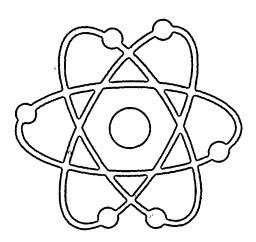
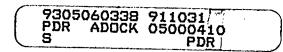
# Nuclear Division

Performance Monitoring — Executive Report



JUNE, 1991



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# DEFINITIONS

D-1 thru D-4

Key: I = Unit 1 II = Unit 2 C = Common

# Executive Summary June 1991 Unit 1

#### Generation

Net generation was 404,859 Mwhrs for the month. Net capacity factor was 91.4% bringing year-to-date to 67.7%, above the target of 60.8% or greater. The availability factor for June was 100%. Reductions in capacity factor were due to operational problems with #13 Feedwater Control valves and a Control Rod sequence exchange. Other reductions in capacity factor were due to weekly Control Rod exercising and the inability to obtain 100% Core Thermal Power due to turbine steam flow limitation.

# Financial

June Nuclear Production Operating and Maintenance <u>preliminary</u> expenditures were \$6.5 million or \$0.9 million under target. The <u>preliminary</u> capital expenditures for June were \$2.1 million, which was \$0.3 million under budget. To date, there is no planned permanent underrun to the 1991 capital budget.

#### Reportable Events (Potential LERs) to NRC Operations Center

There was one reportable event in June, which is an LER. This LER is further described on page I-4.

#### NRC Violations

None.

#### Collective Radiation Exposure

Collective radiation exposure for June was 5.7 manrem while the target for June was 12.14 manrem. The cumulative target through June was 163.03 manrem or less while the cumulative actual year-to-date was 111.82 manrem. The 1991 target is 250 manrem or less.

#### Industrial Safety

There were no reportable lost time accidents in June. Unit 1 employees have worked 3,047,166 manhours as of June 30th or 668 days without a lost time accident.

# Executive Summary June 1991 Unit 2

#### <u>Generation</u>

Net generation was 762,866 Mwhrs for the month. Net capacity factor was 97.7% bringing the year-to-date to 70.8%. The availability factor was 100% during June 1991. Reductions in capacity factor during the month were due to high ambient conditions, condenser fouling, turbine valve tests, control rod adjustments and MSR steam admission valve malfunction.

#### <u>Financial</u>

June Nuclear Production Operating and Maintenance <u>preliminary</u> expenditures were \$7.0 million, or \$2.6 million under target. The <u>preliminary</u> capital expenditures for June were (\$0.2) million, which was \$2.7 million under budget, due to GE settlement credit of \$1.7 million. Capital expenditures are expected to increase towards year's end. Underruns in some projects have been identified with possible offsets in other areas.

# Reportable Events (Potential LERs) to NRC Operations Center

There were two reportable events in June that are potential LERs. These are further described on page II-4.

#### NRC Violations

NONE

### Collective Radiation Exposure

Collective radiation exposure for June was 4.3 manrem while the target for June was 8.33 manrem. The cumulative target through June was 49.98 manrem or less while the cumulative actual was 53.0 manrem. The 1991 target is 100 manrem or less.

## Industrial Safety

There were no reportable lost time accidents in June. Unit 2 employees have worked 1,924,226 hours as of June 30th or 343 days without a lost time accident.

NUCLEAR DIVISION EXEC	UTIVE SUM	MĂRY				i saits	
NINE MILE POINT	1991 PERFORMANCE INDICATORS						
UNIT 1 TOP PERFORMANCE INDICATORS			MONTH OF JUNE		YEAR-TO-DATE		
	1991 TARGET	INDUSTRY MEDIAN•	ACTUAL	TARGET	ACTUAL	TARGET	
SAFETY INDICATORS IN ND BUSINESS PLAN	XXXXXXX			STERNE ST	HARE		
Collective Radiation Exposure(ManRem)	250	474	5.7	12.14	111.82	163.03	
Low-Level Rad Waste (m3 Shipped)	375	337	5.68	31.25	62.31 -	187.50	
Lost Time Accident Rate (Number of Cases/200,000 Man Hours)	.28	.20	0		0.00	.28	
Nondisabling Injuries (First Aid)			1	0	10	0	
Disabling Injuries	<2		0	0	0	0	
Unplanned Automatic Reactor Scrams per year (7,000 hours critical)	1	1.68	0	0	1	0	
Fuel Reliability (uCi/sec) (Average)	<300	83	275	<300	253.1	<300	
COMMERCIAL INDICATORS IN ND BUSINESS FLAN							
Capacity Factor (MDC) (%)	71		91.4	86.8	67.7	60.8	
Unit Capability Factor (%)	71		93.0	96.5	67.2	66.9	
Unplanned Capability Loss (%)	4.0		6.2	3.0	8.6	2.1	
Thermal Performance (%) (Design/Actual)	98.9	98.9	98.3	99.2	99.4	99.2	
Chemistry Index	<.24	.34	.18	<.24	.20	<.24	
Safety System Performance Unavailability (These values are calculated quaterly)			2nd (	Quarter	Year-T	o-Date	
High Pressure Injection (%)	.015	.015	0.	006	0.0	05	
Torus & Shutdown Cooling (RHR) (%)	.004	.005	0.	024	0.0	917	
Emergency AC Power Unavailability (%)	.017	.017	0.	004	0.0	03	

