the year projection	195

#### 8.4. Reports of Installations – Department Overview

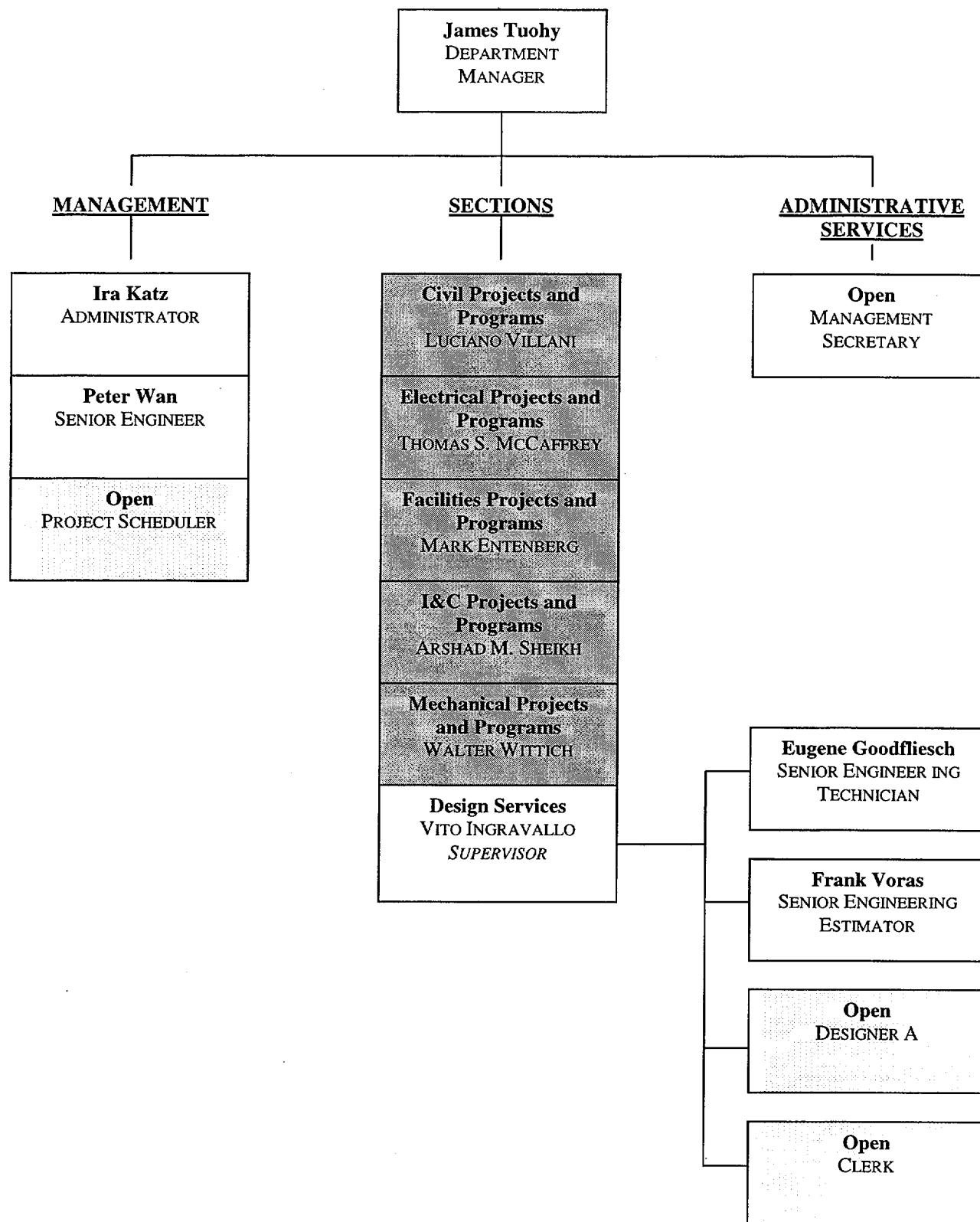
##### *ROI Status*



##### Indicator Description

There are currently approximately 150 completed modifications that require parent-drawing updates (~2800 drawings). A contract has been awarded to complete 595 of these items for (accrued under 1999 budget). This effort was started in November 1999 with a completion date of March 2000. Another contract is planned that will provide for the completion of the remaining items by December 2000. The anticipated cost is .

## 9. Organization Chart





10. 2000 Resource Plan

Section	Item	Full Work Scope Estimated Hours	Reduced Work Scope Estimated Hours	Full Work Scope Estimated Personnel	Reduced Work Scope Estimated Personnel	Reduced Work Scope Estimated Outside Support
4	Manpower Analysis, 1999 Actual Hours	N/A	-	N/A	-	-
5	Operational Overview	16,870	16,370	9.6	9.4	
7	Opportunities – Current Projects and Programs	3,560	2,660	2.0	1.5	
	Total Resources Needed ( 5 + 7 ) *	20,430	19,030	11.6	10.9	
	2000 Approved Budget (554 Hours OT)	18,054	18,054	10.3	10.3	
$\Delta$	Additional Resources Needed				0.6	

## ***11. Design Engineering Overview***

Attachment 2 provides a summary of the financial aspects of the Design Engineering Business Plans. As shown the Full Work Scope Estimated hours, which reflect the total volume of work on Design Engineering's plate, are considerably greater than the budgeted resources. To address this, Design Engineering management carefully considered what could reasonably be deferred from the scope of 2000 work to arrive at an estimate for the Reduced Work Scope shown in these plans. The Reduced Work Scope still allows for the reduction of backlogs in key areas. However, completion of the Reduced Work Scope will require restoration of the 12 positions cut in the 2000 budget.

**Attachment 1**

<u>PLAN OF ACTION</u>			<u>OWNER</u>	<u>DUE DATE</u>	<u>STATUS</u>	<u>COMPLETED</u>
1) Establish the Framework of a streamlined Modification Process. (Tuohy)				9/1/99		Completed 08/24/1999
1.1	Assemble a cross-disipline Team of Engineers and Procedure specialists to be committed full time.	Adinolfi	6/1/99		6/1/99	
1.2	Conduct team building and Brainstorming.	Tuohy	6/11/99		6/11/99	
1.3	Benchmark (phone) other sites and industry process experts within EPRI and INPO.	Szabo	6/25/99		6/25/99	
1.4	Survey Plant and Design engineers for improvement recommendations.	Scandiffio	6/25/99		6/25/99	
1.5	Review Benchmarking results to identify Key areas where our existing process differs and make recommendations for improvement.	Szabo	7/2/99		7/2/99	
1.6	Review Benchmarking & Survey Results and establsh a plan of action for generating Modification Optimization reports.	Tuohy	07/09/199		07/09/199	
1.7	Issue Modification Optimization Report - Volume 1 of 2 "Facility Change Package Description" outlining the general structure of a 'Graded Approach' modification package.	Tuohy	7/30/99		7/30/99	

<b>PLAN OF ACTION</b>			<b>OWNER</b>	<b>DUE DATE</b>	<b>STATUS</b>	<b>COMPLETED</b>
1.8	Issue Modification Optimization Report - Volume 2 of 2 "Facility Change Process Description" giving a detailed description of various aspects of the 'Graded Approach' modification package.		Tuohy	8/24/99		8/24/99
<b>2) Determination of Equivalency, DOE Process Improvement (PITT Team#1)</b>				<i>Phase 2 05/19/2000</i>		<b>1st Phase Completed 02/14/2000</b>
2.1	Attend Process Improvement Through Teams (PITT) Workshop (PITT Team#1 = Dipti Ghosh, George Murray, Joe Szabo, Jim Tuohy, Horst Zitzelsburger)		PITT Team#1	11/17/99		11/17/99
2.2	Discuss impact of DOE improvements on the QAPD with QA.		Zitzelsburger	11/30/99		11/30/99
2.3	Benchmark Equivalency Evaluation Process.		Szabo	11/30/99		11/30/99
2.4	Review proposed changes to SAO-460 with NS&L.		Ghosh	11/30/99		11/30/99
2.5	Review proposed changes to DOE Process with Station Management.		Tuohy	11/30/99		11/30/99
2.6	Revise SAO-460 "10CFR50.59 Safety Evaluations" to remove reference to DOE's.		Ghosh	12/14/99		12/14/99
2.7	Revise DE-SQ-12.512 "Preparation and Approval of Plant Modification Packages and Review of Maintenance and Repair Packages".		Murray	12/14/99		12/14/99

<b><u>PLAN OF ACTION</u></b>			<b><u>OWNER</u></b>	<b><u>DUE DATE</u></b>	<b><u>STATUS</u></b>	<b><u>COMPLETED</u></b>
2.8	Develop 10CFR50.59 Safety Evaluation for revision to SAO-460 "10CFR50.59 Safety Evaluations".		Ghosh	1/13/00		1/13/00
2.9	Present Revision 09 of SAO-460 to the Station Nuclear Safety Committee (SNSC) for approval.		Szabo	1/14/00		1/14/00
2.10	Revise DE-SQ-12.512 Attachments Specific to DOE process.		Szabo	2/9/00		2/9/00
2.11	Prepare 50.59 Safety Evaluation for revision to DE-SQ-12.512.		Szabo	2/4/00		2/4/00
2.12	Prepare approval documents from AD-2002 for revision to DE-SQ-12.512.		Szabo	2/9/00		2/9/00
2.13	Prepare Training Session on revision to DOE process.		Szabo	2/10/00		2/10/00
2.14	Present revision to DE-SQ-12.512 with 50.59 Safety Evaluation to SNSC.		Szabo	2/11/00		2/11/00
2.15	Conduct Training Session on revision to DOE process to Plant & Procurement Engineering groups.		Szabo	2/12/00		2/12/00
2.16	Revise Material Procurement Procedure MPAD-300 to direct Procurement Engineers to perform equivalency evaluations using DE-SQ-12.512.		Zitzelsburger	4/28/00		
2.17	Develop detailed Training on Determination of Equivalency process to be presented to the Procurement Engineering organization.		Szabo	4/28/00		

PLAN OF ACTION			OWNER	DUE DATE	STATUS	COMPLETED
2.18	Complete detailed Training on Determination of Equivalency process with the Procurement Engineering organization.	Zitzelsburger / Szabo	5/19/00			
2.19	Complete indexing and scanning of licensing bases documentation and establish a continuation of the web based Design and Licensing Basis search training in 2000 ESP Continuing Training curriculum.	Szabo/ Ryff	5/19/00	Reference 8/31/99 Event Recovery Plan, Rev.03 - Item # 7		
3) Introduce Indian Point Valve Packing Program, SAO-453 (Mike Barlok)				2/28/00	Completed 02/28/2000	
3.1	Benchmark other sites that utilize Valve Packing Software.	Barlok	9/30/99		9/30/99	
3.2	Review Benchmarking results and identify potential software candidates.	Barlok	10/8/99		10/8/99	
3.3	Discuss benchmarking results and proposed software packages with impacted organizations (Engineering and Maintenance).	Barlok	11/2/00		11/2/00	
3.4	Develop SAO-453 "Indian Point Valve Packing Program"	Barlok	12/3/99		12/3/99	
3.5	Issue Draft of SAO-453 for comment	Barlok	12/31/99		12/31/99	
3.6	Resolve and Incorporate Comments to SAO-453	Barlok	2/15/00		2/15/00	

<b>PLAN OF ACTION</b>			<b><u>OWNER</u></b>	<b><u>DUE DATE</u></b>	<b><u>STATUS</u></b>	<b><u>COMPLETED</u></b>
	3.7	Develop a method of controlling configuration changes to station drawings/documents to satisfy QA Configuration Control Concerns with SAO-453.	Szabo	2/6/00		2/6/00
	3.8	Discuss QA Configuration Control Concerns with SAO-453	Szabo	2/7/00		2/7/00
	3.9	Develop a Programmatic Impact Screen specific to Valve Packing Replacement.	Barlok	2/10/00		2/10/00
	3.10	Develop 50.59 Safety Evaluation for SAO-453.	Szabo	2/17/00		2/17/00
	3.11	Review 50.59 Safety Evaluation with NS&L and Obtain Approval.	Barlok	2/18/00		2/18/00
	3.12	Prepare for SNSC review of SAO-453 (Pre-SNSC Review) and associated 50.59 Safety Evaluation.	Barlok	2/21/00		2/21/00
	3.13	Present SAO-453 and associated 50.59 Safety Evaluation for SNSC review.	Barlok	2/24/00		2/24/00
	3.14	Submit 'SNSC Approved' SAO-453 Rev.00 to Mary Stauber for control and distribution.	Barlok	2/28/00		2/28/00
<b>4) Minor Mod process improvements (PITT Team#3)</b>				4/28/00		
	4.1	Attend Process Improvement Through Teams (PITT) Workshop (PITT Team#3 = Bob Altadonna, Jim Scandiffio, Arshad Sheik, Edson White)	PITT Team#3	1/20/00		1/20/00

<b><u>PLAN OF ACTION</u></b>			<b><u>OWNER</u></b>	<b><u>DUE DATE</u></b>	<b><u>STATUS</u></b>	<b><u>COMPLETED</u></b>
4.2	Discuss impact of Minor Mod improvements on the QAPD with QA.		Sheik	1/31/00		1/31/00
4.3	Benchmark Minor Modification Process.		Sheik	1/31/00		1/31/00
4.4	Review proposed changes to SAO-460 with NS&L.		Scandiffio	1/31/00		1/31/00
4.5	Review proposed changes to Minor Mod Process with Station Management.		PITT Team#3	2/8/00		2/8/00
4.6	Revise SAO-460 "10CFR50.59 Safety Evaluations" to remove reference to Minor Modifications.		Scandiffio	3/23/00		3/23/00
4.7	Revise DE-SQ-12.512 "Preparation and Approval of Plant Modification Packages and Review of Maintenance and Repair Packages" Procedure.		Scandiffio	3/23/00		3/23/00
4.8	Revise QAPD "Quality Assurance Program Document".		Scandiffio	3/23/00		3/23/00
4.9	Review Draft of Procedure changes and conduct a Team meeting to discuss and comment.		PITT Team#3	3/23/00	Team meeting held 3/23/2000 to discuss and comment on draft revisions. Schedule was revised due to project scope expansion into improving the Engineering Review Checklist (ERC) and associated Guideline.	3/23/00
4.10	Incorporate comments to Draft revisions of procedures (DE-SQ-12.512, SAO-460, and the QAPD)		Scandiffio	3/28/00		3/21/00
4.11	Develop 10CFR50.59 Safety Evaluations for revisions to SAO-460, DE-SQ-12.512, and the QAPD.		Scandiffio	3/28/00		3/21/00



<b>PLAN OF ACTION</b>			<b>OWNER</b>	<b>DUE DATE</b>	<b>STATUS</b>	<b>COMPLETED</b>
	4.12	Improve DE-SQ-12.512 Engineering Review Checklist and associated Guideline for use with the revised Minor Mod. process.	Altadonna	6/16/00	Added to Scope 3/23/2000. Labor intensive task.	
	4.13	Review 50.59 Safety Evaluations that were developed for Procedure Changes to SAO-460, DE-SQ-12.512, and the QAPD with NS&L - - Obtain Approval and schedule SNSC review.	PITT Team#3	6/16/00	Meeting Scheduled with NS&L - 4/12/2000	
	4.14	Prepare approval documents from AD-2002 for revision to DE-SQ-12.512.	Sheik	6/20/00		
	4.15	Prepare Training Module on revision to Minor Mod process.	Scandiffio	6/20/00		
	4.16	Present revisions of procedures DE-SQ-12.512, SAO-460, and the QAPD with associated 50.59 Safety Evaluations to SNSC committee.	PITT Team#3	6/20/00		
	4.17	Conduct Training Session on revision to Minor Mod process to Plant and Design Engineering groups.	PITT Team#3	6/21/00		
	4.18	Implementation of 'New' Minor Modification Process	PITT Team#3	7/7/00		
<b>5) Engineering Reply mechanism</b>				6/27/00	Outsource Procedure Updates - Direction from Tuohy, Szabo, and Katz	
	5.1	Review of Scope of work with Contract representative	Katz	3/1/00		3/1/00
	5.2	Review applicable Con Ed, NRC, EPRI and industry documentation used to create procedure.	Contractor	3/5/00		3/5/00

<u>PLAN OF ACTION</u>			<u>OWNER</u>	<u>DUE DATE</u>	<u>STATUS</u>	<u>COMPLETED</u>
5.3	Review Proposed scope of Engineering Reply (ER) mechanism with senior management and CAG group	Katz	2/10/00		2/10/00	
5.4	Interface with Con Ed personnel to acquire insite as to ultimate goals of procedure for site.	Contractor	3/16/00		3/16/00	
5.5	Develop Draft of 'new' procedure DE-SQ-12.526 for Engineering Response mechanism	Contractor	3/26/00	Draft Procedure Submitted 3/22/2000	3/22/00	
5.6	Develop an Electronic means of documenting and tracking Engineering Responses (ER's)	Szabo	6/30/00	Katz committed on a full time basis to Training through May 2000		
5.7	Test Draft procedure DE-SQ-12.526 for Engineering Response mechanism for effectiveness.	Contractor	3/26/00		3/26/00	
5.8	Review and Test Draft procedure DE-SQ-12.526 for Engineering Response mechanism, revise/comment and return to Contractor.	Tuohy/ Szabo	3/28/00		4/7/00	
5.9	Develop SAO-460 10CFR50.59 Safety Evaluation Screening for 'new' Engineering Response mechanism procedure DE-SQ-12.526	Contractor	5/12/00			
5.10	Incorporate changes for preliminary Con Ed comments and from Work Order testing results.	Contractor	6/2/00			
5.11	Perform SAO-460 10CFR50.59 Safety Evaluation Screening for Engineering Reply procedure DE-SQ-12.526	Contractor	6/7/00			

<b><u>PLAN OF ACTION</u></b>		<b><u>OWNER</u></b>	<b><u>DUE DATE</u></b>	<b><u>STATUS</u></b>	<b><u>COMPLETED</u></b>
5.12	Review 50.59 Screening for procedure DE-SQ-12.526 with NS&L and obtain approval.	Contractor	6/16/00		
5.13	Review and Incorporate comments on Draft of procedure DE-SQ-12.526	Contractor	6/21/00		
5.14	Prepare approval documents to meet SAO-100 requirements from AD-2002 'new' procedure DE-SQ-12.526.	Szabo	6/21/00		
5.15	Obtain Station approvals of procedure DE-SQ-12.526	Szabo	6/23/00		
5.16	Prepare Training Session for Plant, System, and Design Engineering groups on 'new' procedure DE-SQ-12.526.	Contractor	6/9/00		
5.17	S&L to Conduct Training Session for responsible Con Ed leads on 'new' procedure DE-SQ-12.526.	Contractor	6/19/00		
5.18	Schedule and Conduct Training of the use of the 'new' Engineering response mechanism with Plant, System, and Design Engineering groups.	Szabo	6/23/00		
5.19	'new' Engineering response mechanism goes into effect.		6/29/00		
<b>6) Introduce "Commercial Controls" Facility Change type into DE-SQ-12.512</b>			12/31/00	Out-source Procedure updates - Direction from Ghosh, Tuohy, and Szabo	
<b>7) Web Based Facility Change Package generation &amp; review ('new' PITT Team#4)</b>			12/31/00	<b>Reference 8/31/99 Event Recovery Plan, Rev.03 - Item #7</b> Team members to be identified and scheduled for PITT workshop.	
<b>8) Station Drawing/Document Revision Process Improvements (Design Eng.-Design Services)</b>			12/31/00		

<b><u>PLAN OF ACTION</u></b>			<b><u>OWNER</u></b>	<b><u>DUE DATE</u></b>	<b><u>STATUS</u></b>	<b><u>COMPLETED</u></b>
	8.1	Issue Scoping Document (i.e. white paper).	Tuohy/ Ingravallo	6/30/00	<b>Scope to include:</b> Prioitization of station drawings/documents, Graded update requirements based upon priority level, The use of sketches, and Field As-Building.	
	8.2	Procedure Changes.	Tuohy/ Ingravallo	9/30/00		
	8.3	Prioritization of select drawing and establish a drawing prioritization process.	Tuohy/ Ingravallo	12/31/00		
<b>9) Improve Request for Engineering Services, RES Process ('new' PITT Team#4)</b>				<b>SEE Note#1</b>		
<b>10) Introduce New Procedure DE-SQ-12.501 "Facility Change Process Description".</b>				<b>SEE Note#1</b>	Out-sourse Procedure updates - Direction from Szabo, Scandiffio, and Tuohy	
<b>11) Major Modification Process Improvements (PITT Team#3)</b>				<b>SEE Note#1</b>		
<b>12) Introduction of 'Team Approach' to Facility Changes</b>				<b>SEE Note#1</b>	Out-sourse Procedure updates - Direction from Tuohy and Katz	
<b>13) Design Verification Process Improvements (Scandiffio)</b>				<b>SEE Note#1</b>		
<b>14) Improve Project Turnover and Close-Out process (PITT Team#1)</b>				<b>SEE Note#1</b>		
<b>15) Improve Project Collection and Storage of Records ('new' PITT Team#4)</b>				<b>SEE Note#1</b>		
<b>Note#1 - Expected Completion date to be established with year 2001 business plan.</b>						

## Attachment 2

Indian Point 2, Design Engineering Business Plan Financial Summary				
	Full Time Equiv People			Outside Support
	Mgmt	WK LY	TOT AL	Contract \$ s
<b>Department Office/Design Services</b>				
Full Work Scope	-	-	10.2	
Reduced Work Scope to Meet Budget *			10.9	
Approved 2000 Budget ( 0.3 OT Hrs )	6	4	10.3	
<b>Civil Projects &amp; Programs</b>				
Full Work Scope	-	-	24.6	
Reduced Work Scope to Meet Budget			14.3	
Approved 2000 Budget ( 0.3 OT )	5	6	11.3	
<b>Electrical Projects &amp; Services</b>				
Full Work Scope	-	-	21.2	
Reduced Work Scope to Meet Budget			15.6	
Approved 2000 Budget ( 0.3 OT )	7	5	12.3	**
<b>Facilities Projects &amp; Programs</b>				
Full Work Scope	-	-	19.6	
Reduced Work Scope to Meet Budget			16.6	
Approved 2000 Budget ( 0.7 OT )	6	8	14.3	
<b>Instrumentation &amp; Controls Projects &amp; Programs</b>				
Full Work Scope	-	-	28.4	
Reduced Work Scope to Meet Budget			20.5	
Approved 2000 Budget ( 0.6 OT )	10	8	18.6	
<b>Mechanical Projects &amp; Programs</b>				
Full Work Scope	-	-	26.8	
Reduced Work Scope to Meet Budget			20.0	
Approved 2000 Budget ( 0.7 OT )	7	7	14.7	***
<b>Totals</b>				
Full Work Scope	-	-	130.6	
Reduced Work Scope to Meet Budget			97.9	
Approved 2000 Budget ( 2.4 OT Including RFO )	41	38	81.4	

- \*Assumed.
- \*\* Non-Outage + RFO Budget
- \*\*\* Non-Outage + RFO Budget

March 24, 2000



**INDIAN POINT 2**  
**CIVIL PROJECTS AND PROGRAMS**  
**YEAR 2000 BUSINESS PLAN, REV 1**

Luciano N. Villani  
PLAN MANAGER:

*Luciano N. Villani*  
SUBMITTED

4/27/00  
DATE

JAMES TUOHY  
SENIOR MANAGEMENT SPONSOR

*J. Tuohy*  
APPROVED

4/27/00  
DATE

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## ***1. Functional Responsibility***

The Civil Projects and Programs section performs all civil engineering and design (structural, architectural, heating, ventilation, air conditioning, plumbing, roofs, site work, coordinating seismic qualification of mechanical and electrical equipment and components) associated with new construction and renovation of structures at the Indian Point Station. The section is responsible for developing scopes of work, determining design criteria, preparing construction specifications, performing structural inspections, site investigations, and resolving field construction problems. It also acts as the Professional Engineer of record in obtaining permits from governmental authorities.



## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>AE Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
HURT	ENGINEER	MS	NJ	7	12
MUKHI	SR. ENGINEER	MS, MBA	NY	4	26
SKONIECZNY	ENGINEER	MS	-	19	1
SMITH	ENGINEER	BS	-	7	11
VILLANI	SECTION MANAGER	MS	NY, NJ	3	17
<b>WEEKLY</b>					
HAUSNER	SENIOR ENGINEERING DESIGNER A	ASSOC	-	1	45
LAL	DESIGNER B	BS	-	18	9
LITROVNIK	SENIOR DESIGNER B	BS	-	1	10
MARUTOLLO*	DESIGNER A	ASSOC	-	-	31
<b>CONTRACTORS/TEMP</b>					
HENRY	SENIOR STAFF ADMINISTRATOR	-	-	-	-
BOUNSE	ENGINEER	-	-	-	-
LEE	GENERAL TYPIST	-	-	-	-
<b>OPEN AND/OR REQUESTED</b>					
REPLACEMENT FOR THAKER	DESIGNER A	-	-	-	-
REPLACEMENT FOR HERRMANN	GENERAL TYPIST	-	-	-	-
<b>TOTAL</b>	<b>11 TOTAL, 9 CURRENTLY FILLED</b>	-	-	<b>60</b>	<b>162</b>

### Authorized Positions

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
<b>1999 Budget</b>	6	7	13
<b>2000 Budget</b>	5	6	11
<b>Change</b>	<b>-1</b>	<b>-1</b>	<b>-2</b>

*\*Mr. Marutollo will be leaving the section on May 1, 2000.*

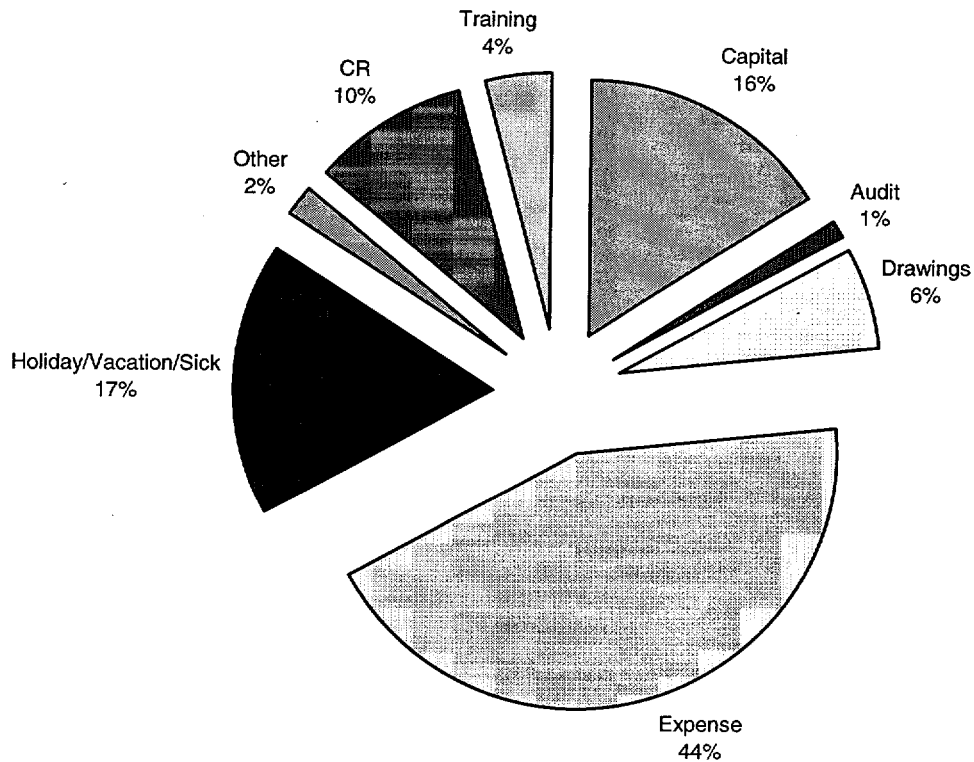
### 3. **Section Mission Statement**

To provide professional engineering service to Nuclear Power for the safe, reliable, and efficient operation and maintenance of Indian Point Units 1 and 2.

#### 4. Manpower Analysis

##### 1999 Manpower Analysis based on EPMIS2K data.

Capital	3,944
Audit	265
Drawings	1,584
Expense	10,819
Holiday/Vacation/Sick	4,244
Other	483
CR	2,397
Training	1,059
<b>Total</b>	<b>24,795</b>
Full Time Equivalents (FTE)	11.92
Production Hours/FTE	1,724



## 5. Operational Overview

Project/Program	Description	Full Work Scope Estimated Hours <i>E = Engineer</i> <i>D = Designer</i> <i>T = Total</i>		Reduced Work Scope Based On 2000 Budget <i>E = Engineer</i> <i>D = Designer</i> <i>T = Total</i>	
5.1. Condition Reports	Complete (195) <u>145</u> CRs that contain evaluations/ drawing updates, SL3s, RFIs, FCAs, and ICAs. Beginning of year inventory: 140 Projected incoming: 10/month Assume 40/item.	E	3900	E	2900
		D	3900	D	<u>2900</u>
		T	<b>7,800</b>	T	<b><u>5,800</u></b>
5.2. Requests for Engineering Service/Engineering Service Requests	Complete (64) <u>48</u> (backlog only) reviews, evaluations, and dispositions of RESs/ESRs. Beginning of year inventory: 49 Projected incoming: 24/year Assume: 20 hours/backlog item 70 hours/incoming item.	E	1530	E	<u>670</u>
		D	650	D	<u>290</u>
		T	<b>2,180</b>	T	<b><u>960</u></b>
5.3. Work Orders	Provide engineering review of (20) <u>11</u> Work Orders as needed to support safe and reliable station operation. Beginning of year inventory: 68 Projected incoming: 21/year <i>The Work Orders that come to the Civil Projects and Programs section typically require a Modification to resolve the issue. Thus, for the most part, they are covered under Minor and Generic Modification categories of work. Works hours shown are only for review and disposition of work orders that do not turn into modifications.</i> <b><u>In addition, with the exception of the HVAC discipline, the civil engineering section is unique in that there are no complimentary system engineering or plant engineering personnel who can address issues pertaining to structural, seismic, coatings, or facilities type issues. As a result, it is heavily relied on for support in these areas outside the minor/major mod arena.</u></b>		<b>200</b>		<b>200</b>

Project/Program	Description	Full Work Scope Estimated Hours <i>E = Engineer</i> <i>D = Designer</i> <i>T = Total</i>	Reduced Work Scope Based On 2000 Budget <i>E = Engineer</i> <i>D = Designer</i> <i>T = Total</i>
5.4. Reports of Installations	<i>Design Services will administer all ROI work efforts.</i>	0	0
5.5. Minor Modifications	<p>Prepare modification packages to implement a planned physical and/or functional change to or an addition or deletion of a permanent plant structure, system, or component that modifies the plant design. For 2000 complete 7 Minor Modifications. Assume 400 hours/Minor Modification</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• CCR Carbon Filter Piping (RFO)</li> <li>• EL 95' Structural Steel Upgrade</li> <li>• Unit 1 VC Dome Repair</li> <li>• Unit 1 Stack Repair</li> </ul>	<p>E 1,400 D 1,800  T 3,200</p>	<p>E 1,400 D 1,800  T 3,200</p>
5.6. Generic Modifications	<p>Prepare modification packages to implement a major or minor modification that will be implemented on a repetitive basis in various locations of the plant over an undetermined period of time. For 2000 complete 3 Generic Modifications. Beginning of year inventory: 2 Projected incoming: 3/year Assume 400 hours/ Generic Modification</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Cable Spreading Room Electrical Supports Upgrade</li> <li>• PAB MCC Upgrades</li> <li>• Generic Platforms Upgrade</li> </ul>	<p>E 550 D 650  T 1,200</p>	<p>E 550 D 650  T 1,200</p>

Project/Program	Description	Full Work Scope Estimated Hours <i>E = Engineer</i> <i>D = Designer</i> <i>T = Total</i>		Reduced Work Scope Based On 2000 Budget <i>E = Engineer</i> <i>D = Designer</i> <i>T = Total</i>	
5.7. Temporary Facility Changes	The Civil section creates and/or permanentizes very few Temporary Facility Changes (TFC) as needed to support safe and reliable station operation. Assume hours spent to be from <i>emergent work</i> .	E	0	E	0
		D	0	D	0
		T	0	T	0
5.8. Modification Support	The Civil Projects and Programs section provides for modifications other groups have the lead on. <ul style="list-style-type: none"> <li>• GT Transformer</li> <li>• Fan Cooler Upgrade Modifications</li> <li>• Stator Repair</li> <li>• CRD Upgrades</li> <li>• Feedwater Heaters</li> </ul>	E	1,000	E	1,000
		D	1,500	D	<u>1,000</u>
		T	2,500	T	<u>2,000</u>
5.9. Training	Complete all continuing training including GET, ESP, qualification training, etc. <ul style="list-style-type: none"> <li>• 3 Weeks – 5 Engineers (600 hrs)</li> <li>• 2 Weeks – 4 Designers (320 hrs)</li> <li>• Qualification training 1.5 people @ 20 Weeks (1200 hrs)</li> </ul>		2,120		2,120
5.10. NRC Inspection & QA Audit Support, Self Assessments, Benchmarking	<ul style="list-style-type: none"> <li>• HVAC Support (300 hrs)</li> <li>• Seismic, etc. (100 hrs)</li> </ul>	E	300	E	300
		D	100	D	100
		T	400	T	400
5.11. Technical Program Maintenance	<ul style="list-style-type: none"> <li>• Structural Maintenance Rule (1,000 hrs +\$ OS)</li> <li>• Heavy Lifts over Safety Related Equipment (500 hrs + \$ OS)</li> <li>• Scaffolding Support</li> <li>• Unresolved Safety Issue USI A-46 (SQUG) (500 hrs +\$ OS)</li> </ul>	E	1600	E	<u>600</u>
		D	600	D	<u>300</u>
		T	2,200	T	<u>900</u>
			+		+

Project/Program	Description	Full Work Scope Estimated Hours <i>E = Engineer D = Designer T = Total</i>	Reduced Work Scope Based On 2000 Budget <i>E = Engineer D = Designer T = Total</i>
5.12. Management and Supervision	Time spent in management and supervisory functions including planning, delegation and oversight of work. Assume 75% of the manager's production hours.	1,313	<u>438</u>
5.13. Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operations. Allocate (25%) <u>10%</u> of 11 @ 1,750 hours	4,813	<u>1,925</u>
Total Estimated Hours		27,926	19,143
Total Estimated Dollars			
Full Time Equivalent People @ 1,750 Hours Each		16.0	10.9

## **6. Equipment/Materials Expertise**

### **6.1. Extensive support provided for:**

- Seismic Structures
- Scaffolding
- Steel Design
- Finite Element Analysis
- Rigging
- Environmental Eng'g
- Seismic Eqmt. Qual
- Permits
- Cranes
- Painting
- HVAC
- Thermal Transients
- Roofs
- Personnel Space Design
- Electrical Supports
- Shop / Fab Drawings

### **6.2. Moderate support provided for:**

- Reinforced Concrete
- Foundations
- Hydrology
- Waterfront Structures
- Flood Protection
- Stacks
- Soils Design
- Pipe Supports

### **6.3. Limited support provided for:**

- Masonry Design
- Fire Protection
- Retaining Structures

### **6.4. Outside Services support for:**

- Rigging
- Environmental Eng'g
- Waterfront Structures
- Siesmic Eqmt. Qual
- Cranes
- Painting
- Thermal Transients
- Roofs



## 7. Opportunities – Current Projects and Programs

The following Projects and Programs are being worked in 2000 to support continued plant operations and to prepare for the 2000 refueling outage.

