



Indian Point 2

Design Engineering Department

2001 Business Plan

Plan Manager: James Tuohy

Submitted: James Tuohy

Date: 1/4/01

Sr. Management Sponsor: Geoffrey Schwartz

Approved: Geoffrey Schwartz

Date: 1/4/01

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1. BUSINESS PLAN SUMMARY

DESIGN ENGINEERING

OVERVIEW:

Design Engineering is comprised of six parts:

- Department Office (DO)
- Civil Projects and Programs (FCX)
- Electrical Projects and Programs (FEX)
- I&C Projects and Programs (FIX)
- Mechanical Projects and Programs (FMX)
- Facilities Projects and Programs (FPX)

The Design Engineering 2001 Business Plan is focused on improving the efficiency of our process, updating important Electrical and I&C calculations, strengthening the Mechanical design programs, and continuing to reduce backlogs of work as resources allow.

GOALS:

- Reduction of backlog through prioritization and increased results.
 - Accomplish completion of
 - 1490 Report of Installation DMDs
 - 1131 Condition Report System Assignments
 - 119 Work Orders on Engineering Hold
- Improved processes and management of past, present, and future workloads to maximize work efficiency and productivity
 - Improved drawing processes.
 - Improved modification processes.
 - Improved Engineering Work Management tools and resources.
 - Increased initiative on self-assessment and benchmarking.
- Retrieve, identify, and provide Web accessibility of past and present records.
- Identification and completion of 2002RFO modifications.
- Update analysis required to sustain safe plant operation.
- Support IP2 through projects and programs that achieve success during an increased plant focus period.
- Full understanding and implementation of engineering fundamentals (no events, follow-up and follow-through, talk, done-done, no gaps, search, learn, vigilance).
(Reference Attachment A.)

EXPECTED RESULTS:

- Improved efficiency.
- Enhanced engineering qualification status.
- Improved perception by regulators.
- Improved morale.
- Improved work planning.

2. ACTION PLANS

ISSUE #1: Optimize Work Processes, Procedures, and Practices				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Improved processes and management of past, present, and future workloads to maximize work efficiency and productivity	Modification Process Optimization	Tuohy	9/30/01	Ongoing
	Drawing Process Optimization	Radvansky	12/31/01	Ongoing
	Engineering Work Management System (Phases 1 & 2)	Tuohy	6/30/01	Phase 1 - 50% Complete
ISSUE #2: Backlog Reduction				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Complete assignments in order to enable transition into the year 2002 with reduced, easier to manage workload. Accomplish completion of <ul style="list-style-type: none"> • 1490 ROI • 1131 Condition Report System Assignments • 119 Work Orders on Engineering Hold 	Reports of Installation Backlog Reduction	Radvansky	2002	Ongoing
	Condition Reports Backlog Reduction	Tuohy	2002	Ongoing
	Work Orders on Engineering Hold Backlog Reduction	Tuohy	2002	Ongoing

2. ACTION PLANS

ISSUE #3: Records Management and Projects Closeout				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Retrieve, identify, and provide Web accessibility of past and present records.	Project File Indexing, Scanning, and Retrieving (Phases 1 & 2)	Tuohy	6/30/01	Phase 1 – 70% Complete
ISSUE #4: Mechanical Design Engineering Programs Improvements				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Update analysis required to sustain safe plant operation.	Pipeflow Modeling	Wittich	12/31/01	1% complete
	ISI/IST Quality Group Classifications and Boundaries	Wittich	9/30/01	2% complete
	Verification of Piping System Stress	Wittich	12/31/01	2% complete
	Heatup/Cooldown Curves	Wittich	7/31/01	10% complete
	95 River Water Analysis	Wittich	12/31/01	15% complete

2. ACTION PLANS

ISSUE #5: Calculations Maintenance and Upgrade				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Update analysis required to sustain safe plant operation.	Upgrade of Electrical Calculations	Entenberg	2002	Ongoing
	Upgrade and Maintenance of I&C/Electrical Setpoint Calculations	Sheikh/ Entenberg	12/31/01	Ongoing
	Calculations and Specifications Road Mapping Program (Phase 1)	Wittich	2002	Ongoing
ISSUE #6: Wiring Programs Improvement				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Update analysis required to sustain safe plant operation.	Emergency Diesel Generator Wiring Verification Project	Entenberg	10/30/01	Scheduled to begin 2/15/00
	Gas Turbine Wiring Verification Project	Entenberg	10/30/01	Ongoing

2. ACTION PLANS

ISSUE #7: Accelerated Improvement Projects				
GOAL	ACTIONS	OWNER	EXPECTED COMPLETION DATE	STATUS
Support IP2 through projects and programs that achieve success during an increased plant focus period.	NRC Audit Support, Regulatory Interface, and Effectiveness Reviews	Tuohy	12/31/01	Ongoing
	50.54 and DBD Resolution and Analysis	All Section Managers	2002	Ongoing
	Improved Standard Tech Specs	All Section Managers	12/31/01	Ongoing

3. APPROVED 2001 BUDGET

**DESIGN ENGINEERING
2001 BUDGET**

	HUMAN RESOURCES												Average
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Management Weekly													
SUB TOTAL													
Contractors Weekly Overtime Hours													

	(\$000)												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Labor:													
Management Comp													
SUB TOTAL MANAGEMENT Weekly													
TOTAL LABOR													
Accounts Payable:													
Routine Technical Prog Mtce.													
Mod Process Optimization													
Drawing Process Optimization													
Eng Work Management System													
ROI Backlog Reduction													
Condition Reports Backlog													
Work Orders on Eng Hold													
NRC Support													
50.54/DBD Analysis													
Calculations & Specifications													
Upgrade of Electrical Calcs													
Emergency Diesel Generator													
Gas Turbine Wiring													
Setpoint Calculations													
Pipeflow Modeling													
ISI/IST Quality Group													
Piping System Stress													
Heatup/Cooldown Curves													
River Water Analysis													
Project File Indexing/Scanning													
System Admin/Software Upgr													
Major/Minor Modifications													
Minor Changes													
Waterfront Repair													
Environmental Initiatives													
Proteus & SAS													
SUB TOTAL A/P													
All Other:													
Materials & Supplies													
P Card													
Petty Cash													
Training/Benchmarking													
Communications													
Rent/Electric/Parking Facilities													
Vehicles													
All Other													
SUB TOTAL ALL OTHER													
TOTAL NON-OUTAGE													
OUTAGE													

4. PROJECT REQUESTS – Summary Table

#	Project/Program	Section	Normal Work Scope (Hours)	Estimated Outside Support		2001 Budget Information			
				Additional Resources (\$K)	Accelerated Improvement Plan (\$K)	Human (Hrs)	O&M (\$K)	Capital (\$K)	XM (\$K)
1	Modification Process Optimization	DO							
		FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
2	Drawing Process Optimization	DO							
		FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
3	Engineering Work Management System	DO							
		FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
4	Reports of Installation Backlog Reduction	DO							

4. PROJECT REQUESTS – Summary Table

#	Project/Program	Section	Normal Work Scope (Hours)	Estimated Outside Support		2001 Budget Information			
				Additional Resources (\$K)	Accelerated Improvement Plan (\$K)	Human (Hrs)	O&M (\$K)	Capital (\$K)	XM (\$K)
5	Condition Reports Backlog Reduction	DO							
		FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
6	Work Orders on Engineering Hold Backlog Reduction	FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
7	NRC Audit Support, Regulatory Interface, and Effectiveness Reviews	DO							
8	50.54 and DBD Resolution and Analysis	FCX							
		FEX							
		FIX							
		FMX							
		TOTAL							

4. PROJECT REQUESTS – Summary Table

#	Project/Program	Section	Normal Work Scope (Hours)	Estimated Outside Support		2001 Budget Information			
				Additional Resources (\$K)	Accelerated Improvement Plan (\$K)	Human (Hrs)	O&M (\$K)	Capital (\$K)	XM (\$K)
9	Calculations and Specifications Road Mapping Program (Phase 1)	FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
10	Improved Standard Tech Specs	FCX							
		FEX							
		FIX							
		FMX							
		TOTAL							
11	Upgrade of Electrical Calculations	FEX							
12	Emergency Diesel Generator Wiring Verification Project	FEX							
13	Gas Turbine Wiring Verification	FEX							

4. PROJECT REQUESTS – Summary Table

#	Project/Program	Section	Normal Work Scope (Hours)	Estimated Outside Support		2001 Budget Information			
				Additional Resources (\$K)	Accelerated Improvement Plan (\$K)	Human (Hrs)	O&M (\$K)	Capital (\$K)	XM (\$K)
14	Upgrade and Maintenance of I&C/Electrical Setpoint Calculations	FIX							
		FEX							
		TOTAL							
15	Pipeflow Modeling	FMX							
16	ISI/IST Quality Group Classifications and Boundaries	FMX							
17	Verification of Piping System Stress	FMX							
18	Heatup/Cooldown Curves	FMX							
19	95 River Water Analysis	FMX							
20	Project File Indexing, Scanning, and Retrieving	DO							
21	System Administration and Software Upgrades	DO							
22	Studies	FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							

4. PROJECT REQUESTS – Summary Table

#	Project/Program		Section	Normal Work Scope (Hours)	Estimated Outside Support		2001 Budget Information				
					Additional Resources (\$K)	Accelerated Improvement Plan (\$K)	Human (Hrs)	O&M (\$K)	Capital (\$K)	XM (\$K)	
23	Modifications	Major/ Modifications Assume 10 @ 1300 hours each including 2002 RFO modifications.	FCX								
			FEX								
			FIX								
			FMX								
			FPX								
			SUB								
				15 Minor Changes @ 570 hours each.	FPX						
				Support for modifications that other groups have the lead on.	FCX						
					FEX						
					FIX						
					FMX						
					FPX						
					SUB						
					TOTAL						

4. PROJECT REQUESTS – Summary Table

#	Project/Program	Section	Normal Work Scope (Hours)	Estimated Outside Support		2001 Budget Information			
				Additional Resources (\$K)	Accelerated Improvement Plan (\$K)	Human (Hrs)	O&M (\$K)	Capital (\$K)	XM (\$K)
	TOTAL HOURS AND DOLLARS	DO							
		FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							
	TOTAL FULL TIME EQUIVALENTS @ 2080 HOURS	DO							
		FCX							
		FEX							
		FIX							
		FMX							
		FPX							
		TOTAL							

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 1: Modification Process Optimization

Description:

Modification process optimization efforts are continuing to identify and implement specific process improvements. This effort involves the 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 in the year 2001 include development of electronic modification packages with electronic signature approvals.