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Source of data: INPO Comparative Performance Indicator Report (Industry data through 6/90)
Salary Incentive Performance Indicator

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NINE MILE POINT UNIT 1		1991 PERFORMANCE INDICATORS						
		1991 TARGET	MONTH	OF JUNE	YEAR-T	O-DATE		
REGULATORY INDICATOR IN ND BUSINESS PLAN			ACTUAL	TARGET	ACTUAL	TARGET		
Number of LER's		· <23	1	<2	7	<12		
PROFESSIONAL INDICATOR								
Number of LER's/Violation due to Personnel Error	1	<6	to	<1	XV	<3		
FINANCIAL (\$ X 1,000)								
Nuclear Production O & M Expenses (Budget @ 95%)	•• /	86,317	6,463	7,365	38,499	45,988		
Capital Improvements		28,563	1,910	1,976	6,545	12,634		
Capital Improvement - Common		5,402	199	395	617 `	2,573		
PSC MERIT INCENTIVES					June 1, 199	1 - To Date		
LLRW Disposal Volume (M <sup>3</sup> Shipped)	•	319.5 - 339.5	5.68	47	5.68	47		
Cumulative Rad Exposure (ManRem)	•	110 - 130	5.7	17	5.7	17		
Complete Conceptual Engr. Outsge Mods.	•	11/27/91 - 12/12/91	0 Compi.	0 Compl.	0 Compl.	0 Compl.		
Radwaste Corr./Maint W.R.'s	•	25 - 50	73	25 - 50	73	25 - 50		
Fire Corr./Maint. W.R.'s	•	25 - 50	65	25 - 50	65	25 - 50		
Nuisance Annunciators	•	15 - 20	12	15 - 20	12	15 - 20		
Corr./Maint. Power Block W. R.'s	•	400 - 450	450	400 - 450	450	400 - 450		

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NUCLEAR DIVISION EXECUTIVE SUMMARY							
NINE MILE POINT		<b>1991</b> ]	PERFORMANC	E INDICATOR	S		
UNIT 2 TOP PERFORMANCE INDICATORS			MONTH	OF JUNE	YEAR-T	YEAR-TO-DATE	
	1991 TARGET	INDUSTRY MEDIAN•	ACTUAL	TARGET	ACTUAL	TARGET	
SAFETY INDICATORS IN ND BUSINESS PLAN						K. H. MAR	
Collective Radiation Exposure (ManRem)	100	474	4.3	8.33	53.0	49.98	
Low-Level Rad Waste (m3 Shipped)	375	337	23.63	31.25	151.68	187.50	
Lost Time Accident Rate (Number of Cases/200,000 Man Hours)	.26	.20	0		0.0	.26	
Nondisabling Injuries (First Aid)			4	0	26	0	
Disabling Injuries	<2		0	0	0	0	
Unplanned Automatic Reactor Scrams per year (7,000 hours critical)	1	1.68	0	0	0	0	
Fuel Reliability (uCi/sec) (Average)	<50	83	0.0	<50	0.0	<50	
COMMERCIAL INDICATORS IN ND BUSINESS PLAN					<u>XXXXXX</u>	PX <b>I</b> RIA	
Capacity Factor (MDC) (%)	76		97.7	80.0	70.83	70	
Unit Capability Factor (%)	76		97.9	80.0	71.31	70	
Unplanned Capability Loss (%)	13		1.76	<5	8.95	<13.3	
Thermal Performance (%) (Design/Actual)	99	98.9	99.1	99.2	99.4	99.2	
Chemistry Index	<.27	.34	.50	<.27	.41	<.27	
Safety System Performance Unavailability (These values are calculated quarterly)		2nd Quarter Thru June Year-To-Date		o-Date			
High Pressure Injection (%)	.03	.015	0.0	072	0.	05	
Residual Heat Removal (%)	.025	.005	0.0	009	0.0	005	
Emergency AC Power Unavailability (%)	.02	.017	0.0	026	0.0	)16	

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Source of data: INPO Comparative Performance Indicator Report (Industry data through 6/90)
# Salary Incentive Performance Indicator

NINE MILE POINT		1991 PERFORMANCE INDICATORS						
UNIT 2		1991 TARGET MONTH OF JUN		OF JUNE	YEAR-TO	D-DATE		
REGULATORY INDICATOR IN ND BUSINESS PLAN			ACTUAL	TARGET	ACTUAL	TARGET		
Number of LER's		<23	2	<2	14	<12		
PROFESSIONAL INDICATOR IN ND BUSINESS PLAN								
Number of LER's/Violation due to Personnel Error	#	<13	1	<1	4	<6		
FINANCIAL (\$ X 1,000)								
Nuclear Production O & M Expenses	** #	106,907	7,014	9,641	48,187	54,571		
Capital Improvements		24,289	(440)	2,024	6,318	12,988		
Capital Improvement - Common		5,849	240	475	754	3,095		
PSC MERIT INCENTIVES					June 1, 199	1 - To Date		
LLRW Disposal Volume (M <sup>3</sup> Shipped)	*	234.8 - 254.8	23.63	34.97	23.63	34.97		
Net Electric Generation MWH	*	3,890,000 - 4,705,000	762,866	712,000	762,866	712,000		
Cumulative Rad Exposure (ManRem)	*	55 - 65	4.3	8.5	4.3	8.5		
Issue Engr. & Installation Plans for Outage Mods	*	11/27/91 - 12/12/91	0 Compl.	0 Compl.	0 Compl.	0 Compl.		
Total W. R. Backlog	*	1,500 - 1,650	1,958	1,880	1,958	1,880		
Performance Safety Related P. M.'s (%)	*	96 - 99	95	99	95	99		
Nuisance Annunciators (Main Control Room Only)	*	20 - 35	36	35	36	35		
COMMON REGULATORY PERFORMANCE								
NRC Commitments Met on Time (%)	#	95	100	100	98.8	95		
INPO Commitments Met on Time (%)	#	95	66.6	100	88.3	100		
COMMON MERIT INCENTIVE								
Nuclear Division AVA Annualized Gross Value	#	34,049,900	30.30	)7,600	30,30	7.600		