Project/Program Title	Full Work Scope Estimated Hours	Full Work Scope Estimated Outside Support	Reduced Work Scope Based On 2000 Budget	Reduced Estimated Outside Support Based On 2000 Budget
7.1. Shop Drawing Expertise	400	-	<u>0</u>	-
7.2. Cross Training (Designer/Engineer)	200	-	<u>0</u>	-
7.3. Independent Spent Fuel Storage Installation (Upgrade Spent Fuel Building and Crane)	1,000	-	<u>100</u>	-
7.4. IWE / IWL Containment Structural Inspections	2,000	In QA Budget	2,000	In QA Budget
7.5. Environmental Initiatives	2,000		<u>200</u>	
7.6. Unit 1 Fuel Pool Issues – Potential Repairs	2,000	-	<u>400</u>	-
7.7. Steam Generator Replacement Project	400	-	400	-
7.8. CCR Pressurization Modification (HVAC)	400	-	400	-
7.9. Re-Design of Space in the Energy Education Center (Old Simulator Building)	1,000		<u>0</u>	<u>0</u>
7.10. Re-Design of the Maintenance Training Facility & Evaluation Of Existing Administrative Work Areas	1,000		<u>0</u>	<u>0</u>
7.11. Re-Design of NEM Building	1,000		<u>0</u>	<u>0</u>

<b>Project/Program Title</b>	<b>Full Work Scope Estimated Hours</b>	<b>Full Work Scope Estimated Outside Support</b>	<b>Reduced Work Scope Based On 2000 Budget</b>	<b>Reduced Estimated Outside Support Based On 2000 Budget</b>
7.12. Support to IP Facilities Section	400	-	400	-
7.13. UFSAR Segment Reviews/DBD Reviews	2,000	-	<u>1000</u>	-
7.14. Modification Process Optimization Support	200	-	<u>100</u>	-
7.15. Year 2000 Civil RFO Support	1,000	-	1,000	-
<b>Total Estimates</b>	<b>15,000</b>		<b>6,000</b>	
<b>Full Time Equivalent People @ 1,750 Hours Each</b>	<b>8.6</b>	-	<b>3.4</b>	-

7.1. Shop Drawing Expertise

Improving and developing in-house expertise is recognized as a top priority for maintaining a competitive advantage. Developing both construction and shop fabrication drawings to facilitate ease of installation will significantly reduce construction time and the final cost of the project. This goal was developed in 1996 for the purpose of improving communication with Van Nest Shops and to minimize the number of CRFs (Clarification Request Forms) generated during the installation of Civil projects in the 1997 RFO. Civil staff engineers and designers met with Shop personnel to determine the facility's tooling capabilities and reviewed many of the steel designs shown on the shop drawings prior to fabrication. This "hands on" experience and upfront involvement reduced the amount of time spent on "rework" and, contributed to a significant reduction in the number of CRF's. Five projects benefited from this effort and are listed below. It should be noted, however, that the expertise developed is specific to the relationship established with Van Nest Shops. If steel fabrication is purchased from an outside vendor (and each fabricator has unique tooling capabilities with different machining tolerances) our developed expertise would not be necessary. Subsequently, the continued generation of shop drawings could be a time consuming endeavor, putting constraints on the time available for other site specific projects.

**PROJECTS with SHOP DRAWINGS**

PROJECT NO	DRAWING NO	PROJECT DESCRIPTION
10721-94	265434-00	Steam Generator Platform Extensions
11821-96	265439-00	PZR Hoist Support Plate & Handrails
76339-95	265165-AA-01	VC Jib Crane, Equipment Transport System
10912-95	9321-1292-AE-01 9321-1292-AF-01 307995-02	H2 Recombiner Support Steel
20807-94	226214-AA Sht. 1	Floor Reinforcing for Equipment Hatch @ Elev. 95' 0"

7.2. Cross Training (Designer/Engineer)

The Civil section is essentially self-sufficient in Civil Engineering and HVAC Mechanical Design. Our Engineers and Designers possess practical "hands-on" expertise as well as very specific technical skills such as knowledge of "finite-element" analysis, Seismic design, Paint and Coating issues, Rigging and Scaffolding, Heat Transfer Analysis, etc. The subject initiative was started in 1996 for the purpose of cross training Engineers on the AutoCad system to facilitate disposition of drawings and sketches in preparation of the 1997 plant Refueling Outage. It also allowed for Designers to initiate ESR responses and project specifications. Although it did not fully mature because of the section workload, initiatives were started and successfully completed.

7.3. Independent Spent Fuel Storage Installation  
(Upgrade Spent Fuel Building and Crane)

The project for upgrading the IP Spent Fuel Building and Crane is currently funded in the capital budget at an estimated loaded cost of ( approx. direct) over

3 years, ( ) occurring approximately 2 years before fuel storage is maxed out (approx yr 2005-6). It contains, in essence, two phases the first of which is structural in nature. The second is co-requisite and involves the actual spent fuel removal from the IP Spent Fuel Building to an approved repository (On-site or Off-site). Civil Engineering is a discipline to the Reactor and Fuel Engineering section.

7.4. IWE / IWL Containment Structural Inspections

In September 1996, new ASME Section XI requirements were published in the federal register that mandated the use of Article IWE and IWL for containment inspections. Sargent & Lundy has been awarded a contract to develop liner and concrete inspection procedures, to perform the inspection, and to provide an inspection report. Raytheon Engineers and Constructors (original AE firm for IP2) were awarded a contract to develop Inspection Criteria for the Containment IWE/IWL Inspection Program. Under this contract, Raytheon is responsible to develop a set of criteria and basis to aid the inspectors and the Responsible Program Engineer in determining what observed deficiencies requires further engineering evaluation.

As of April 2000, the liner inspection has been completed. Results of this inspection indicate liner deficiencies (corrosion) at Elevation 46'. The exterior inspection is due to be completed by mid-May.

7.5. Environmental Initiatives

Oil- Water Separators:

In 1997, a comprehensive study was performed of the IP2 drainage systems to identify flooding concerns and develop a five year plan for improving the site's margin for compliance to New York State Department of Environmental Conservation (NYSDEC) water discharge requirements. The primary concern was the potential for oil to be released to the discharge canal through building drains, because of limited secondary containment on oil containing systems. The current design of both Unit 1 & 2 allows for the use of common flow paths of four systems; the roof and floor drains, as well as the storm water and subsurface drains. Floor drains and sump pumps in areas of oil containing equipment also discharge to storm drain piping which is routed to the discharge canal.

Consequently, oil storage tanks, oil pipelines, oil containing equipment and oil filling stations were examined for their potential risk and recommendations were made for upgrades. The proposed modifications include installing:

- New secondary containment around risk significant systems (i.e., Turbine Lube oil tanks, Boiler Feed Pump oil tank, Station Transformers, Diesel Generators, and truck filling locations, etc.)
- Three Oil Water Separators - two in the Unit 1 Turbine Building and one in the Transformer Yard
- New drainage piping to Oil Water Separators
- Rerouting and diverting flows from trenches and building, roof and storm drains

This issue is in the forefront of environmental concerns for the station and is listed as Environmental Health & Safety Goal #2 for Nuclear Operations in 1999. Refer to Attachment 7.10A for the 1999 EH & S Goals. A preliminary Order of Magnitude Estimate projects the cost to be between for this effort.

Freon Usage:

A program was developed in 1996 to identify and locate the sources of Freon releases to the environment. Air Conditioning units are routinely monitored for Freon usage, replacement and leakage. This endeavor has led to a significant reduction in the amount of freon leakage since initiated in '96 and '97. In the past Civil P & P personnel were involved in meetings with Con Edison EH&S staff and NYSDEC representatives to address the Reportable Quantities (RQ) for refrigerant HCFC-22. The meetings were fruitful in that the DEC obtained a better understanding of the "Freon 22"/"Freon 12" issues, and revised the reportable limits in 1997. Engineering will continue to provide technical assistance to plant personnel on freon related issues and will continue to make improvements in the program.

*Bulk Chemical Storage (PN 12026-99):*

A Project was completed in 1999 that meets the requirements for the storage of Bulk Chemicals as stipulated by NYSDEC for all industrial facilities. The upgrade included the Sodium Hypochlorite tanks as well as the Concentrated Caustic and Sulfuric Acid systems in the water factory.

The scope of the modification included providing spill containment and remote level indication at the hypochlorite filling station, and installing vents on the tanks. The acid and caustic tanks in the water factory were retired in accordance with NYSDEC requirements. A separate project by Mechanical Projects and Programs retired and removed two (2) caustic tanks in the Primary Auxiliary Building (PAB). Year 2000 activities will address quarterly inspections of the tanks and ancillary systems.

*GT2 & # Moat Liner (PN 11350-95):*

IP2 has made a commitment to NYSDEC to replace the existing bentonite moat liner for the 200,000 gallon GT 2 & 3 with a new polyurea liner, similar to that found in the Tank Farm. Over the years no discharge was recorded from the moat's Oil Water Separator, which led to unresolved questions of its integrity. Although the existing bentonite liner was examined and tested using approved DEC contractors/techniques, a commitment was made by Indian Point to replace the liner with a new surface installed system. The scope of the modification also includes construction of a new truck unloading area contained by a concrete wall. Both the new liner and truck containment area will be tested for leakage upon completion of the work. This modification package was released and is currently awaiting installation.

7.6. Unit 1 Fuel Pool Issues – Potential Repairs

*Introduction*

The Unit 1 Fuel Pools located in the Fuel Handling Building and their approximate capacities are:

Water Storage Pool	272,000 gals.
East Storage Pool	169,000 gals.
West Storage Pool	200,000 gals.
Failed Fuel and Auxiliary Pool	48,000 gals.
Disassembly Pool	48,000 gals.
Cask load Pool	48,000 gals.
Fuel Transfer Pool	87,000 gals.

The original plant operation utilized all pools. The Unit 1 spent fuel assemblies are currently stored in the West Pool. The East Pool is a candidate location for storage (with

an approved liner system) if the fuel assemblies required to be moved in the future will be stored in the East or West pools. A detailed description of these 2 Pools follows:

#### **East Storage Pool**

The East Storage Pool is a 169,000 gallon reinforced concrete pool with a bottom at elevation 30'-0". The Carboline-coated walls range in thickness from 3'-0" along the east outside wall to 5'-6" along the wall adjoining the pool and the Chemical Systems Building. There is a 6" curb surrounding the pool decking which is at elevation 70'-6". The pool decking is a series of removable steel checker plate covers. A pool gate separates this pool from the West Storage Pool. The East pool currently contains contaminated equipment and is in the process of being cleaned. The Unit 1 spent fuel rods may be transferred to this pool if the West pool is found to be leaking. A modification to this pool would be required to ensure it's water tightness before that can occur.

#### **West Storage Pool (Contains The Unit 1 Spent Fuel)**

The West Storage Pool is a 200,000 gallon reinforced concrete pool lined with Carboline. The bottom of the pool is at elevation 30'-0" and is 2'-8-1/2" thick. The pool wall thickness range from 3'-0" along the Containment Building wall to 5'-6" along the wall adjacent to the Fuel Transfer Pool. There are 12 ventilation inlets along the curb surrounding the pool decking which is at elevation 70'-6". The pool decking is a series of removable steel checker plate covers. Pool gates separate this pool from the East Storage Pool, the Fuel Transfer Pool and Disassembly Pool.

This pool contains the Unit 1 spent fuel rods. If it can be determined that there is no leakage in this pool, the rods will continue to be stored here and no modification to the East pool will be required.

#### **Background**

On May 20, 1994, while in the process of investigating a suspected water inventory loss from the Unit 1 Spent Fuel Pools, the "Sphere Foundation Sump" located on the 14ft. elevation of the Chemical Systems Building was sampled to determine if it contained radioactivity. The sample results indicated positive for tritium. Although prior work had been underway since the 1990 time frame to obtain more accurate information as to the suspected pool water inventory loss, this latest information resulted in a more aggressive and formalized approach to the problem. The objective of the project plan was to identify and quantify the inventory loss from the Unit 1 Fuel Pools. These activities were performed and recommendations developed to address future work.

#### **Current Status**

As a result of the above mentioned investigations, Civil Engineering was given the task to:

- |          |  |
|----------|--|
| Phase 1) | Identify ( via analysis) the high stress regions of the pools using finite element |
| Phase 2) | Perform physical examination of the Walls and Floors and evaluate results          |
| Phase 3) | Develop Phase 2 recommendation plans   |

Phase 1 was completed in 1995. Phase 2 and 3 are currently on hold pending the physical cleaning of the accessible pools. (It should be noted that an evaluation is underway in the year 2000 (See proposed alternate plan below) which will address the potential for dry storage in casks of both unit 1 and unit 2 fuel within the unit 1 complex. The attached decision tree was presented to upper management for review. Civil Engineering and Reactor Engineering will be developing cost estimates and time schedules for the associated alternatives. Another presentation is scheduled in April 2000 for updating purposes. If dry cask storage is not feasible, then the schedule below will be followed. — LNV 3/15/00). Once the physical examination is complete, the results will be used to justify the analytical results of Phase 1. After inspection, the following options are possible:

- 1) Option 1-- Inspections reveal no leakage from West Pool – Scope for option 1 will call for draining/cleaning of all pools, except West Pool, repair existing deficiencies (cracks).
- 2) Option 2 – Inspections reveal possible leakage path out of West Pool. Fabricate and install new stainless steel liner in East Pool and move the fuel. Estimated cost is as follows:

**Estimated Cost**

Surface Prep Pool Areas	
Fabricate New Stainless Steel Liner Plates	
Construct / Install New Liner, Leak detection system, Separation Wall	
Inject Grout New Liner to Structure	
Install New SS Racks in East Pool	
Inspect/Repair West Pool	
Sub Total	
Contingency	
Sub Total	
Overheads	
<b><u>TOTAL</u></b>	

*Proposed Alternate Plan is available in Adobe Acrobat file format.*



**7.7. Steam Generator Replacement Project (New Section Initiative)**

Of the 8 nuclear power plants that went operational in the 1970's with Westinghouse steam generators, Unit 2 is the only plant that has not replaced its steam generators. The primary concern is the deterioration of the tubes and the effect on the power generation capacity. Con Edison has performed studies to evaluate the remaining useable life of our steam generators based on the condition of the IP2 generator tubes. This evaluation concluded that the IP2 steam generators would, in all probability, continue to be serviceable for several additional cycles of operation. However, based

on the great deal of projection uncertainty, it is judged prudent at this time to prepare for steam generator replacement during the 2002 refueling outage.

The major project tasks that will be the responsibility of the Civil Programs/Projects section are as follows:

- ◆ Obtaining all necessary permits
- ◆ Provide documents necessary to establish Design Basis
- ◆ Review safe load path for movement of steam generators
- ◆ Assure protection underground utilities during generator transport
- ◆ Review Building Plans
- ◆ Rigging
- ◆ Review Vendor modification packages/drawings/safety evaluations
- ◆ Review Vendor procedures and specifications
- ◆ Field Support During Construction

A separate project team has been set up to oversee and manage this project. Only incidental support from FCX will be needed in 2000. Should the 2000 RFO inspections result in the replacement schedule being accelerated to the 2002 RFO, two FCX engineers will need to be assigned to the project full time starting June 1<sup>st</sup>.

7.8. CCR Pressurization Modification (HVAC) (New Section Initiative)

The CCR ventilation system presently has two modes of operation. During normal operation, outside make up air is mixed with CCR return air and cooled by the air-conditioning unit and supplied to the control room via supply air ducts. During incident mode which includes SI / Hi radiation signal, toxic gas or smoke signal, the present ventilation system shuts off the outside air intakes and recirculates 100% with both carbon/HEPA unit fan and air-conditioning fans operating. The existing duct dampers that are required to operate to change from normal mode to incident mode will be modified to reduce the unfiltered air leakage during Safety Injection / Hi Radiation incident.. In addition controls will be modified to pressurize the CCR in response to SI / HI radiation signal with outside air filtered by carbon/ HEPA unit. In case of Toxic gas and or smoke signal, the ventilation system will go into 100% recirculation without carbon/HEPA filter unit fan in operation.

7.9. Re-Design of Space in the Energy Education Center (Old Simulator Building)

The Energy Education Center is an approximately 40,000 sq ft building which currently houses several classrooms, a library, training administrative space, an auditorium, a large conference room and large areas which at one time comprised a simulator control room and public exhibit areas. Because of the need for administrative, conferencing and swing space within the Indian Point site, this structure is a prime candidate for development and expansion. Civil Engineering will be responsible for the preparation of : conceptual plans; cost estimates; construction drawings and specifications; as well as, securing building permits and following the project through construction.

7.10. Re-Design of the Maintenance Training Facility & Evaluation Of Existing Administrative Work Areas

The maintenance Training facility is a 9800-sqft structure that is currently being utilized as an adjunct "hands-on" training facility to address the needs of Indian Point Maintenance Dept and in some cases, the New York Power Authority. The structure



is in need of several upgrades which include installing a new sanitary sewer connection to the main on Broadway, New bathroom facilities, new HVAC, new classroom construction, new wall insulation to meet NYS Energy Code, etc. The building is centrally located between both utilities and has been the subject of many co-sharing discussions. Civil Engineering will be responsible for the preparation of: conceptual plans; cost estimates; construction drawings and specifications; as well as, securing building permits and following the project through construction.

7.11. Re-Design of NEM Building

The Nuclear Environmental Building is an 800 (approximate) sqft structure that currently houses environmental technicians. This structure dates back to the original construction of IP1 and was at one time used as a visitor center. It is located outside the protected area. Its location is prime for consideration as a meeting center for industry (INPO), NRC, other audit groups, and for IP2 departments who may be in need of a "breakout" location for staff meetings and assemblies. The structure is within walking distance of both IP2 and IP3. Civil Engineering will be responsible for the preparation of: conceptual plans; cost estimates; construction drawings and specifications; as well as, securing building permits and following the project through construction.

7.12. Support to IP Facilities Section

In the late 80's, relations with the town of Buchanan deteriorated to a point where public hearings were held (on a monthly basis) for a period of approximately 12 + months. The issue stemmed from the fact that the new Simulator Building was going to be built (allegedly) without a building permit. The issue grew to a point where it made the local Westchester newspapers. The issue also had a cascading affect concerning the historical relationships with the Village. The Village of Buchanan Planning Board questioned the issuance of all construction/building permits, certificates of occupancy for all our structures starting from plant (Unit 1) start up. The key players in this issue were Engineering, IP Public Affairs, and the corporate Legal Department. Retroactive Building Permit fees were paid and most, but not all, C of O's issued. Open items in areas of emergency personnel access/egress, corridor exit lighting, etc. remain for some structures. Our plan was to make the necessary upgrades to the structures as they were modified. A recent example of this was the renovation to the SAB, which was the structure with the greatest number of potential violations.

In general the code require that any new construction (greater than 64 square feet), or structural demolitions, on site require a building permit. Also any new "external" construction such as new buildings or structures (i.e. the Fish Return system, parking lots) or changes in use of a structure (i.e. warehouse to administrative office space) requires Site Plan Approval. Site Plan Approval involves public hearings, environmental impact studies, etc. The Village requires that a New York State registered Professional Engineer stamp all new drawings and applications. Our corporate legal department recognizes this process.

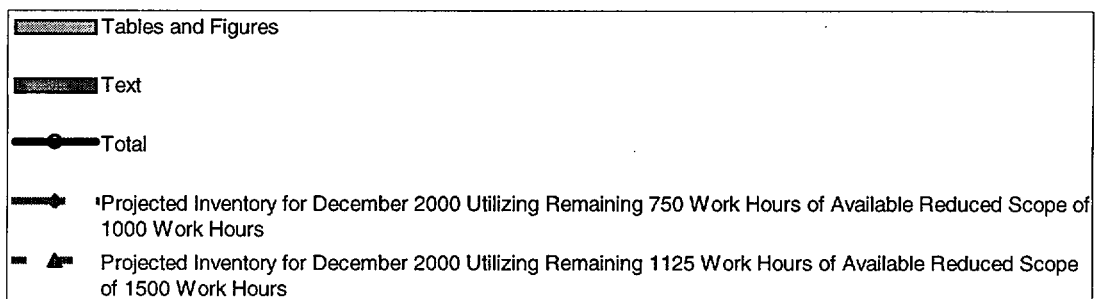
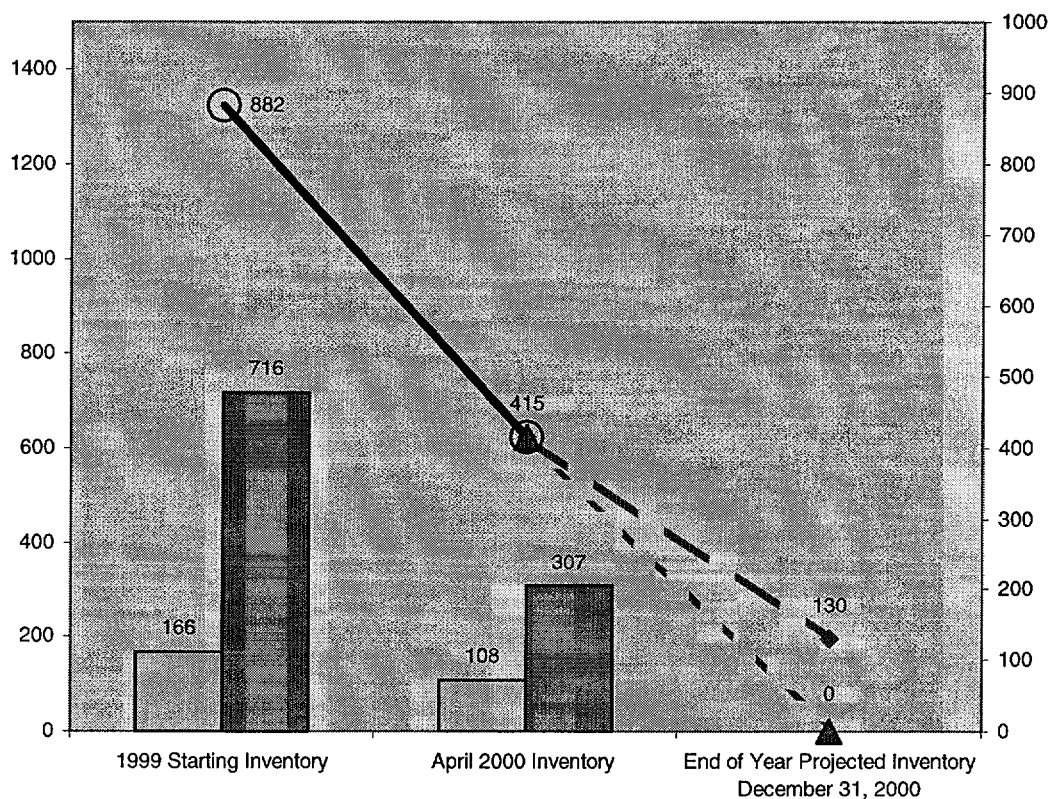
Typically after a Site Plan Approval is granted, a Building Permit is issued, the Building Inspector inspects the site during construction, and a Certificate Of Occupancy is issued after construction is complete.

Civil Engineering will be responsible in assisting the Facilities section of the station for the preparation of: conceptual plans; cost estimates; construction drawings and specifications; as well as, securing building permits for this process.

### 7.13. UFSAR Segment Reviews/DBD Reviews

Civil Engineering was assigned in excess of 700 open items between 1999 and the year 2000 to review for content and accuracy. In some instances, calculations were required to verify statements made in the original FSAR. Examples include a thermal analysis of the effects an increased operating temperature on the Containment Building steel liner plate insulation, and a seismic evaluation of the Boric Acid Building to verify that the controlling factor for concrete reinforcement design was the minimum temperature steel requirements of the ACI-318 Building Code. These FSAR items are required to be completed by April 1, 2000 with some issues carrying over as required.

**Performance Indicator**  
**UFSAR**



7.14. Modification Process Optimization Support

Modification Process Optimization Support efforts are continuing and Design Engineering personnel will continue their participation in order to identify and implement specific process improvements in the MOD Process.

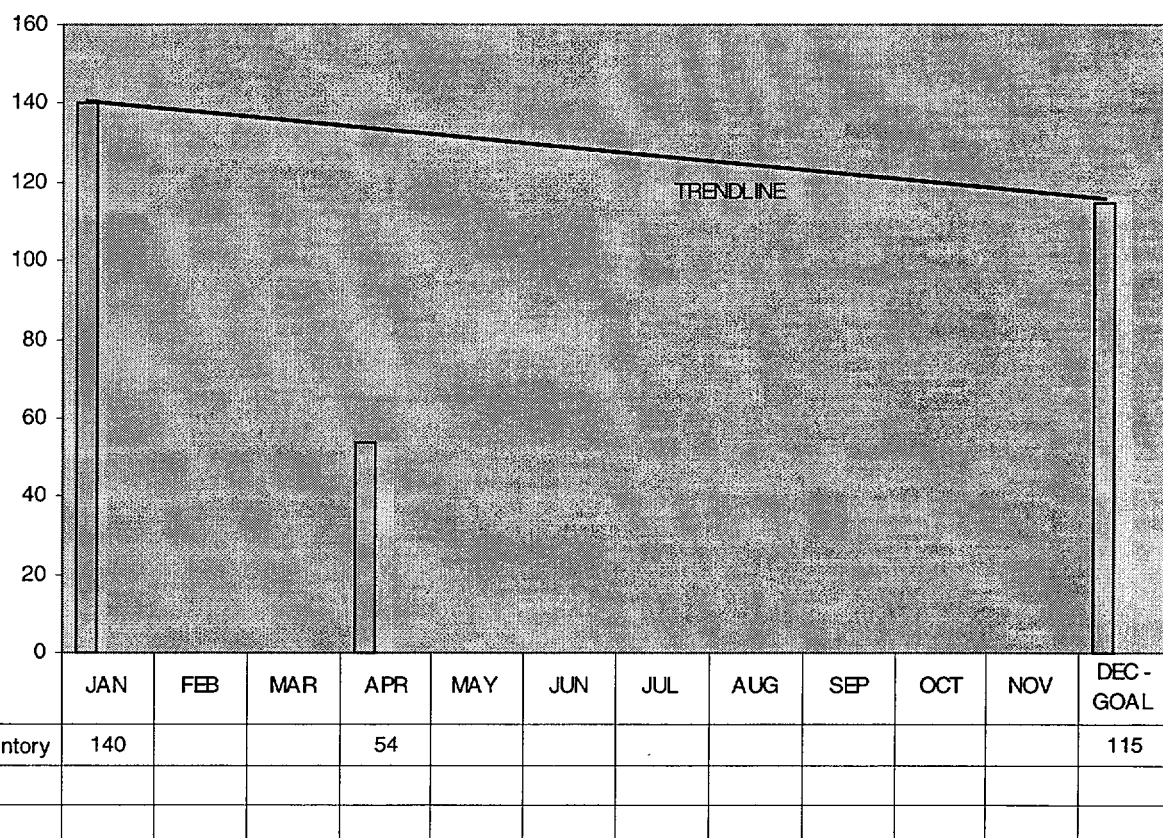
7.15. Year 2000 Civil RFO Support

Civil Engineering has historically supported the station refueling outage by providing personnel (both Engineers and Designers) to the plant engineering (Field Engineering) section on site. In some cases, support was also provided in a project management role to the Construction department. Coverage called for a minimum 12 hr to 16hr shift with some instances requiring 24 hr coverage. Typical, the civil personnel are involved with addressing immediate operability equipment support, personnel safety, seismic, structural, and coating issues. The section is committed to this activity as one of its highest priorities in workload.