Justification:

Spring 1999 self initiated process improvement effort and Revision 3 of the IP2 8/31/99 Event Recovery Plan

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #1: Optimize Work Processes, Procedures, and Practices

FUNDING (\$000) – 365 requested and 365 budgeted

Proposed By: J. Szabo

Date: 12/7/00

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 2: <u>Drawing Process Optimization</u>	
Description: <p>The number of drawings in the system at Indian Point is between 70,000-100,000. The management of this large volume of information and data is presently very resource intensive. In addition to the normal maintenance required of the drawing system, there is a backlog that has accumulated over the years that was not effectively addressed. This backlog was aggressively worked in the latter part of 2000. As of this writing, however, there are approximately 2000 drawing revisions that still need to be completed. Some level of this backlog will not be completed in 2000 and will need to be addressed in calendar year 2001. Process improvements are already underway to improve the selection of the drawings that truly need updating.</p>	
Justification: <p>In order to further, and to adequately, optimize this entire resource-intensive process, additional funding will be needed in calendar year 2001. Studies have indicated that there is much duplication of effort, unnecessary “handoffs” i.e. multiple signatures on drawings, unnecessary or limited value hard copy distribution, etc. The types of improvements envisioned will include both the modification and as-building efforts devoted to drawings. Maximizing the application of electronic technologies available as well as streamlining the process flow for drawing production are necessary undertakings. Implementing the changes will require some level of funding. This level is estimated at \$100K. This funding will cover some remaining backlog reduction as well as overall improvements to the process. Specific examples of improvements in addition to the examples cited above are partial as-built report incorporation, exploring additional access to drawings, completion of drawing classifications and other improvements yet to be identified.</p> <p>This limited amount of funding will yield savings for all users of the drawing system as this widely used information resource is further enhanced.</p>	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #1</u> : Optimize Work Processes, Procedures, and Practices	
<i>FUNDING (\$000) – 100 requested and 100 budgeted</i>	
Proposed By: M. Radvansky	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 3: <u>Engineering Work Management System</u>	
Description: Design Engineering and Site Engineering request to purchase a work management system to improve the productivity effectiveness and the efficiency of the IP2 engineering work force. Account4 Professional Service Automation Software of Account4.com Inc. is requested for purchased. Account4.com shall furnish one (1) copy of the licensed program for up to maximum of 150 users, maintenance services for the account4 system for one year, consulting services, and training services for the Account4 system. Account4.com's client list includes Boston Edison, Filenet, Viacom, Chase Manhattan Bank and many others. Design Engineering, Site Engineering, and Indian Point Computer Applications reviewed and evaluated the Account4.com proposal and presentation in August 2000. We recommended Account4.com to be the non-competitive contract to provide the service. Engineering is working together to better improve our process and to manage our workload to maximize work efficiency and productivity. The installation of Account4.com work management software will ensure the achievement of these goals.	
Justification: Condition Report #199905517 INPO Evaluation: February 26, 2001 to March 5, 2001	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #1</u> : Optimize Work Processes, Procedures, and Practices	
FUNDING (\$000) – 320 requested and 320 budgeted	
Proposed By: Z. Sheikh	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 4: <u>Reports of Installation Backlog Reduction</u>	
Description: Continue with the aggressive effort currently underway to incorporate drawing changes to reflect completed modifications to the plant. In 2001, we will utilize both the resources of Con Edison personnel as well as Outside Services to accomplish a reduction in these backlog inventories. We have transitioned key Con Edison personnel into project management roles in order to maintain productivity as well as improving the quality of the intended work results. <u>Report of Installation Packages @ 4 hours per assignment(DMD)</u> Design Services will administer the completion of 865 assignments for \$225K by Outside Services. The respective engineering disciplines will administer the completion of an additional 625 assignments.	
Justification: The station has been cited for not incorporating modifications into the as-built drawings used to operate and maintain the plant. This condition presents a configuration control problem with its attendant ramifications to safe and efficient plant operations. An aggressive effort needs to be maintained to bring the remaining unincorporated drawings changes into the appropriate plant as-built drawings. Efforts are underway to streamline and upgrade to overall drawing revision process, however, the need to continue with this effort is essential and will pay dividends in the future as well as maintaining our regulatory responsibilities. The year 2000 effort has significantly reduced the backlog of open modification drawings. A large influx is expected in 2001, however, and a sustained effort is required.	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #2:</u> Backlog Reduction	
<i>FUNDING (\$000) – 450 requested, 225 budgeted and 225 pending</i>	
Proposed By: M. Radvansky	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 5: <u>Condition Reports Backlog Reduction</u>	
Description: In 2001, we will utilize both the resources of Con Edison personnel as well as Outside Services to accomplish a reduction in these backlog inventories. We have transitioned key Con Edison personnel into project management roles in order to maintain productivity in addition to the quality of the intended work results. The reduction in backlog inventories to be accomplished by Outside Services is composed of the following: <u>Condition Reports (SLs & ICAs) @ 30 hours per assignment</u> Department Office: 50 assignments for \$150K Civil Projects and Programs: 83 assignments for \$250K Electrical Projects and Programs: 93 assignments for \$277.5K I & C Projects and Programs: 83 assignments for \$250K Mechanical Projects and Programs: 167 assignments for \$500K Facilities Projects and Programs: 24 assignments for \$72.5K Total: 500 items for \$1500K	
Justification: The completion of the aforementioned assignments will enable us to transition into the year 2002 with reduced easier to manage workload. With reduction in backlog inventories, Con Edison employees will be able to maintain a steady state future workload. Our effort in 2001 will reduce the need for Outside Services in 2002 and beyond while also improving our awareness of the significance of the remaining issues. In 2001, as we get closer to the "bottom of the barrel" by utilizing Outside Services, we will be more cognizant of the safety significance and the internal and external impacts of our global workload.	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #2:</u> Backlog Reduction	
<i>FUNDING (\$000) – 3000 requested, 1500 budgeted and 1500 pending</i>	
Proposed By: L. Smith, A. Sheikh, M. Entenberg, W. Wittich	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 6: <u>Work Orders on Engineering Hold Backlog Reduction</u>	
Description: In 2001, we will utilize both the resources of Con Edison personnel as well as Outside Services to accomplish a reduction in these backlog inventories. We have transitioned key Con Edison personnel into project management roles in order to maintain productivity in addition to the quality of the intended work results. <u>Work Orders on Engineering Hold @ 200 hours per assignment</u> Civil Projects and Programs: 12 assignments for \$230K Electrical Projects and Programs: 11 assignments for \$225K I & C Projects and Programs: 5 assignments for \$100K Mechanical Projects and Programs: 17 assignments for \$340K Facilities Projects and Programs: 8 assignments for \$150K Total: 53 assignments for \$1045K	
Justification: The completion of the aforementioned assignments will enable us to transition into the year 2002 with reduced easier to manage workload. With reduction in backlog inventories, Con Edison employees will be able to maintain a steady state future workload. Our effort in 2001 will reduce the need for Outside Services in 2002 and beyond while also improving our awareness of the significance of the remaining issues. In 2001, as we get closer to the “bottom of the barrel” by utilizing Outside Services, we will be more cognizant of the safety significance and the internal and external impacts of our global workload.	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #2:</u> Backlog Reduction	
<i>FUNDING (\$000) – 2090 requested, 1045 budgeted and 1045 pending</i>	
Proposed By: L. Smith, A. Sheikh, M. Entenberg, W. Wittich	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 7: NRC Audit Support, Regulatory Interface, and Effectiveness Reviews

Description:

In addition to the routine NRC audit support and regulatory interface provided by Design Engineering, the increased agency focus status of IP2 is expected to generate the need for additional support for NRC inspection activities. These support activities will primarily include responding to requests for information and resolution of emergent issues in both the technical and programmatic areas.

Justification:

Benchmarking for watch list plant shows that extensive resources are required to provide appropriate responses to information requests and action items resulting from this increased NRC focus.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #7: Accelerated Improvement Projects

FUNDING (\$000) – 1000 requested, 550 budgeted and 450 pending

Proposed By: N/A

Date: N/A

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 8: <u>50.54 and DBD Resolution and Analysis</u>	
Description: The efforts associated with the DBD and 10CFR50.54(f) projects have generated CR's that typically identify gaps between our design/licensing basis and the associated verifying documentation. Resource requirements for resolution of these CR's primarily fall in the engineering/design area. Also, engineering resources will be required as DBD's are issued for review.	
Justification: Continuing support of the 50.54 and DBD projects is required to complete these efforts to improve the accuracy and accessibility of design and licensing basis documentation.	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #7</u> : Accelerated Improvement Projects	
FUNDING (\$000) – 750 requested, 325 budgeted and 425 pending	
Proposed By: L. Smith, A. Sheikh, M. Entenberg, W. Wittich	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 9: Calculations and Specifications Road Mapping Program (Phase 1)

Description:

Index and integrate the mechanical engineering calculations and specifications. This multi-year project will prepare roadmaps, identify design basis interactions and reconstitute essential calculations. This effort is needed for resolution of CRS items, NRC audits and to improve department efficiency.

1. Index, review, and document mechanical system calculations and specifications.
2. Recover and review existing calculations: Obtain copies of all available calculations related to mechanical systems and topical areas (including calculations prepared by Site Engineering, Westinghouse, and other vendors). Ensure calculations are indexed and provided to Records Management group for scanning.
3. Review mechanical calculations on a system-by-system and topical basis to establish the current status of the calculations (i.e. current design basis, superceded, historical study, etc.). Document this review using system roadmaps and/or providing input to the applicable DBDs. Identify any calculations that are not available or not current.
4. Recover and review existing equipment and installation specifications: Obtain copies of all available specifications related to mechanical systems and equipment. Ensure specifications are indexed and provided to Records Management group for scanning. Document this review using system road maps and/or providing input to the applicable DBDs. Identify any specifications that are not available or no current.

Justification:

This effort is needed for resolution of CRS items and NRC audits. The Design Basis Calculation Hierarchy Roadmaps will strengthen our control of the design basis and help us coordinate the various activities performed by NS&L, Design engineering, Systems engineering and Test & Performance. Implementation of these Roadmaps is considered an essential activity to broaden engineering focus on safe operations within our design basis.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #5: Calculations Maintenance and Upgrade

FUNDING (\$000) – 600 requested, 350 budgeted and 250 pending

Proposed By: W. Wittich	Date: 12/7/00
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Dept. Manager Approval: J. Tuohy	Date: 12/7/00
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2001 Budget Approval By: G. Schwartz	Date: 12/7/00
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4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 10: Improved Standard Tech Specs

Description:

In an effort to increase operational flexibility, eliminate unnecessary regulatory burden and improve reactor safety, IP2 plans to adopt the NRC Improved Standard Technical Specifications. Support for this project from Design Engineering is anticipated in the area of safety evaluations, technical reviews, and procedure revisions.

Justification:

Conversion to Improved Standard Technical Specifications (STS) has been encouraged by the NRC in order to achieve a high degree of consistency and standardization throughout the industry. Eighty-seven of the 103 commercial nuclear units licensed by the NRC have committed to STS which is expected to improve reactor safety, increase operational flexibility and optimize regulatory compliance.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #7: Accelerated Improvement Projects

FUNDING (\$000) – In-house work only, no outside services fund required.

Proposed By: L. Smith, A. Sheikh, M. Entenberg, W. Wittich

Date: 12/7/00

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 11: Upgrade of Electrical Calculations

Description:

This activity provides for the upgrade of electrical calculations for the Plant's power system. 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. The Electrical section will support the calculation process improvement efforts being led by the Mechanical section (Project Request 9: Calculations and Specifications Road Mapping Program (Phase 1)). As the electrical calculation files are reviewed and brought up to date, some gaps may be identified. This project will also address the significance of these gaps and their proper closure.

Justification:

The IP2 Calculation Program is presently considered to be in the lower quartile of U.S. plants. A multi-year effort is required to upgrade the program.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #5: Calculations Maintenance and Upgrade

FUNDING (\$000) – 650 requested, 340 budgeted and 310 pending

Proposed By: M. Entenberg	Date: 12/7/00
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Dept. Manager Approval: J. Tuohy	Date: 12/7/00
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2001 Budget Approval By: G. Schwartz	Date: 12/7/00
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4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 12: Emergency Diesel Generator Wiring Verification Project

Description:

Finish effort currently ongoing to make the drawings for the Emergency Diesel Generators (EDG) a complete set indicating all information.

Justification:

The EDG jacket water pressure switch issue of three years ago occurred in part to inadequate details on the EDG drawings which resulted in an unknown load on the contacts of these switches. These failures resulted in excessive unavailability of the EDGs.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #6: Wiring Programs Improvement

FUNDING (\$000) – 150 requested and 150 budgeted

Proposed By: M. Entenberg

Date: 12/7/00

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request
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Title: Project Request 13: Gas Turbine Wiring Verification Project

Description:

Finish effort currently ongoing to make the drawings for the three Gas Turbines a complete set indicating all necessary information.

Justification:

Drawings currently available for the GTs are not adequate to perform troubleshooting activities or to provide an understanding of control circuits. The effort to date has included detailed as-built review, as well as a hand-over-hand wire tracing when required, by our GT vendor with assistance from site Maintenance and System Engineering personnel.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #6: Wiring Programs Improvement

FUNDING (\$000) – 150 requested and 150 budgeted

Proposed By: M. Entenberg	Date: 12/7/00
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Dept. Manager Approval: J. Tuohy	Date: 12/7/00
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2001 Budget Approval By: G. Schwartz	Date: 12/7/00
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4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 14: Upgrade and Maintenance of I&C /Electrical Setpoint Calculations

Description:

I&C Projects and Programs has responsibility for maintaining I&C calculations in support of the Setpoint Control Program per SAO-452. The overall objective of this program is to ensure that plant systems operate within their design limits and to prevent unwanted challenges to system operating parameters. In order to better achieve this objective, an effort is underway to improve the setpoint program. The work associated with this improvement effort is being prioritized based on approach to the classification and treatment of setpoints per SAO-452. Validation and verification of the most safety-significant setpoints (grade 1 and 2) is mostly complete. Work is underway to outsource a project that will identify, categorize, and develop a database of grade 3 and grade 4 setpoints. As this work is completed, new I&C setpoint calculations will be developed or existing calculations revised as necessary, including associated 50.59 evaluations.