June 1, 1991 to December 31, 1991
\*\* 1991 O & M Targets @ 95%

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# UNIT I

# LER/VIOLATION SUMMARY

# POTENTIAL LERS

During this reporting period, there was one Reportable Event to the NRC which is a potential LER.

LER #91-07 DER 1-91-Q-0463

On June 29, 1991, Nine Mile Point Unit 1 experienced an actuation of an Engineered Safety Feature (ESF). Specifically, while performing a routine calibration of the Refuel Bridge High Range Process Radiation Monitor (RBHRPRM), a Reactor Building Emergency Ventilation System (RBEVS) initiation was received. This initiation occurred as the RBHRPRM drawer was being withdrawn as a step in the calibration procedure. Power to the drawer was momentarily interrupted resulting in the RBEVs initiation.

The root cause was personnel error.

#### NOTICE OF VIOLATION

None.

# SIGNIFICANT EVENTS

The Nuclear Regulatory Commission SALP report was recently issued with the following Facility Performance Analysis Summary.

Functional	Rating, Trend Last Period	Rating, Trend <u>This Period</u>
Plant Operations - Units 1 & 2	3 3	2 2
Radiological Controls	2	. 2
Maintenance/Surveillance	3	2
Emergency Preparedness	1	1
Security and Safeguards	1	1
Engineering and Technical Support	· 2	2
Safety Assessment/Quality Verification	3 Improving	2

Previous Assessment Period: March 1, 1989, to February 28, 1990 Present Assessment Period: March 1, 1990, to March 31, 1991

On June 4 and 5, 1991, NRC senior managers met to review the performance of nuclear power plants licensed to operate by the NRC. This meeting is conducted semiannually to focus NRC resources on those plants and related issues of greatest safety significance. At this meeting, it was concluded Nine Mile Point Units 1 and 2 have demonstrated sustained improvement sufficient to warrant removal form the category of plants that requires

# <u>UNIT II</u>

# LER/VIOLATION SUMMARY

# POTENTIAL LERS

During this reporting period, there were two Reportable Events to the NRC which are potential LERs.

LER #91-13

On June 3, 1991, Nine Mile Point Unit 2 experienced actuation of an Engineered Safety Feature (ESF). This event consisted of an isolation of the Reactor Water Cleanup System (WCS). Closure of the WCS outboard isolation valve was initiated by Control Room operators immediately before a high differential flow isolation signal was received. The isolation signal occurred as plant operators were manipulating WCS filter/demineralizer units. At the time of the event, the reactor mode switch was in the "RUN" position (Mode 1) and the reactor was operating at 100% rated thermal power.

The root cause of this event has been determined to be inadequate system operation due to unreliable filter/demineralizer level indication.

LER #91-14 DER 2-91-Q-0420

On June 20, 1991, Nine Mile Point Unit 2 experienced an Engineered Safety Feature (ESF) actuation. Specifically, the Secondary Containment (Reactor Building) isolated and the Standby Gas Treatment System (GTS) started automatically. The ESF actuation was initiated by a ventilation exhaust low flow. At the time of the event the reactor mode switch was in the "RUN" position (Mode 1) with the reactor operating at 100% rated thermal power.

The root cause was personnel error due to failure to follow procedure.