## 8. Performance Indicators

### 8.1. Condition Reports

#### *Condition Report Status*



#### Indicator Description

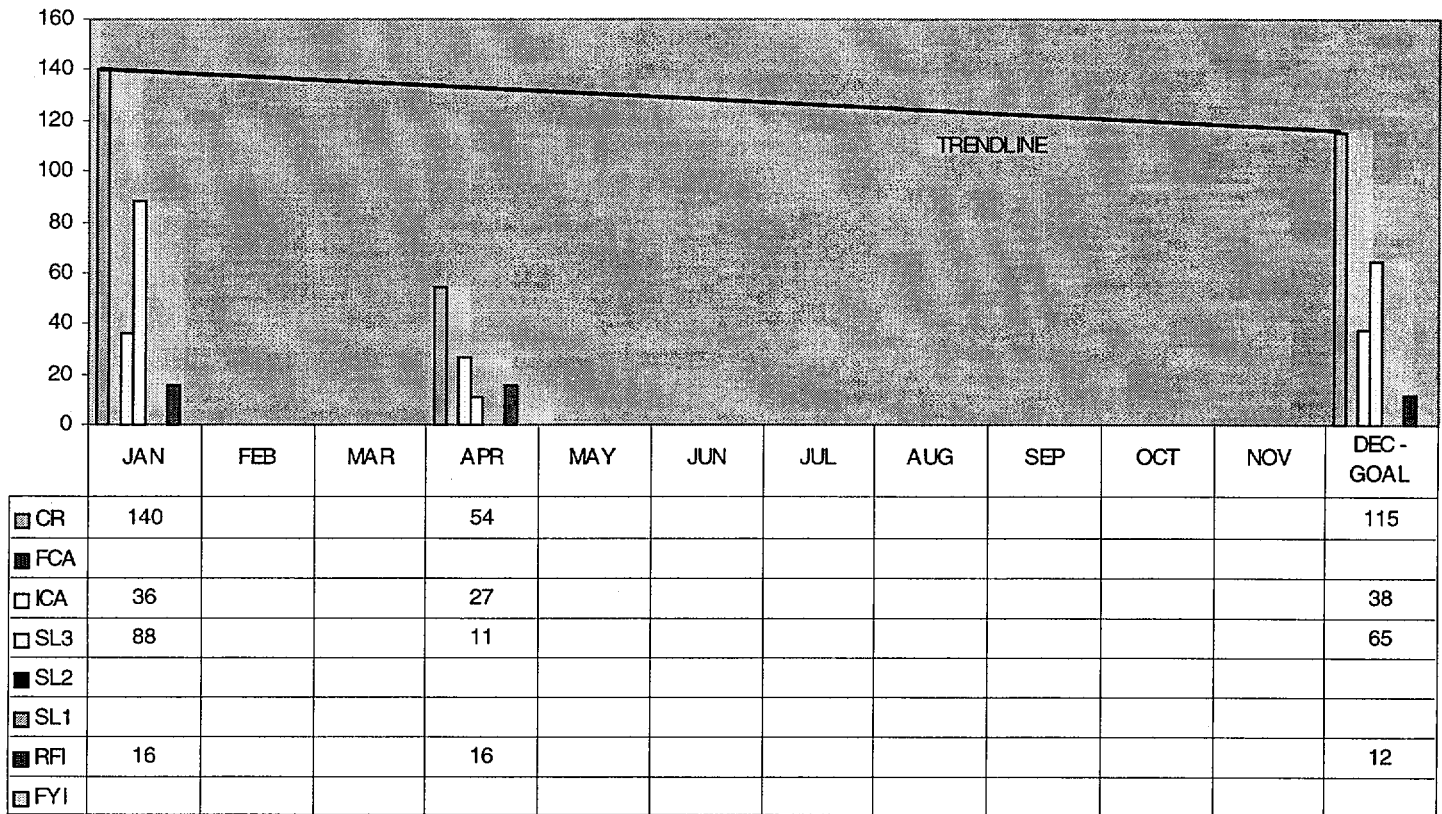
Goals for the reduction of Condition Reports assigned to the section are specified above. A reduction in inventories from 140 to 115 is planned for the Year 2000. Our net year 2000 inventory is 260 items consisting of 140 items in backlog in addition to the anticipated 120 incoming items. The section goal is to complete 145 items during the course of this year.

#### Analysis

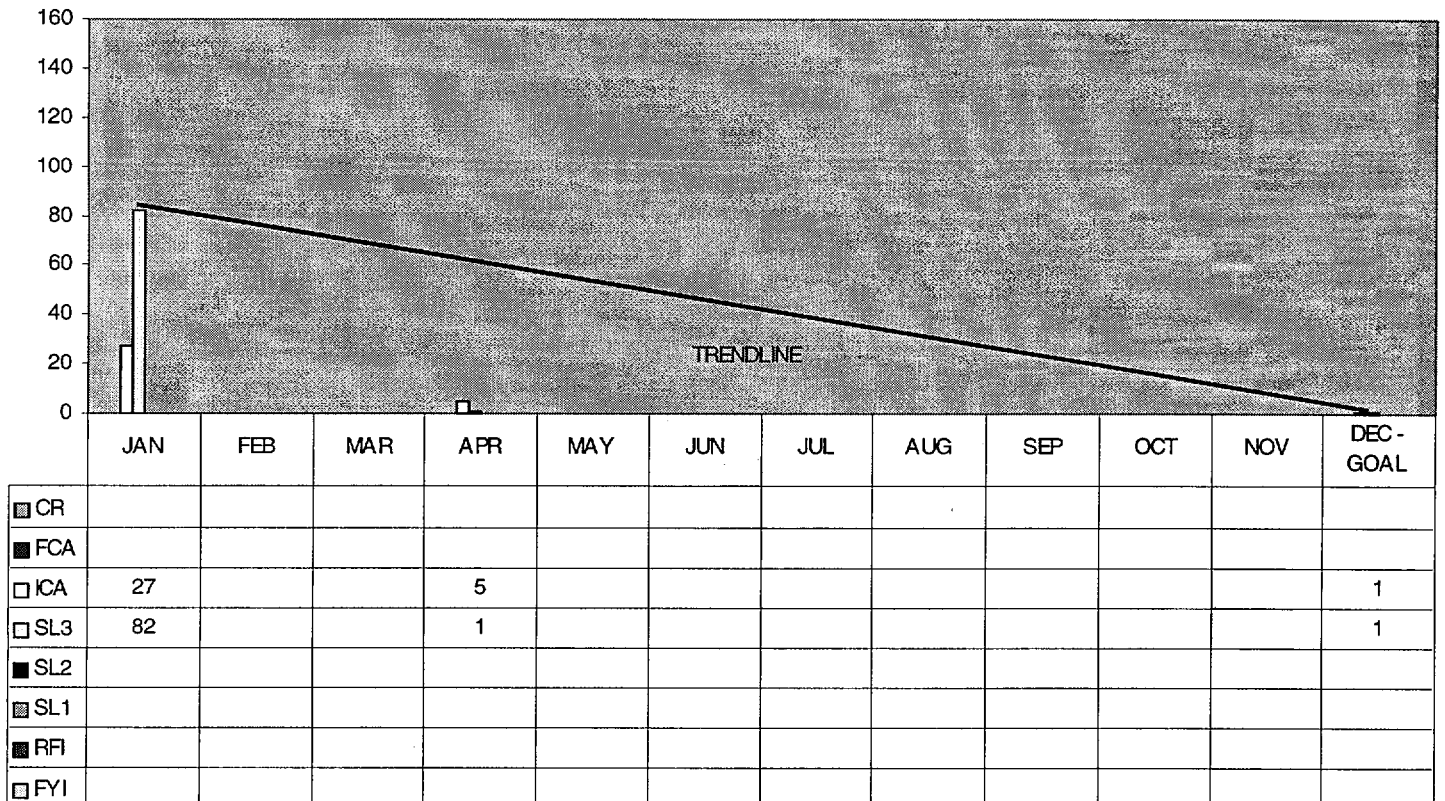
Beginning of year inventory	140
To be received for the year (28/month)	120
Planned to be completed for the year	(145)
End of the year projection	115

# 8.1.1. Total Inventory as of April 20, 2000

## Open Condition Reports

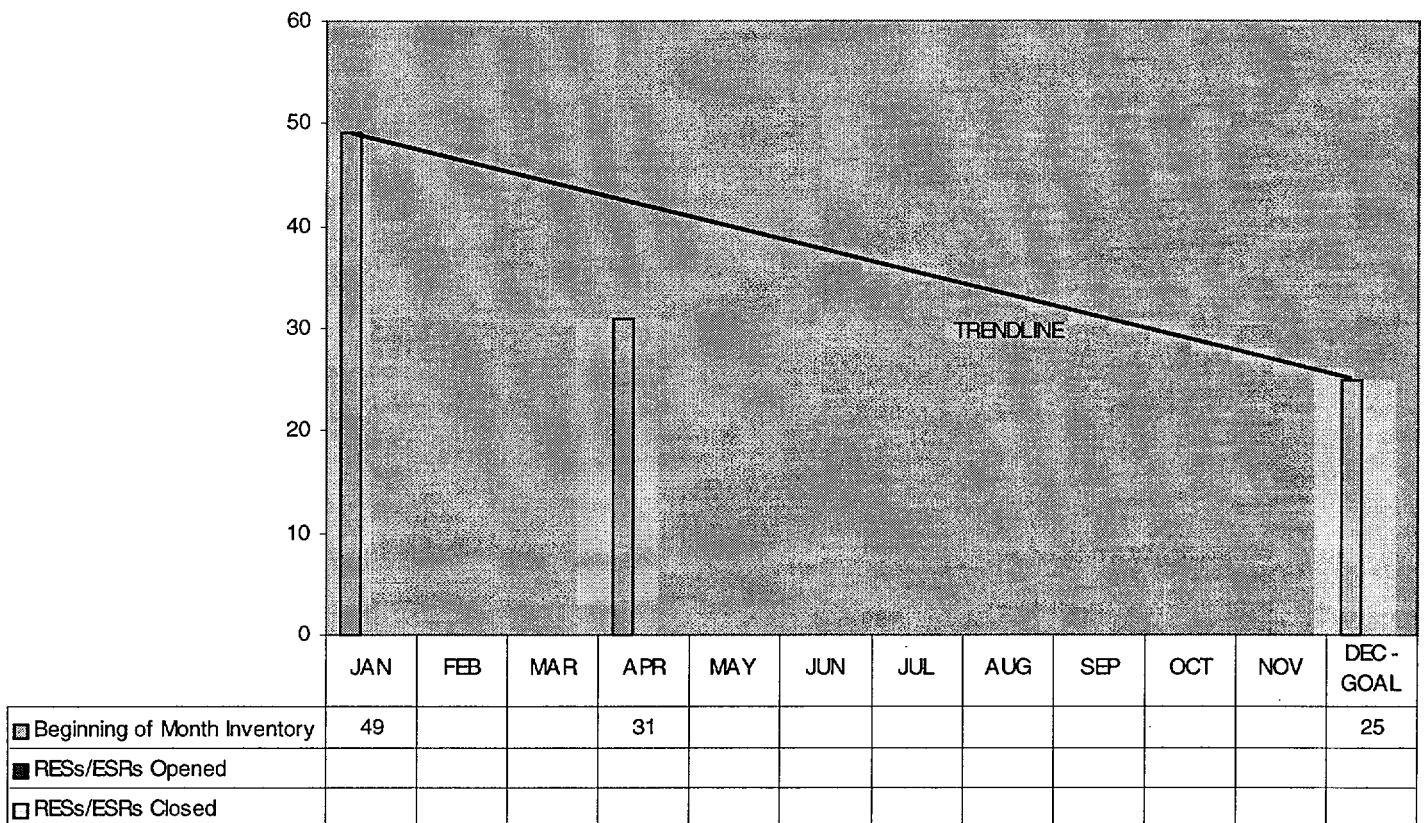


## Overdue Condition Reports



## 8.2. Request for Engineering Service/Engineering Service Request

*RES/ESR Status*



### Indicator Description

The reduction in Requests for Engineering Service/Engineering Service Requests will be achieved by allocation of the resources described in Section 5.2, which will allow the completion of 48 RESs/ESRs. An additional reduction is not anticipated this year as a result of our effort to review/filter all RESs/ESRs last year. This review will determine where RESs/ESRs can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- conversion to generic modification or DOE
- other

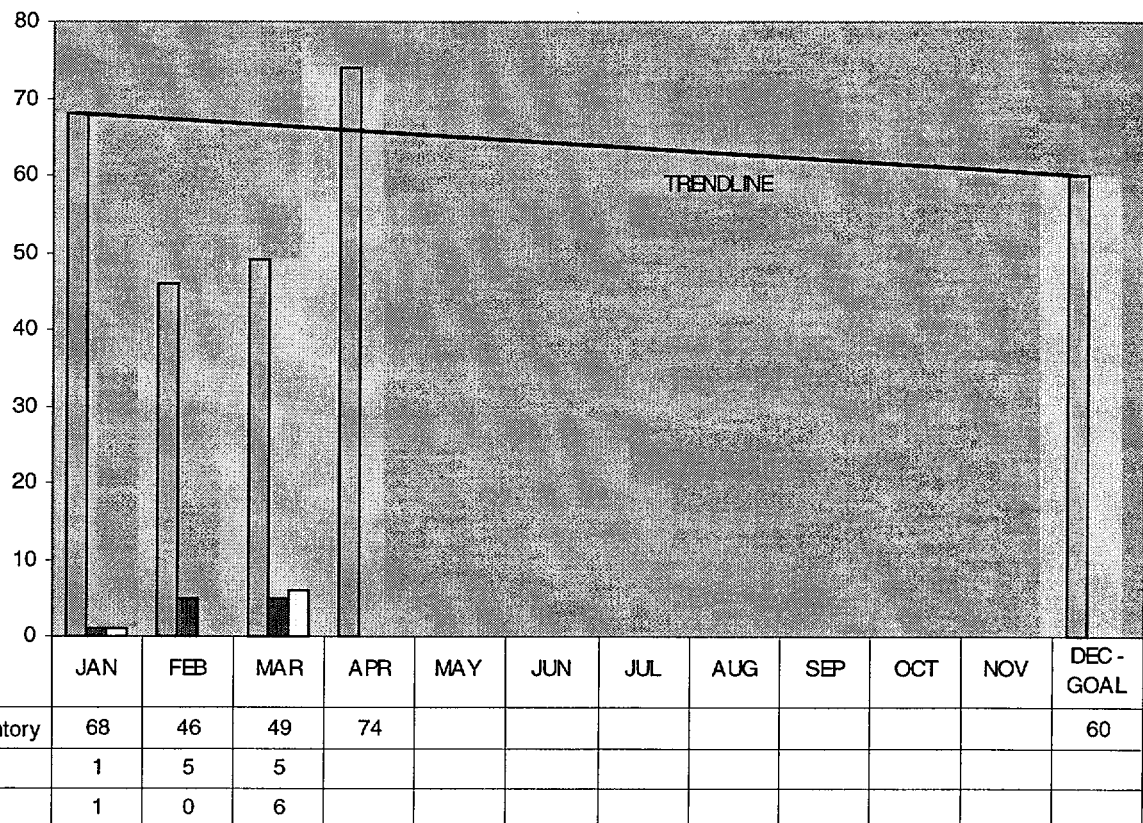
### Analysis

Beginning of year inventory	49
Received during the first quarter of the year	9
Completed or dispositioned at the end of the first quarter	(27)
To be received for the remainder of the year	15
Planned to be completed for the remainder of the year	(21)
Additional reduction based on effort to review and filter	N/A
End of the year projection	25



### 8.3. Work Orders

*Work Order Status*



#### Indicator Description

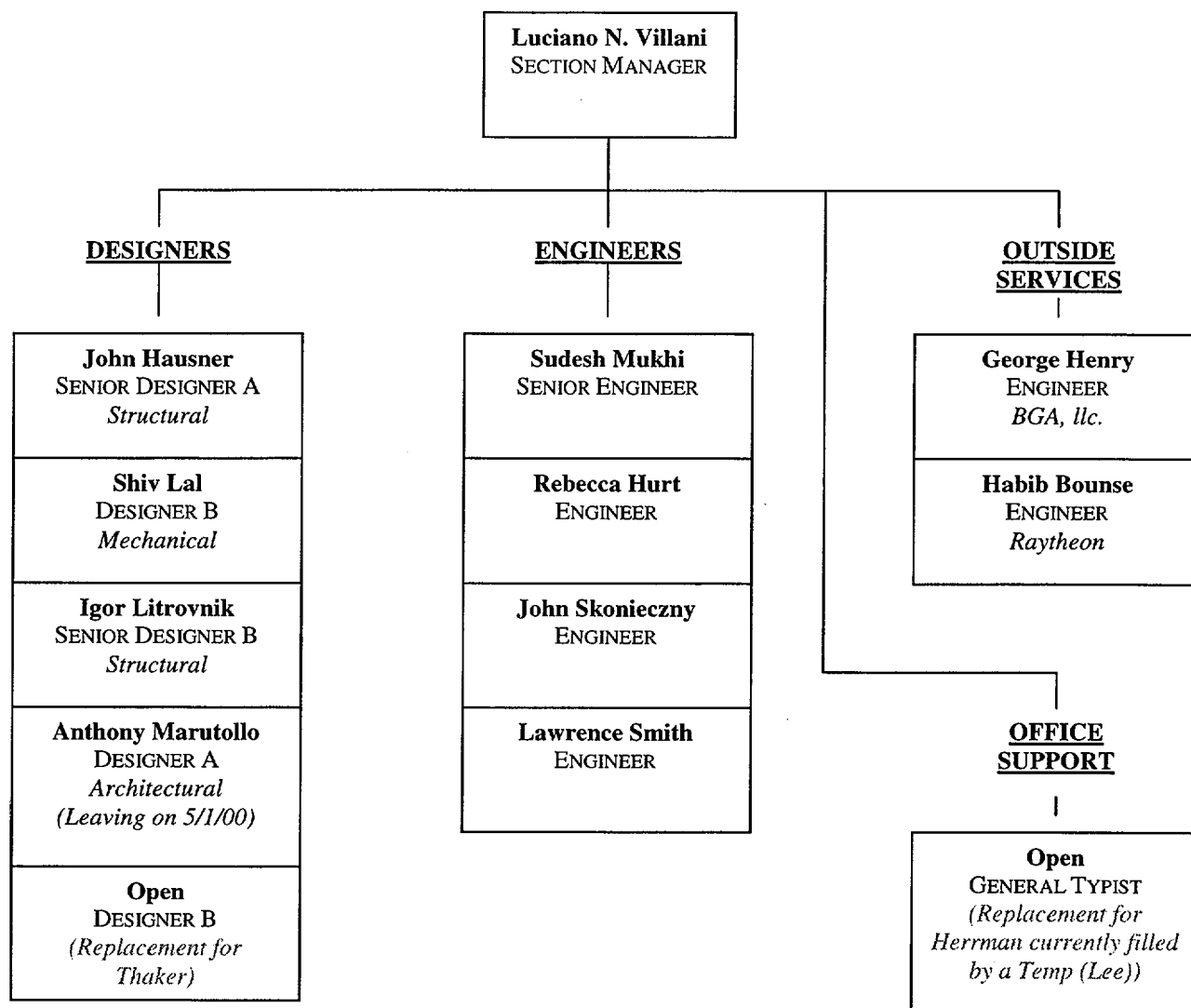
The reduction in Work Orders will be achieved by allocation of the resources described in Section 5.3, which will allow the completion of 10 Work Orders. An additional reduction (~18) is anticipated this year as a result of our effort to review/filter all Work Orders. This review will determine where Work Orders can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- other

#### Analysis

Beginning of year inventory	68
Received during the first quarter of the year	11
Completed or dispositioned at the end of the first quarter	(5)
To be received for the remainder of the year	10
Planned to be completed for the remainder of the year	(6)
Additional reduction based on effort to review and filter	(18)
End of the year projection	60

9. Organization Chart (As of April 2000)





# **10. 2000 Resource Plan**

Section	Item	Full Work Scope Estimated Hours	Reduced Work Scope Estimated Hours	Full Work Scope Estimated Personnel	Reduced Work Scope Estimated Personnel	Reduced Work Scope Estimated Outside Support
4	Manpower Analysis, 1999 Actual Hours	20,551	-	11.2	-	-
5	Operational Overview	27,926	19,143	16.0	10.9	
7	Opportunities – Current Projects and Programs	15,000	6,000	8.6	3.4	
5 + 7	Total Resources Needed (5 + 7)	42,926	25,143	24.6	14.3	
	2000 Approved Budget (554 Hours OT)	19,804	19,804	11.3	11.3	
<b>Δ</b>	Additional Resources Needed				<b>3.0</b>	<b>( )*</b>

To accomplish the Reduced Work Scope we will be pursuing approval of 3 additional personnel slots (2 engineer, 1 designer).

\* *of the available budget will be used for staff augmentation in order to partially offset the cost of contract support being used to fill open budgeted slots.*



**INDIAN POINT 2**  
**ELECTRICAL PROJECTS AND PROGRAMS**  
**YEAR 2000 BUSINESS PLAN, REV 1**

THOMAS S. McCAFFREY

PLAN MANAGER:

D. Glosky

SUBMITTED

4/27/00

DATE

JAMES TUOHY

SENIOR MANAGEMENT SPONSOR

J. Tuohy

APPROVED

4/27/00

DATE

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## ***1. Functional Responsibility***

The Electrical Projects and Programs Section provides electrical engineering expertise, design and project services for power systems and requirements including Security and Lighting for the Indian Point Station. Responsible for developing scopes of work, determining design criteria, preparing construction specifications, performing system/equipment investigations, and assist in resolving field construction and plant equipment problems. Performs programmatic activities and supports regulatory and licensing requirements in areas such as environmental qualification, electrical bus/diesel generator loading, electrical coordination/protection and cable separation.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>AE Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
GHOSH	SENIOR ENGINEER	MS	-	23	11
KHAN, MAJ	ENGINEER	MEE	TX	10	7
TY	ENGINEER	MSEE	-	9	25
WILSON	SENIOR ENGINEER	MBA	NY	24	9
MCCAFFREY	SECTION MANAGER	BE, MBA			8
<b>WEEKLY</b>					
MARTIN	SENIOR DESIGNER A	HS	-	-	38
TABAKMAN	DESIGNER B	MSEE	-	30	7
TAI	JR DRAFTER	HS	-	-	8
<b>OPEN AND/OR REQUESTED</b>					
REPLACEMENT FOR SULLIVAN*	ENGINEER	-	-	-	-
OPEN	ENGINEER	-	-	-	-
OPEN POSITION	DESIGNER	-	-	-	-
OPEN POSITION	DESIGNER	-	-	-	-
<b>CONTRACTORS</b>					
GERA	ENGINEER	-	-	-	-
KEEGAN	ENGINEER	-	-	-	-
KLEIN	ENGINEER	-	-	-	-
<b>TOTALS</b>	<b>12 TOTAL, 8 FILLED + 3 CONTRACTOR</b>	-	-	<b>96</b>	<b>113</b>

\*Retired 1/31/00.

### Authorized Positions

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
<b>1999 Budget</b>	8	7	15
<b>2000 Budget</b>	7	5	12
<b>Change</b>	-1	-2	-3

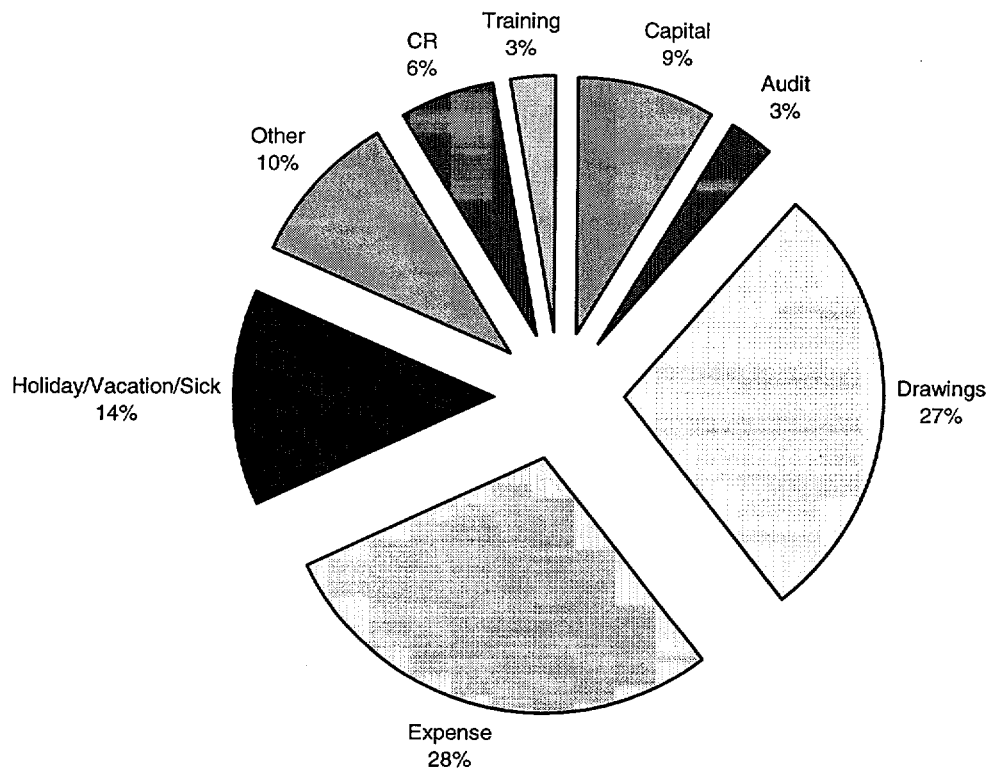
### 3. *Section Mission Statement*

To provide professional electrical engineering service to Nuclear Power for the safe, reliable, and efficient operation and maintenance of Indian Point Units 1 and 2.

#### 4. Manpower Analysis

##### 1999 Manpower Analysis based on EPMIS2K data.

Capital	1,652
Audit	515
Drawings	5,286
Expense	5,439
Holiday/Vacation/Sick	2,584
Other	1,802
CR	1,136
Training	508
<b>Total</b>	<b>18,922</b>
Full Time Equivalents (FTE)	9.10
Production Hours/FTE	1,795



5. **Operational Overview**

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.1. Condition Reports	Complete (280) <u>140</u> CRs that contain evaluations/drawing updates, SL3s, RFIs, FCAs, and ICAs. Beginning of year inventory: ~150 (most are ICAs) Projected incoming: 25/month Assume 35 hours/CR 15 hours/engineer 20 hours/designers	9,800	<u>4,900</u>
5.2. Request for Engineering Service/ Engineering Service Request	Review, evaluation, disposition of (24) <u>12</u> RESs/ESRs to accomplish a reduction in inventories. Beginning of year inventory: 25 Projected incoming: 16/year Assume 60 hours/ RES/ESR	1,440	<u>720</u>



Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.3. Work Orders	<p>Provide engineering review of (25) <u>20</u> Work Orders as needed to support safe and reliable station operation. Beginning of year inventory: 61 Projected incoming: 20/year</p> <p><i>The Work Orders that come to the Electrical Projects and Programs section typically require a Modification to resolve the issue. Thus, for the most part, they are covered under Minor and Generic Modification categories of work. Works hours shown are only for review and disposition of work orders that do not turn into modifications.</i></p>	200	200
5.4. Report of Installation	<p><i>All ROI work efforts will be administered by Design Services.</i></p>	0	0

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.5. Minor Modifications	<p>Prepare modification packages to implement a planned physical and/or functional change to or an addition or deletion of a permanent plant structure, system, or component that modifies the plant design.</p> <p>For 2000 complete (20) <u>15</u> Minor Modifications.  Beginning of year inventory: 51  Projected incoming: 18/year  Assume 400 hours/Minor Modification  160 hours/engineer  240 hours/design team (~ 2 designers)</p>	8,000	<u>6,000</u>
5.6. Generic Modifications	<p>Prepare modification packages to implement a major or minor modification that will be implemented on a repetitive basis in various locations of the plant over an undetermined period of time.</p> <p>For 2000 complete (10) <u>5</u> Generic Modifications.  Beginning of year inventory: 10  Projected incoming: 2/year  Assume 200 hours/ Generic Modification</p>	2,000	<u>1,000</u>

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.7. Temporary Facility Changes	<p>The Electrical section is a contributor in creating and/or permanentizing TFCs. For 2000 complete 5 TFCs.</p> <p>Beginning of year inventory: 3</p> <p>Projected incoming: 3/year</p> <p>End of year target: 1</p> <p>Assume 400 hours/TFC</p> <p>160 hours/engineer</p> <p>240 hours/design team (~ 2 designers)</p>	2,000	2,000
5.8. Modification Support	<p>The Electrical Projects &amp; Programs section provides support for Modifications other groups have the lead on.</p> <p>Rough estimate: (1000) <u>300</u> hours.</p>	1,000	<u>300</u>
5.9. Training	<p>Complete all continuing and qualification training including GET, ESP, etc.</p> <p>Continuing engineer training: 6 people @ 80 hours each</p> <p>Continuing designer training: 3 people @ 60 hours each</p> <p>Continuing contractor training: 3 people @ 20 hours each</p> <p>Qualification Training: N/A</p>	720	720

<b>Project/Program</b>	<b>Description</b>	<b>Full Work Scope Estimated Hours</b>	<b>Reduced Work Scope Based On 2000 Budget</b>
5.10. NRC Inspection and QA Audit Support, Self Assessments	Provide electrical design engineering support/ participation in the following subject areas: Support to QA for 2 SSFAs: 1 person each for 6 weeks each. Response to 2 SSFAs: 1 person each for 6 wks each. All other estimate 500 hours.	1,460	1,460
5.11. Technical Program Maint.	Electrical Workmanship Std. (EI-6009) Cable Separation Program Seismic Design Basis Support Maintenance of EQ Program Maintenance of Safeguard Drawings/Files Maintenance of Diesel Load Study AC/DC Load Track Electrical Calculations	750	750
5.12. Management & Supervision	Time spent in management and supervisory functions including planning, delegation and oversight of work.	1,313	1,313
5.13. Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation. Electrical Equipment/System Support Electrical Protection Assume 10% of 12 personnel man-hours.	2,208	2,208
<b>Total Estimated Hours</b>		<b>30,891</b>	<b><u>21,571</u></b>
<b>Full Time Equivalent People @ 1750 Hours Each</b>		<b>17.7</b>	<b><u>12.3</u></b>

## 6. *Equipment/Materials Expertise*

- AC/DC Load Track
- Electric Gen /Excitation
- Harmonics
- Offsite Power Grid
- Appendix R- ASSS
- Elec Diesel Generators
- Heat Tracing
- Security Systems
- Battery/ DC System Breaker/Fuse Sizing
- EMI/RFI
- Inverters & Chargers
- Switchgear
- Transformers
- 6.9kv/480V Breakers
- Cables
- Fire Protection
- Lighting Systems
- Environmental Qualification
- Cable Separ. Criteria
- Gas Turbines
- Maintenance Rule
- Cathodic Protection
- Dynamic Electrical Transients
- Molded Case Ckt Bkrs

## 7. Opportunities – Current Projects and Programs

The following Projects and Programs are being worked in 2000 to support continued plant operations and to prepare for the 2000 refueling outage.

Project/Program Title	Full Work Scope Estimated Hours	Full Work Scope Estimated Outside Support	Reduced Work Scope Based On 2000 Budget	Reduced Estimated Outside Support Based On 2000 Budget
7.1. Upgrade of Electrical Calculations	400		400	
7.2. FSAR/DBD Update	400	-	400	-
7.3. Special Activities	200	-	200	-
7.4. 2000 RFO Support	900	-	900	-
7.5. Replacement of GT #1 Transformer	500	-	500	-
7.6. MOV 746 Modification	200	-	200	-
7.7. Modification of Battery Charger Ground Detection CKT	200	-	200	-
7.8. CCR Ventilation Incident Mode	300	-	300	-
7.9. Cathodic Protection – CW & SW Piping	600	-	600	-
7.10. Station Metering Upgrade	400	-	400	-
7.11. Integration of IP2/IP3 Security Systems	600	-	600	-
7.12. Electrical Support for Turbine Building Sump Oil Removal	200	-	0	-
7.13. Electrical Support for Fuel Handling & Polar Crane	200	-	0	-

<b>Project/Program Title</b>	<b>Full Work Scope Estimated Hours</b>	<b>Full Work Scope Estimated Outside Support</b>	<b>Reduced Work Scope Based On 2000 Budget</b>	<b>Reduced Estimated Outside Support Based On 2000 Budget</b>
7.14. Reconnect Oil Pump from Battery 22	400	-	400	-
7.15. Electrical Setpoint Calcs	200	-	<u>0</u>	-
7.16. Development of Fuse Database	300	-	<u>0</u>	-
7.17. DB50 Breaker Qualification Testing (\$ in Outage Budget)	200		200	
7.18. Life Extension	200	-	<u>0</u>	-
7.19. Modification Process Optimization Support	275	-	<u>175</u>	-
7.20. EQ Program Upgrade Support	300		300	
7.21. Improved Standard Tech Specs	0	0	0	0
<b>Total Estimated Hours</b>	6,075	-	<u>5,775</u>	-
<b>Full Time Equivalent People @ 1750 Hours Each</b>	3.5	-	<u>3.3</u>	-
<b>Total Estimated Dollars</b>	-		-	

## 7. Opportunities – Current Projects and Programs (Continued)

### 7.1. Upgrade of Electrical Calculations

This activity provides for the upgrade of electrical calculations for the Plant's power system. This project includes updating the Non-safety Related MCC Coordination Study and updating the Emergency Diesel Generator and 480VAC System Load Studies. Ref. IP 2 Recovery Plan, Rev 3, Nov. 1, 1999, Long Term Corrective Action # 7. Ongoing work is being performed by outside contractors in providing computer-based programs (Duke Engineering) and for modeling the IP2 auxiliary power distribution system (Raytheon). Continuing support is needed from the Section to provide inputs, review results, and understand use/maintenance of the programs.