Justification:

Completion of this ongoing effort will improve the efficiency of controlling and maintaining I&C setpoints. An effective setpoint control program will ensure proper evaluation and authorization prior to implementation of setpoint changes.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #5: Calculations Maintenance and Upgrade

FUNDING (\$000) – 300 requested, 150 budgeted and 150 pending

Proposed By: M. Entenberg, A. Sheikh	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 15: Pipeflow Modeling

Description:

Obtain, train and implement an in-house pipe flow model for essential plant systems. For 2001, prepare pipe flow modeling for the following systems:

1. Component Cooling Water System
2. Service Water System for essential components
3. Service Water System for non-essential components
4. Aux Boiler Feed Water

Justification:

Mechanical Projects is required to model piping systems two to four times a year to assess the Operability of piping systems.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #4: Mechanical Design Engineering Programs Improvements

FUNDING (\$000) – 130 requested and 130 budgeted

Proposed By: W. Wittich

Date: 12/7/00

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 16: <u>ISI/IST Quality Group Classifications and Boundaries</u>	
<p>Description: Update current methods of controlling, documenting, and revising ISI/IST classifications. Ensure engineering drawings reflect the correct classifications and boundaries, and establish an up-to-date engineering basis document for these classifications and boundaries.</p> <p>1. Review and, as required, revise engineering procedures related to these classifications and boundaries. Ensure procedures address control of ISI/IST basis document. Mechanical design engineering to establish a controlled ISI/IST basis document.</p>	
<p>Justification: Through review and update ISI/IST classification and boundaries to ensure a complete design basis.</p>	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #4</u> : Mechanical Design Engineering Programs Improvements	
FUNDING (\$000) –45 requested and 45 budgeted	
Proposed By: W. Wittich	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 17: Verification of Piping System Stress

Description:

Development, evaluation and control of the stress calculations that support the IP2 piping system design basis have not been performed in a uniform and consistent manner within the IP2 plant and engineering departments. To address this discrepancy, a number of plant standards/procedures will be prepared and implemented. The plant standards/procedures would be adhered to by all departments and outside vendors to ensure consistency and configuration management control. The key documents required would encompass the following:

Piping System Analysis Procedure: A procedure will be developed that will outline the process required to be performed to initiate a new analysis, revise an existing analysis, or perform an assessment for an as-found discrepant condition. This procedure would constitute a “top-tier” document providing process requirements and design basis control.

Design Basis Design Criteria: A design criteria document will be prepared that will explicitly state the requirements for qualifying piping systems and their components, pipe supports and equipment in accordance with IP2 design basis. The criterion document will include an Operability Acceptance Criteria. A design criteria document will be prepared to be used for performing operability qualification of as-found discrepant conditions involving piping and pipe supports consistent with stated NRC requirements.

Work Instruction: A work instruction document will be prepared to provide a uniform standard guideline to engineers performing piping and pipe support calculations. The work instruction will include a Pipe Stress Calculation Standard. A calculation standard for pipe stress/pipe support calculations will be prepared to ensure all calculations, whether prepared by Con Edison or an outside vendor, would be prepared in a consistent format.

Action Plan: An action plan would be developed that would outline the goals of design engineering to obtain, assess, and catalog all existing plant analysis in support of piping system design basis control for current conditions and future work.

This work is required to implement corrective actions from CRS items and QA audits. It is also needed to defend our design basis during NRC audits.

Justification:

This effort is needed for resolution of CRS items and NRC audits.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #4: Mechanical Design Engineering Programs Improvements

FUNDING (\$000) – 85 requested and 85 budgeted

Proposed By: W. Wittich

Date: 12/7/00

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 18: Heatup/Cooldown Curves

Description:

There is a discrepancy between the applicable time periods of the SER heatup and cooldown curves (18EFPYs) and the Tech Spec curves (21.63 EFPYs). New heatup and cooldown curves are required based on varying degrees of copper and nickel content in RV welds. Calculation, analysis, and technical support of an NRC Tech Spec amendment is required. Modification to OPS may also be required.

Justification:

Operation beyond 18 EFPYs is expected sometime in 2001. Therefore, this activity is mandatory.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: ISSUE #4: Mechanical Design Engineering Programs Improvements

FUNDING (\$000) – 255 requested, 237 budgeted and 18 pending

Proposed By: W. Wittich

Date: 12/7/00

Dept. Manager Approval: J. Tuohy

Date: 12/7/00

2001 Budget Approval By: G. Schwartz

Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request
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Title: Project Request 19: <u>95 River Water Analysis</u>
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Description:

<p>The ultimate heat sink analysis and the diesel load study must be updated to reflect numerous plant configuration changes in the last 5 years.</p>

Justification:

<p>These analyses involve complex interactions on safety systems with minimal margins. Revised calculations are necessary to provide confidence that future test results and /or plant modifications are within our design basis.</p>

Environmental, Health, & Safety Impact: N/A
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Action Plan Reference: <u>ISSUE #4</u> : Mechanical Design Engineering Programs Improvements

<i>FUNDING (\$000) – 86 requested and 86 budgeted</i>
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Proposed By: W. Wittich	Date: 12/7/00
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Dept. Manager Approval: J. Tuohy	Date: 12/7/00
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2001 Budget Approval By: G. Schwartz	Date: 12/7/00
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4. PROJECT REQUESTS - Details

DESIGN ENGINEERING	
2001 Project Request	
Title: Project Request 20: <u>Project File Indexing, Scanning, and Retrieving</u>	
<p>Description: Phase 1 of this project involves close-out of modification packages engineered during the 1990s. This process involves retrieving project file information, packaging the information according to Station and Engineering procedures, submitting the final package to Records Management for scanning, verifying the quality of the scanned document, and filing the hard copy in a retrievable location.</p> <p>Phase 2 of this project involves retrieving previously microfilmed modification packages, verifying the quality of the hard copy versus the microfilm, re-submitting the packages to Records Management for scanning, verifying the quality of the scanned document, and filing the hard copy in a retrievable location</p> <p>This project has the following primary objectives:</p> <ul style="list-style-type: none"> • To increase the accessibility of our records through the use of scanning as a QA records management technique; and viewing via the Filenet Panagon Viewer. The Filenet Panagon Viewer is accessible via the Internet and maintains secure access to documents. • To eliminate the backlog of items awaiting closeout. • To maintain proper records management at 1 Park Place in accordance with Station and Engineering procedures 	
<p>Justification: CR# 199809226</p>	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: <u>ISSUE #3</u> : Records Management and Projects Closeout	
FUNDING (\$000) – 100 requested and 100 budgeted	
Proposed By: Zeeshan Sheikh	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 21: System Administration and Software Upgrades

Description:

Software used by the design staff must be maintained and administered in order to provide continued engineering support to the Station. These software packages include:

- Metaphase Upgrades
- WARS Administration

Due to the advances in software, it is necessary to continue upgrading these packages so as to maintain continuity and compatibility with parallel software systems.

Justification:

Invoice from K. David (WARS Administration)
Compliance with Computer Applications policies and procedures.

Environmental, Health, & Safety Impact: N/A

Action Plan Reference: N/A

FUNDING (\$000) – 150 requested, 100 budgeted and 50 pending

Proposed By: M. Radvansky	Date: 12/7/00
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Dept. Manager Approval: J. Tuohy	Date: 12/7/00
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2001 Budget Approval By: G. Schwartz	Date: 12/7/00
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4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 22: Studies

Description:

Design Engineering Support is required for the following plant initiatives:

1. Proteus & SAS Computer Upgrade

This project is in support of an effort led by the Computer Applications section. The existing computers will be replaced by redundant servers. Proteus' multiplexers will be upgraded. Existing input signal wiring will be retained and drawing information confirmed. Infrastructure fiber optic and network and power cable runs within and from the TSC Computer Room, TSC and CCR will be designed. Drawings will be developed to support the cable runs and a complete system PMT for all inputs.

2. Independent Spent Fuel Storage Installation (Upgrade Spent Fuel Building and Crane)

In 2005 we will run out of room to store spent fuel in the spent fuel pit. The project for upgrading the IP Spent Fuel Building and Crane is currently funded in the capital budget at an estimated loaded cost of \$11,800,000 (approx. \$5M direct) over 3 years, (\$9,625,000) 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.

3. 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

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 22: Studies (*Continued...*)

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 5.5 and 7.0 million dollars for this effort. Phase 1 Engineering work scheduled for 2001 includes performing a modification to install secondary containment around oil containing equipment.

4. Unit 1 Fuel Pool Issues – Potential Repairs

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. Work to be done in 2001 is Visual Inspection of the pools by Civil Engineering.

5. Support Work for Waterfront Repair

The unit dock is a concrete platform built over a portion of the Hudson River and supported by steel piles encased in concrete. The concrete encasement on many piles has deteriorated exposing the steel piles to harsh waterfront environment making them susceptible to corrosion. Also, the ship bumper system has partially collapsed and many of the woodpiles are significantly deteriorated. A mod was issued to make necessary repairs. The work is expected to be done in 2001 and will require Civil support.

6. Utility Tunnel Support

Ongoing Design Engineering services are required for the Remediation of the Utility Tunnel Project. Modifications will be prepared for the retirement of abandoned services, as well as the repair or replacement of active services, which include the City Water and Fire Protection lines, and miscellaneous electrical systems.

Justification:

1. Proteus & SAS Computer Replacement - The existing Proteus & SAS computers and displays are obsolete with only marginal hardware support available. The existing software is unable to support the plant's Human Factors Engineering initiatives and is difficult to change to support the plant's long term evolution.
2. Independent Spent Fuel Storage Installation (Upgrade Spent Fuel Building and Crane) - In 2005 we will run out of room to store spent fuel in the spent fuel pit.
3. Environmental Initiatives - The site's compliance to New York State Department of Environmental Conservation (NYSDEC) water discharge requirements is marginal.

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING					
2001 Project Request					
Title: Project Request 22: <u>Studies</u> (<i>Continued...</i>)					
Justification:					
1. <u>Unit 1 Fuel Pool Issues – Potential Repairs</u> – If leak path is not identified water with traces of tritium may continue to leak into groundwater drains.					
2. <u>Support Work for Waterfront Repair</u> - Deteriorated condition creates the potential for damage to docking ships and de-rating of the dock load capacity.					
3. <u>Utility Tunnel Support</u> - On going work in the Utility Tunnel may not be able to continue without support and input from various engineering sections.					
Environmental, Health, & Safety Impact: N/A					
Action Plan Reference: N/A					
FUNDING (\$000) – 302 requested, 202 budgeted and 100 pending					
	Project/Program	Section	Normal Work Scope (Hours)	Estimated Outside Support	
				Additional Resources (\$K)	Accelerated Improvement Plan (\$K)
1	Proteus & SAS Computer Replacement	FIX			
2	Independent Spent Fuel Storage Installation (Upgrade Spent Fuel Building and Crane)	FCX			
3	Environmental Initiatives	FCX			
4	Unit 1 Fuel Pool Issues – Potential Repairs	FCX			
5	Support Work for Waterfront Repair	FCX			
6	Utility Tunnel Support	FCX			
		FEX			
		FIX			
		FMX			
		FPX			
		TOTAL			
TOTAL					
Proposed By: L. Smith, A. Sheikh, M. Entenberg, W. Wittich				Date: 12/7/00	
Dept. Manager Approval: J. Tuohy				Date: 12/7/00	
2001 Budget Approval By: G. Schwartz				Date: 12/7/00	

4. PROJECT REQUESTS - Details

NOTE: The following information is preliminary and subject to change as the Management Review Committee finalizes the modification selection. This process will be complete in January and this project request will be updated accordingly by 1/31/01.