## NOTICE OF VIOLATION

NONE

#### SIGNIFICANT EVENTS

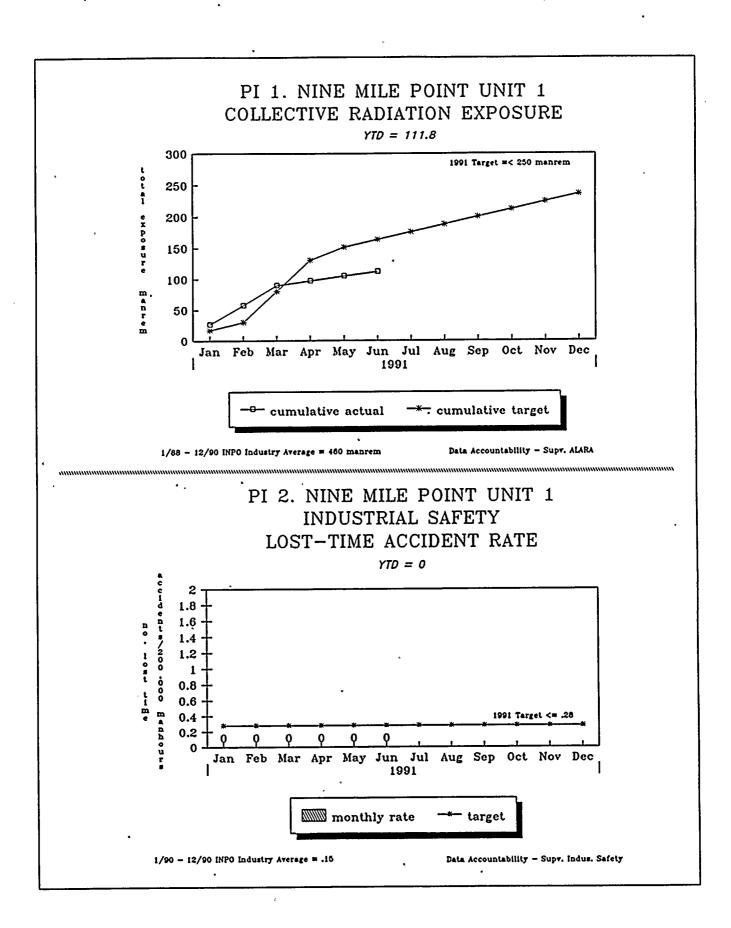
- Excellent month for power generation 97.7% capacity factor.
- SALP meeting received 2's in all areas related to generation, up from 3's in Maintenance, Operations and Quality Verfification.
- Nuclear Electric Insurance Limited (NEIL) Inspection June 27 and 28. Impressed with professional attitude of individuals; improved compliance with standards for transformers; credits earned were above industry average.
- Followup on Div. I Diesel Generator frequency control problem observed during loss of line 5 event. Problem was identified and corrected based on special tests performed in June.