### 7.2. FSAR/DBD Update

This is a comprehensive ongoing program to update the FSAR/DBD. After validation of the FSAR by the Configuration Management personnel, Design Engineering reviews and approves them for adequate source documentation. In year 2000 there are planned DBDs for 480V overall Unit Protection and RPS System. Supporting this requires input and review by the Electrical Section.

### 7.3. Special Activities

In 1999 the Electrical Section participated the Modification Optimization team, provided a member to the EQ Self-Assessment team, and also provided a member to serve as an instructor for the ESP Session on Design Basis. Similar special activities are expected for the year 2000.

### 7.4. 2000 RFO Support

The 2000 RFO will begin at the end of April and continue to June. Engineering will provide extensive support through our engineers and designers to follow our modification packages and assist with TFCs, CRs, and emerging work. Support of Regulatory Inspection activities is also expected at this time.

### 7.5. Replacement of GT #1

Provides for replacement of GT #1 used to provide 6.9 kv power to IP2 from the 13.8 kv system. A new dry type transformer has been purchased. The existing transformer and associated deluge piping will be removed. New cables will be installed from GT #1 to IP3's 6.9 kv 52 GT/BT breaker. The work will be done pre-outage in 3 phases.

### 7.6. MOV 746 Modification

Modifications have been performed on MOVs for safe shutdown by rewiring the control circuit to address hot shorts due to postulated fires. A generic modification is used to make this change.

### 7.7. Modification of Battery Charger Ground Detection CKT

This change upgrades the ground detection circuit to each of the four safety grade battery chargers. The vendor, SCI, will provide the parts and services to make this change during the outage.

### 7.8. CCR Ventilation Incident Mode

This project is scheduled for the 2000 RFO. It involves revising an issued mod package by changing the control circuit of the dampers in the



CCR. In addition, certain dampers will be modified to remain in either fixed open or close position.

7.9. Cathodic Protection – CW & SW Piping

Major capital project to provide cathodic protection to the circulating water and service water-piping system. New distribution of power and installation of anodes is required.

7.10. Station Metering Upgrade

With the de-regulation of the Utility industry and Con Edison's selling of its generating facilities, the revenue metering of IP2 output and auxiliary power connections are required. Scope includes installation of revenue accuracy types of CTs PTs and meters. This information will also be telemetered to the Energy Control Center.

7.11. Integration of IP2/IP3 Security Systems

An outside consultant is currently evaluating the IP2/IP3 security systems. Recommendations will be identified to integrate and upgrade the security system of both plants.

7.12. Electrical Support for Turbine Building Sump Oil Removal

The Mechanical Projects and Programs section sponsors this environmental project. The Electrical scope will involve providing power supplies, local controls, and remote indication/alarm.

7.13. Electrical Support for Fuel Handling & Polar Crane

The Civil Projects and Programs section sponsors this project. The Electrical scope is to support the electrical design of the system and provide electrical power supplies from an appropriate distribution panel or MCC.

7.14. Reconnect Oil Pump from Battery 22

The emergency seal oil pump is currently connected to Battery 22. The modification involves reconnecting it to Unit 1 Battery 11. This will remove a non-safety motor load from the vital Battery 22, thereby enhancing its capacity.

7.15. Electrical Setpoint Calculations

The setpoint program is identifying electrical equipment setpoints where there is no supporting basis. New calculations will be developed as required to support the disposition of the electrical setpoints. Typical examples are setpoints for power system relays, transfer switches, and heat tracing alarms. The I&C Projects and Programs section handles I&C types of setpoints.

7.16. Development of Fuse Database

This initiative was identified previously. Due to other priorities and limited resources, this effort has not started. The activity involves establishing a fuse list, providing a tagging system, and inputting to an appropriate database information on fuse type, loads, reference drawings, and its location.

7.17. DB50 Breaker Qualification Testing

The IP2 DB50 breakers were optimized and enhanced during the extended breaker outage of 1998. This activity will take a spare DB50 and have it cycled for

equivalent 40-year plant life followed by a seismic test. Westinghouse has prepared the test plan and will coordinate the test. Our effort will include providing inputs to the test plan, assisting in resolving test anomalies and evaluating test results.

7.18. Life Extension

The Configuration Management group, under R. Remshaw, is handling a life extension program. IP2 is participating in an EPRI Life Extension program. Activities include review of issues at other plants and selective review of our electrical equipment.

7.19. Modification Process Optimization Support

Modification Process Optimization Support efforts are continuing and Design Engineering personnel will continue their participation in order to identify and implement specific process improvements in the Modification Process. Electrical Projects and Programs will have 1 engineer participate directly in this process beginning in July 2000 dedicating 20% of his/her work hours to this effort until the end of the year. For more information see Section 7.1 in the Department Office Business Plan.

7.20. EQ Program Upgrade Support

The EQ files are currently being reformatted and updated per the EPRI EQ Management System. These files will require review and approval by Design Engineering before they are accepted into the database as controlled EQ files.

7.21. Improved Standard Tech Specs

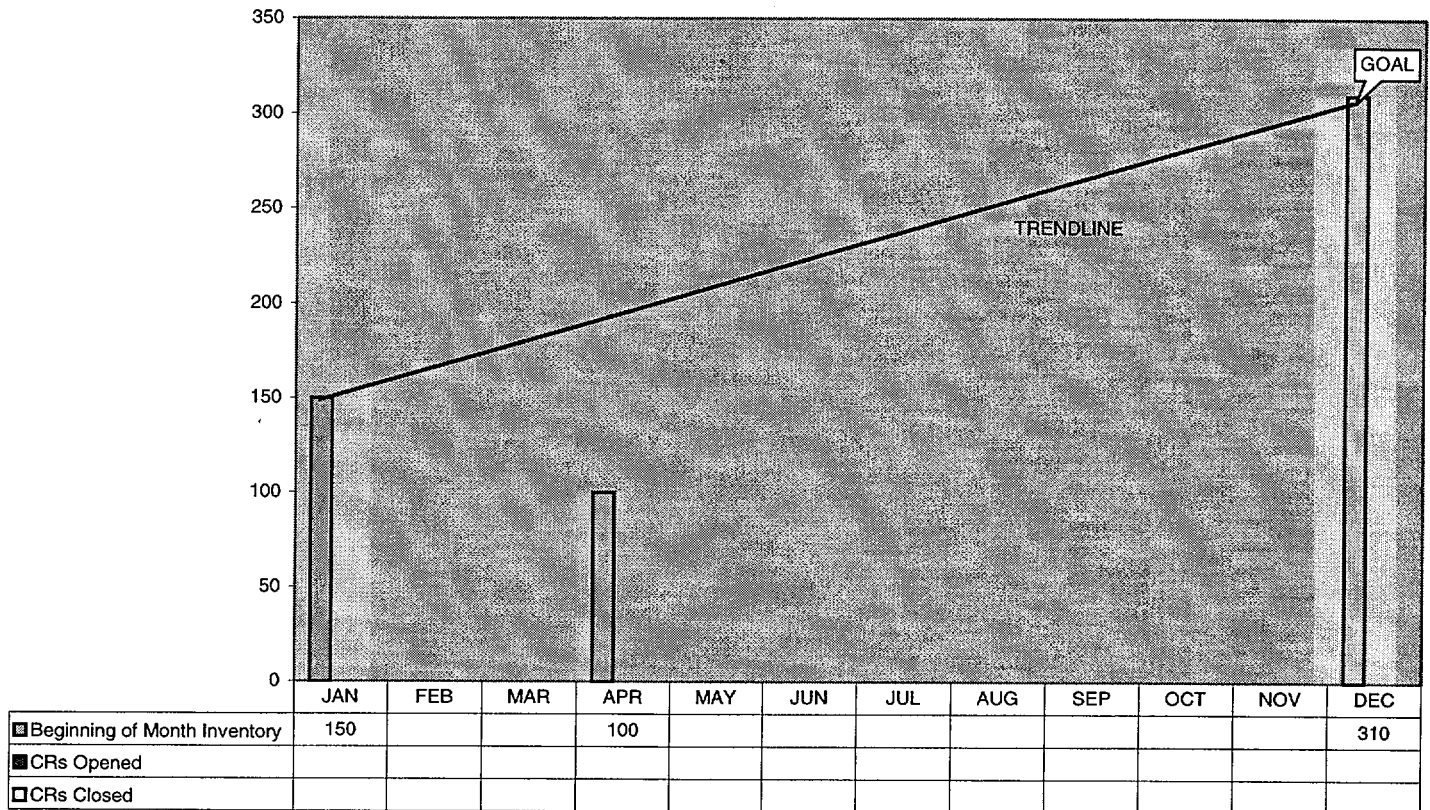
Provide support for the preparation of Improved Standard Technical Specifications for IP 2. This multi year project is expected to start in the second half of 2000 and will require allocation of Section resources to review drafts of selected sections of the new Tech Specs, their Bases and the new Technical Requirements Manual. After submittal to the NRC participation in responding to RAI's is anticipated.

## 8. Performance Measures

### 8.1. Condition Reports

#### 8.1.1. Overall Performance

*Condition Report Status*



#### Indicator Description

Goals for the reduction of Condition Reports assigned to the section are specified above. An increase in inventories from 150 to 310 is expected for the Year 2000 due to a lack of resources. We anticipated 300 incoming items for the Year 2000. The section goal is to complete 140 items during the course of this year.

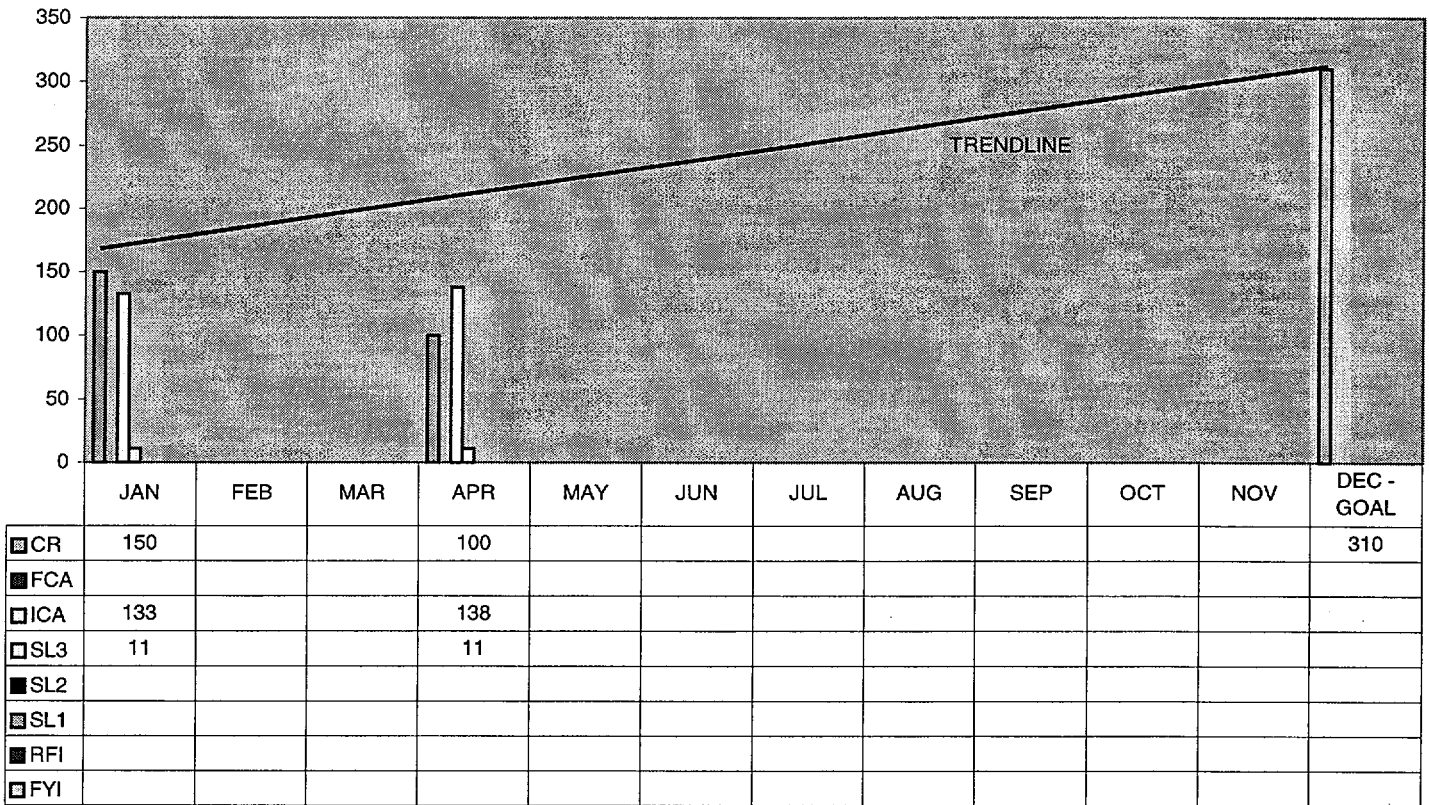
#### Analysis

Beginning of year inventory	150
To be received for the year (25/month)	300
Planned to be completed for the year	(140)
End of the year projection	310

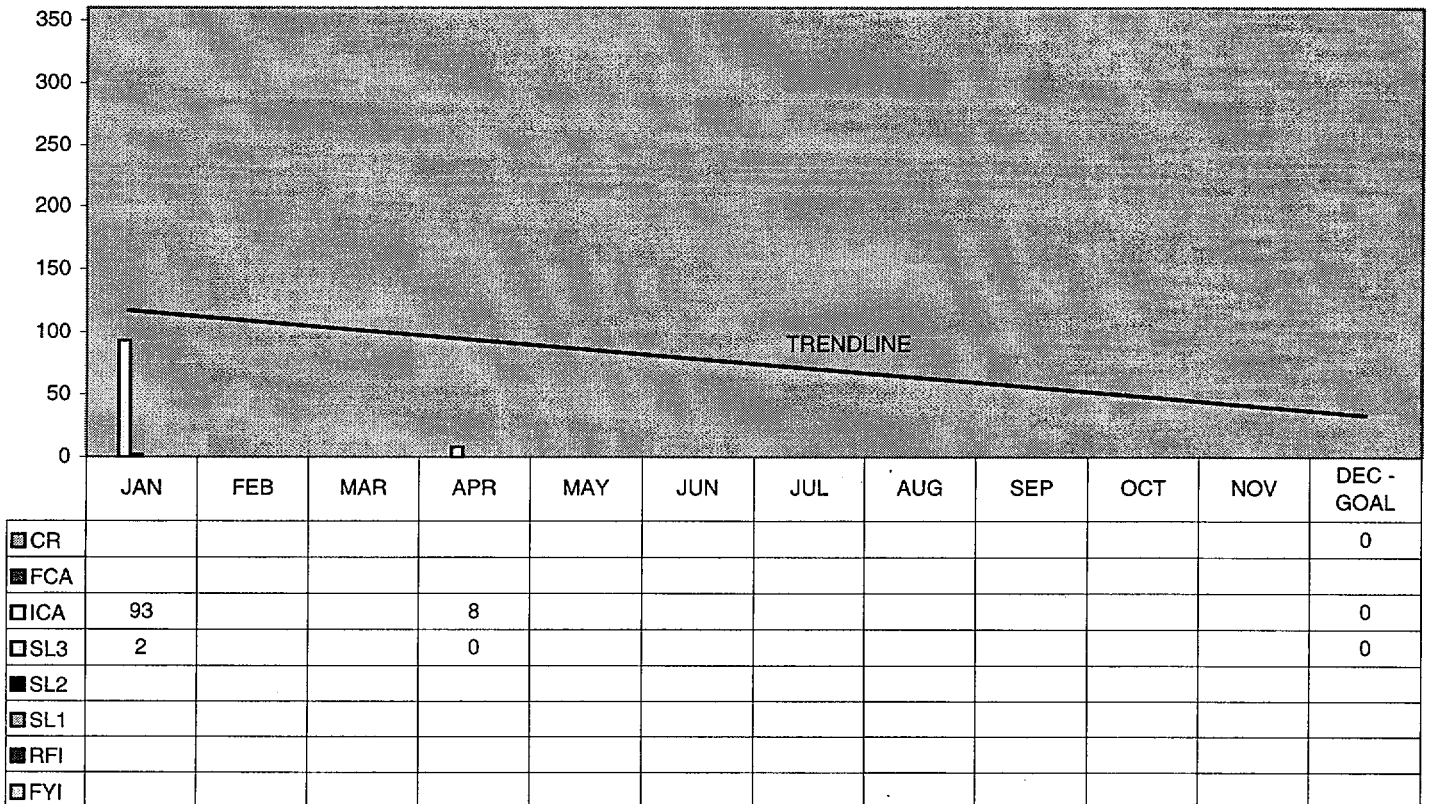
Resources are limited within the Electrical Projects and Programs section to further reduce the CR backlog this year. Approximately one-half of the backlog is drawing related. The Department Office Business Plan for Design Engineering discusses drawing process improvements as well as initiatives to use outside services to further reduce this backlog.

# 8.1.2. Total Inventory as of April 2000

## *Open Condition Reports*

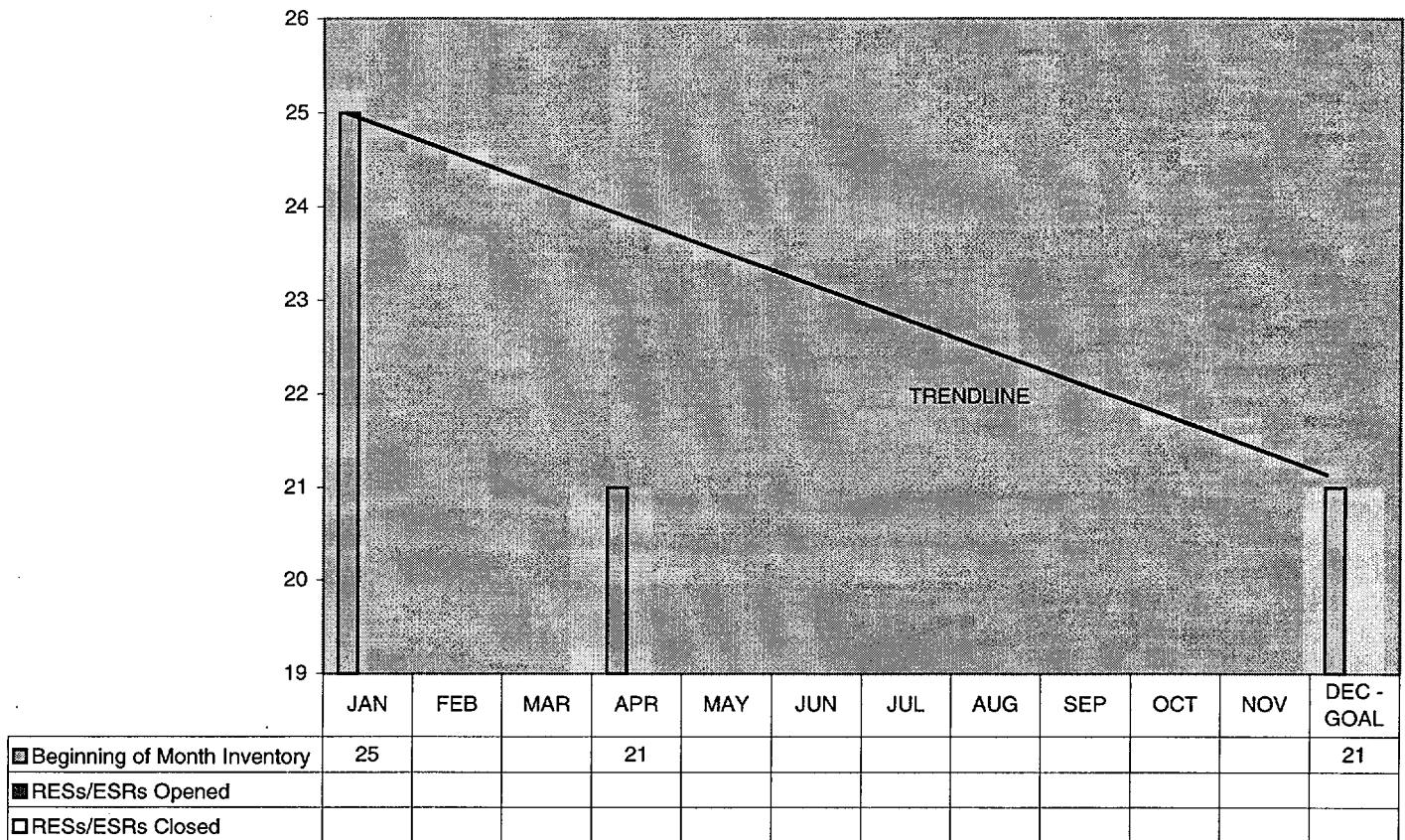


## *Overdue Condition Reports*



## 8.2. Request for Engineering Service/ Engineering Service Request

*RES/ESR Status*



### Indicator Description

The reduction in Requests for Engineering Service/Engineering Service Requests will be achieved by allocation of the resources described in Section 5.2, which will allow the completion of 12 RESs/ESRs. An additional reduction (~8) is anticipated this year as a result of our effort to review/filter all RESs/ESRs. This review will determine where RESs/ESRs can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- conversion to generic modification or DOE
- other

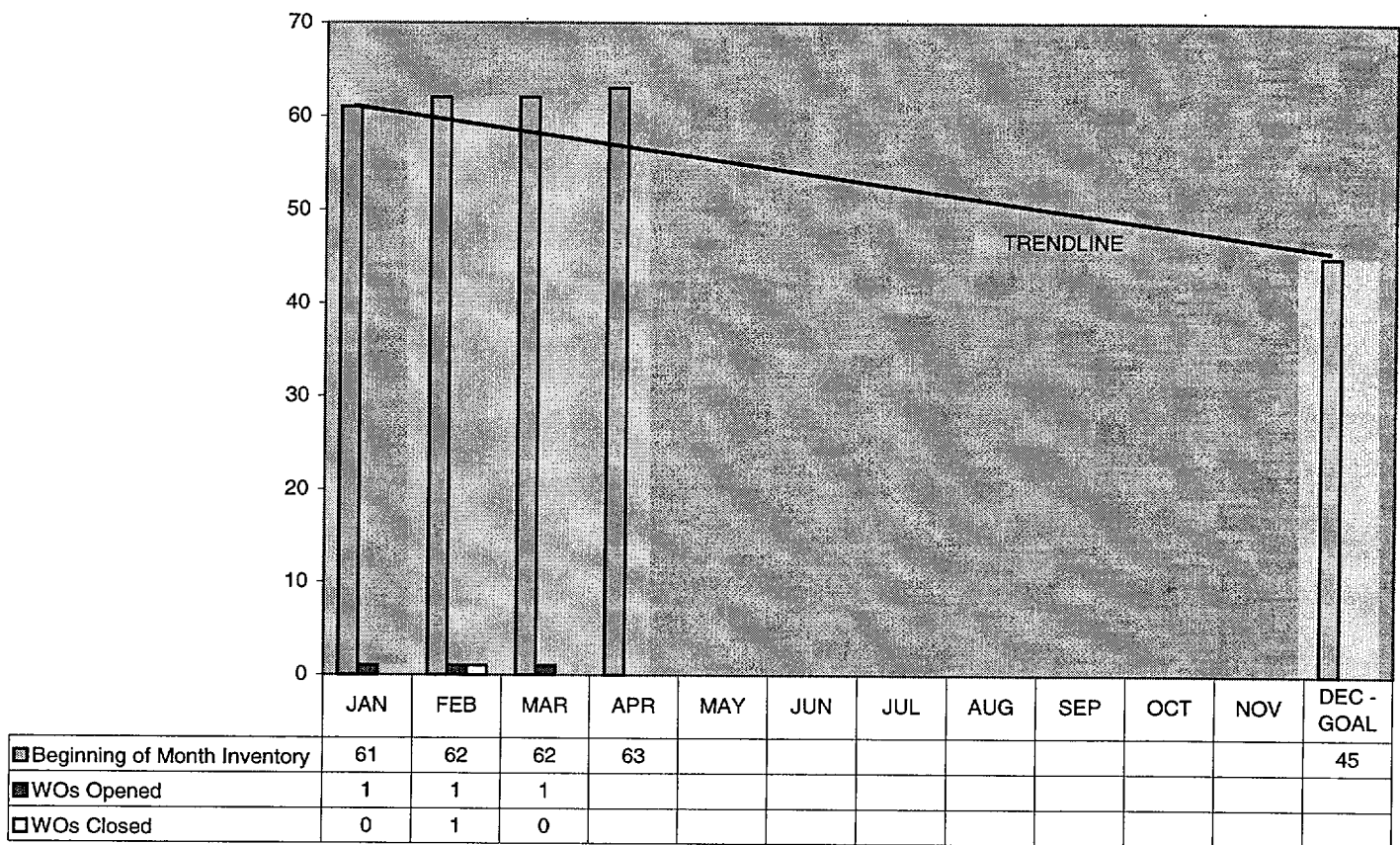
### Analysis

Beginning of year inventory	25
Received during the first quarter of the year	1
Completed at the end of the first quarter	(5)
To be received for the remainder of the year	15
Planned to be completed for the remainder of the year	(7)
Additional reduction based on effort to review and filter	(8)
End of the year projection	21



### 8.3. Work Orders

*Work Order Status*



#### Indicator Description

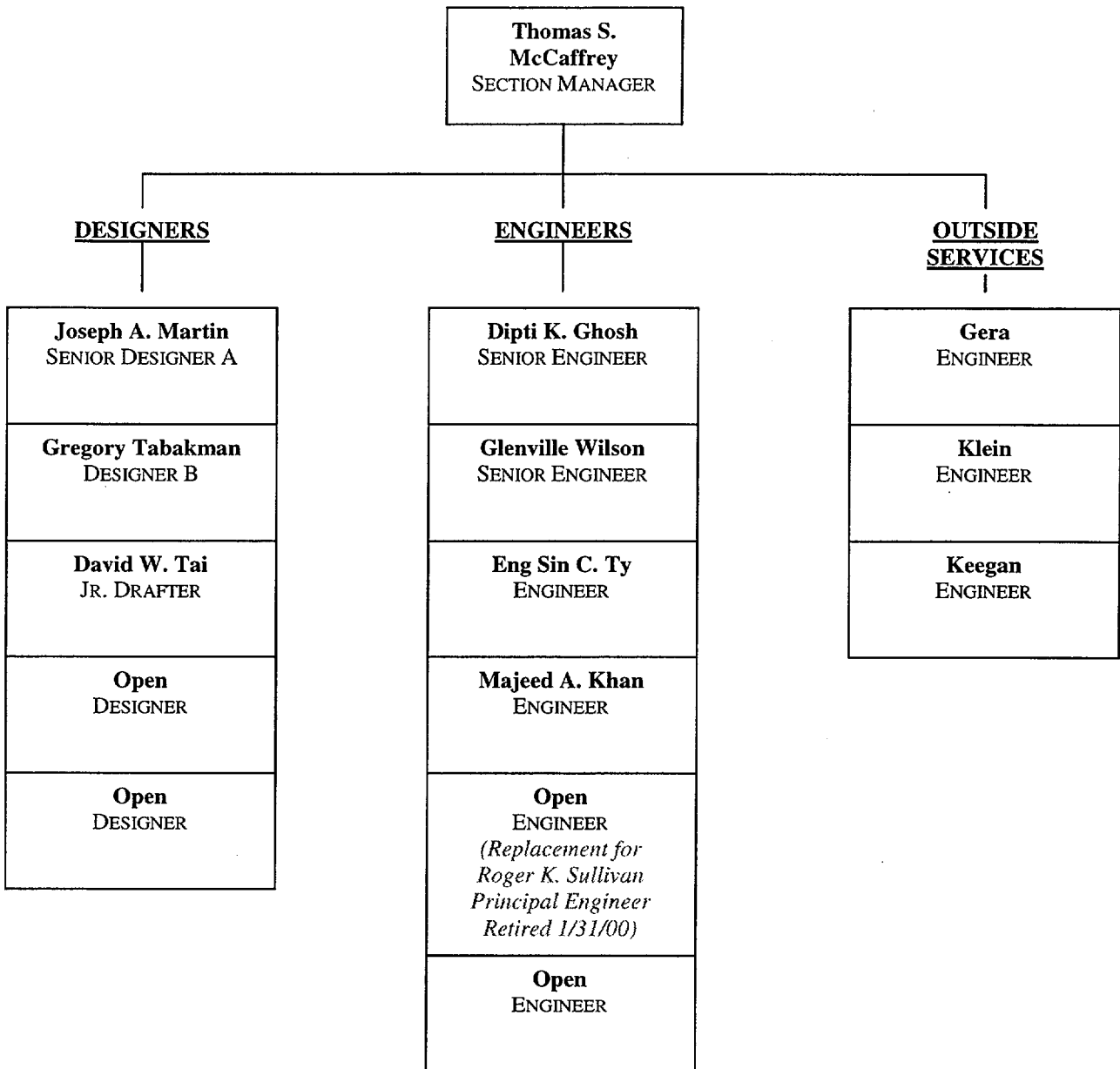
The reduction in Work Orders will be achieved by allocation of the resources described in Section 5.3, which will allow the completion of 20 Work Orders. An additional reduction (~16) is anticipated this year as a result of our effort to review/filter all Work Orders. This review will determine where Work Orders can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- other

#### Analysis

Beginning of year inventory	61
Received during the first quarter of the year	3
Completed at the end of the first quarter	(1)
To be received for the remainder of the year	17
Planned to be completed for the remainder of the year	(19)
Additional reduction based on effort to review and filter	(16)
End of the year projection	45

9. Organization Chart



**10. 2000 Resource Plan**

Section	Item	Full Work Scope Estimated Hours	Reduced Work Scope Estimated Hours	Full Work Scope Estimated Personnel	Reduced Work Scope Estimated Personnel	Reduced Work Scope Estimated Outside Support
4	Manpower Analysis, 1999 Actual Hours	16,338	-	8.9	-	-
5	Operational Overview	30,891	21,571	17.7	12.3	-
7	Opportunities – Current Projects and Programs	6,075	5,775	3.5	3.3	
	Total Resources Needed (5 + 7)	36,966	27,346	21.2	15.6	
	2000 Approved Budget (554 Hours OT)	21,554	21,554	12.3	12.3	
<b>Δ</b>	Additional Resources Needed				3.3	0

To accomplish the Reduced Work Scope we will be pursuing approval of 3 additional personnel slots (1 engineer, 2 designers).





**INDIAN POINT 2**  
**FACILITIES PROJECTS AND PROGRAMS**  
**YEAR 2000 BUSINESS PLAN, REV 1**

MARK ENTENBERG

PLAN MANAGER:

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SUBMITTED

  
APPROVED

04-27-2000  
DATE

4/27/00  
DATE

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## ***1. Functional Responsibility***

Facilities Engineering was transferred to Design Engineering –Nuclear in 1993. This section has always performed multidiscipline tasks for Indian Point Station Units 1 & 2 since its inception in 1984 when it was under the Civil Engineering Department.