DESIGN ENGINEERING 2001 Project Request

Title: Project Request 23: Modifications

Description:

Provide continued support for the following modifications:

SCHEDULED FOR COMPLETION IN 2001

1. Utility Tunnel Upgrade & Deteriorated City Water Line
2. Proteus And Safety Assessment System Upgrade Program
3. Chlorination System Upgrade
4. City Water Backflow Preventers
5. Waterfront Upgrade Program

SCHEDULED FOR COMPLETION IN 2002; ENGINEERING TO BE COMPLETED IN 2001

1. IP2 FCU Charcoal Filter Removal
2. Relocation IEOPS Probes

Develop modifications for the following issues:

SCHEDULED FOR COMPLETION IN 2001

1. Turbine Bldg. Sump Oil Removal (Partial)
2. Page/Party System Upgrade (Partial)
3. Fluke Data Log Replacement

SCHEDULED FOR COMPLETION IN 2002; ENGINEERING TO BE COMPLETED IN 2001

1. 5th Battery Charger
2. Main Generator Rewind
3. Replacement Of Db Breakers
4. Cathodic Protection
5. IP-Cranes Upgrade Program
6. Power Uprate
 - Turb Cntrl Vlv Mufflers
 - Optimize HP Turb
 - Increase Tavg
7. RCP Vibration Monitor Replacement
8. Simplified Head Assembly

Funding pending for the following issue as well as others:

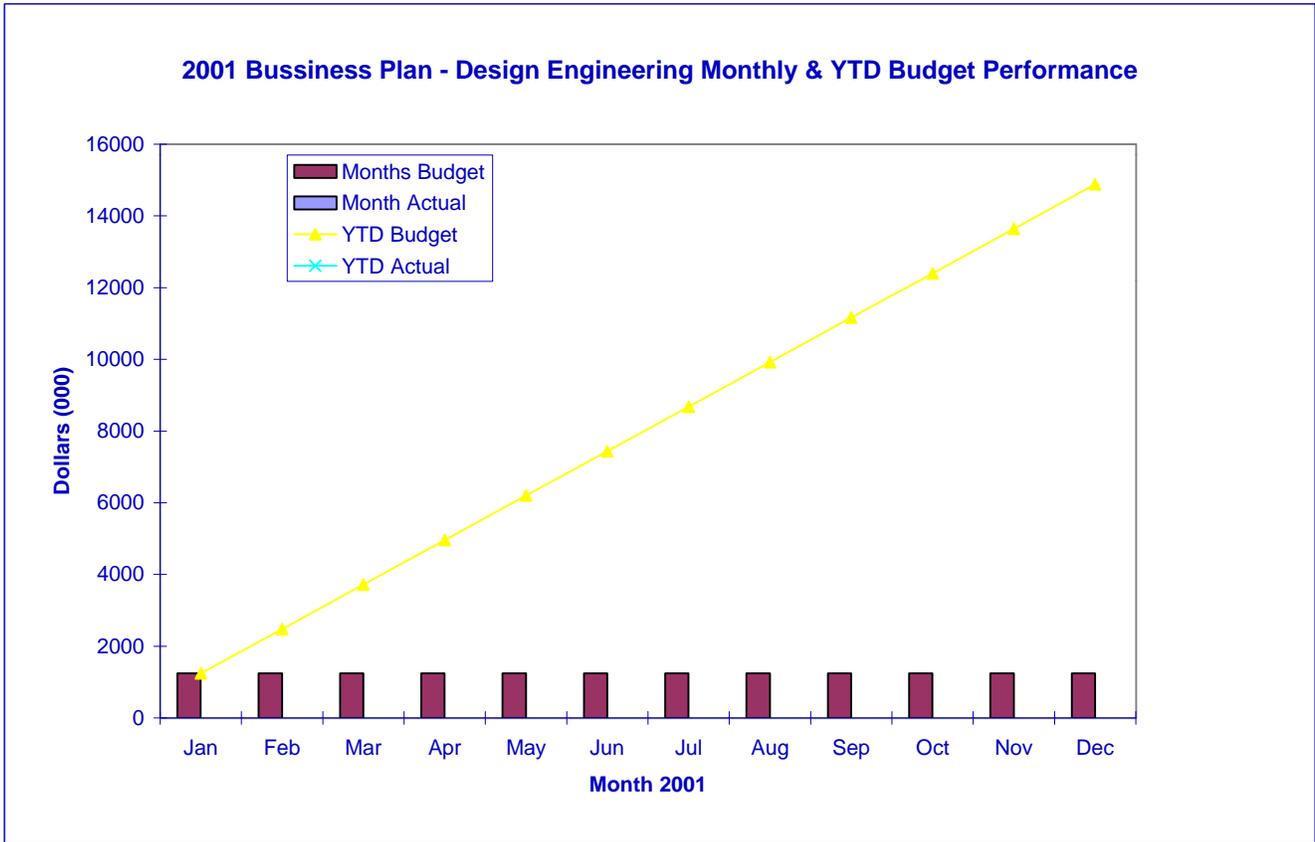
SCHEDULED FOR COMPLETION IN 2001

1. Unit 1 Spent Fuel Pool Upgrade
2. FSB Crane Upgrade

4. PROJECT REQUESTS - Details

DESIGN ENGINEERING 2001 Project Request	
Title: Project Request 23: <u>Modifications</u> (<i>Continued...</i>)	
Justification: Management Review of Project Candidates.	
Environmental, Health, & Safety Impact: N/A	
Action Plan Reference: N/A	
FUNDING (\$000) – 1480 requested, 740 budgeted and 740 pending	
Proposed By: L. Smith, A. Sheikh, M. Entenberg, W. Wittich	Date: 12/7/00
Dept. Manager Approval: J. Tuohy	Date: 12/7/00
2001 Budget Approval By: G. Schwartz	Date: 12/7/00

5. PERFORMANCE INDICATORS



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Months Budget	1240	1240	1240	1240	1240	1240	1240	1240	1240	1240	1240	1240			
Month Actual															
YTD Budget	1240	2480	3720	4960	6200	7440	8680	9920	11160	12400	13640	14880			
YTD Actual															

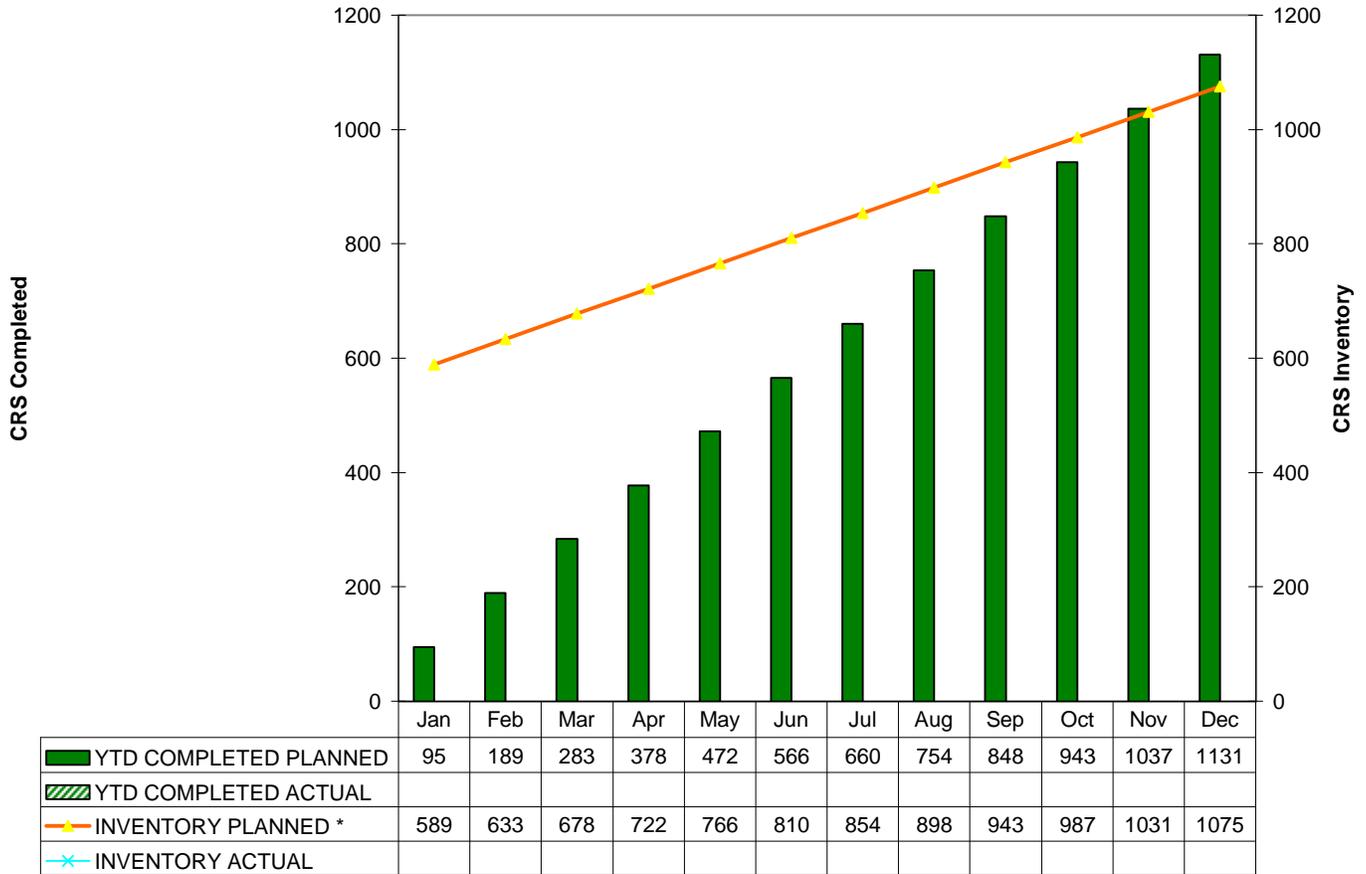
INDICATOR DESCRIPTION

This indicator shows the monthly and year to date (YTD) Training Department approved budget. As the year progresses the actual monthly and year to date budget performance data will be added. This indicator will show our use of Company resources verses our approved plan.

ANALYSIS

5. PERFORMANCE INDICATORS

2001 Business Plan - Design Engineering Condition Report Performance



INDICATOR DESCRIPTION

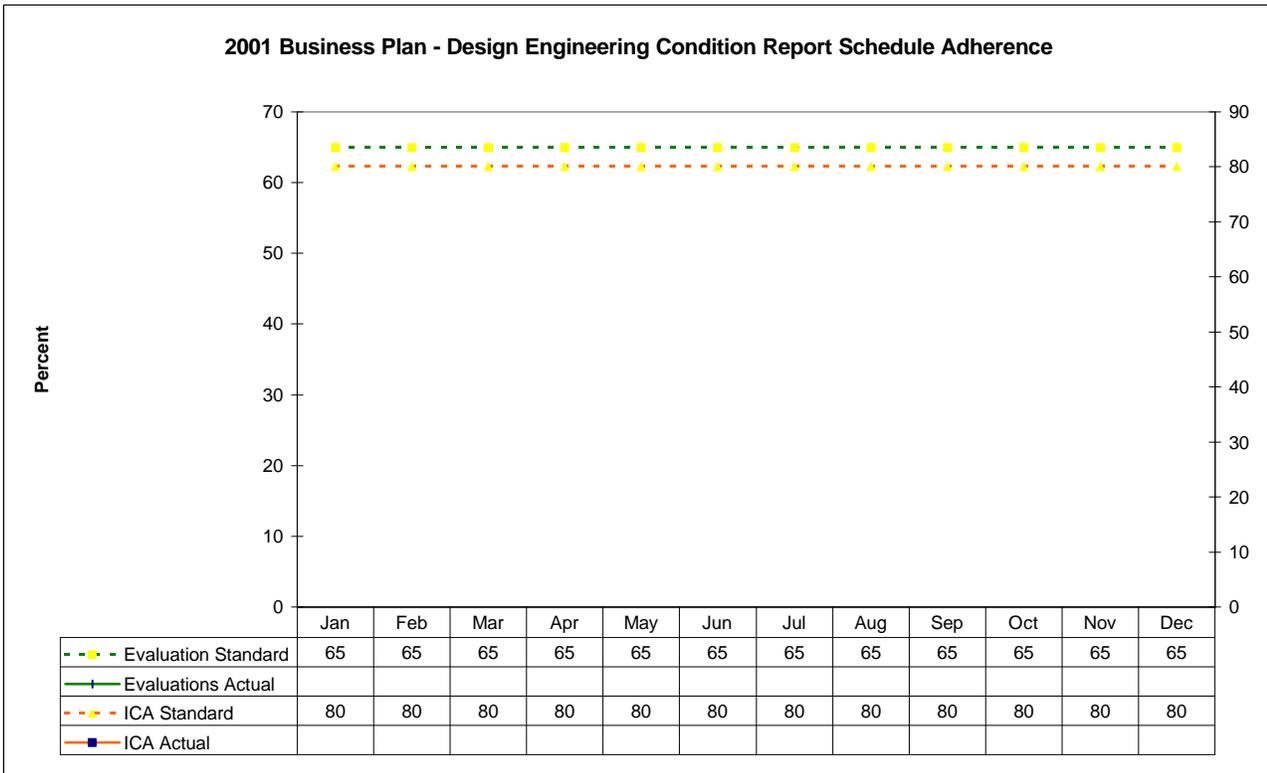
Condition Report inventory, including evaluations, drawing updates, SL-3s, RFIs, FCAs, ICAs, and other sub-assignments.