II-4

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# **BUSINESS PLAN**

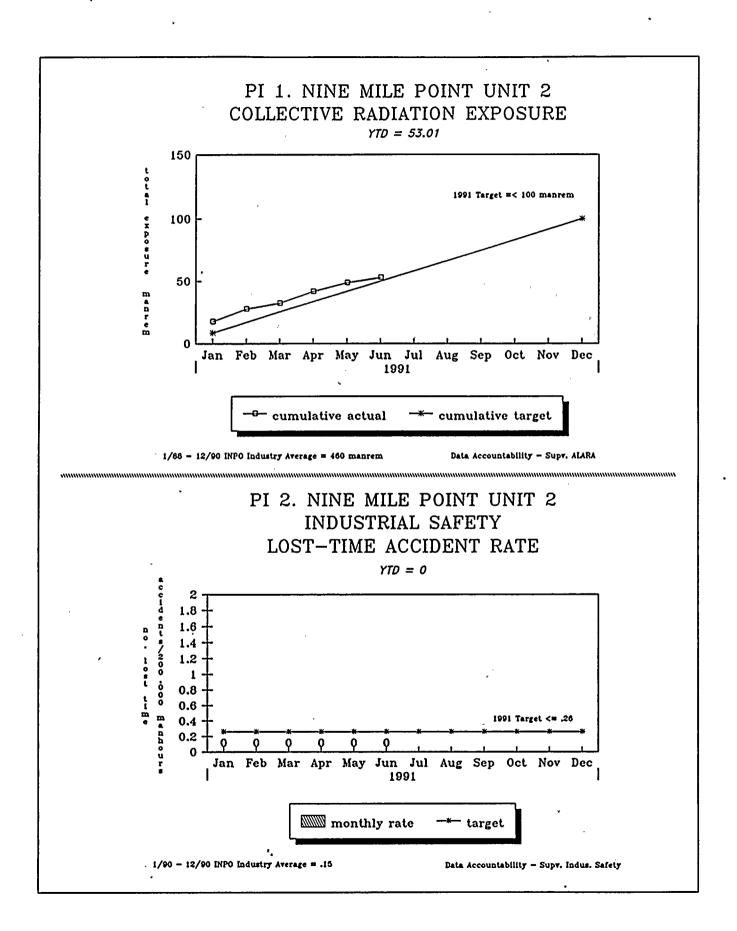
# PERFORMANCE INDICATORS



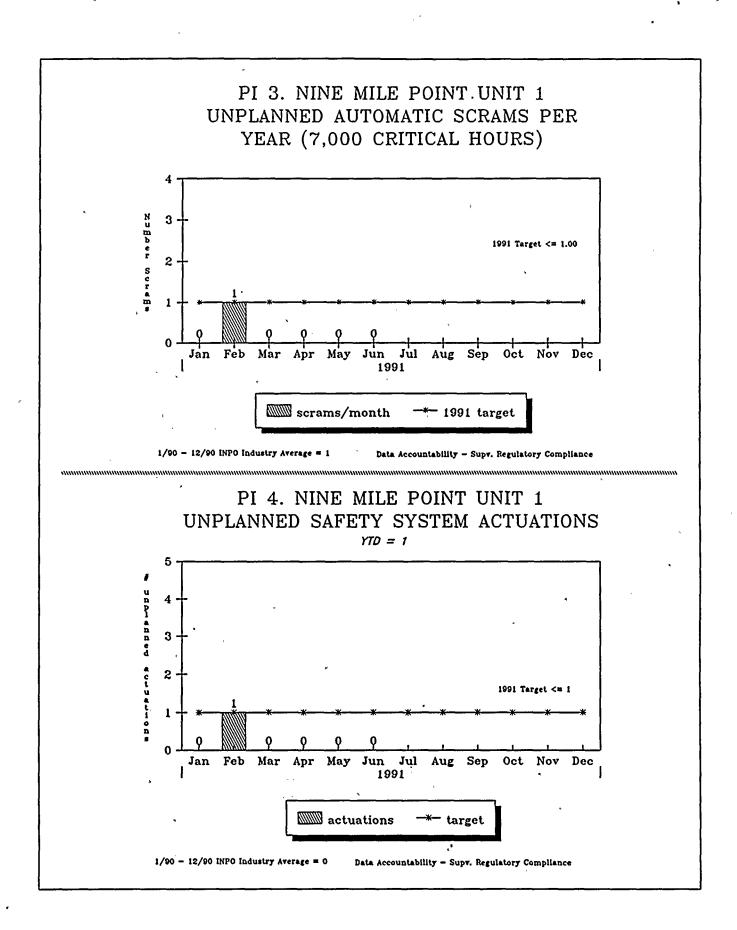
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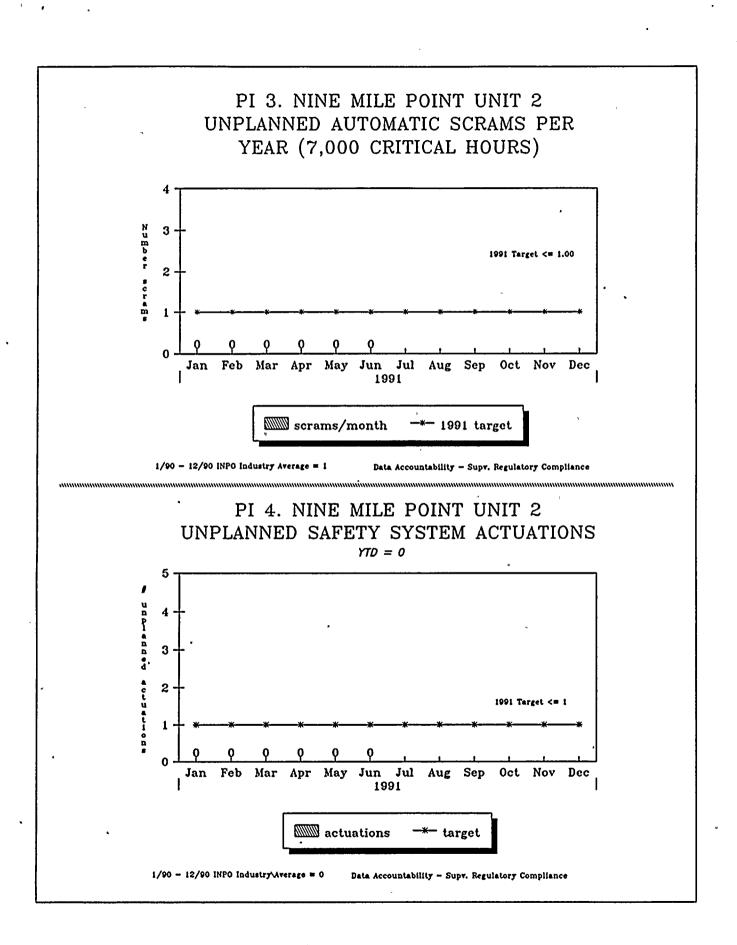
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**I-5** 