The technical qualification and skills of individuals in this section are of multidiscipline type i.e. Electrical, Mechanical, Civil/Structural, and Instrumentation & Controls. The designers have been given cross training and provided with on hand experience to perform multidiscipline tasks. This makes this Section to be very effective in responding to Indian Point Station's needs for Technical solutions.

WE prepare Major, Minor, Generic, and Set Points type of modifications under one package for fixes to problems, systems enhancements, Environmentally Qualified systems modifications, modifications to eliminate environmental and Emergency Operating Procedures (EOPs) concerns, permanent modifications for the Temporary Facilities Changes (TFCs) and installation of new systems.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Profess. License</u>	<u>AE Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
BRANDSTAEDTER	SENIOR ENGINEER	BS	NY	3	33
ENTENBERG	SECT. MANAGER	BEE	-	-	20
MEIKLE	ENGINEER	MS	-	-	27
MCVETTY (AS OF 4/1)	SENIOR ENGINEER	BSME	-	19	14
<b>WEEKLY</b>					
HOGG	SR DESIGNER B	BS	-	-	32
ISLAM	DESIGNER A	BS	-	-	14
KRAVETS	DESIGNER A	MS	-	-	10
MATASOVSKI	DESIGNER A	MS	-	-	27
MCCORMACK	SR DESIGNER B	-	-	-	35
PATEL	DESIGNER A	BS,MBA	PA	22	11
SWEENEY	DESIGNER B	AE(E)	-	-	21
<b>CONTRACTORS</b>					
CARSCADDEN	I&C ENGINEER	-	-	-	-
NIEH	ENGR-MECHANICAL	-	-	-	-
SHIVE	TECH SPEC- MECH	-	-	-	-
VALVANO	I&C ENGINEER	-	-	-	-
<b>REPLACEMENTS REQUESTED FOR PERSONNEL LEAVING IN APRIL</b>					
SHEIKH	SENIOR ENGINEER	BSEE,MSNUC	-	7	14
PANTANO (Replace with Engineer)	DESIGNER A	AAS	-	-	27
SURDUKOWSKI	SR DESIGNER B	-	-	-	30
<b>TOTALS</b>	<b>14 FILLED 4 CONTRACTORS</b>	-	-	<b>51</b>	<b>315</b>

### Authorized Positions

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
<b>1999 Budget</b>	6	10	16
<b>2000 Budget</b>	6	8	14
<b>Change</b>	<b>0</b>	<b>-2</b>	<b>-2</b>

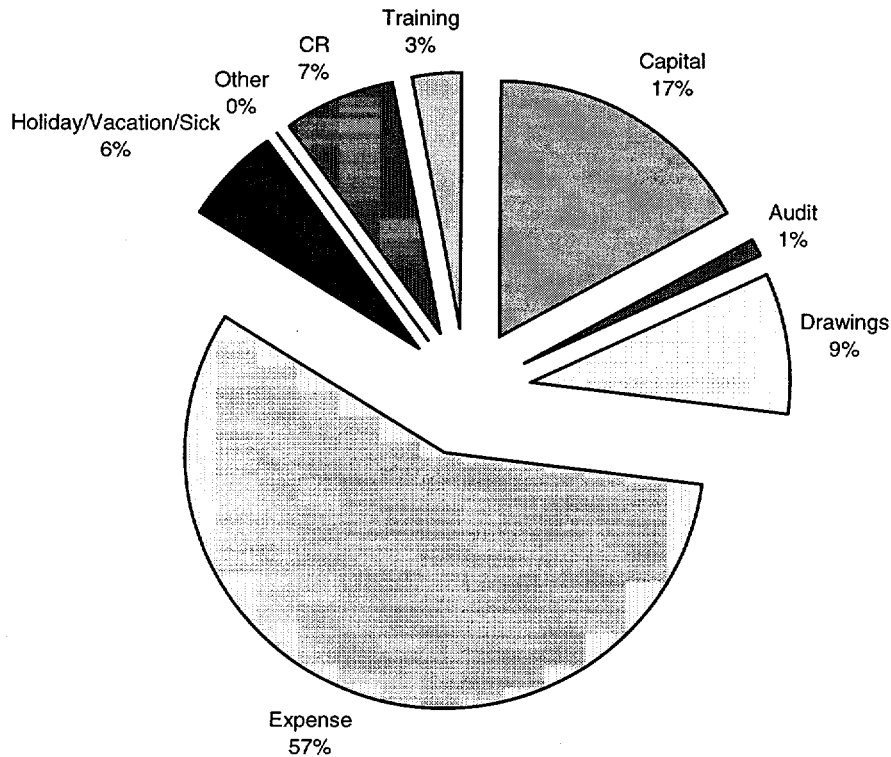
### 3. **Section Mission Statement**

To engineer and design multi-discipline modifications with a “quick turnaround” to support IP1/IP2 while maintaining a high quality product. Modifications must fully answer User needs. In addition, their design must address all the aspects of nuclear requirements, while maintaining budgetary restraints in terms of being cost effective.

#### 4. Manpower Analysis

##### 1999 Manpower Analysis based on EPMIS2K data.

Capital	5,227
Audit	307
Drawings	2,767
Expense	17,523
Holiday/Vacation/Sick	1,845
Other	0
CR	2,152
Training	922
<b>Total</b>	<b>30,743</b>
Full Time Equivalents (FTE)	14.78
Production Hours/FTE	1,955



## 5. Operational Overview

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.1. Condition Reports	Complete 90 CRs that contain evaluations, SL3s, RFIs, FCAs, and ICAs @ 40 hours each. Beginning of year inventory: 62 Projected incoming: 5/month Assume 40 hours/CR 20 hours/engineer 20 hours/designers	3,600	3,600
5.2. Request for Engineering Service/Engineering Service Request	The Facilities section does not review, evaluate, or dispose of RESs/ESRs. Instead, the section is responsible for projects with completed RESs/ESRs by other sections in the department. The hours shown are for administrative review efforts.	100	100
5.3. Work Orders	Provide engineering review of 48 (35) Work Orders as needed to support safe and reliable station operation. Beginning of year inventory: 65 Projected incoming: 24/year  <i>Work Orders on Engineering Hold are resolved as Minor or Generic Modification Packages. The Facilities Section takes the lead on this area for the Department</i>	200	200

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.4. Report of Installation	<p>The Facilities section has ~80 ROIs in backlog from the 97-98 Outage. We will complete the following modification ROI package using our staff:</p> <ul style="list-style-type: none"> <li>480V Switchgear Steam Break</li> </ul> <p><i>All other ROI work efforts will be administered by Design Services.</i></p>	160	160
5.5. Minor Modifications	<p>Prepare 46 (33) modification packages to implement a planned physical and/or functional change to or an addition or deletion of a permanent plant structure, system, or component that modifies the plant design. Assume 400 hours/Minor Modification 160 hours/engineer 240 hours/design team (~ 2 designers)</p>	18,400	<u>13,200</u>
5.6. Generic Modifications	<p>Prepare 2 Generic Modification packages to implement a major or minor modification that will be implemented on a repetitive basis in various locations of the plant over an undetermined period of time. For 2000 prepare generic modifications for pump/motor replacements. Assume 240 hours each for 2 modifications.</p>	480	480



Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.7. Temporary Facility Changes	The Facilities section is a major contributor in creating and/or permanentizing TFCs. For 2000 complete 10 TFCs. Beginning of year inventory: 6 Projected incoming: 6/year Assume 400 hours/TFC 160 hours/engineer 240 hours/design team (~ 2 designers) End of year inventory: 6	4,000	4,000
5.8. Modification Support	The Facilities section receives rather than provides support for Modifications as needed for expertise of other groups.	0	0
5.9. Training	Complete all continuing and qualification training including GET, ESP, etc. Continuing engineer training: 6 people @ 80 hours each Continuing designer training: 8 people @ 60 hours each Continuing contractor training: 4 people @ 20 hours each Qualification Training: N/A	1,040	1,040
5.10. NRC Inspection & QA Audit Support, Self Assessments, Benchmarking	The Facilities section provides minimal engineering support/participation in this subject area. Our involvement is limited to NRC questions directly related to modifications performed by the section.	200	200
5.11. Technical Program Maintenance	This area does not apply to the Facilities Section.	0	0
5.12. Management & Supervision	Time spent in management and supervisory functions including planning, delegation and oversight of work.	1,313	1,313

<b>Project/Program</b>	<b>Description</b>	<b>Full Work Scope Estimated Hours</b>	<b>Reduced Work Scope Based On 2000 Budget</b>
5.13. Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation. Assume 10% of 14 personnel hours.	2,450	2,450
<b>Total Estimated Hours</b>		<b>31,943</b>	<b><u>26,743</u></b>
<b>Full Time Equivalent People @ 1750 Hours Each</b>		<b>18.3</b>	<b><u>15.3</u></b>

**6. Equipment/Materials Expertise**

- Reinforced Concrete
- Seismic Structure
- Seismic Equipment Qualification
- Pipe Supports
- Steel Design
- Electrical Supports
- Instrumentation including level indicating and controls for tanks
- Finite Element Analysis
- Electrical Control Systems
- Mechanical Systems (i.e.: pumps, MOVs, control valves and seals)
- Electrical Systems (i.e.: transformers, switchgear, breakers, distribution equipment)

7. **Opportunities – Current Projects and Programs**

The following Projects and Programs are being worked in 2000 to support continued plant operations and to prepare for the 2000 refueling outage.

<b>Project/Program Title</b>	<b>Full Work Scope Estimated Hours</b>	<b>Full Work Scope Estimated Outside Support</b>	<b>Reduced Work Scope Based On 2000 Budget</b>	<b>Reduced Estimated Outside Support Based On 2000 Budget</b>
7.1. Installation of 5 <sup>th</sup> Battery Charger	900	-	900	-
7.2. Modification Process Optimization	150	-	150	-
7.3. Accumulators for PORVs	1200	-	1200	-
<b>Total Estimated Hours</b>	<b>2,250</b>	<b>-</b>	<b>2,250</b>	<b>-</b>
<b>Full Time Equivalent People @ 1750 Hours Each</b>	<b>1.3</b>	<b>-</b>	<b>1.3</b>	<b>-</b>
<b>Total Estimated Dollars</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

## **7. Opportunities – Current Projects and Programs (Continued)**

### **7.1. Installation of 5<sup>th</sup> Battery Charger**

#### **Problem/Justification**

The recent event of under-voltage at Indian Point 2 Station resulted in the loss of battery charger # 24 for a long duration. This event has prompted the need of installing a spare battery charger permanently in the same room with conveniently installed provisions of quick connections that will allow it to be substituted for the failed battery charger.

#### **Solution**

This modification will install a 5<sup>th</sup> battery charger identified as "Battery Charger # 25". This battery charger will normally be maintained in the de-energized condition, disconnected at the input and output of its power supplies. It will be connected and energized only in the event of a loss of any one of the battery chargers # 21, # 22, # 23, or # 24. Administrative controls will be applied to isolate the failed battery charger and make connections to battery charger # 25. This will ensure that the isolation and separation requirements are maintained when the spare battery charger is substituted for the failed battery charger.

### **7.2. Modification Process Optimization**

Modification Streamlining efforts are continuing and Design Engineering personnel will continue their participation in order to identify and implement specific process improvements in the MOD Process. Arshad Sheikh will represent Facilities Engineering. He will devote 30% of his time for 12 weeks.

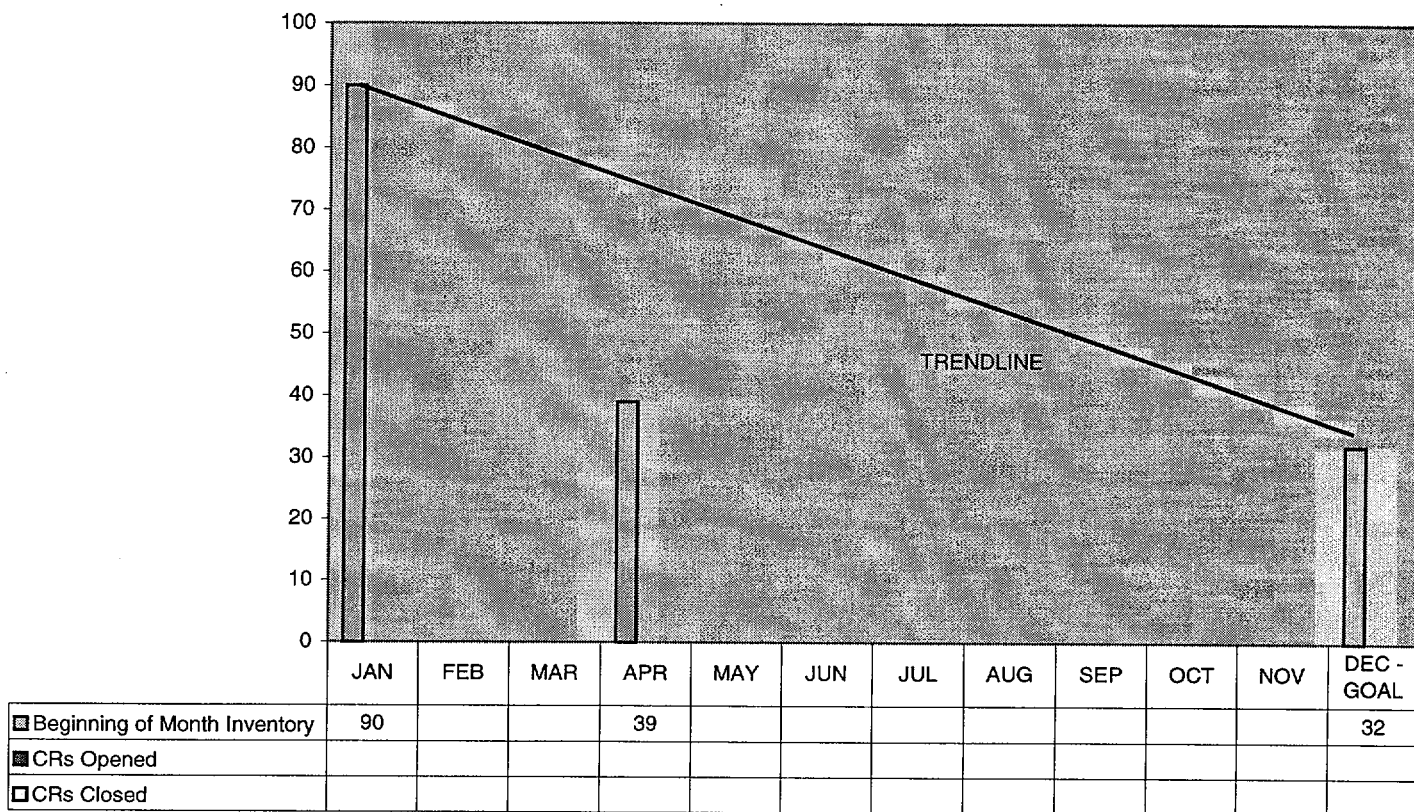
### **7.3. Accumulators for PORVs**

The existing nitrogen accumulators provide the nitrogen supply to the power operated relief valves (PORVs) for the low temperature overpressure protection system. It has been determined while testing that the accumulators may not support the minimum 200 continuous cycles as stated in the Updated Final Analysis Report (UFSAR). Because of the potential for insufficient nitrogen capacity for the overpressure protection system, this project will resize and replace the existing accumulators to support the design basis requirement. In addition, the low pressure setpoint will be revised.

## 8. Performance Indicators

### 8.1. Condition Reports

*Condition Report Status*



#### 8.1.1. Overall Performance

##### Indicator Description

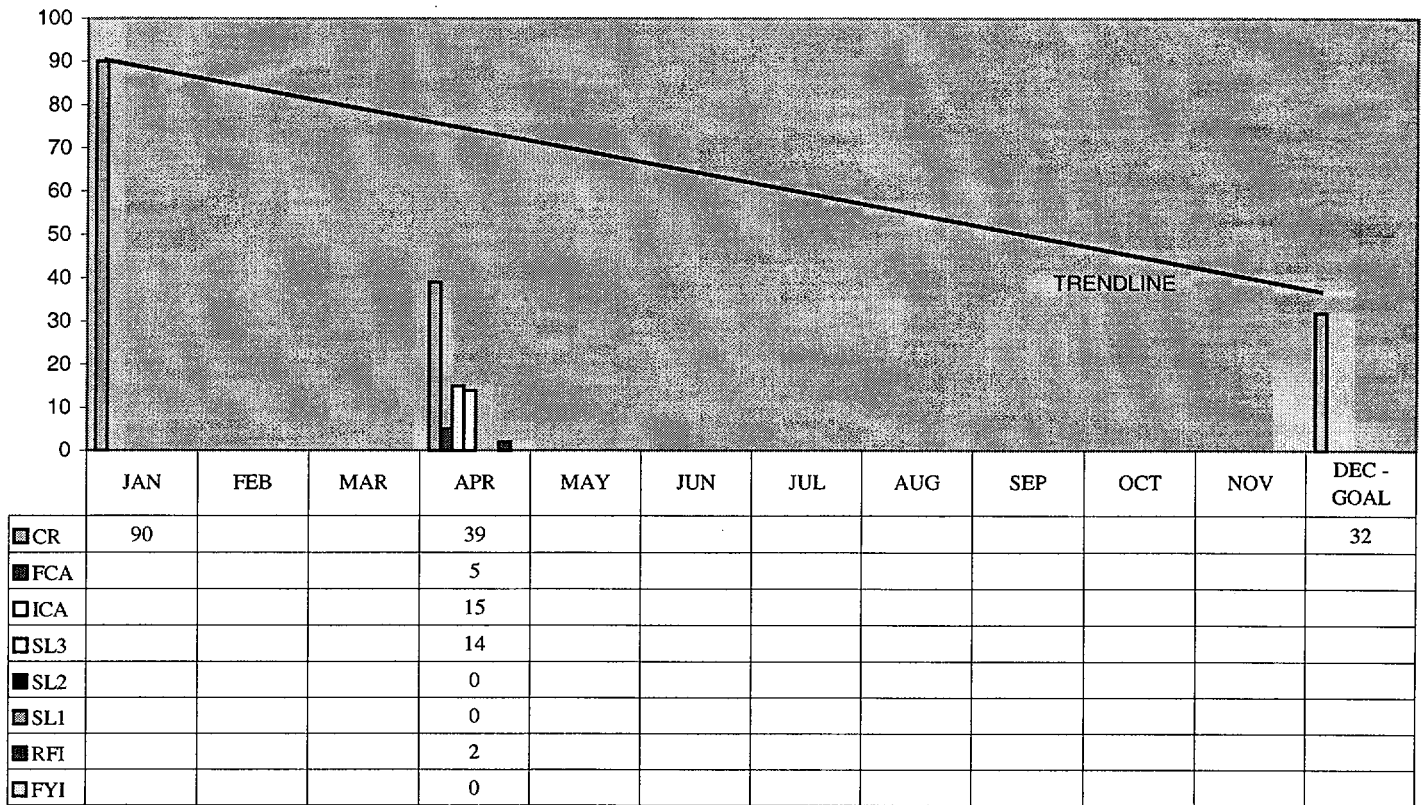
Goals for the reduction of Condition Reports assigned to the section are specified above. A reduction in inventories from 62 to 32 is planned for the Year 2000. We anticipated 60 incoming items for the Year 2000. The section goal is to complete 90 items during the course of this year.

##### Analysis

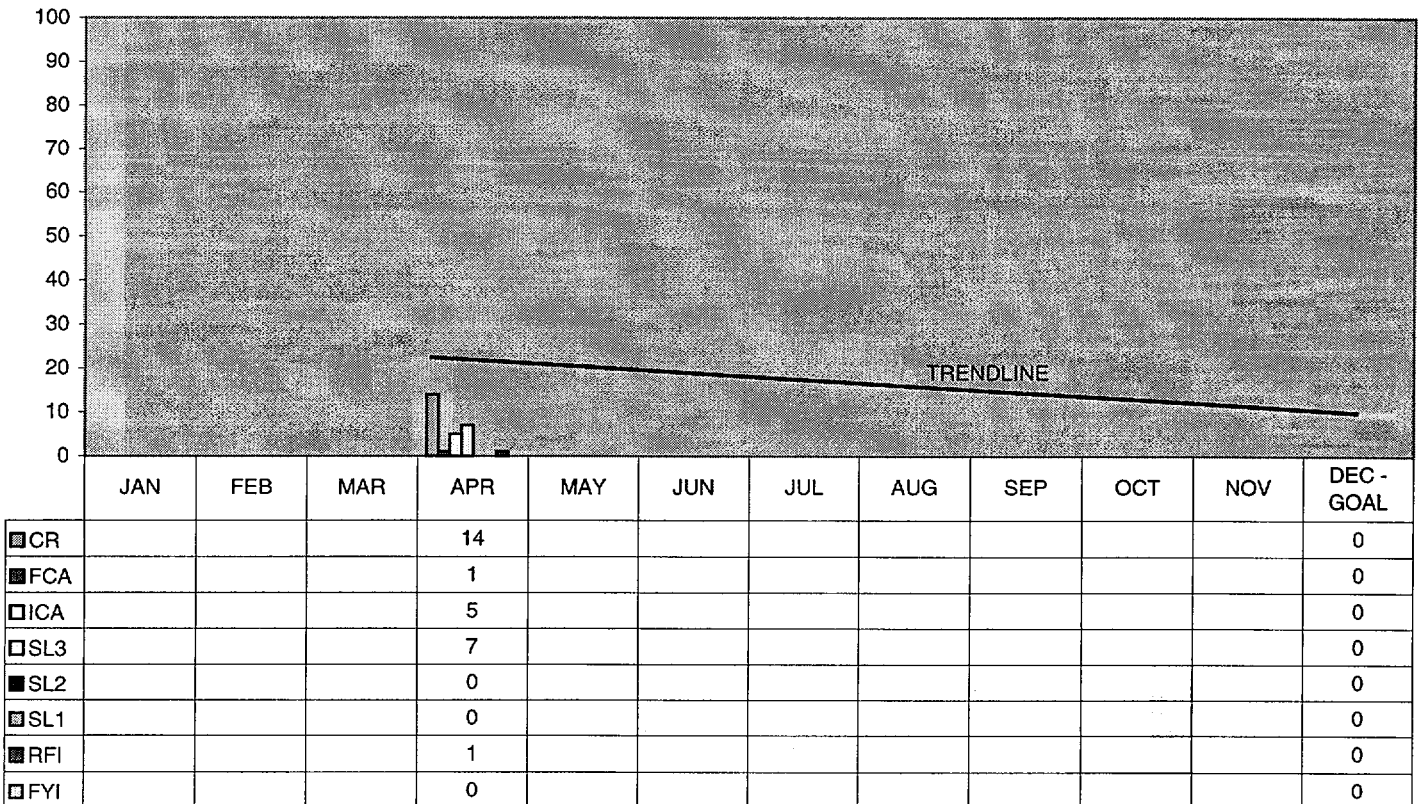
Beginning of year inventory	62
To be received for the year	60
Planned to be completed for the year	(90)
End of the year projection	32

### 8.1.2. Total Inventory as of April 10, 2000

#### *Open Condition Reports*



#### *Overdue Condition Reports*



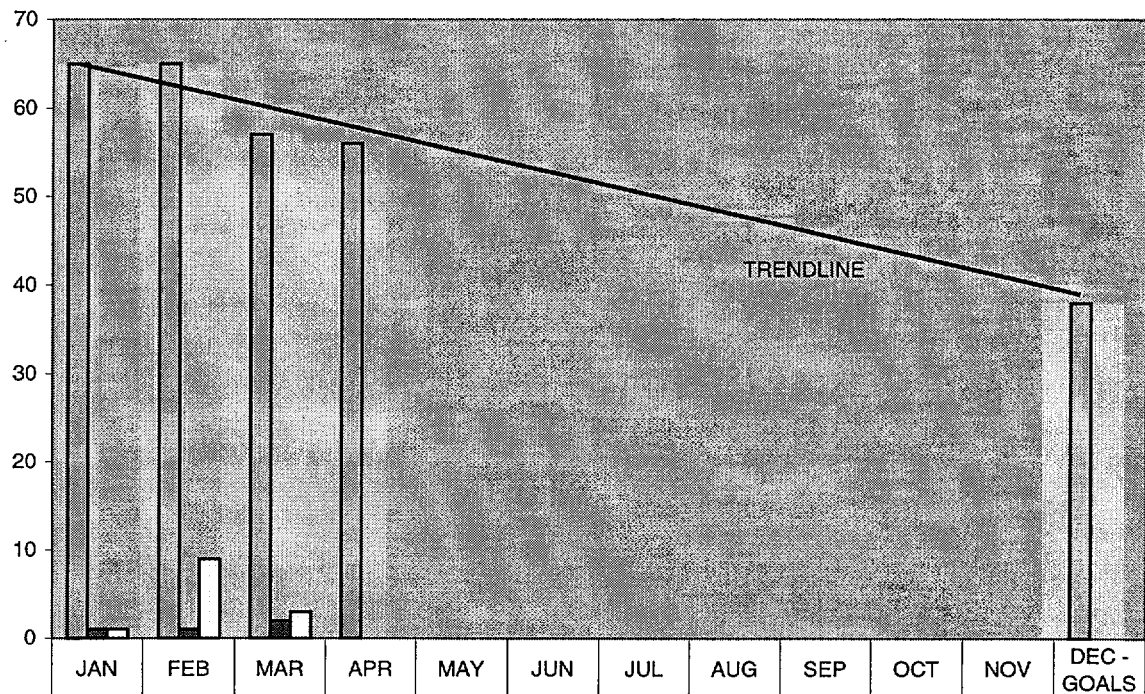
8.2. Request for Engineering Service/Engineering Service Request

As stated in Section 5.2, the Facilities Projects and Programs section does not review, evaluate, or dispose of RESs/ESRs. Instead, the section is responsible for projects with completed RESs/ESRs by other sections in the department. Therefore, there are no performance indicators in this area.



### 8.3. Work Orders

#### Work Order Status



Beginning of Month Inventory	65	65	57	56								38
Work Orders Opened	1	1	2									
Work Orders Closed	1	9	3									

#### Indicator Description

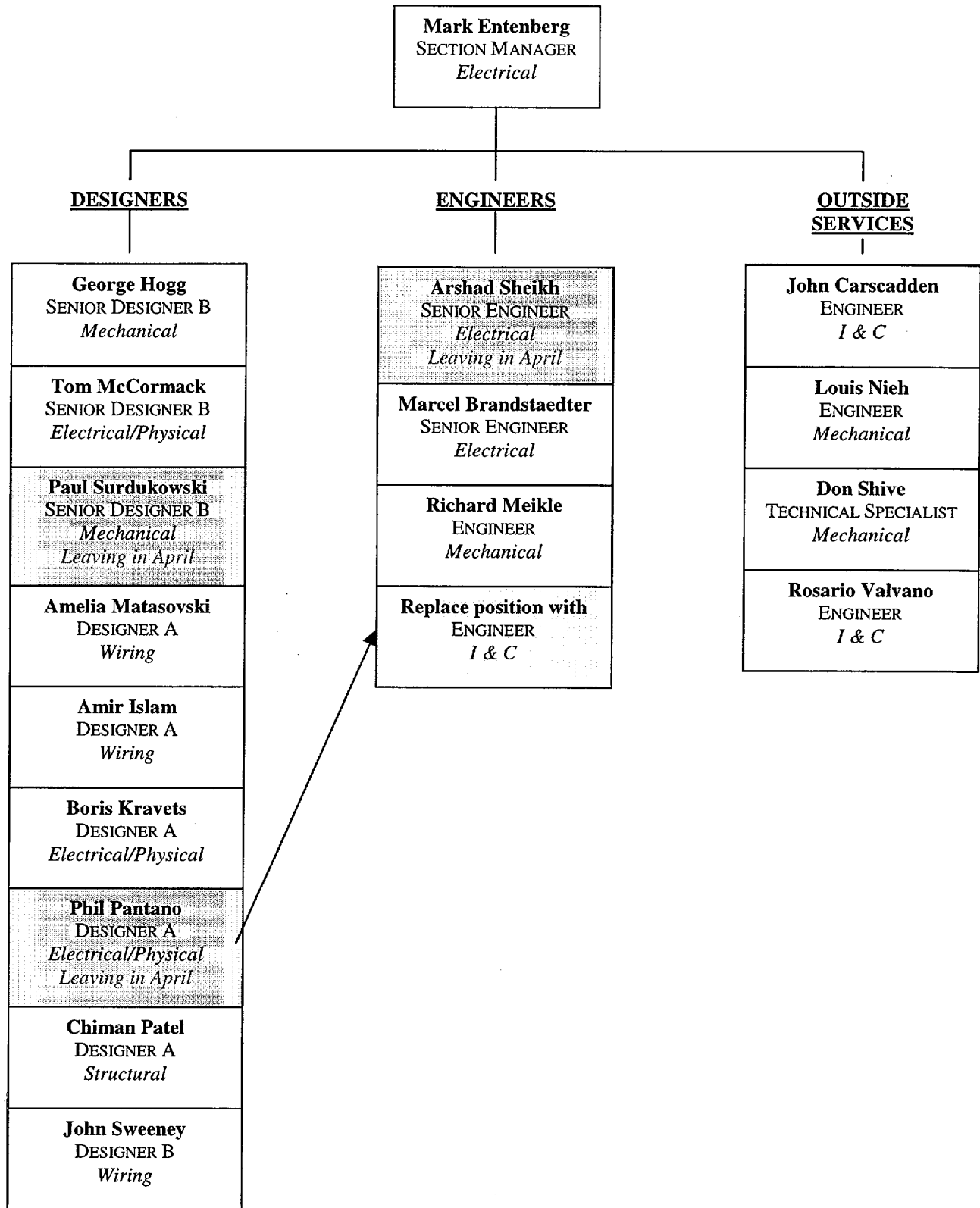
The reduction in Work Orders will be achieved by allocation of the resources described in Section 5.3, which will allow the completion of 40 Work Orders. An additional reduction (~18) is anticipated this year as a result of our effort to review/filter all Work Orders. This review will determine where Work Orders can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- other

#### Analysis

Beginning of year inventory	65
Received during the first quarter of the year	4
Completed or dispositioned at the end of the first quarter	(13)
To be received for the remainder of the year	20
Planned to be completed for the remainder of the year	(20)
Additional reduction based on effort to review and filter	(18)
End of the year projection	38

## 9. Organization Chart

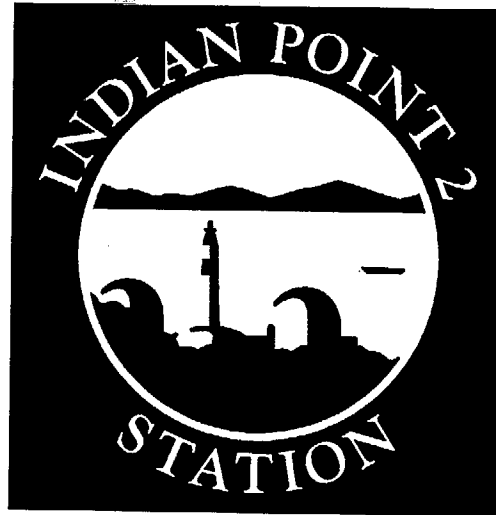


**10. 2000 Resource Plan**

Section	Item	Full Work Scope Estimated Hours	Reduced Work Scope Estimated Hours	Full Work Scope Estimated Personnel	Reduced Work Scope Estimated Personnel	Reduced Work Scope Estimated Outside Support
4	Manpower Analysis, 1999 Actual Hours	28,898	-	15.7	-	-
5	Operational Overview	31,943	26,743	18.3	15.3	-
7	Opportunities – Current Projects and Programs	2,250	2,250	1.3	1.3	-
	Total Resources Needed ( 5 + 7 )*	34,193	28,993	19.6	16.6	
	2000 Approved Budget (554 Hours OT)	25,983	25,983	14.3	14.3	
<b>Δ</b>	Additional Resources Needed				2.3	( )*

To accomplish the Reduced Work Scope we will be pursuing approval of 2 additional personnel slots (1 engineer, 1 designer).