Other items considered for Condition Reports are timeliness, adherence to schedules, quality, CR closure acceptance rate and self-identification ratio by organization. Completed Condition Report projections have been "straight-lined" for the year.

Note: * Assumes incoming CR assignments at rate of 138/mo.

ANALYSIS

5. PERFORMANCE INDICATORS



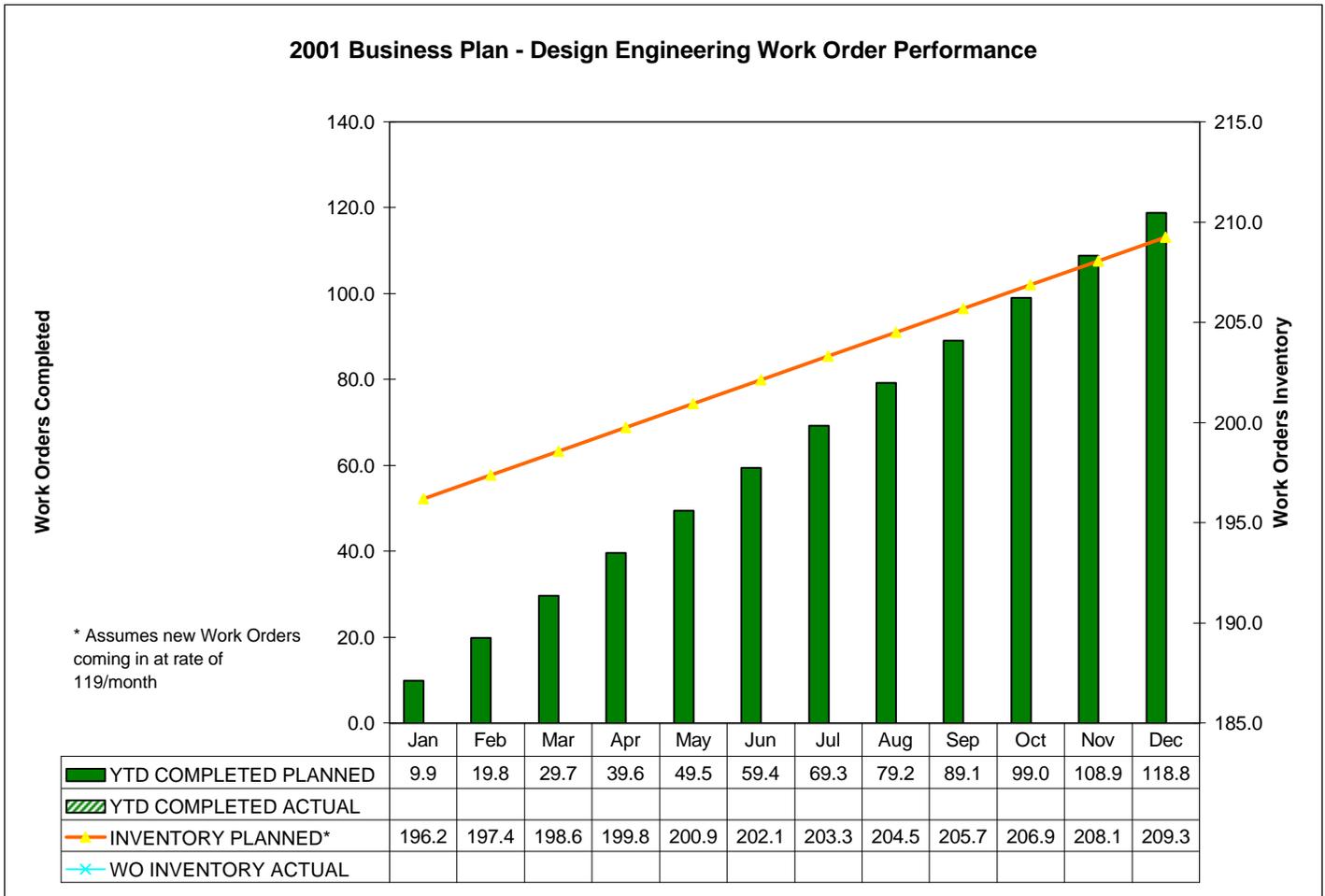
INDICATOR DESCRIPTION

Percentage of completed ICAs vs. what was scheduled for completion for the month. A Department currently meets our Corrective Action Program Standards when their ICA Schedule Adherence is greater than 60%. A Department currently exceeds our Corrective Action Program Standards when their ICA Schedule Adherence is greater than 80%.

Percentage of completed evaluations vs. what was scheduled for completion for the month. A Department currently meets our Corrective Action Program Standards when their Evaluation Completion Schedule Adherence is greater than 50%. A Department currently exceeds our Corrective Action Program Standards when their Evaluation Completion Schedule Adherence is greater than 65%.

ANALYSIS

5. PERFORMANCE INDICATORS



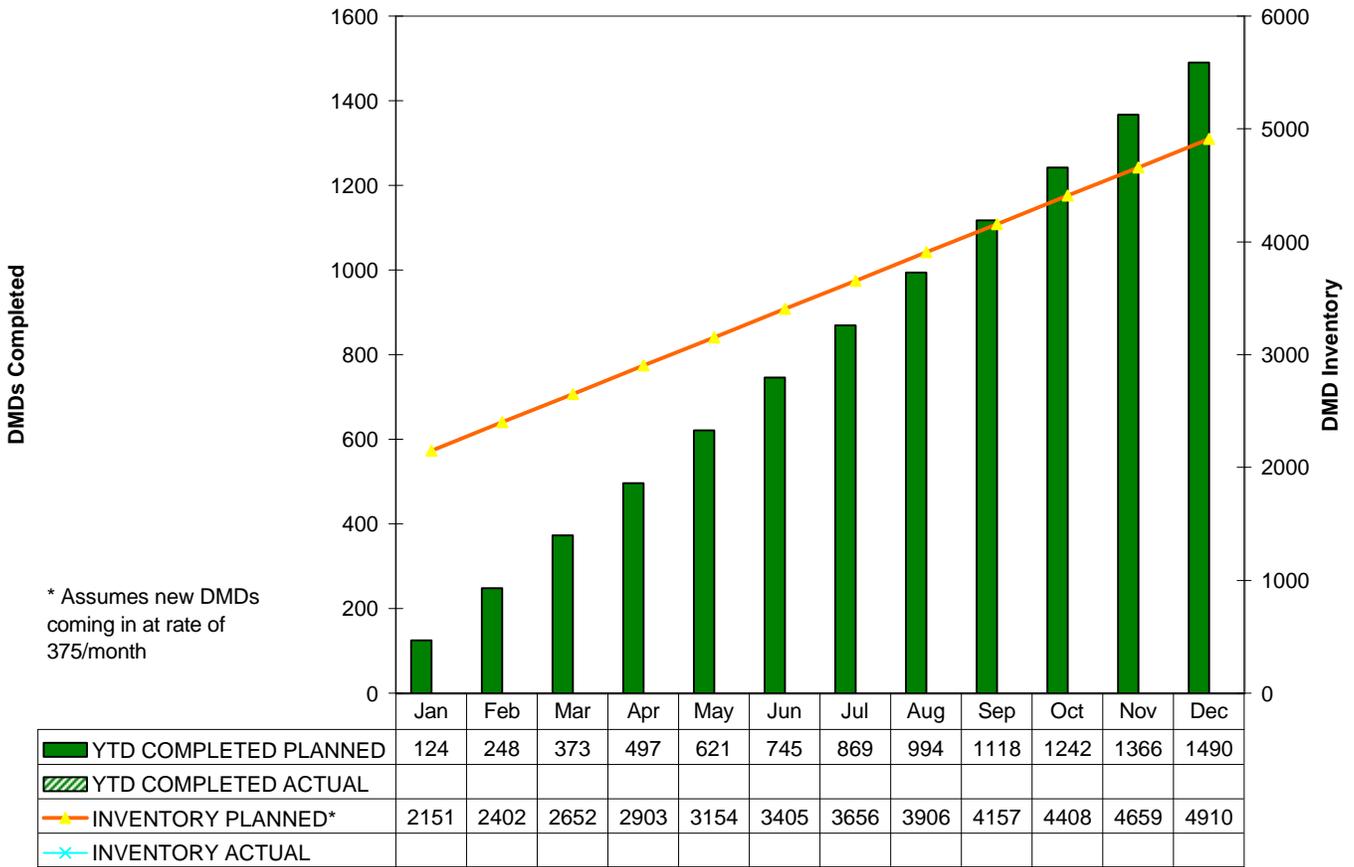
INDICATOR DESCRIPTION

Work Orders assigned, completed and inventory. Completed Work Order projections have been "straight-lined" for the year.

ANALYSIS

5. PERFORMANCE INDICATORS

2001 Business Plan - Design Engineering ROI/DMD Program



INDICATOR DESCRIPTION

Projections have been "straight-lined" for the year.

ANALYSIS

6.1 OPERATIONAL OVERVIEW

***NOTE:** Accelerated Improvement Plan dollar amounts are shown to reflect the amount of work planned for completion. These dollar amounts are reflected in the Project Requests section.