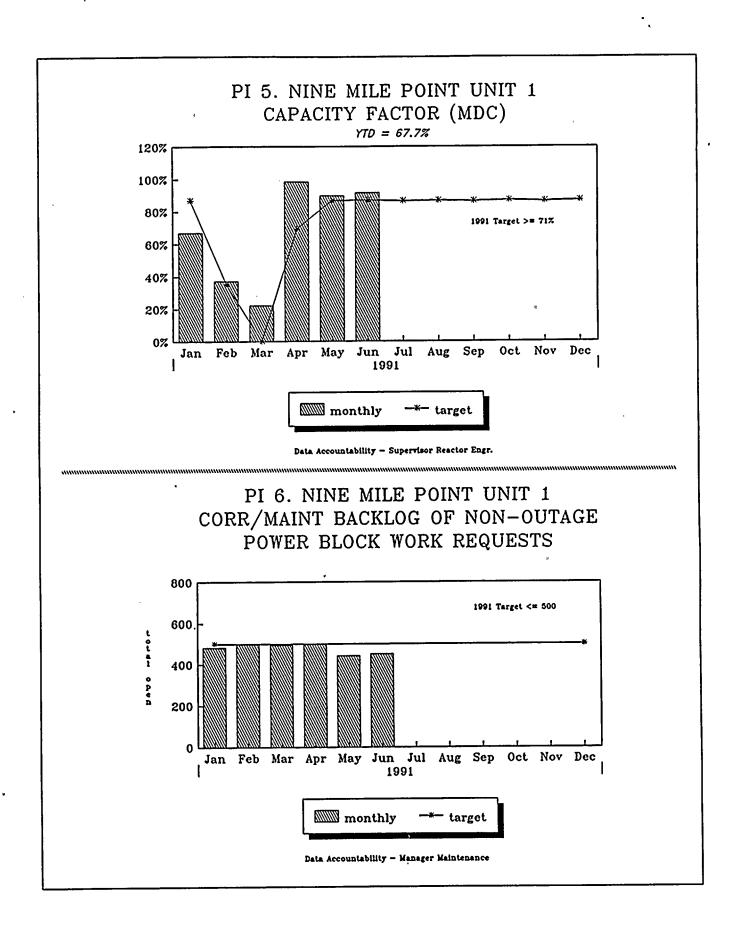


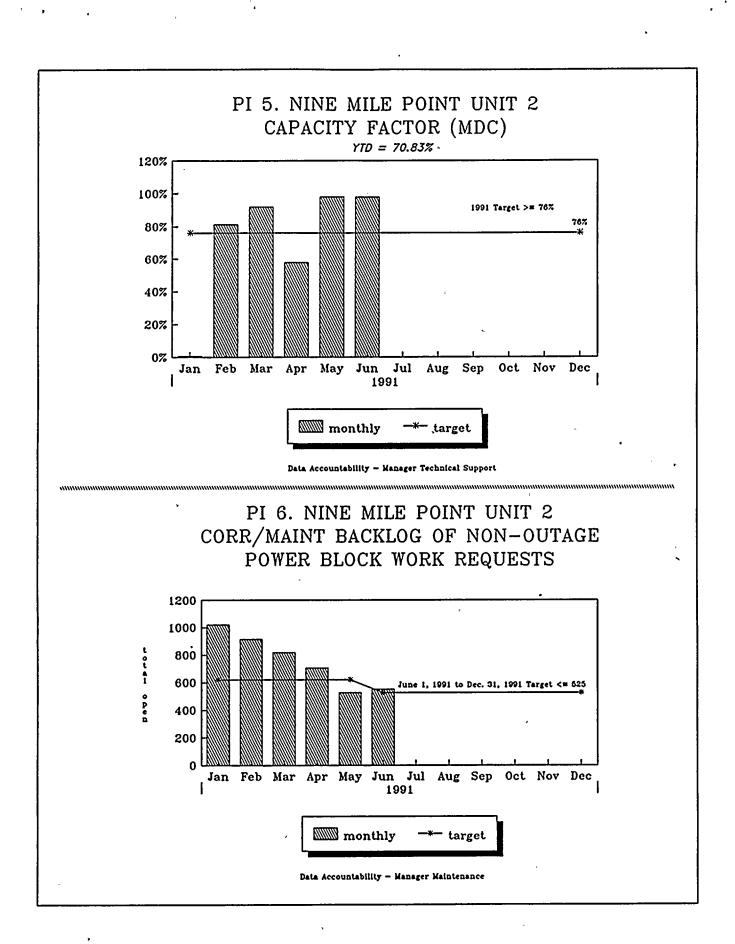
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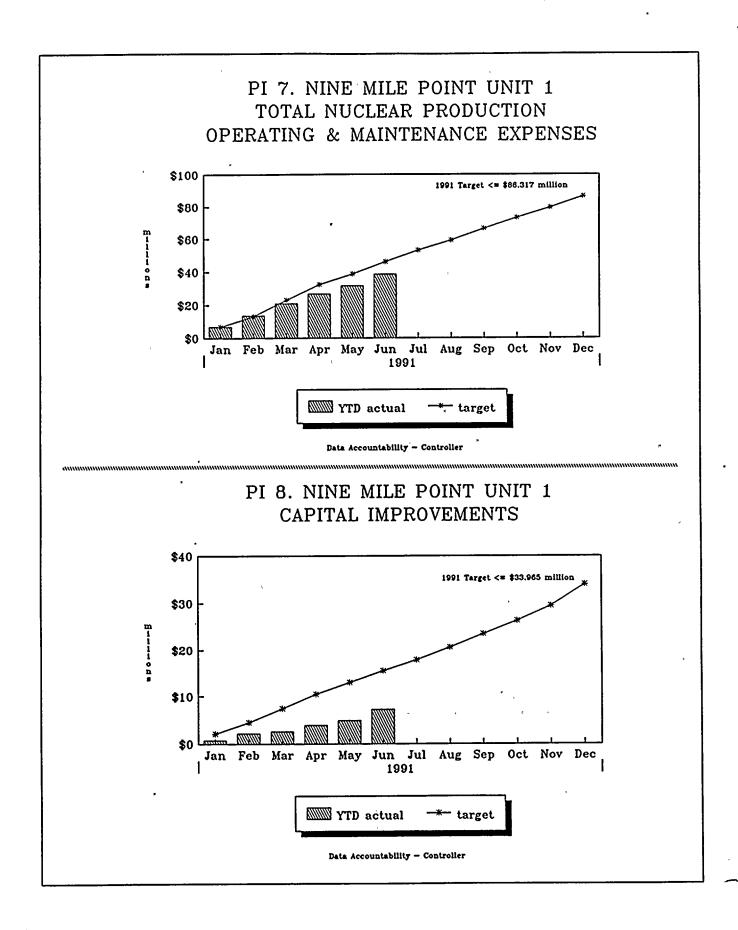