\* *of the available budget will be used for staff augmentation in order to offset the cost of contract support being used to fill open budgeted slots.*




**INDIAN POINT 2**  
**MECHANICAL PROJECTS AND PROGRAMS**  
**YEAR 2000 BUSINESS PLAN, REV 1**

WALTER WITTICH  
PLAN MANAGER:

JAMES TUOHY  
SENIOR MANAGEMENT SPONSOR

  
SUBMITTED

  
APPROVED

4/27/00  
DATE

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## ***1. Functional Responsibility***

The Mechanical Projects and Programs section is an in-house design and engineering group chartered to develop the longer-term modifications required for continued Plant operation. The group also addresses regulatory issues that fall into the mechanical discipline, develops and maintains programs important to safe plant operation, and prepares studies as required.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>AE Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
ALIBUTOD	SENIOR ENGINEER	BS-CH E	-	30	10
BALEN	SERIOR ENGINEER	MS-EM	-	-	14
LAU	SENIOR ENGINEER	MS-ME	NY	33	1
MYERS	ASSOCIATE ENGINEER	BS-ME	-	-	1
WAGNER	SENIOR ENGINEER	BS-ME	-	30	9
WITTICH	SECTION MANAGER	MS-ME	NY	20	1
<b>WEEKLY</b>					
BALADO	SENIOR DESIGNER B	-	-	-	34
BHALLA	SENIOR DESIGNER B	BS-ME	-	11	13
FONG	ENG. DRAFTER	AAS	-	0	18
MEZA	SENIOR DESIGNER B	-	-	-	32
WALKER	DESIGNER B	-	-	-	10
<b>CONTRACTORS</b>					
BARON	ENGINEER	MS-ME	-	-	-
GALLER	ENGINEER	MS-MTLGY	-	-	-
JAIN	ENGINEER	MS-ME	-	-	-
KASAT	ENGINEER	MS-ME/EE	-	-	-
<b>REPLACEMENTS REQUESTED FOR PERSONNEL LEAVING BY JUNE</b>					
MADIA	SENIOR ENGINEER	MS-ME	NY	-	16
MARK <sup>1</sup>	SENIOR ENGINEER	MS-MTLGY	NY	-	25
MARZULLO	SENIOR DESIGNER B	-	-	-	33
THOMANY <sup>2</sup>	SENIOR TYPIST				
<b>TOTALS</b>	<b>15 FILLED 4 CONTRACTOR</b>	-	-	<b>124</b>	<b>217</b>

<sup>1</sup> The slot for this Metallurgist was eliminated by the reduction of positions in 2000. However, we will be pursuing a replacement as indicated in Section 10.

<sup>2</sup> The slot for this Senior Typist will be replaced with a Designer.

### Authorized Positions

	<b>Management</b>	<b>Weekly</b>	<b>Totals</b>
<b>1999 Budget</b>	12	7	19
<b>2000 Budget</b>	7	7	14
<b>Change</b>	<b>-5</b>	<b>0</b>	<b>-5</b>

### 3. **Section Mission Statement**

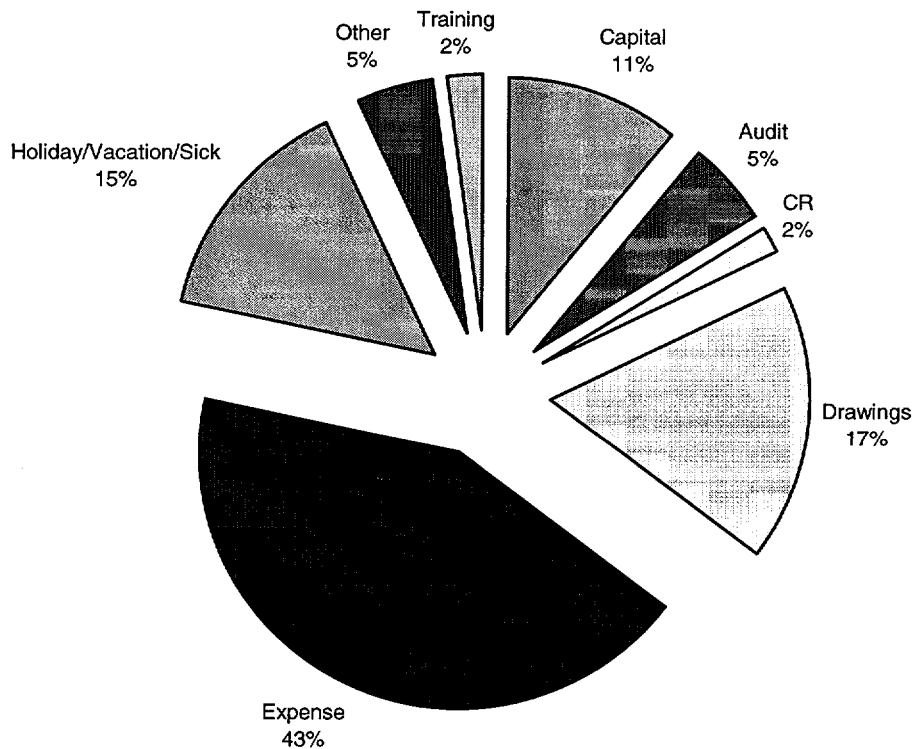
To provide professional mechanical engineering service to Nuclear Power for the safe, reliable, and efficient operation and maintenance of Indian Point Units 1 and 2.



#### 4. Manpower Analysis

##### 1999 Manpower Analysis based on EPMIS2K data.

Capital	3,391
Audit	1,696
Drawings	5,456
Expense	13,537
Holiday/Vacation/Sick	4,629
Other	1,496
CR	516
Training	721
<b>Total</b>	<b>31,442</b>
Full Time Equivalents (FTE)	15.12
Production Hours/FTE	1,773



## 5. Operational Overview

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.1. Condition Reports	Complete (360) <u>350</u> CRs that contain evaluations, drawing updates, SL3s, RFIs, FCAs, and ICAs. Beginning of year inventory: 260 Projected incoming: 25/month Assume 35 hours/item.	14,400	<u>12,250</u>
5.2. Request for Engineering Service/ Engineering Service Request	Complete (30) <u>20</u> reviews, evaluations, dispositions of RESs/ESRs Beginning of year inventory: 32 Projected incoming: 19/year Assume 60 hours/item.	1,800	1,200
5.3. Work Orders	Provide engineering review of 20 Work Orders as needed to support safe and reliable station operation. Beginning of year inventory: 44 Projected incoming: 48/year  <i>The Work Orders that come to the Mechanical Projects and Programs section typically require a Modification to resolve the issue. Thus, for the most part, they are covered under Minor and Generic Modification categories of work. Works hours shown are only for review and disposition of work orders that do not turn into modifications.</i>	200	200

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.4. Report of Installation	<i>Assume Design Services will handle ROIs for previously installed modifications.</i> The Mechanical section will complete 14 Year 2000 RFO modification ROI packages(840 hours) plus 5 additional modification ROI packages (300 hours)	1,140	1,140
5.5. Minor Modifications	Prepare modification packages to implement a planned physical and/or functional change to or an addition or deletion of a permanent plant structure, system, or component that modifies the plant design. For 2000 complete 12 Minor Modifications. Assume 400 hours/Minor Modification	4,800	4,800
5.6. Generic Modifications	Prepare modification packages to implement a major or minor modification that will be implemented on a repetitive basis in various locations of the plant over an undetermined period of time. For 2000 complete 8 Generic Modifications. Assume 180 hours/Generic Modification	1,440	1,440
5.7. Temporary Facility Changes	The Mechanical section creates and/or permanentizes very few Temporary Facility Changes (TFC) as needed to support safe and reliable station operation. Assume hours spent to be from <i>emergent work</i> .	0	0

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.8. Modification Support	The Mechanical Projects & Programs section provides support for Modifications that other groups have the lead on.	2,000	<u>1,000</u>
5.9. Training	<p>Complete all continuing and qualification training including GET, ESP, etc.</p> <p>Continuing training:</p> <ul style="list-style-type: none"> <li>• 7 Engineers @ 80 hours each (560)</li> <li>• 7 Designers @ 60 hours each (420)</li> <li>• 4 Contractors @ 20 hours each (80)</li> </ul> <p>Qualification Training: 3 people @ 12 weeks each (1,440 hours)</p>	2,500	2,500
5.10. NRC Inspection & QA Audit Support, Self Assessments, Benchmarking	<p>Provide Mechanical design engineering support/participation in the following subject areas:</p> <ul style="list-style-type: none"> <li>• Support to QA for 2 SSFAs: 1 person each for 6 weeks each.</li> <li>• Response to 2 SSFAs: 2 people each for 3 weeks each.</li> <li>• All other issues: 540 hours.</li> </ul>	1,500	1,500
5.11. Technical Program Maintenance	<ul style="list-style-type: none"> <li>• SQUG support to Civil: 500 hours</li> <li>• MOV, AOV, SG ISI, balance of ISI program, IST, welding: 500 hours total.</li> </ul>	1,000	1,000
5.12. Management & Supervision	<p>Time spent in management and supervisory functions including planning, delegation and oversight of work.</p> <p>Assume 75% of the manager's production hours.</p>	1,313	1,313

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.13. Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation. Assume 10% of 14 personnel hours.	3,675	<u>2,450</u>
5.14. Manager Support and Planning	Time allocated to work planning, scheduling and tracking	1,750	1,750
<b>Total Estimated Hours</b>		<b>37,518</b>	<b>(32,543) 25,543</b>
<b>Total Estimated Dollars</b>		-	
<b>Full Time Equivalent People @ 1750 Hours Each</b>		<b>21.4</b>	<b>(18.6) 14.6</b>

NOTE Partial allocating the work scope for Condition Reports in Section 5.1 to Outside Services has reduced four personnel slot. This Outside Services effort is indicated as instead.

## 6. **Equipment/Materials Expertise**

- Applied mechanics and stress analysis including pipe stress, baseplate and support design, equipment qualification including SQUG activities, snubber reduction
- Failure analysis, welding and machining
- Materials & Chemistry
- Hydraulic Modeling, Fluid Mechanics
- Rotating Equipment including pump selection and performance, traveling water screens, turbines, vibration analysis and evaluation
- Piping design for pressure/temperature, velocity calculations, wet steam material selection and thermal performance evaluation
- MOV/AOV Actuator Sizing
- Fire Protection Piping/ Sprinkler Design
- Thermal Hydraulics including stretch power evaluations
- System Interaction evaluations for jet impingement and pipe breaks
- Valve Selection and Sizing for Cv, delta-p, head loss, pressure/temperature
- Heat Exchanger/ Heat Load Sizing, Performance & Materials Selection
- Engineering economics
- Steam Generators

## 7. Opportunities – Current Projects and Programs

The following Projects and Programs are being worked in 2000 to support continued plant operations and to prepare for the 2000 refueling outage.

Project/Program Title	Full Work Scope Estimated Hours	Full Work Scope Estimated Outside Support	Reduced Work Scope Based On 2000 Budget	Reduced Estimated Outside Support Based On 2000 Budget
7.1. IP 2/3 Water Treatment Plant	120		120	
7.2. Modify Recirc Pump Impeller (*\$'s for supporting W analysis, budgeted by others)	20	*	20	*
7.3. Generic MOV Alteration Mod	480		480	
7.4. Steam Generator Replacement	0	0	0	0
7.5. RCDT & PRT Vent & Sample Improvements	480		480	
7.6. Replace Stator Water Coolers	40	0	40	0
7.7. Replace FW Heaters 21/22 A, B, C	800		800	
7.8. Enhance AFW Regulation Valves	640	0	640	0
7.9. UFSAR Segment Reviews	315	0	315	0
7.10. Enhanced DBD Reviews (160 hours each Mechanical – DBD)	640	0	640	0
7.11. FCU Charcoal Filter Removal	140	0	140	0
7.12. Extraction Steam/Wet Steam Piping Replacement	40	0	40	0
7.13. #3 RCP Seal Modification	40	0	0	0
7.14. Replace H2 Recombiners	40	0	40	0
7.15. Stator Leak Monitoring System	640	0	640	0

<b>Project/Program Title</b>	<b>Full Work Scope Estimated Hours</b>	<b>Full Work Scope Estimated Outside Support</b>	<b>Reduced Work Scope Based On 2000 Budget</b>	<b>Reduced Estimated Outside Support Based On 2000 Budget</b>
7.16. S/G Snubber Removal	120	0	120	0
7.17. Chlorination System	640	0	640	0
7.18. Calculations and Specifications Program	200		200	
7.19. Steam Generator In-Service Inspection Program	200		200	
7.20. Welding Program Upgrade	250		250	
7.21. Steam Generator Tube Rupture Outage Support	480		480	
7.22. Finish Moving In/Setup at Park Place	320	0	320	0
7.23. Modification Process Optimization Support	200	0	200	0
7.24. 2000 RFO Support	1,400	0	1,400	0
7.25. Improved Standard Tech Specs Support	0	0	0	0
7.26. IVSW Modification	600		600	
7.27. SJAE after Condensor Modification	600		600	
<b>Total Estimates</b>	<b>9,445</b>		<b>9,405</b>	
<b>Full Time Equivalent People @ 1750 Hours Each</b>	<b>5.4</b>	<b>-</b>	<b>5.4</b>	<b>-</b>

*\*Estimates /hour (Includes T&L)*



7.1. IP 2/3 Water Treatment Plant

The proposed modification is a joint effort with NYPA to install water treatment modules to provide treated water to IP3 and IP2 facilities. The shared water treatment modules will replace the IP2 water factory, supplying all the treated water requirements of IP2. The IP2 scope of work is to provide piping connections to supply approximately 800 gpm of city water to the water treatment modules located near the discharge channel, under the IP2/IP3 bridge and provide the treated water to IP2.

The scope of work can be treated as a multiple phase task. Phase I is to support the installation of the joint Water Treatment Modules. Phase II work is to connecting the treated water from the Water Treatment Module interface point to the IP1 condensate storage tanks. The last Phase is to isolate piping and water treatment equipment within IP2 that are no longer required as a result of the installation of the joint NYPA/CON ED Water Treatment Modules.

The modifications proposed above are desirable from an economical standpoint. The existing Water Factory at IP2 is aging and requires a substantial cost for maintaining its efficient operation. The joint effort with NYPA makes economical sense since the initial installation and operations cost will be shared by IP2 and NYPA and it will be lower than if NYPA and IP2 were to have its own water treatment modules

7.2. Modify Recirculation Pump's Impellers

The available net positive suction head (npsh) for the recirculation pumps is marginal and will cause minor cavitation when pumping to core and containment spray. The pump's impellers will be replaced with improved impellers requiring lower suction pressure. In addition to avoiding undesirable pump operation, this change will allow revisions to the EOP's, significantly simplifying emergency operations.

7.3. Generic MOV Alteration Mod

The 2000RFO scope for this generic mod is to upgrade the operators on a number of valves to provide adequate margin for long term operations. The operators to be modified are Tag #'s: 226, 535, 536, 769, 784, 786, 797, 822A/B, 842, 843, 856A-F, 882, 887A/B and 889A/B.

7.4. Steam Generator Replacement Project

Of the 8 nuclear power plants that went operational in the 1970's with Westinghouse steam generators, Unit 2 is the only plant that has not replaced its steam generators. Based on tube deterioration approaches for estimating remaining life of the steam generators, it still appears most probable that the steam generators will continue to be serviceable for several additional cycles of operation. However, based on the great deal of projection uncertainty it is judged prudent at this time to prepare for steam generator replacement during the 2002 refueling outage.

A separate project organization has been set up to oversee and manage this project. Support from FMX will be needed in 2000. Should the 2000 RFO inspections result in the replacement schedule being accelerated to the 2002 RFO, 2 Mechanical Engineers will be assigned to the project full time starting June 1<sup>st</sup>.

7.5. RCDT and PRT Vent and Sample Improvements

The purpose of this modification is to minimize condensation from collecting at low points in the Pressurizer Relief Tank (PRT) and Reactor Coolant Drain Tank (RCDT) gaseous vent and sample lines inside the Vapor Containment and The PAB. The modification will re-slope the lines and install automatic drain traps.

7.6. Replace Stator Water Coolers

The existing tube bundles are approaching the end of their useful life. Continued full load operation without bundle replacement is unreliable. Replacement of the existing tube bundles, channel heads, and floating head with ones made of titanium eliminate future tube corrosion and improves cooler reliability and availability. The tube bundles are redesigned to reclaim the 34 tubes that were rendered ineffective due to partial blockage by the channel divider plate. Replacement of the channel head and the floating head with the ones made of titanium will save O&M expenses. It was projected that the break-even point for using new channel and floating heads compared to using existing ones is approximately 48 months.

7.7. Replace FW Heaters 21/22 A, B, C

In support of the planned Steam Generator replacement effort scheduled for the 2002 RFO, the water treatment chemistry of the Main Steam (MS) system has been changed to raise its pH. Removal of copper bearing material from the MS system is also necessary because the presence of copper inhibits the ability to raise pH. (The presence of copper would also adversely impact new steam generator tubing that has not formed a protective oxide layer.) Therefore, modifications to remove copper bearing alloys from the MS system were implemented. The six condenser neck heaters, 21A,B,C and 22 A,B,C, are the only remaining major copper bearing alloy components in the main steam system. The tube bundle replacement of these heaters with 304LSS material is scheduled for the 2000 RFO.

7.8. Enhance AFW Regulation Valves

This modification replaces the eight existing AFW Flow Control Valves FCV-405A,B,C,D and FCV-406A,B,C,D. The replacement valves will be an improved design with a balanced plug, actuator quick disconnects, quick change trim and equal percentage trim flow characteristics. The FCV-406s are exposed to severe service conditions (i.e., very high pressure difference across the valve) and have in the past caused trim and body erosion. Therefore, the FCV-406 series valves will have a drag trim design that will eliminate the damaging effects of cavitation that occurs during hot shutdown conditions associated with low flow and high differential pressures across the valve.

7.9. UFSAR Segment Reviews

The Mechanical Section is responsible for 3915 segments of the UFSAR with approximately 1740 of those segments currently approved. Alternative approaches for the approval of the remaining segments are being considered. The recent proposal made by Carl Dumsday would call for the Mechanical Section to review and approve the 630 segments needing approval that will not be processed via the UFSAR Change Request process.

7.10. Enhanced DBD Reviews

Resources are allocated to review the 4 DBD's planned for completion in 2000 that cover mechanical systems. The 4 such DBD's are: RCS/SG, CCSW, SW, and CCF.

7.11. FCU Charcoal Filter Removal (11243-95)

This modification removes the HEPA filters, the charcoal filters and associated fire protection and detection equipment from each of the five Containment fan Cooler units, resulting in a significant cost savings for the maintenance and testing of this equipment. A study, documented in WCAP-14542, which uses the revised source term methodology of NUREG 1465, shows that off site and control room doses remain within regulatory limits without reliance on this equipment. NRC approval of proposed Tech. Spec. changes are required for implementation of this modification. Partial implementation of this modification is planned for the 2000 RFO due to outage time constraints.

7.12. Extraction Steam/Wet Steam Piping Replacement (01813-88)

Mechanical Projects & Programs is serving in a support role to the System Engineer on this project. The project involves replacement of extraction and wet steam piping that has reached the end of it's useful life due to erosion/corrosion. The services provided include review of drawings and piping material specifications. The piping materials are being upgraded to materials more resistant to erosion/corrosion

7.13. #3 RCP Seal Modification (12758-97)

Installation of the clamp ring modification, provided by Westinghouse, will provide for proper water lubrication of the #3 RCP seals. This will allow reuse of these seal parts vs. replacement at each PM cycle, saving ~ in parts costs. This modification is being done by Plant Engineering as an MSAP (98-00450-FFX)

7.14. Replace H2 Recombiners (10912-95)

This project replaces the 2 existing combustor recombiners and associated equipment with passive autocatalytic recombiners. The new recombiners have been installed and are in service. The original recombiners and associated equipment have been removed from service but have been left in place. What remains to be done is to remove the old recombiners and associated equipment to free up valuable space.

7.15. Stator Leak Monitoring System

This project provides monitoring of stator water leakage. The project requires new controls and will connect to the existing stator water coolers

7.16. S/G Snubber Removal (12705-97)

This project will eliminate the 24 large bore SG snubbers ( 6 per SG ), avoiding extensive effort and resources associated with their inspection, maintenance and operability evaluations. This modification has been performed successfully at other PWR's and was implemented by IP 3 during their 97RFO.

7.17. Chlorination System Upgrade (11892-96)

This project will replace the existing CLP-11 and CLP-12 chlorination skids with new skids with lower capacity pumps, improved pump seals and improved skid materials. The lower capacity pumps are needed to better match the system requirements. The other changes should resolve leakage problems. The CLP-RW-11 and CLP-RW-12 skids will also be replaced for the same reasons.

- 7.18. Calculations and Specifications Program  
Index and integrate the mechanical engineering calculations and specifications. Reconstitute essential calculations. This effort is needed for resolution of CRS items, NRC audits and to improve department efficiency.
- 7.19. Steam Generator In-Service Inspection Program  
Develop the basis for the eddy current program for RFO 2000. Qualify CECCO/bobbin probe, develop aged and cracked calibration specimens, update procedures and interface with NRC. Includes sludge analysis.
- 7.20. Welding Program  
Evaluate the site welding program, develop a new program for control of Class A welding, issue procedures for welder qualification and material certification
- 7.21. Steam Generator Tube Rupture Outage Support  
On Feb. 15, 2000, the plant entered a Steam Generator Tube Rupture ALERT. Mechanical Engineering is providing technical support and direction to the Command and Control Team. This effort involves full time site support plus in outside services ( Altran for finite element analysis and issue resolution support, Star for metallurgy support, Pitkin for crack growth calcs ).
- 7.22. Finish Moving In/Setup at Park Place  
Unpack boxes, set up file system and library.
- 7.23. Modification Process Optimization Support  
Modification Process Optimization Support efforts are continuing and Design Engineering personnel will continue their participation in order to identify and implement specific process improvements.
- 7.24. 2000 RFO Support  
The Mechanical Section will provide extensive support to the station during the refueling outage. This item is to cover outage support not provided under one of the other Section Business Plan items.
- 7.25. Improved Standard Tech Specs Support  
Provide support for the preparation of improved standard Technical specifications for IP 2. This multi year project is expected to start in the second half of 2000 and will require allocation of Section resources to review drafts of selected sections of the new Tech Specs, their Bases and the new Technical Requirements Manual. After submittal to the NRC participation in responding to RAI's is anticipated.
- 7.26. IVSW Modification  
This modification changes the function on the Isolation Valve Seal Water (IVSW) system. The current system design is subject to a loss of inventory during some post-accident plant conditions. The revised system design will have the capability of maintaining its inventory in the event of a containment isolation phase A event. This change in function is required to ensure the capability of the system to perform its safety function under all accident conditions.

7.27. SJAE after Condensor Modification

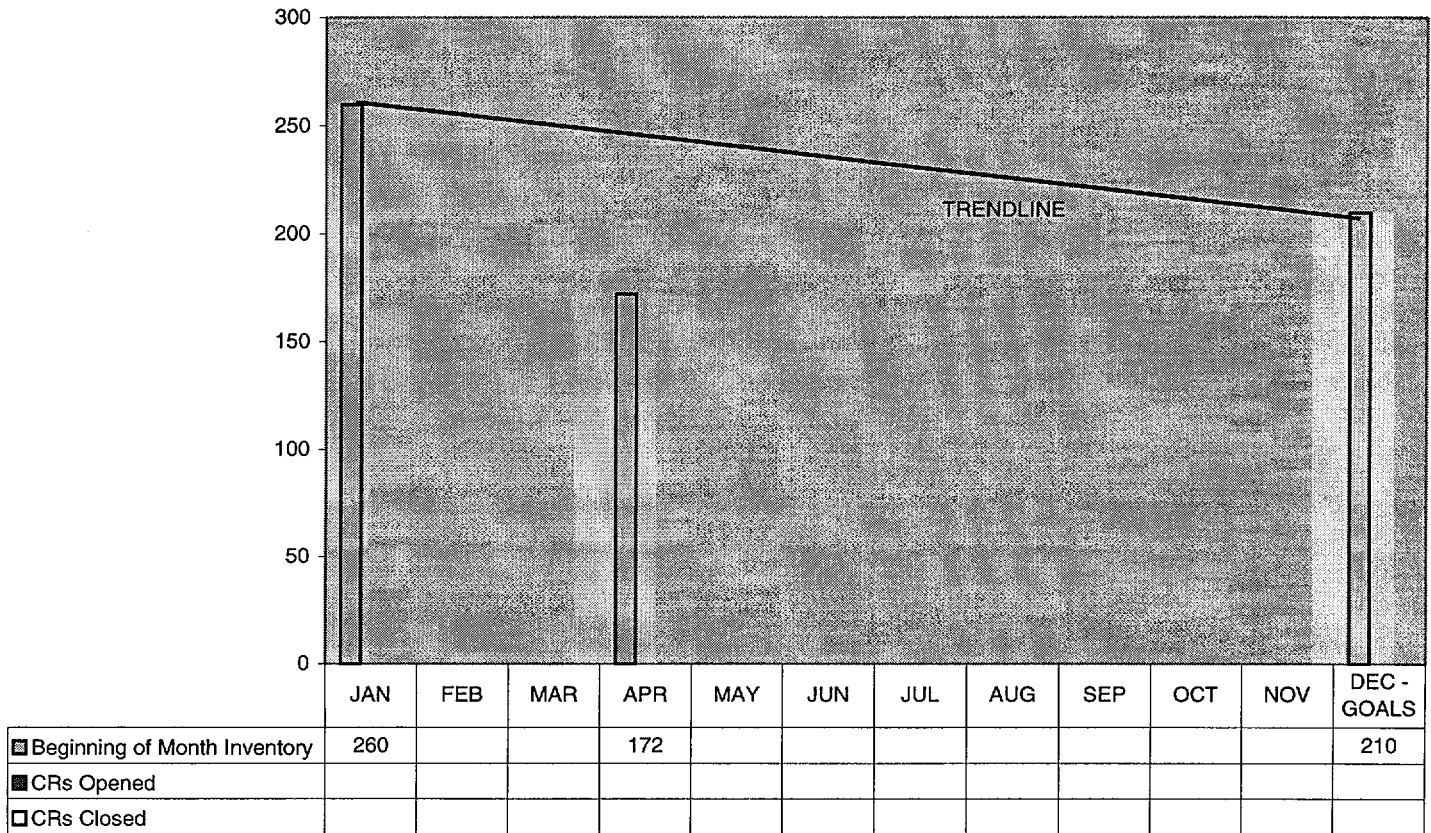
This mod will modify the piping and traps for the SJAE after condensers. This mod will provide the capability to raise the PH level in the secondary system to remove copper oxide deposits.

## 8. Performance Indicators

### 8.1. Condition Reports

#### 8.1.1. Overall Performance

*Condition Report Status*



#### Indicator Description

Goals for the reduction of Condition Reports assigned to the section are specified above. A reduction in inventories from 260 to 210 is expected for the Year 2000 due to a lack of resources. We anticipated 300 incoming items for the Year 2000. The section goal is to complete 350 items during the course of this year.

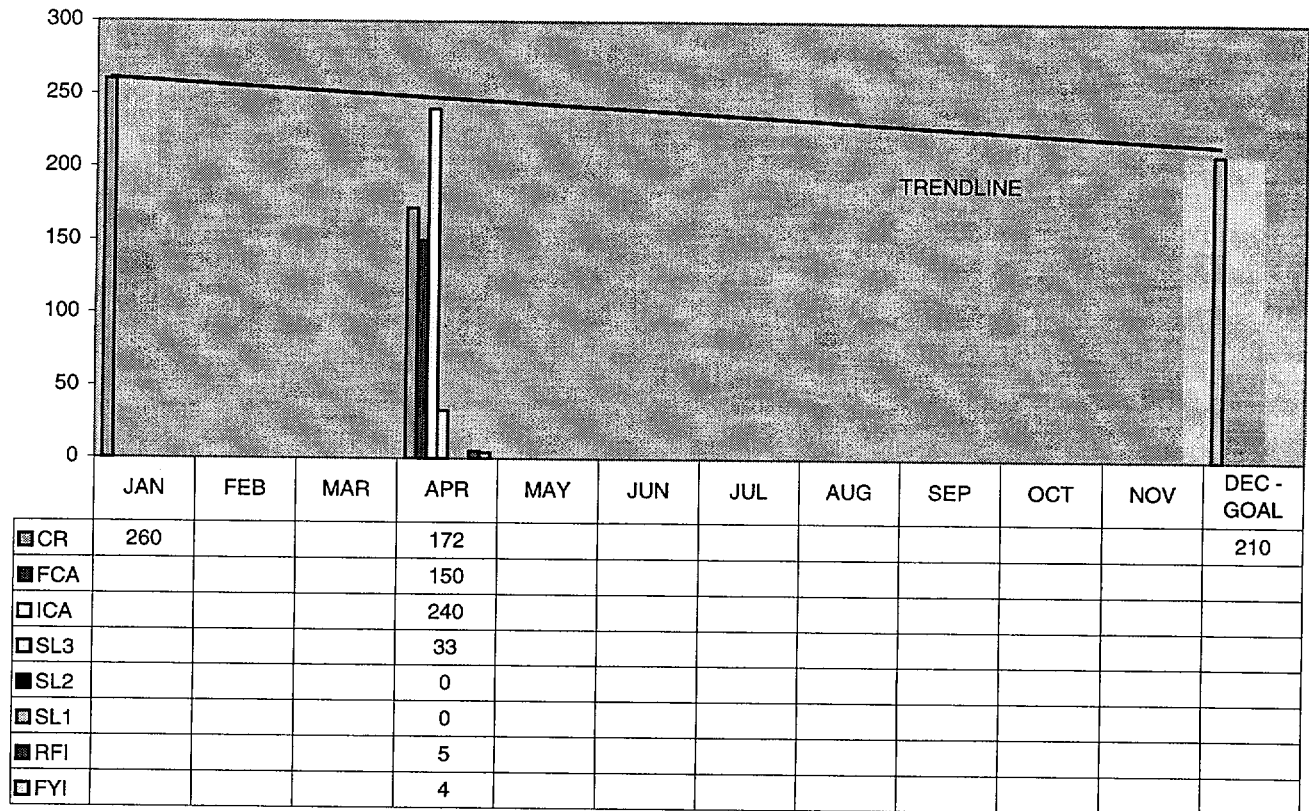
#### Analysis

Beginning of year inventory	260
To be received for the year (25/month)	300
Planned to be completed for the year	(350)
End of the year projection	<b>210</b>

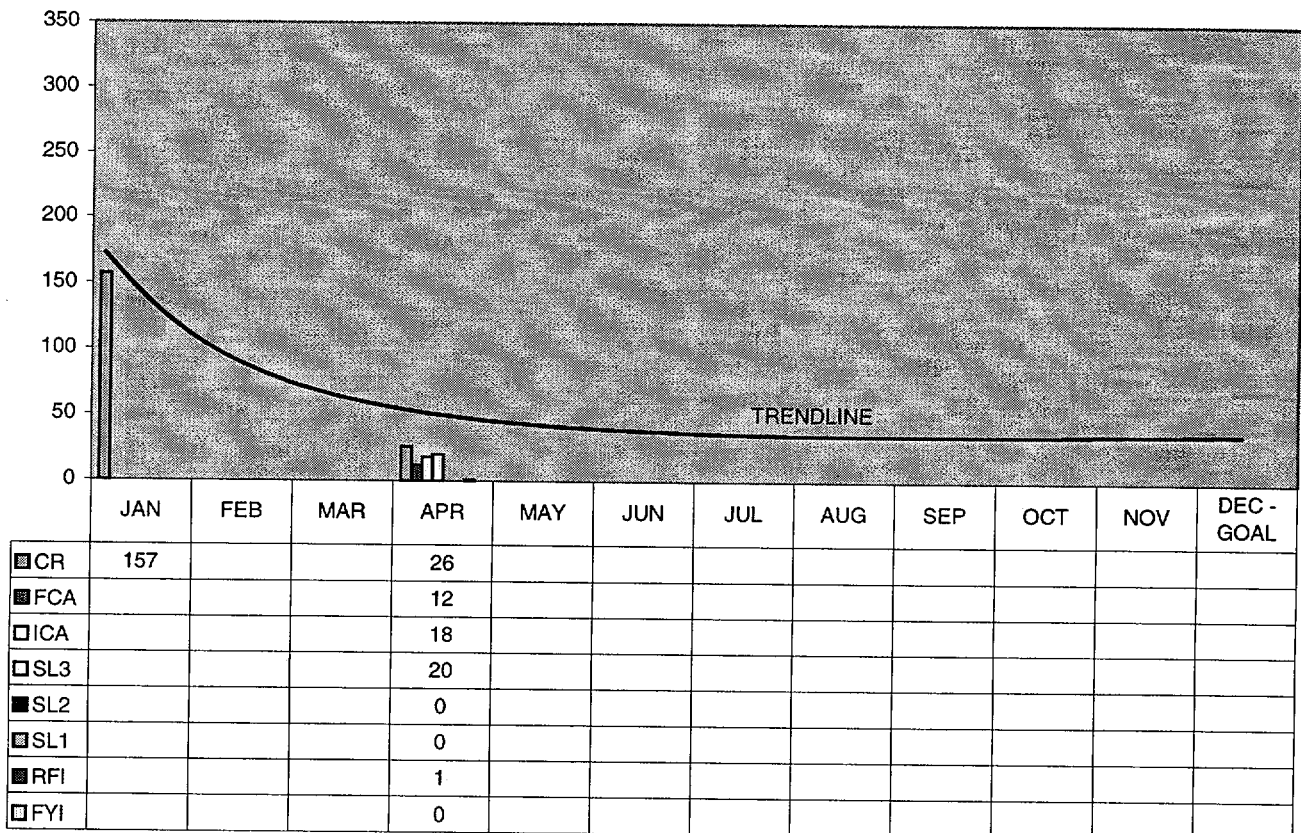
Resources are limited within the Mechanical Projects and Programs section to further reduce the CR backlog this year. Approximately one-half of the backlog is drawing related. The Department Office Business Plan for Design Engineering discusses drawing process improvements as well as initiatives to use outside services to further reduce this backlog.