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<p>Condition Reports Complete CR <i>assignments</i> that contain evaluations, drawing updates, SL3s, RFIs, FCAs, ICAs, and other sub-assignments.</p> <p>Assume 30 hours/assignment.</p> <p><i>The figures to the right do not include Condition Report resolutions and analysis pertaining to DBD issues. The hours for major Condition Report resolutions are indicated in the Project Requests section.</i></p>	DO	Projected BOY inventory: 35 Projected incoming: 200/year # of assignments to be completed: 150			
	FCX	Projected BOY inventory: 55 Projected incoming: 300/year # of assignments to be completed: 167			
	FEX	Projected BOY inventory: 170 Projected incoming: 300/year # of assignments to be completed: 243			
	FIX	Projected BOY inventory: 45 Projected incoming: 300/year # of assignments to be completed: 167			
	FMX	Projected BOY inventory: 225 Projected incoming: 400/year # of assignments to be completed: 300			
	FPX	Projected BOY inventory: 15 Projected incoming: 160/year # of assignments to be completed: 104			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<p><u>Engineering Action Requests</u> Complete reviews, evaluations, and dispositions of EARs.</p> <p>Assume 25 hours/assignment.</p>	FCX	Projected BOY inventory: 5 Projected incoming: 10/year # of assignments to be completed: 10			
	FEX	Projected BOY inventory: 5 Projected incoming: 10/year # of assignments to be completed: 10			
	FIX	Projected BOY inventory: 5 Projected incoming: 10/year # of assignments to be completed: 10			
	FMX	Projected BOY inventory: 10 Projected incoming: 15/year # of assignments to be completed: 15			
	FPX	Projected BOY inventory: 5 Projected incoming: 10/year # of assignments to be completed: 10			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<p><u>Work Orders on Engineering Hold</u> Provide engineering review of Work Orders on Engineering Hold as needed to support safe and reliable station operation.</p> <p>Assume 200 hours/MWO 80 hours/engineer 120 hours/design team (~ 2 designers)</p> <p><i>Work Orders typically require a Modification to resolve the issue.</i></p>	FCX	Projected BOY inventory: 45 Projected incoming: 21/year # of assignments to be completed: 22			
	FEX	Projected BOY inventory: 45 Projected incoming: 20/year # of assignments to be completed: 21			
	FIX	Projected BOY inventory: 15 Projected incoming: 20/year # of assignments to be completed: 15			
	FMX	Projected BOY inventory: 50 Projected incoming: 48/year # of assignments to be completed: 41			
	FPX	Projected BOY inventory: 40 Projected incoming: 24/year # of assignments to be completed: 20			
<p><u>Clarification Requests</u></p>	FCX	Process Clarification Requests for various modifications.			
	FEX	Process Clarification Requests for various modifications.			
	FIX	Process Clarification Requests for various modifications.			
	FMX	Process Clarification Requests for various modifications.			
	FPX	Process Clarification Requests for various modifications.			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<p><u>Reports of Installations</u> Design Services will handle administration and completion of Report of Installation (ROI) packages.</p>	DO	Design Services is administering an Accelerated improvement plan for ROI packages.			
	FCX	Process ROI packages for various modifications.			
	FEX	Process ROI packages for various modifications.			
	FIX	Process ROI packages for various modifications.			
	FMX	Process ROI packages for various modifications.			
	FPX	Process ROI packages for various modifications.			
<p><u>Routine NRC Inspection & QA Audit Support, Self Assessments, Benchmarking</u> Provide design engineering support/participation in the areas described.</p>	DO	The Department Office's involvement in this area is covered under management time. Estimate is for benchmarking.			
	FCX	Support to QA for 1 SSFAs: 1 person for 6 weeks. Response to 1 SSFAs: 2 people for 3 weeks each. All other estimates: 250 hours.			
	FEX	Support to QA for 1 SSFAs: 1 person for 6 weeks. Response to 1 SSFA: 2 people for 3 weeks each. All other estimates: 500 hours.			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Routine NRC Inspection & QA Audit Support, Self Assessments, Benchmarking</u> (Continued...)	FIX	Support to QA for 1 SSFAs: 1 person for 6 weeks. Response to 2 SSFAs: 2 people for 3 weeks each. All other estimates: 500 hours.			
	FMX	Support to QA for 1 SSFAs: 1 person for 6 weeks. Response to 2 SSFAs: 2 people for 3 weeks each. All other estimates: 500 hours.			
	FPX	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.			
<u>Emergent Work</u> Time allocated to respond to Station inquiries and work that emerges over the course of the year that must be done to support safe and reliable operation.	FCX	15% of 10 personnel hours.			
	FEX	10% of 12 personnel hours.			
	FIX	10% of 15 personnel hours.			
	FMX	10% of 14 personnel hours.			
	FPX	15% of 12 personnel hours.			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<p><u>Training</u> Complete all continuing and qualification training including GET, ESP, etc. and attend seminars, conferences, technical training</p>	DO	Continuing management training: 5 people @ 60 hours each Continuing weekly training: 2 people @ 40 hours each Qualification Training: 0 people @ 9 weeks SAOs and OP290 procedures training: 6 people @ 25 hours each			
	FCX	Continuing management training: 6 people @ 60 hours each Continuing weekly training: 4 people @ 40 hours each Qualification Training: 1 person @ 9 weeks SAOs and OP290 procedures training: 6 people @ 25 hours each STAAD Pro Structural Computer Program Training (\$3K) Outside Seminars: 1/year/engineer @ \$2K/trip x 5 engineers.			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
Training (Continued...)	FEX	Continuing management training: 7 people @ 60 hours each Continuing weekly training: 5 people @ 40 hours each Qualification Training: 1 person @ 9 weeks SAOs and OP290 procedures training: 7 people @ 25 hours each			
	FIX	Continuing management training: 8 people @ 60 hours each Continuing weekly training: 7 people @ 40 hours each Qualification Training: 1 person @ 9 weeks SAOs and OP290 procedures training: 8 people @ 25 hours each			
	FMX	Continuing management training: 8 people @ 60 hours each Continuing weekly training: 6 people @ 40 hours each Qualification Training: 1 person @ 9 weeks SAOs and OP290 procedures training: 8 people @ 25 hours each			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Training</u> <i>(Continued...)</i>	FPX	Continuing management training: 6 people @ 60 hours each Continuing weekly training: 6 people @ 40 hours each Qualification Training: 1 person @ 9 weeks SAOs and OP290 procedures training: 6 people @ 25 hours each			
<u>Routine Technical Program Maintenance</u>	FCX	Structural Maintenance Rule (500 hrs +\$100K OS) Heavy Lifts over Safety Related Equipment (250 hrs + \$50K OS) Scaffolding Support Unresolved Safety Issue USI A-46 (SQUG) (500 hrs +\$50K OS + \$25K membership dues) Coatings Program (400 hours + \$50K) STAAD Pro Structural Computer software upgrade to LAN Based Technical Publications (\$7K)			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
	FEX	Electrical Workmanship Std. (EI-6009) Cable Separation Program Seismic Design Basis Support Maintenance of Safeguard Drawings/Files Maintenance of Diesel Load Study AC/DC Load Track Electrical Calculations EQ File Upgrade			
<u>Routine Technical Program Maintenance</u> (Continued...)	FIX	EQ Program (I&C to assume responsibility from Station) (2500 hours) Loop Diagram Program (time included in CR's and Mods) Human Factors Evaluation Program (500 hours) Safety Assessment System Program (100 hours)			
	FMX	SQUG support to Civil: 500 hours MOV, AOV, SG ISI, balance of ISI program, IST, welding: 500 hours total. Extraction Steam/Wet Steam Piping (300 hours)			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Technical Administrating</u>	DO	<p>Provide auxiliary technical review and disposition for Department Office CRs. Assist entire department with CR management issues including backlog reduction as in the Project Requests section.</p> <p>Handling, tracking, and monitoring Outside Services CR efforts.</p> <p>Produce weekly/monthly/annual status reports, schedules, and performance indicators.</p> <p>Provide costs estimates and budget reviews for the department.</p> <p>Prepare yearly as well as quarterly updates to the Department Business Plan.</p>			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Project Scheduling</u>	DO	<p>Tracking, scheduling, and conducting preliminary acceptance reviews of:</p> <ul style="list-style-type: none"> • MWOs • EARs(new mod process) • Modifications • Clarification Requests <p>Produce weekly/monthly/annual status reports, schedules, and performance indicators.</p> <p>Develop 2 year minor change project list as well as 5 year major change project list.</p>			
<u>Process Improvement Activities</u>	DO	<p>Technical analysis regarding processes and improvements. Conceptual and strategic planning with regard to the Modification process, procedures, and DE training. Implement training initiatives for processes in conjunction with the Training Department.</p> <p>Perform continuous benchmarking efforts to improve work processes.</p> <p>Represent the authority on procedures.</p> <p>Produce weekly/monthly/annual status reports, schedules, and performance/quality indicators.</p>			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Design Services</u>	DO	<p><u>Supervisory Designer (1165 hours)</u> Ownership of Modification closeout process. Benchmarks, develops, and implements drawing processes and controls. Controls and distributes ROI backlog to outside vendors. Provides technical assistance and review of drawings requiring approval. Produces weekly/monthly/annual status reports, schedules, and performance indicators. Maintains incoming drawing updates for CCR drawings using 2 designers. Electrical Designer A & Mechanical Designer A (3520 hours) These individuals concentrate their efforts on updating CCR drawings as required for ROIs and CRs. They also as-built modifications which are developed using sketches in the new mod process.</p>			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Administrative Work</u> Purchase office supplies, provide clerical support, data entry, coordinate engineering follow-up issues, and maintain project files and calculations for Records Management transmittal.	DO	Management Secretary			
	FIX	Administrative Work (Shared with FEX)			
	FCX	Administrative Work (Shared with FMX)			
	FPX	Administrative Work (Shared with FPX)			
<u>HVS</u> Time allocated for holidays, vacations, sick and FMLA time. Assume: 5 sick days/person/year 1 personal holiday/person/year 19 vacation days/person/year 10 holiday days/person/year	DO	10 people @ 280 hours each			
	FCX	11 people @ 280 hours each			
	FEX	12 people @ 280 hours each			
	FIX	16 people @ 280 hours each			
	FMX	14 people @ 280 hours each			
	FPX	13 people @ 280 hours each			
<u>Management and Supervision</u> Time spent in management and supervisory functions including planning, delegation and oversight of work.	DO	Management and Supervision			
	FCX	Management and Supervision			
	FEX	Management and Supervision			
	FIX	Management and Supervision			
	FMX	Management and Supervision			
	FPX	Management and Supervision			

6.1 OPERATIONAL OVERVIEW

Project/Program	Section	Detail	Estimated Con Edison Hours	Estimated Outside Support	
				Routine (\$K)	Accelerated Improvement Plan (\$K)
<u>Office Expenses</u>	DO	Materials and Supplies			
		P Card			
		Petty Cash			
		Training/Benchmarking			
		Communications			
		Rent/Electric/Parking Facilities			
		Vehicles			
		All Other			
<u>Sub-total</u>	DO	Sub-total			
	FCX	Sub-total			
	FEX	Sub-total			
	FIX	Sub-total			
	FMX	Sub-total			
	FPX	Sub-total			
TOTAL HOURS AND DOLLARS					
<u>Full Time Equivalents</u>	DO	FTE people @ 2080 hours each			
	FCX	FTE people @ 2080 hours each			
	FEX	FTE people @ 2080 hours each			
	FIX	FTE people @ 2080 hours each			
	FMX	FTE people @ 2080 hours each			
	FPX	FTE people @ 2080 hours each			
TOTAL FULL TIME EQUIVALENTS					

6.2 FUNCTIONAL RESPONSIBILITIES

Department Office

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.

Civil Projects and Programs

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.

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.

6.2 FUNCTIONAL RESPONSIBILITIES

Electrical Projects and Programs

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.

I&C Projects and Programs

I & C Projects and Programs Engineering Section of Design Engineering is a major contributor of providing engineering support to Indian Point Station. We provide technical support 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 2001 for Design Basis Documents (DBD) reviews and participation in Safety System Functional Assessment (SSFSA).

Mechanical Projects and Programs

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.

6.2 FUNCTIONAL RESPONSIBILITIES

Facilities Projects and Programs

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.

6.3 EQUIPMENT/MATERIALS EXPERTISE

Department Office

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

Civil Projects and Programs

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

Moderate support provided for:

- Reinforced Concrete
- Foundations
- Hydrology
- Waterfront Structures
- Flood Protection
- Stacks
- Soils Design
- Pipe Supports

Limited support provided for:

- Masonry Design
- Fire Protection
- Retaining Structures

Outside Services support for:

- Rigging
- Environmental Eng'g
- Waterfront Structures
- Siesmic Eqmt. Qual
- Cranes
- Painting
- Thermal Transients
- ROOFS

6.3 EQUIPMENT/MATERIALS EXPERTISE

Electrical Projects and Programs

- 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

I&C Projects and Programs

Electrical & Process Controls Including:

- Setpoint and loop accuracy calculations
- Setpoint Issues
- Solenoid Valves And Limit Switches
- Transmitters, Process Switches and Control Valves
- Regulators
- Controllers and Recorders
- Thermocouples and RTDs
- A To D Conversions (EI 6010)
- LEFM
- Rad Monitoring System
- Data Highway Systems
- EQ Issues
- Calculation Methodologies including Westinghouse Methodologies
- Regulatory Requirements

6.3 EQUIPMENT/MATERIALS EXPERTISE

- Design History
- Loop Diagrams
- Logics including RPS/ESF/NIS systems
- Design Basis Documents
- Human Factors Review and Approval
- SAS and Proteus Computers