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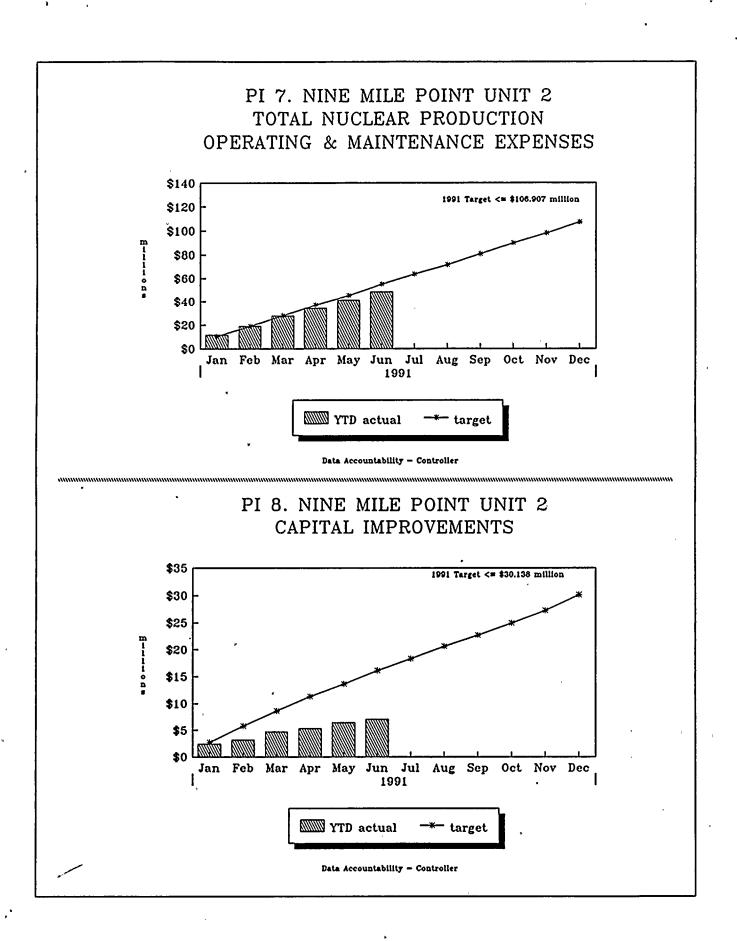


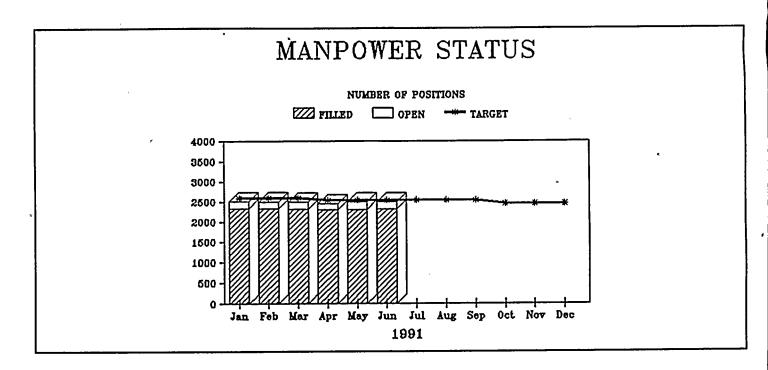


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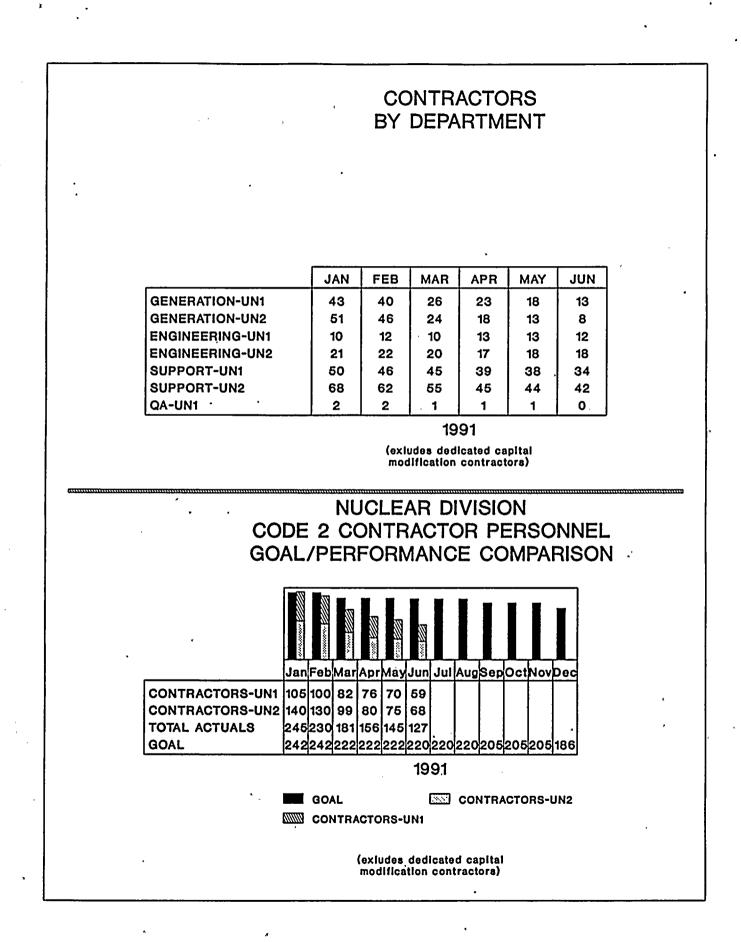