# 8.1.2. Total Inventory as of April 20, 2000

## Open Condition Reports



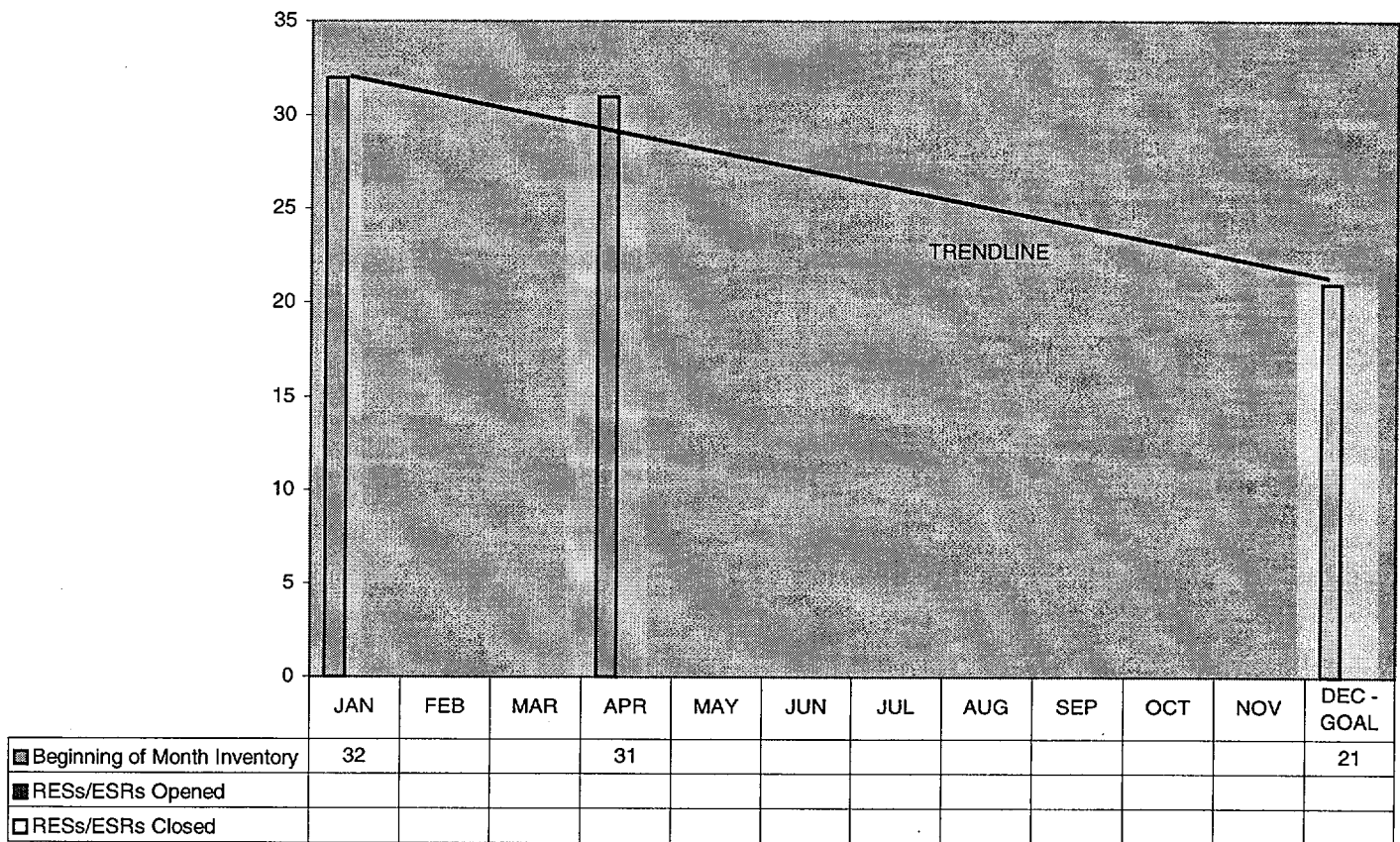
## Overdue Condition Reports





## 8.2. Request for Engineering Service/Engineering Service Request

### RES/ESR Status



### Indicator Description

The reduction in Requests for Engineering Service/Engineering Service Requests will be achieved by allocation of the resources described in Section 5.2, which will allow the completion of 31 RESs/ESRs. An additional reduction (~10) is anticipated this year as a result of our effort to review/filter all RESs/ESRs. This review will determine where RESs/ESRs can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- conversion to generic modification or DOE
- other

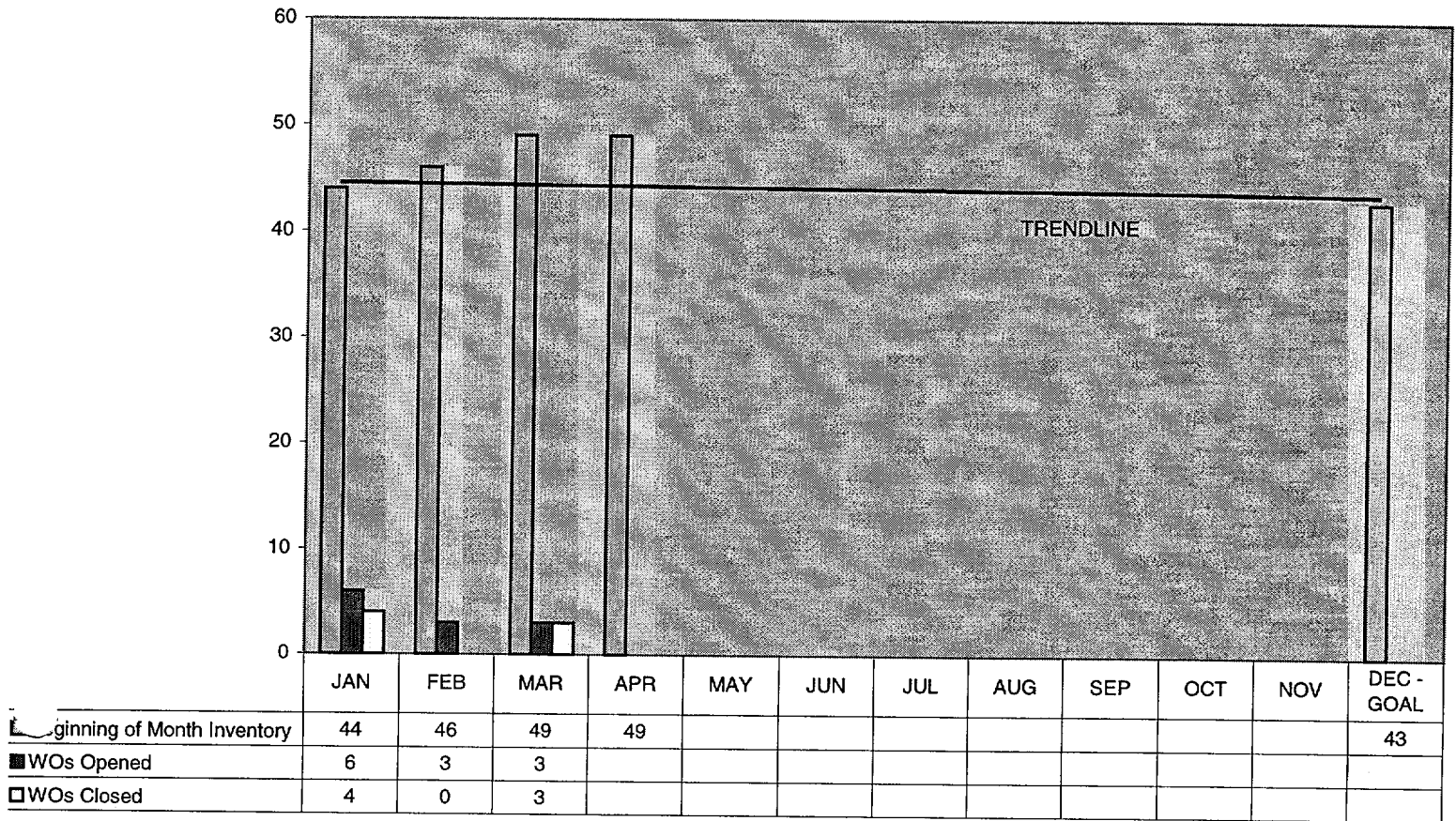
### Analysis

Beginning of year inventory	32
Received during the first quarter of the year	4
Completed or dispositioned at the end of the first quarter	(5)
To be received for the remainder of the year	15
Planned to be completed for the remainder of the year	(15)
Additional reduction based on effort to review and filter	(10)
End of the year projection	21



### 8.3. Work Orders

*Work Order Status*



#### Indicator Description

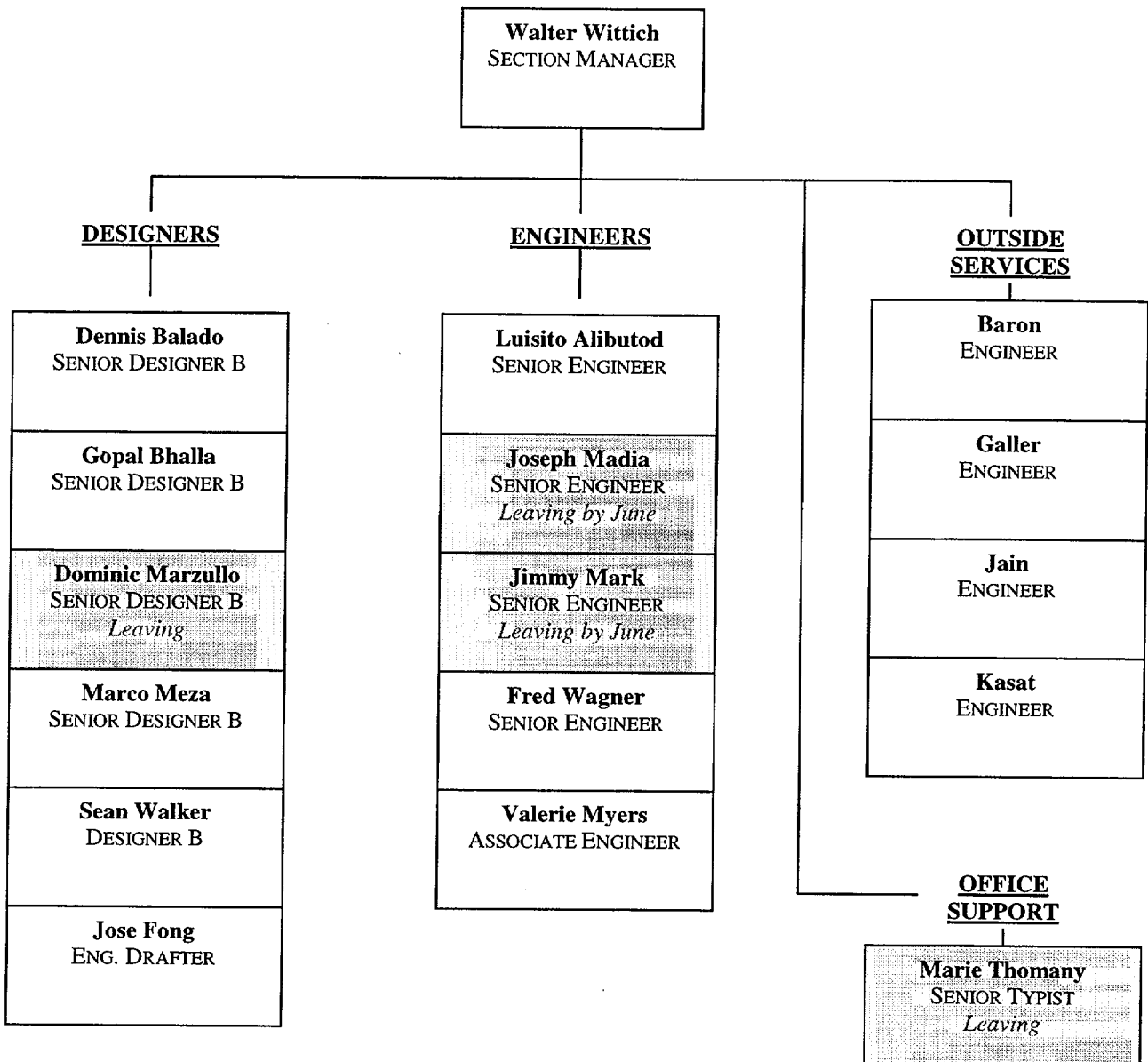
The reduction in Work Orders will be achieved by allocation of the resources described in Section 5.3, which will allow the completion of 20 Work Orders. An additional reduction (~18) is anticipated this year as a result of our effort to review/filter all Work Orders. This review will determine where Work Orders can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- other

#### Analysis

Beginning of year inventory	44
Received during the first quarter of the year	12
Completed or dispositioned at the end of the first quarter	(7)
To be received for the remainder of the year	25
Planned to be completed for the remainder of the year	(13)
Additional reduction based on effort to review and filter	(18)
End of the year projection	43

## 9. Organization Chart



# 10. 2000 Resource Plan

Section	Item	Full Work Scope Estimated Hours	Reduced Work Scope Estimated Hours	Full Work Scope Estimated Personnel	Reduced Work Scope Estimated Personnel	Reduced Work Scope Estimated Outside Support
4	Manpower Analysis, 1999 Actual Hours	26,813	-	14.6	-	-
5	Operational Overview	37,518	25,543	21.4	14.6	
7	Opportunities – Current Projects and Programs	9,445	9,405	5.4	5.4	
5 + 7	Total Resources Needed (5 + 7)	46,963	34,948	26.8	20.0	
	2000 Approved Budget (1,296 Hours OT)	25,796	25,796	14.7	14.7	
△	Additional Resources Needed				5.3 <sup>NOTE 1</sup>	NOTE 2

NOTE 1 We will be pursuing approval for 5 additional budgeted engineer slots as well as funding (~ ) for 5 contractors to be used for staff augmentation in order to accomplish the Reduced Work Scope.

NOTE 2 part of the overrun is due to costs incurred as part of the Steam Generator Tube Rupture Outage which is being charged to a separate account. (Sections 7.3, 7.19, 7.21, 7.26, 7.27)



**INDIAN POINT 2**  
**I&C PROJECTS AND PROGRAMS**  
**YEAR 2000 BUSINESS PLAN, REV 1**

ARSHAD M. SHEIKH

PLAN MANAGER:

*A. Sheikh*

SUBMITTED

*4-27-00*

DATE

JAMES TUOHY

SENIOR MANAGEMENT SPONSOR

*J. Tuohy*

APPROVED

*4/27/00*

DATE

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## ***1. Functional Responsibility***

In 1993, the I & C Projects and Programs Engineering Section of Design Engineering, was formed. Over the years, we have become major contributors, particularly in areas of emerging regulatory and technical issues, such as Setpoint Verification, Power Supply Verification, Safety Related Logic Testing under Generic Letter GL 96-01, Setpoint Control, direct regulatory interface on Design Basis issues, I&C Calculations, and Analog to Digital Upgrades. In addition to a routine workload of ESRs, Modifications and Work Orders, we also provide continuing support for ongoing programs such as: EOP Accuracy Calculations, Environmental Qualification, Human Factors Evaluations, SAS (Safety Assessment System) Computer Impact Evaluations, historical expertise in the areas of the electrical and I&C Licensing and Design Basis, and continuing Programmatic requirements such as Regulatory Guide 1.97 requirement impacts on EOPs and Westinghouse WCAP Methodologies for Grade 1 Setpoint Calculations. New initiatives have been requested in 2000 for EQ (1 man-year per Ang Dong) and improved Technical Specification (1/2 man-year) program support.

## 2. Personnel Information

<u>Name</u>	<u>Title</u>	<u>Highest Degree</u>	<u>Professional License</u>	<u>AE Experience</u>	<u>Con Ed Experience</u>
<b>MANAGEMENT</b>					
ADORNO	SENIOR ENGINEER	BSM	CA CONTROLS	19	15
CHOU	SENIOR ENGINEER	MSEE	NY, NJ/ISA, IEE E	17	13
DESAI	SENIOR ENGINEER	MSME, MSSys, MSNUC	NY, IEEE	23	12
SHEIKH	SECTION MANAGER	BSEE, MS NUC	-	7	14
JAYARAMAN	PRINCIPAL ENGINEER	BSEE, BSPHYS	ASME	24	18
MAGNANI	PRINCIPAL ENGINEER	MSEE	IEEE	4	28
MISILO	SENIOR ENGINEER	MEME	ASME	9	16
SCANDIFFIO	SENIOR ENGINEER	BSEE	-	9	16
<b>WEEKLY</b>					
GACULA	SENIOR DESIGNER A	BSM FOREIGN	-	12	30
GIZUNTERMAN	SENIOR DESIGNER B	BSE FOREIGN	-	20	9
GRABCHAK	SENIOR DESIGNER B	BSE FOREIGN	-	19	9
MITCHELL	DESIGNER B	AA		1	10
PRIESTER	SENIOR DESIGNER B	AA		1	30
THOMPSON	DESIGNER A	AA		0	31
TOCHILOVSKY	SENIOR DESIGNER B	BSE FOREIGN		19	9
<b>CONTRACTORS</b>					
WILLIAM WALSH	ENGINEER	-	-	-	-
KENT RUSSELL	ENGINEER	-	-	-	-
STEVE RUDOLPH	ENGINEER	-	-	-	-
GEORGE HUGHES	ENGINEER	-	-	-	-
<b>OPEN AND REQUESTED</b>					
REPLACEMENT FOR LEE	ENGINEER	-	-	-	-
REPLACEMENT FOR SHAH	ENGINEER	-	-	-	-
REPLACEMENT FOR HARRISON	GENERAL TYPIST	-	-	-	-
<b>TOTALS</b>	<b>18 TOTAL, 15 CURRENTLY FILLED</b>	-	-	<b>184</b>	<b>260</b>

## 2. Personnel Information (continued)

*Supplemental contract support should be continued in order to meet workload demands as well as anticipation of additional personnel transferring out due to travel burdens and relatively high job pressures.*

### Authorized Positions

	Management	Weekly	Totals
1999 Budget	10	8	18
2000 Budget	10	8	18
Change	0	0	0



### 3. **Section Mission Statement**

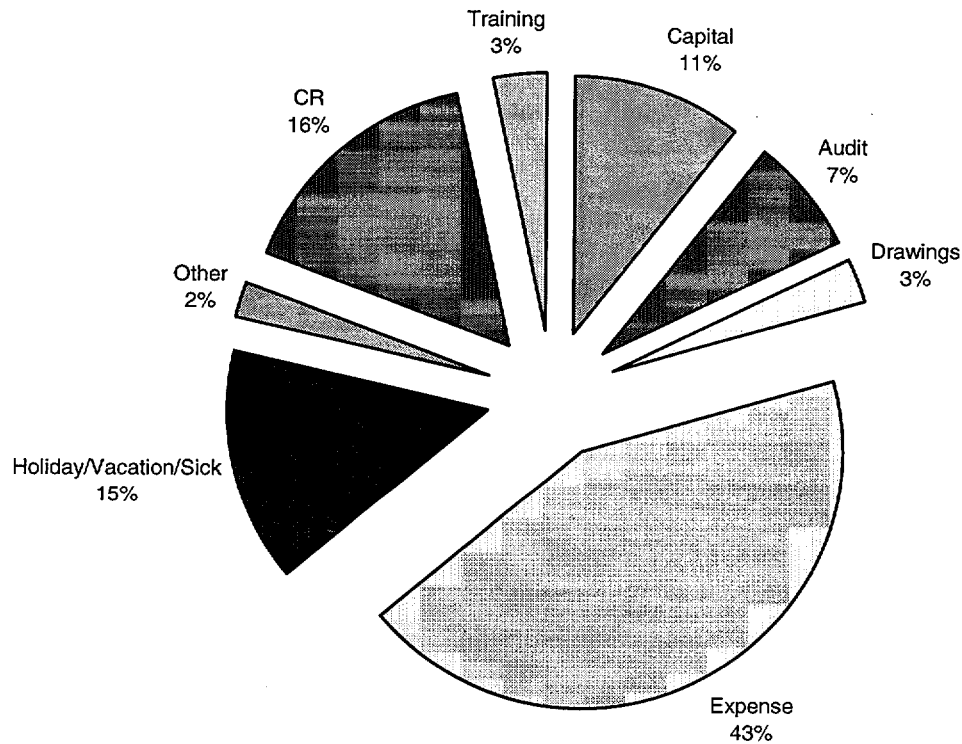
To impart professional engineering service to Nuclear Power for the safe, reliable, and efficient operation and maintenance of Indian Point Units 1 and 2 by:

- providing engineering expertise,
- providing design and project services for instrumentation and process monitor/controls,
- performing programmatic activities, and
- supporting regulatory and licensing requirements in areas such as setpoint control, digital upgrades, human factor evaluations and environmental qualifications.

#### 4. Manpower Analysis

##### 1999 Manpower Analysis based on EPMIS2K data.

Capital	4,036
Audit	2,741
Drawings	989
Expense	16,502
Holiday/Vacation/Sick	5,638
Other	852
CR	6,030
Training	1,232
<b>Total</b>	<b>38,020</b>
Full Time Equivalents (FTE)	18.28
Production Hours/FTE	1,771



5. **Operational Overview**

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.1. Condition Reports	<p>Complete (250) <u>200</u> CRs that contain evaluations/drawing updates, SL3s, RFIs, FCAs, and ICAs.</p> <p>Beginning of year inventory: 336 (roughly 200 of 336 were transferred to Setpoint Control in the Configuration Management organization in the 1<sup>st</sup> quarter)</p> <p>Projected incoming: (45) 25/month (reduced from 45/month in 99 based on assignment of Setpoint Control items to Configuration Management directly in 2000)</p> <p>Assume 35 hours/item.</p>	10,000	<u>8,000</u>
5.2. Requests for Engineering Service/Engineering Service Requests	<p>Complete 43 reviews, evaluations, and dispositions of RESs/ESRs.</p> <p>Beginning of year inventory: 52</p> <p>Projected incoming: 16/year</p> <p>Assume 60 hours per RES/ESR. (The 60 hrs is predicated on implementation of Item 7.6 of this Business Plan.)</p>	2,580	2,580
5.3. Work Orders	<p>Provide engineering review of (26) <u>21</u> Work Orders as needed to support safe and reliable station operation.</p> <p>Beginning of year inventory: 22</p> <p>Projected incoming: 16/year</p> <p><i>The Work Orders that come to the I&amp;C Projects and Programs section typically require a Modification to resolve the issue. Thus, for the most part, they are covered under Minor and Generic Modification categories of work. Works hours shown are only for review and disposition of work orders that do not turn into modifications.</i></p>	200	200

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.4. Reports of Installations	<i>Design Services will administer all ROI work efforts.</i>	0	0
5.5. Minor Modifications	<p>Prepare modification packages to implement a planned physical and/or functional change to or an addition or deletion of a permanent plant structure, system, or component that modifies the plant design.  For 2000 complete (20) <u>15</u> Minor Modifications.  Beginning of year inventory: 20  Projected incoming: 10/year  Assume 400 hours/Minor Modification  160 hours/engineer  240 hours/design team (~ 2 designers)</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Condenser Hotwell Level Mod</li> <li>• RMS Motor Starter Contingency Mod</li> <li>• CWP &amp; SWP Level Probe Mods</li> <li>• CCP, SWP &amp; CSP Logic Changes Mod</li> <li>• RCS Draindown Mod</li> </ul>	8,000	<u>6,000</u>

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.6. Generic Modifications	<p>Prepare modification packages to implement a major or minor modification that will be implemented on a repetitive basis in various locations of the plant over an undetermined period of time.</p> <p>For 2000 complete 6 Generic Modifications one of which will be a new generic mod for name plates outside CCR: @ 400 hours.</p> <p>Beginning of year inventory: 2</p> <p>Projected incoming: 6/year</p> <p>Assume (200) <u>100</u> hours/Generic Modification</p>	1,400	<u>900</u>
5.7. Temporary Facility Changes	<p>The I&amp;C Projects and Programs section is a contributor in creating and/or permanentizing TFCs. For 2000 complete (5) <u>3</u> TFC issues.</p> <p>Current inventory: 5</p> <p>Projected incoming: 3/year</p> <p>Assume 400 hours/TFC</p> <p>160 hours/engineer</p> <p>240 hours/design team (~ 2 designers)</p>	2,000	<u>1,200</u>
5.8. Modification Support	<p>The I &amp; C Projects &amp; Programs section provides support for projects other groups have the lead on.</p> <p>1,000 hours/section</p>	2,000	<u>1,000</u>
5.9. Training	<p>Complete all continuing and qualification training including GET, ESP, etc.</p> <p>Continuing engineer training: 9 people @ 80 hours each</p> <p>Continuing designer training: 7 people @ 60 hours each</p> <p>Continuing contractor training: 2 people @ 20 hours each</p> <p>Qualification Training: 2 people @ 12 weeks.</p>	2,140	2,140

Project/Program	Description	Full Work Scope Estimated Hours	Reduced Work Scope Based On 2000 Budget
5.10.NRC Inspection & QA Audit Support, Self Assessments, Benchmarking	Provide electrical design engineering support/ participation in the following subject areas: Support to QA for 2 SSFAs: 1 person each for 6 weeks each. Response to 2 SSFAs: 1 person each for 6 wks each. All other estimate 500 hours. <i>Reduction based on assumption that QA uses contractors for audits.</i>	1,460	<u>750</u>
5.11. Technical Program Maintenance	EQ Program 300 hours Loop Diagram Program (time included in CR's and Mods) Human Factors Evaluation Program (600) <u>400</u> hours Safety Assessment System Program 100 hours	1,000	<u>800</u>
5.12. EQ Program Upgrade	Additional EQ Program Support requested for planned EQ File electronic translations and re-writes. See Section 1.	1,750	1,750
5.13. Management and Supervision	Time spent in management and supervisory functions including planning, delegation and oversight of work. Assume 75% of Section Manager's production hours	1,313	1,313
5.14. Emergent Work	Time allocated for work that emerges over the course of the year that must be done to support safe and reliable operation. Assume (15%) 10% of 18 personnel man-hours.	4,725	<u>3,150</u>

<b>Project/Program</b>	<b>Description</b>	<b>Full Work Scope Estimated Hours</b>	<b>Reduced Work Scope Based On 2000 Budget</b>
5.15. Long Term Leave	Time allocated to recognize known long-term sick leave.	1,750	1,750
<b>Total Estimated Hours</b>		<b>40,318</b>	<b>31,533</b>
<b>Full Time Equivalent People @ 1750 Hours Each</b>		<b>23.0</b>	<b>18.0</b>

## 6. **Equipment/Materials Expertise**

Electrical & Process Controls Including:

- Setpoint Issues
- Solenoid Valves And Limit Switches
- Transmitters, Magnetrols And Control Valves
- Regulators
- Recorders, Rtds, Temperature And Flow Switches
- A To D Conversions (EI 6010)
- Lefm
- Rad Monitoring System
- Data Highway Systems
- Eq Issues Related To Above Equipment
- Calculation Methodologies
- Instrumentation and Controls
- Regulatory Requirements
- Design History
- Loop Diagrams
- RPS/ESF Logics



## 7. Opportunities – Current Projects and Programs

The following Projects and Programs are being worked in 2000 to support continued plant operations and to prepare for the 2000 refueling outage.

Project/Program Title	Full Work Scope Estimated Hours	Full Work Scope Estimated Outside Support	Reduced Work Scope Based On 2000 Budget	Reduced Estimated Outside Support Based On 2000 Budget
7.1. Analog to Digital	1,000	-	<u>500</u>	-
7.2. Upgrade of EI-6010 A to D Guidelines, SAO-460, SAO-232	1,500	-	<u>1,000</u>	-
7.3. Training A to D & EMI/RFI	250	-	250	-
7.4. Drawing Productivity	250	-	<u>0</u>	-
7.5. SPC Calculation & Setpoints Support by I&C Projects and Programs	2,500	-	<u>1,500</u>	-
7.6. Modification Process Optimization Support	525	-	525	-
7.7. UFSAR Segment Reviews	200	-	<u>500</u>	-
7.8. Upgraded DBD Reviews	400	-	400	-
7.9. <u>Proteus (Plant Monitoring) &amp; SAS (Safety Assessment System) Computer Replacement</u>	1,000	-	1,000	-
7.10. EOP (Dixon Indicator) A to D Upgrades Scope & Licensing for RFO 2002 ( <i>Hours included in 7.1</i> )	500	-	<u>0</u>	-

<b>Project/Program Title</b>	<b>Full Work Scope Estimated Hours</b>	<b>Full Work Scope Estimated Outside Support</b>	<b>Reduced Work Scope Based On 2000 Budget</b>	<b>Reduced Estimated Outside Support Based On 2000 Budget</b>
7.11. NIS (Nuclear Instrumentation System) Modernization	750	-	750	-
7.12. Steam Generator Replacement Project	0	-	0	-
7.13. Improved Standard Tech Specs Support	500	-	500	-
7.14. 2000 RFO Support	0	-	1,000	-
<b>Total Estimates</b>	<b>9,375</b>	<b>-</b>	<b>7,925</b>	<b>-</b>
<b>Full Time Equivalent People @ 1750 Hours Each</b>	<b>5.4</b>	<b>-</b>	<b>4.5</b>	<b>-</b>

7.1. Analog to Digital

Background

Analog to Digital: All vendors of replacement instrumentation and major equipment are rapidly incorporating digital (CPU based firmware or software) technology into their equipment. The NRC regulatory atmosphere regarding digital equipment is volatile and uncertain. NRC has dispatched AIT teams for non-safety digital systems (Salem Annunciators, Main Feedwater controllers, etc.) because they "challenge" nuclear safety. We DO NOT have an option to avoid digital installations because there is no alternative equipment (e.g. Waste Gas Analyzer, IEOPS). We are also incorporating borderline safety related applications beyond the original J/Y Auxiliary Feedwater Controllers (i.e. LEFM, RCS Draindown Level), and have Digital Reg. Guide 1.97 equipment installed prior to new NRC requirements (e.g. Core Exit T/Cs and Plasma Display). Because of the vintage and design of our plant, (e.g. grounding, lack of air conditioning) and the limited experience of all personnel, we have a particular difficulty in applying the EPRI guidelines for temperature, EMI, V&V and ACEs Testing. There will be a growing need for I&C Project and Programs efforts in this area, as well as consultant support and presently unanticipated vendor support to develop a viable A to D program.