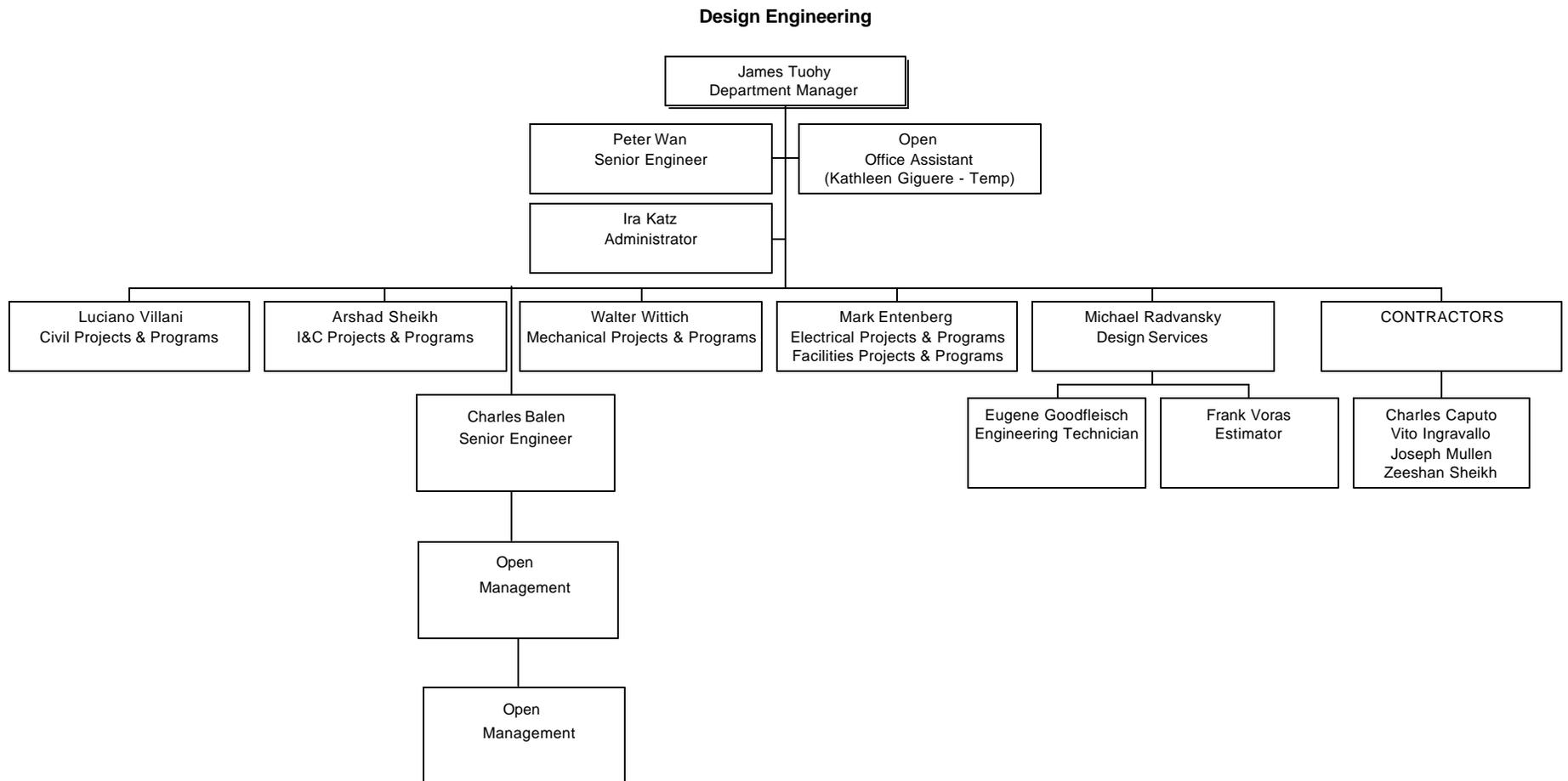
Mechanical Projects and Programs

- 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

Facilities Projects and Programs

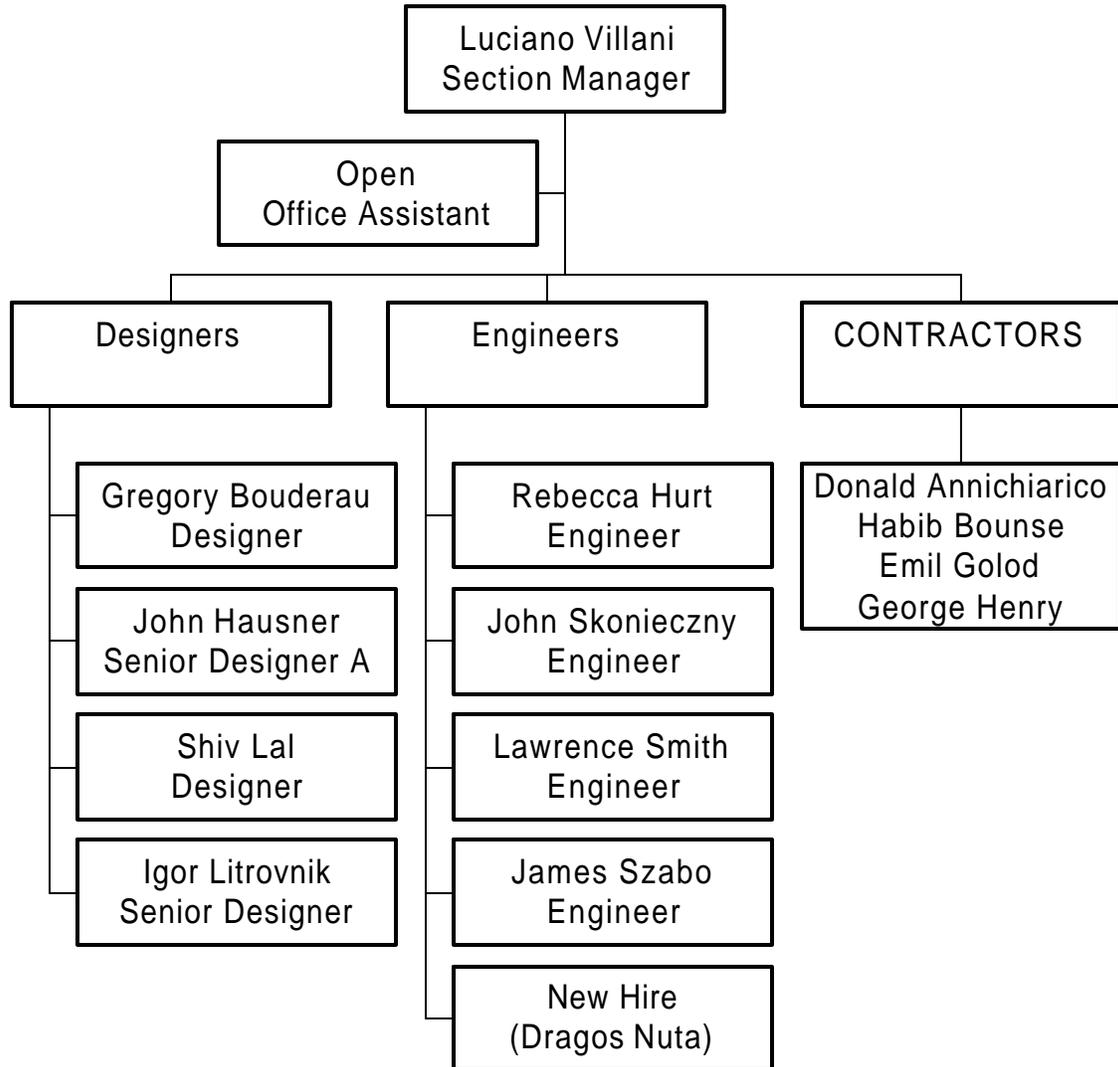
- Reinforced Concrete
- Seismic Structure
- Seismic Equipment Qualification
- Pipe Supports
- Steel Design
- Electrical Supports
- Instrumentation including level indicating and controls for tanks
- Finite Element Analysis
- Electrical Control Systems
- Mechanical Systems (i.e.: pumps, MOVs, control valves and seals)
- Electrical Systems (i.e.: transformers, switchgear, breakers, distribution equipment)

6.4 ORGANIZATION CHARTS



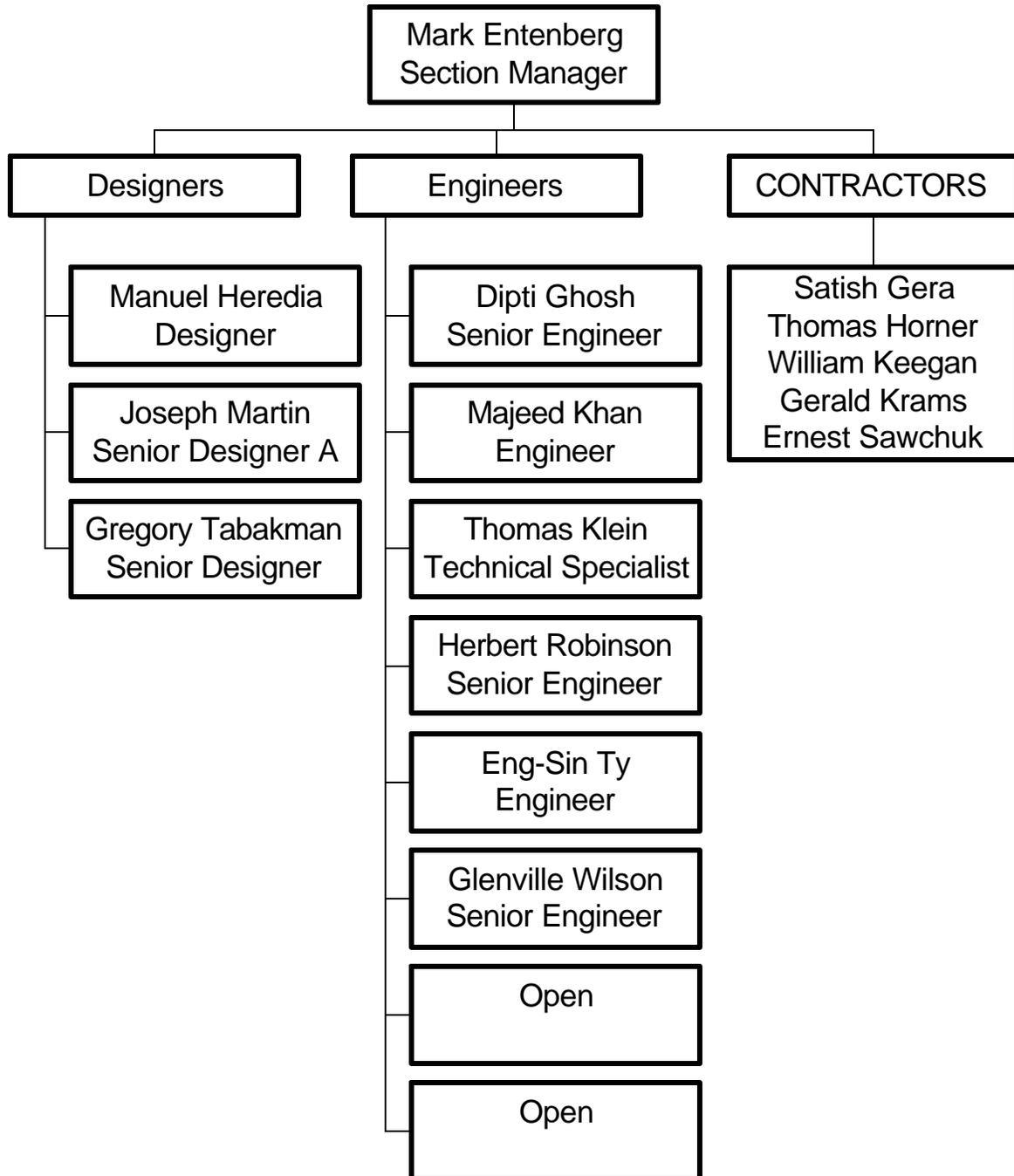
6.4 ORGANIZATION CHARTS

CIVIL PROJECTS & PROGRAMS

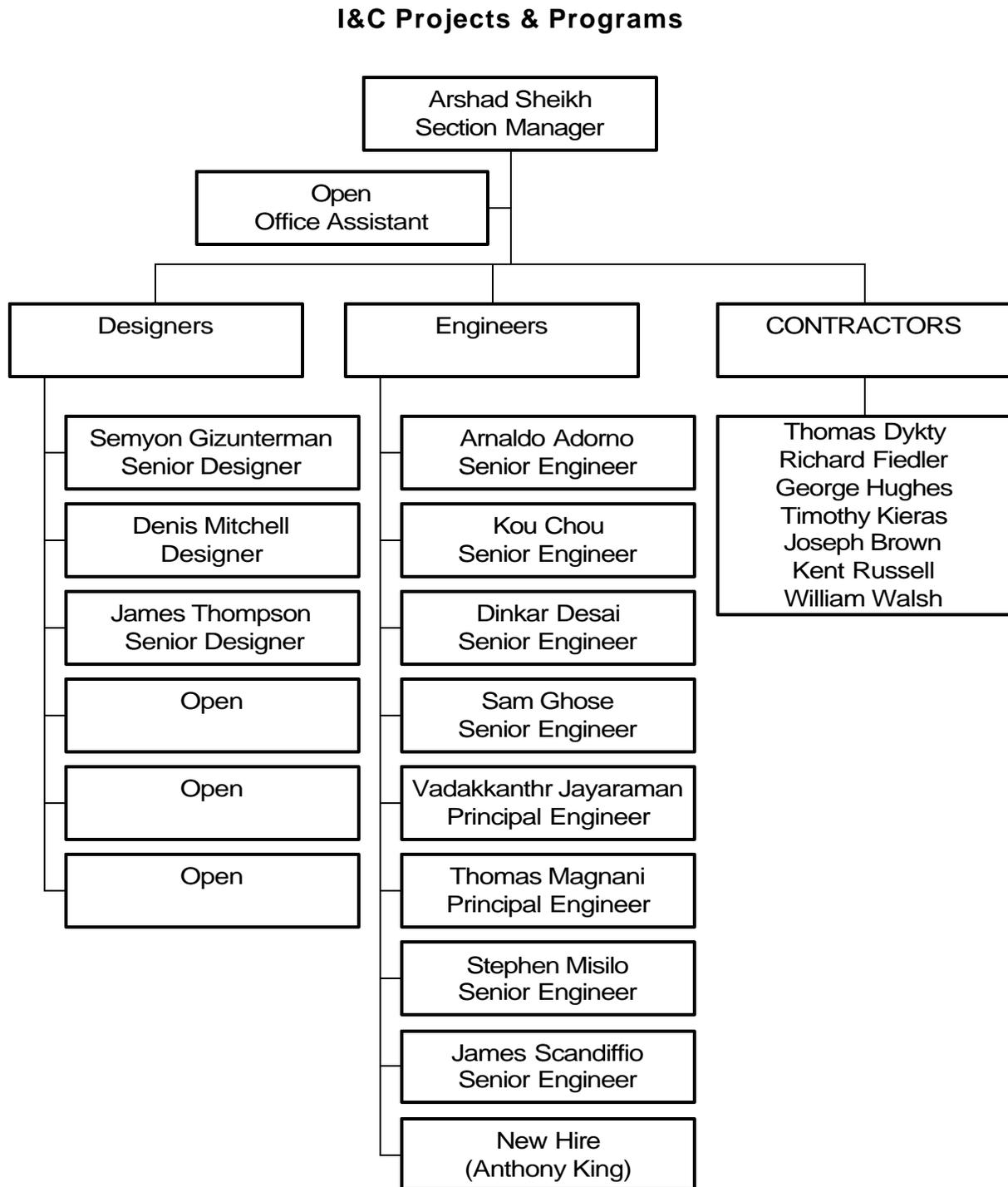


6.4 ORGANIZATION CHARTS

Electrcial Projects & Programs

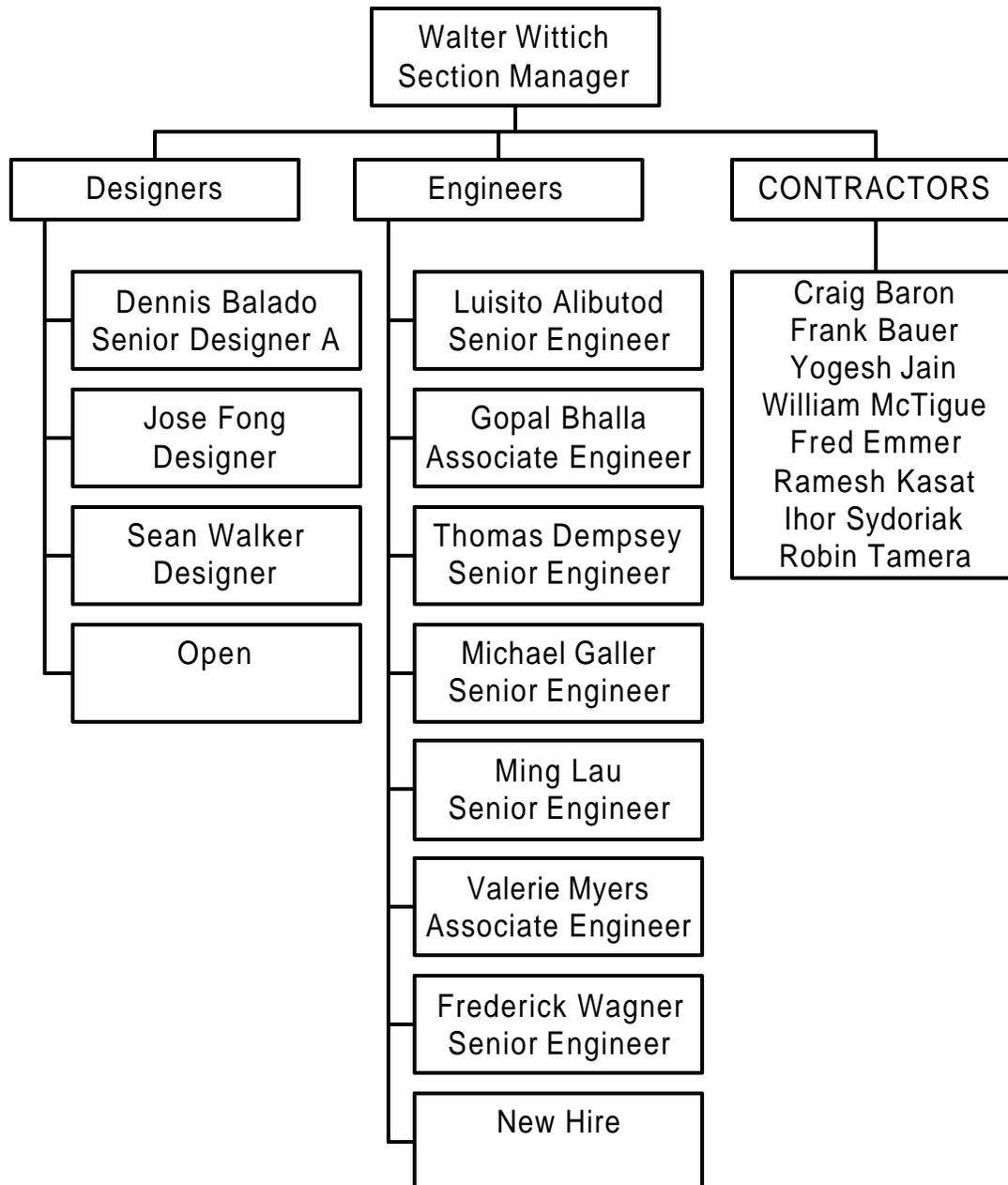


6.4 ORGANIZATION CHARTS



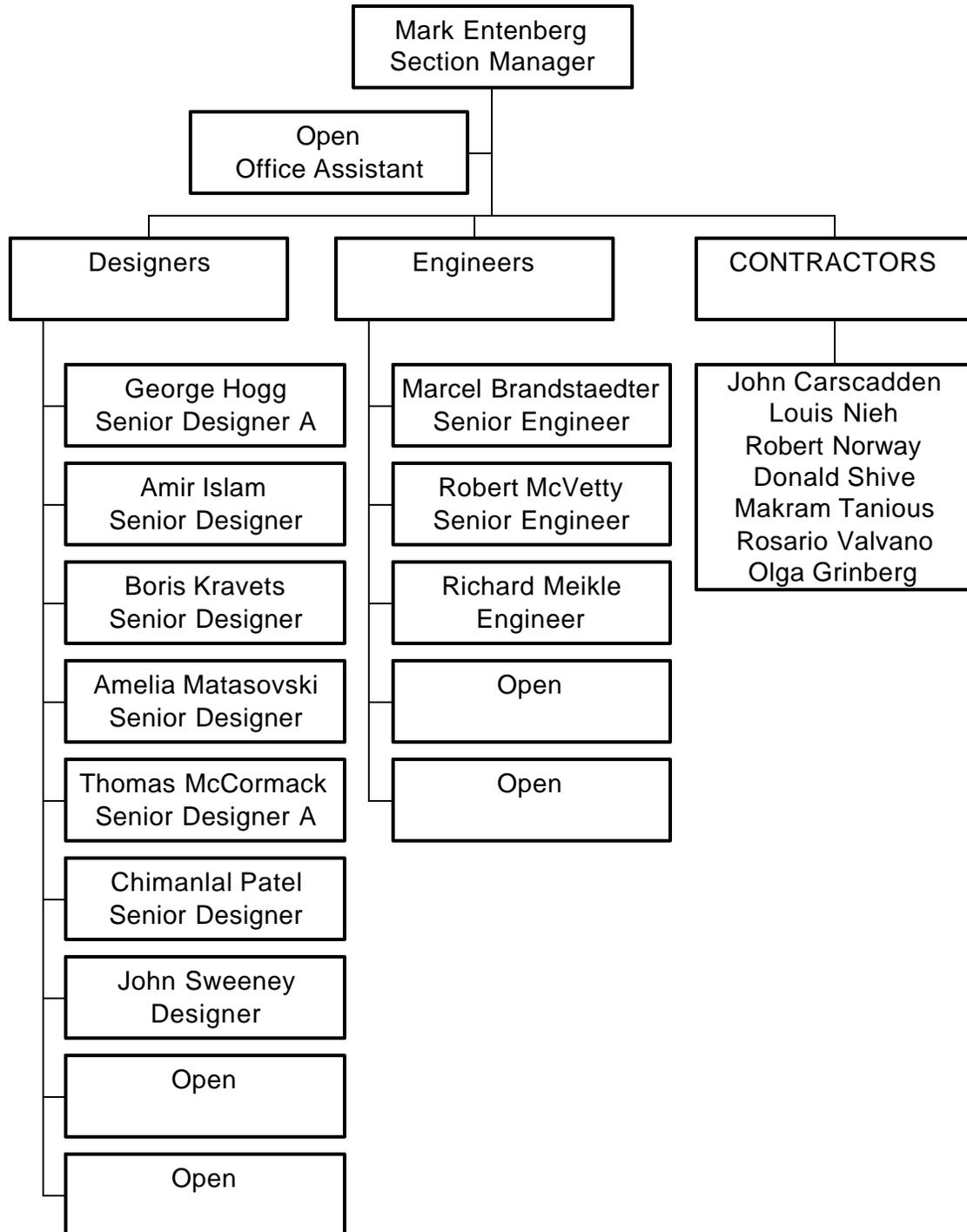
6.4 ORGANIZATION CHARTS

Mechanical Projects & Programs



6.4 ORGANIZATION CHARTS

Facilities Projects & Programs



6.5 YEAR 2001 RESOURCE ALLOCATION SUMMARY

Section	Requested Con Ed Human Resources		
	Management	Weekly	Total
Department Office			
Civil Projects and Programs			
Electrical Projects and Programs			
I&C Projects and Programs			
Mechanical Projects and Programs			
Facilities Projects and Programs			
Department Total			

Section	Estimated Outside Support		
	Routine Outside Support (\$K)	Accelerated Improvement Plan (\$K)	Total (\$K)
Department Office			
Civil Projects and Programs			
Electrical Projects and Programs			
I&C Projects and Programs			
Mechanical Projects and Programs			
Facilities Projects and Programs			
Department Total			

Section	Item	Estimated Con Ed Person-Year	Con Ed Labor Dollars (000)	Total Estimated Outside Support \$'s (000)
4	Project Requests			
6.1	Operational Overview			
4 + 6.1	Total Resources Needed			
	Approved Budget			

Fundamentals

- *No Events*
WE must prevent events...Top performers do not have Events...By practicing the fundamentals, every day WE will prevent Events.
- *Follow up and follow through*
Adding work or a problem to a list or schedule does not get it done or solve it...WE must manage and track work and problems (follow up), not let up until it is done or solved (follow through), and ensure problems are permanently solved and not forgotten (follow up and follow through) ...Following up and following through will prevent Events.
- *Talk*
WE must talk to each other...WE must not hand a teammate a problem electronically and walk away...WE must talk, face-to face, or pick up the phone...When WE talk, WE must keep the focus on what is best for the plant...If WE talk to each other WE will prevent Events.
- *“Done-done”*
WE know work is not done until it is “done-done”...This means there is nothing left to do – including the paperwork - and everything is done completely and correctly...By making sure work is “done-done” WE will prevent Events.
- *No gaps*
WE must leave no gaps in our products...Our customers must not have to make the conclusion...WE must fill in all the details and leave no doubt...WE must ensure every detail is correct, complete, and up to date... By preventing gaps, WE will prevent Events.
- *Search*
WE must identify problems...There is no “bad news”...WE must always ask “What is the extent? Does the problem exist somewhere else in the plant?”...By searching for problems WE will prevent Events.
- *Learn*
WE must learn from problems and from others, and share what we have learned ...By learning, WE will prevent Events.
- *Vigilance*
WE must practice the fundamentals, every day...WE must never let success lead to complacency...By practicing the fundamentals, every day, WE will prevent Events.

Remember...

If WE practice the fundamentals, every day, others will also...it’s contagious.