7.2. Upgrade of EI-6010 A to D Guidelines, SAO-460, SAO-232

Further work is required to upgrade existing EI-6010 A to D Guidelines and provide linkages to required updates of SAO-460 (Safety Evaluations) and SAO-232 (Software Requirements) in order to support routine A to D purchases and applications for use at Indian Point 2.

7.3. Training A to D & EMI/RFI

Seminars/Training as need to support future A to D work for both I&C Project & Programs and other station work groups involved (EPRI completed development of a Pilot A to D Qualification course last year. EMI/RFI Training has been held for I&C Projects & Programs, but remains required for other station work groups. System Engineering needs to re-initiate plans for site specific EMI/RFI Surveys, since the EMI Generic Surveys developed by EPRI are too stringent for application of unmodified commercially available digital equipment.)

7.4. Drawing Productivity

While the massive strides IP2 has made in the area of electronic drawing media, hold great promise for future benefits in Configuration Management, information transfer and productivity, this technology requires continued maintenance and support. We need to obtain the maximum productivity benefits from these tools by building on the drop down menu of the standard drawing symbols we are developing this year, and move further toward a closer marriage of drawing and databases. We must encourage vendors to provide electronic media catalog cuts and drawings, and use new features and capabilities that are made available as drawing software advances.

7.5. SPC Calculation & Setpoints Support by I&C Projects and Programs

Setpoint Control (Configuration Management) has included funding for Grade 3 Setpoint Calculations in their 2000 Budget request. The intent is to provide Calculations in Con Edison's standard formats, so that they can be accepted and scanned into our Calc Indexing System with minimized effort by in house personnel.

This mitigates what had been a major unbudgeted human resource requirement. Review of these Calcs by appropriate station personnel is still recommended to assure that the Calcs are properly understood and can be explained and understood during future Modification work, and defended during future Regulatory inspections.

7.6. Modification Process Optimization Support

Modification Process Optimization Support efforts are continuing and Design Engineering personnel will continue their participation in order to identify and implement specific process improvements in the MOD Process.

7.7. UFSAR Segment Reviews

The I&C Section is responsible for 1038 segments of the UFSAR with 299 segments currently approved. Alternative approaches for the approval of the remaining segments are being considered. The recent proposal by Carl Dumsday, which has been agreed to by I&C Section management, will result in Section personnel reviewing the 399 segments of the UFSAR (they are responsible for) that will not be processed via the UFSAR Change Request process.

7.8. Upgraded DBD Reviews

(Vinny Amarato - #s, Ratheon, Westinghouse)

7.9. Proteus (Plant Monitoring) & SAS (Safety Assessment System) Computer Replacement

This project is in support of an effort led by the Computer Applications section. Vendor proposals have been solicited and will be evaluated. A capital budget will be prepared and submitted. Factory Acceptance and Site Acceptance Tests will be developed. Scheduled vendor visits will be made in support of project goals. Wiring between the TSC computer room, TSC and CCR will be designed. Drawings will be marked up to reflect retirement of the existing system.

7.10. EOP (Dixon Indicator) A to D Upgrades Scope & Licensing for RFO 2002

(Misilo)

7.11. NIS (Nuclear Instrumentation System) Modernization

This work is necessary to support the obsolescence of equipment and cables. Anticipated benefits are: 40-year detector life, lower maintenance and calibration costs, simplified startup procedures, EQ qualification of the in-containment system. The work is presently planned for the 2002 RFO. Vendor proposals will be solicited and evaluated. A capital budget will be prepared and submitted. Due to 1 year lead time an order will be placed in 2000. Drawing work and planning will begin in 2000.

7.12. Steam Generator Replacement Project

Of the 8 nuclear power plants that went operational in the 1970's with Westinghouse steam generators, Unit 2 is the only plant that has not replaced its steam generators. Based on tube deterioration approaches for estimating remaining life of the steam generators, it still appears most probable that the steam generators will continue to be serviceable for several additional cycles of operation. However, based on the great deal of projection uncertainty it is judged prudent at this time to prepare for steam

generator replacement during the 2002 refueling outage.

A separate project organization has been set up to oversee and manage this project. Only incidental support from FIX will be needed in 2000. Should the 2000 RFO inspections result in the replacement schedule being accelerated to the 2002 RFO, one I & C Engineer will need to be assigned to the project full time starting June 1<sup>st</sup>.

7.13. Improved Standard Tech Specs Support

Provide support for the preparation of improved standard Technical specifications for IP 2. This multi year project is expected to start in the second half of 2000 and will require allocation of Section resources to review drafts of selected sections of the new Tech Specs, their Bases and the new Technical Requirements Manual. After submittal to the NRC participation in responding to RAI's is anticipated.

The Design I & C Section will be involved in the transition to Allowable Values for Tech Spec instrumentation requirements.

7.14. 2000 RFO Support

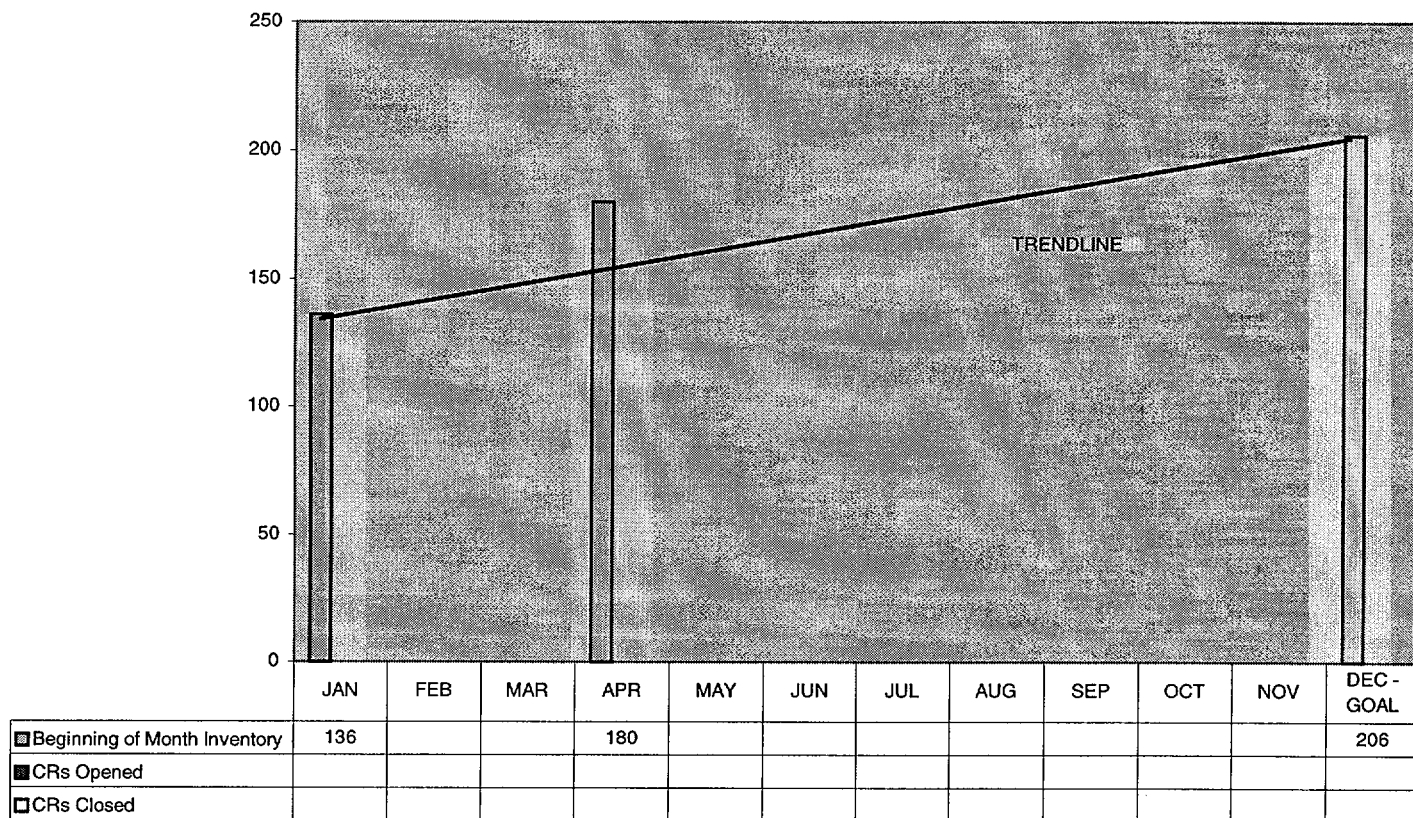
The 2000 RFO will begin at the end of April and continue to June. Engineering will provide extensive support through our engineers and designers to follow our modification packages and assist with TFCs, CRs, and emerging work. Support of Regulatory Inspection activities is also expected at this time.

## 8. Performance Measures

### 8.1. Condition Reports

#### 8.1.1. Overall Performance

*Condition Report Status*



#### Indicator Description

A normal throughput (not backlog) for items in process based on average per month 1999 receipt and processing for each category is:

- 20 SL3s (1 month processing inventory)
- 100 ICAs (4 month processing inventory)
- 20 RFIs (4 month processing inventory)

Our goal is to reduce our current ICA backlogs to these normal processing levels over a 3-year period. We have already met this goal for SL3s, and plan to continue at or below the processing level of 20.

Quality of CRS responses will be monitored by CAG to assure that rejection rates for initial SL3 responses by CAG and initial ICA responses by owners stay below station averages. An additional goal is to have SL3 responses and identified references be adequate to stand alone in clearly identifying the scope of problems and the adequacy of corrective actions taken including the completeness of extents of condition evaluations, where applicable, as demonstrated by CAG spot-checks and audits.

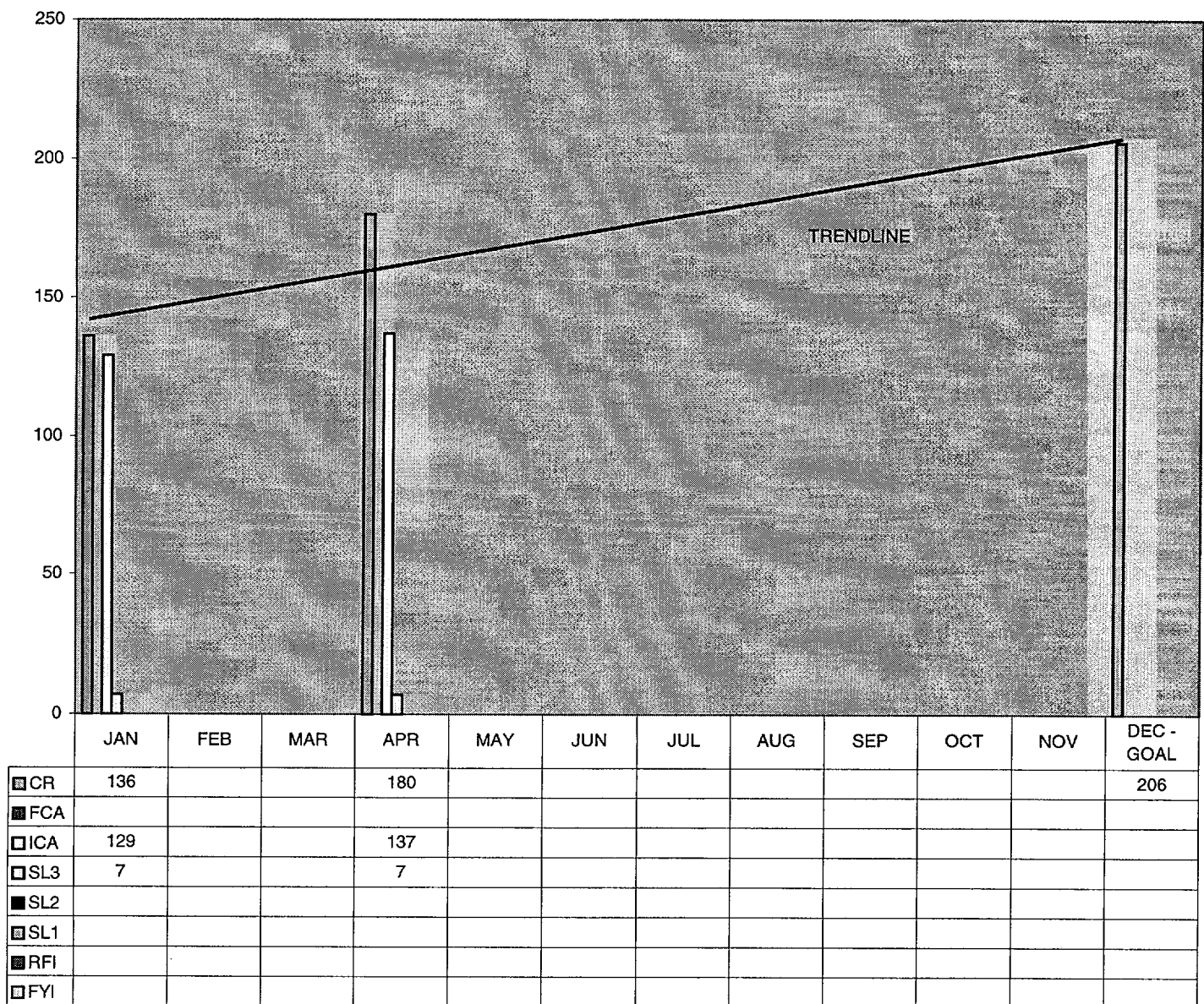
### Analysis

Beginning of year inventory	136
To be received for the year (30/month)	300
Planned to be completed for the year	(230)
End of the year projection	<b>206</b>

Resources are limited within the I&C Projects and Programs section to further reduce the CR backlog this year. Approximately one-half of the backlog is drawing related. The Department Office Business Plan for Design Engineering discusses drawing process improvements as well as initiatives to use outside services to further reduce this backlog.

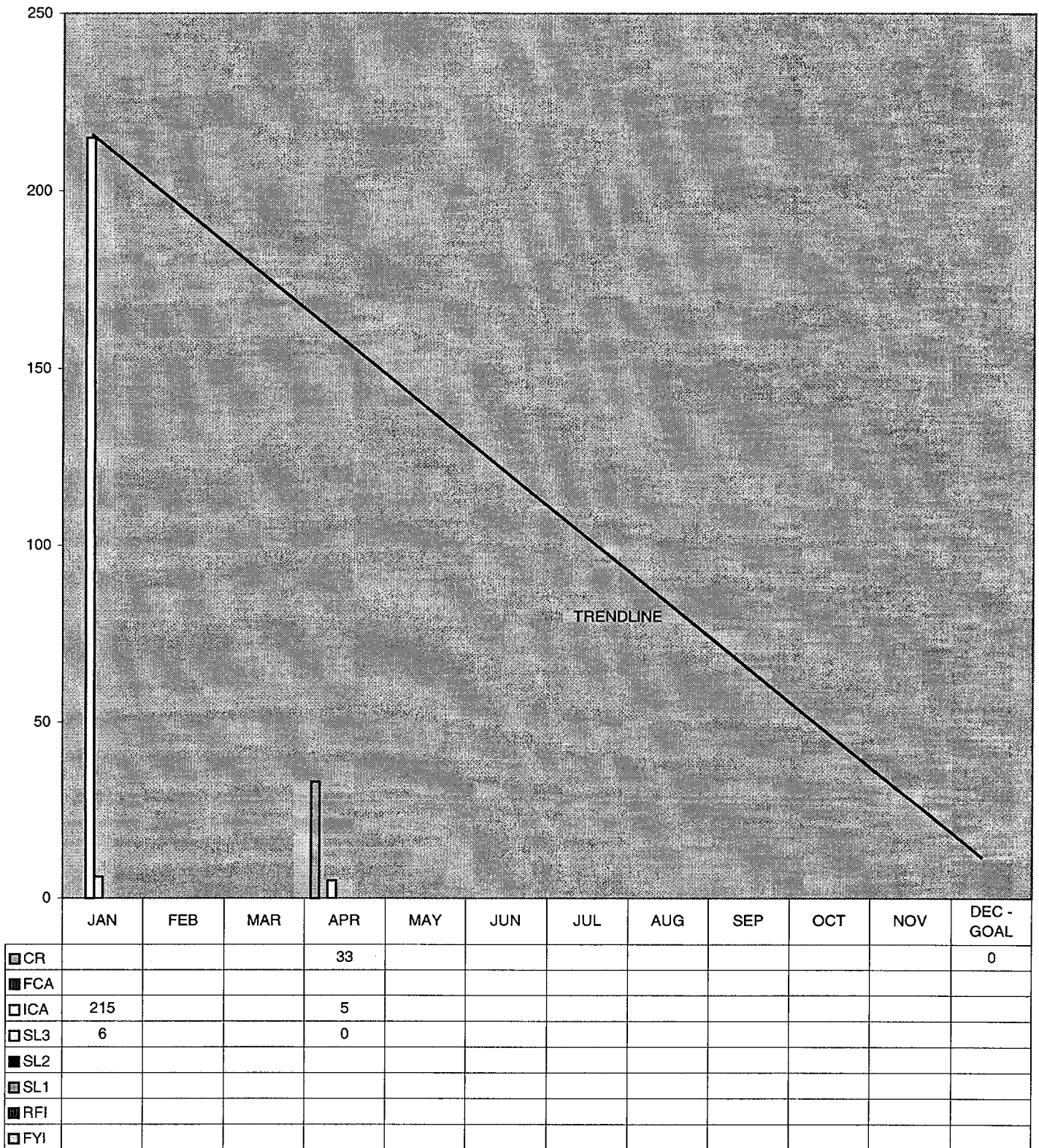
### 8.1.2. Total Inventory as of April 2000

#### Open Condition Reports





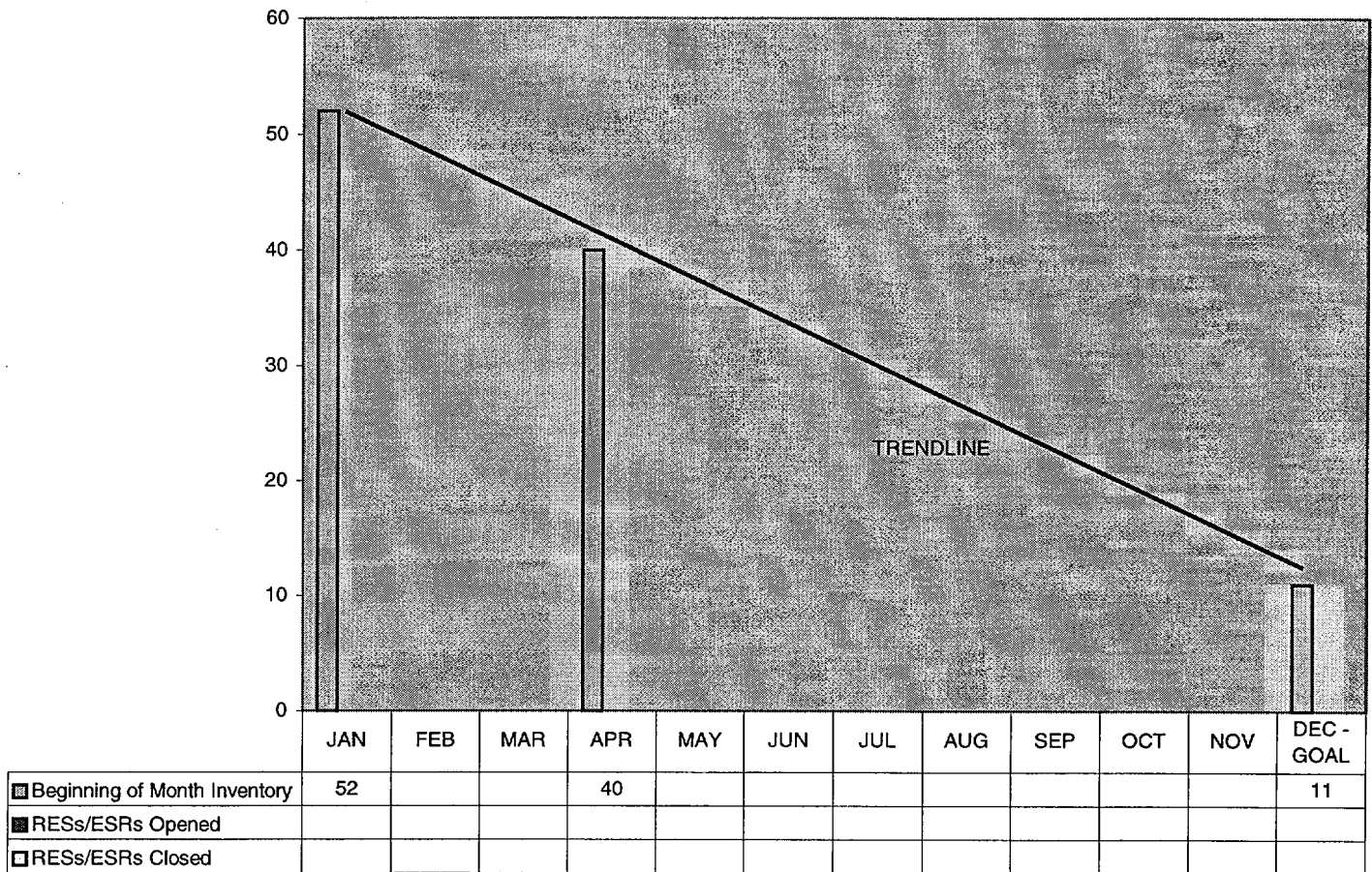
Overdue Condition Reports





# Request for Engineering Service/ Engineering Service Request

## RES/ESR Status



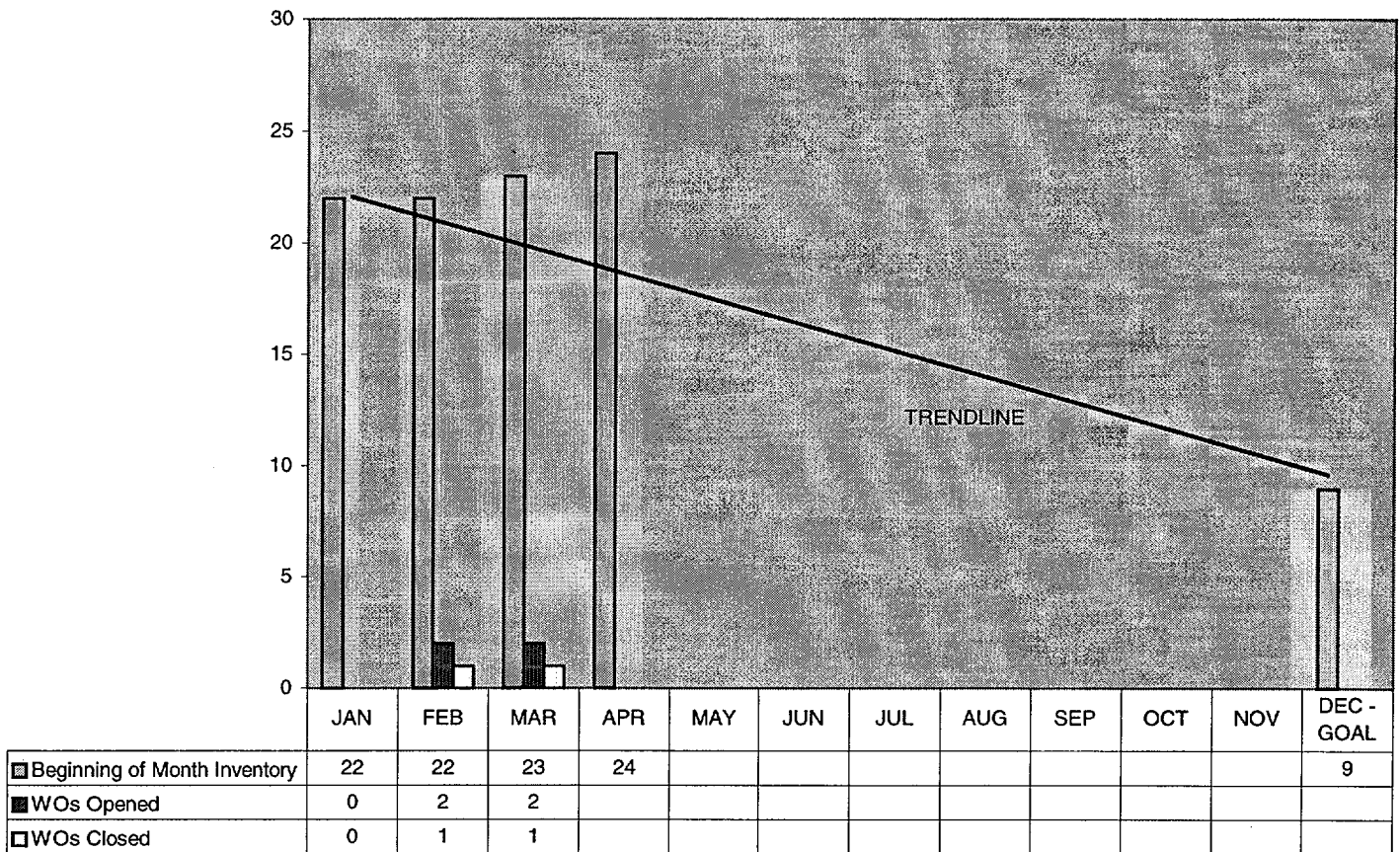
The reduction in Requests for Engineering Service/Engineering Service Requests will be achieved by allocation of the resources described in Section 5.2, which will allow the completion of 43 RESs/ESRs. An additional reduction (~14) is anticipated this year as a result of our effort to review/filter all RESs/ESRs. This review will determine where RESs/ESRs can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- conversion to generic modification or DOE
- other

Beginning of year inventory	52
Received during the first quarter of the year	1
Completed at the end of the first quarter	(13)
To be received for the remainder of the year	15
Planned to be completed for the remainder of the year	(30)
Additional reduction based on effort to review and filter	(14)
Revised end of the year target	11

## 8.2. Work Orders

*Work Order Status*

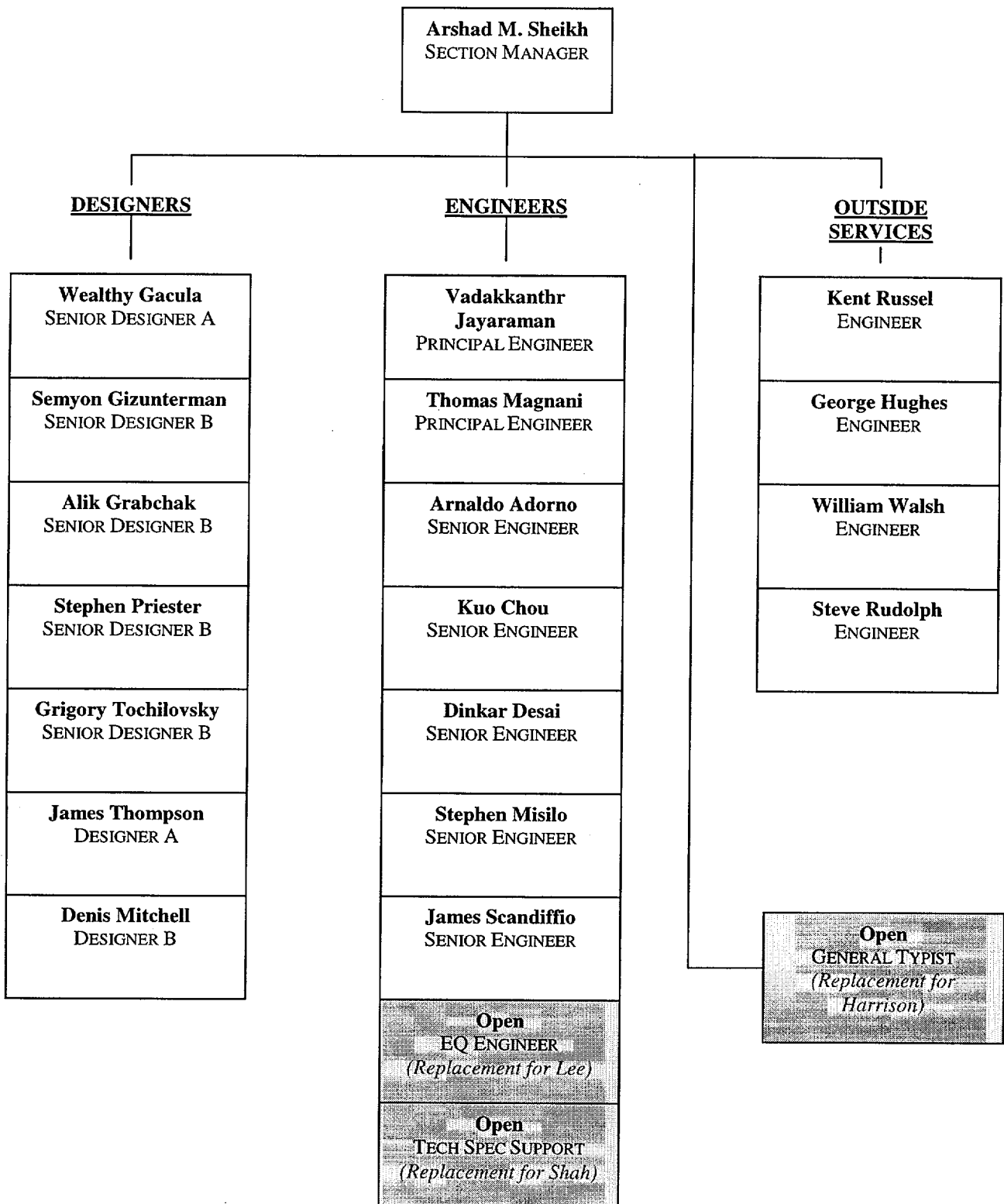


The reduction in Work Orders will be achieved by allocation of the resources described in Section 5.3, which will allow the completion of 21 Work Orders. An additional reduction (~8) is anticipated this year as a result of our effort to review/filter all Work Orders. This review will determine where Work Orders can be dispositioned based on one of the following:

- insufficient value added
- clarification of improper assignment
- other

Beginning of year inventory	22
Received during the first quarter of the year	4
Completed at the end of the first quarter	(2)
To be received for the remainder of the year	12
Planned to be completed for the remainder of the year	(19)
Additional reduction based on effort to review and filter	(8)
Revised end of the year target	9

## 9. Organization Chart



**10. 2000 Resource Plan**

Section	Item	Full Work Scope Estimated Hours	Reduced Work Scope Estimated Hours	Full Work Scope Estimated Personnel	Reduced Work Scope Estimated Personnel	Reduced Work Scope Estimated Outside Support
4	Manpower Analysis, 1999 Actual Hours	30,480	-	16.6	-	-
5	Operational Overview	40,318	31,533	23.0	18.0	0
7	Opportunities – Current Projects and Programs	9,375	7,925	5.4	4.5	0
	Total Resources Needed (5 + 7)	49,693	39,458	28.4	20.5*	
	2000 Approved Budget (1,109 Hours OT)	32,609	32,609	18.6	18.6	
<b>Δ</b>	Additional Resources Needed				1.9	0

\*Reduced Work Scope Estimated Personnel has been reduced by 2 people and this resource is shown as 2 people ( ) in the Estimated Outside Support column.

To accomplish the Reduced Work Scope we will be pursuing approval of 2 additional personnel slots (1 engineer, 1 designer).