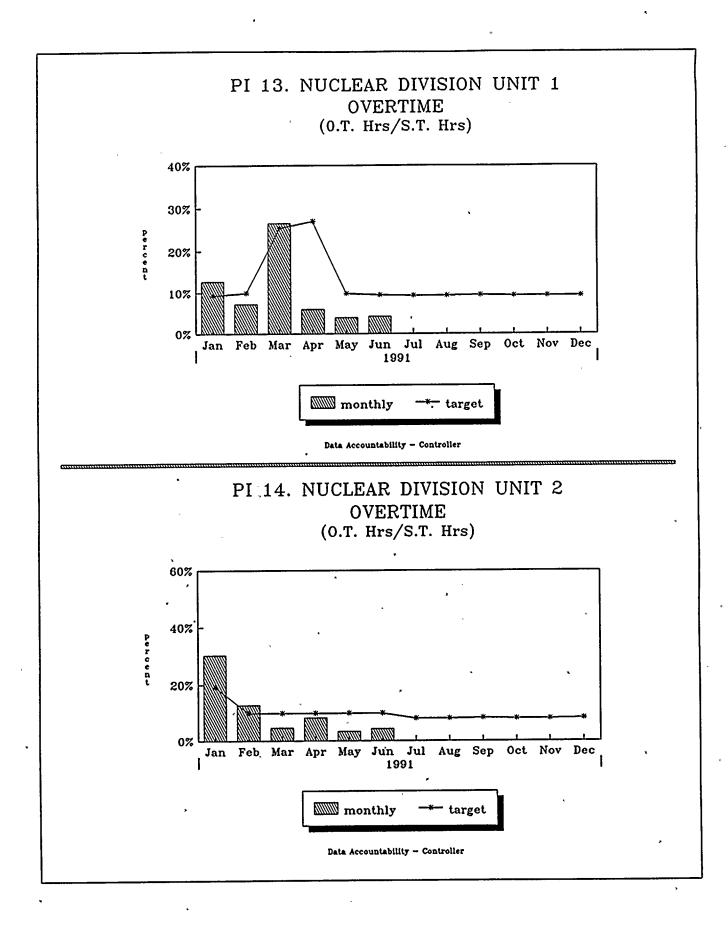


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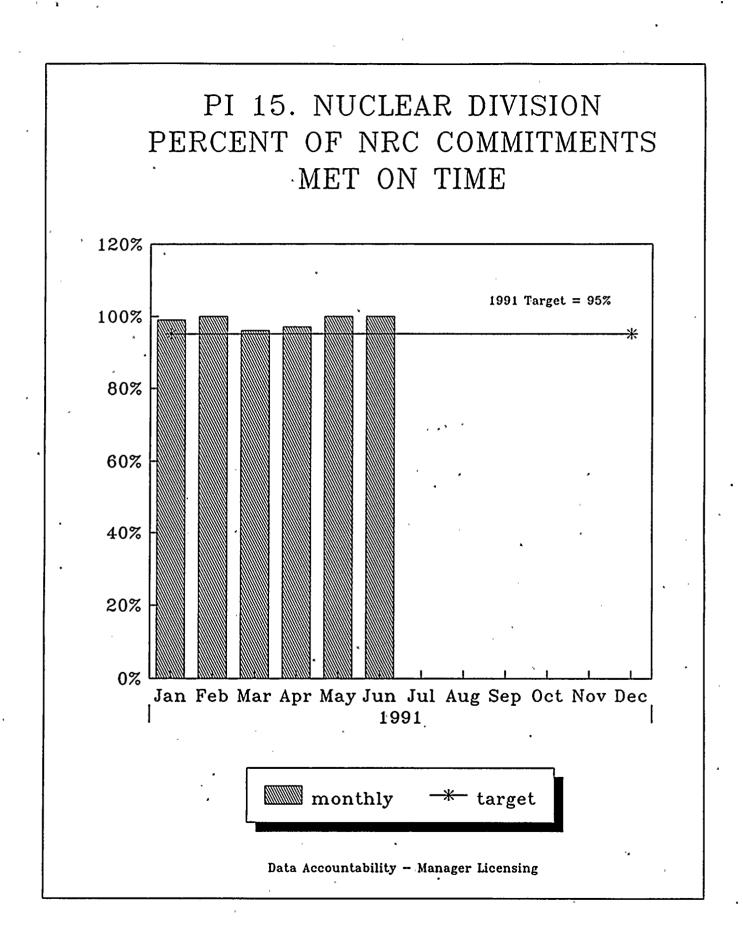
NIAGARA MOHAWK POWER CORPORATION 1991 LABOR STAFFING MONTH OF JUNE							
DEPARTMENT TITLE MONTHLY MONTHLY MONTH ACTUAL TARGET VARIAN							
Executive-VP/Staff	3	3	0				
Executive Staff	13	13	0				
Nuclear Communications & Public Affairs	13	13	0				
Nuclear Controller	20	22	-2				
Nuclear Engineering	. 346	369	-23				
Nuclear Generation	1427	1505	-78				
Nuclear Support	385	446	-61				
Nuclear Quality Assurance	110	121	-11				
TOTALS	2317	2492	-175				

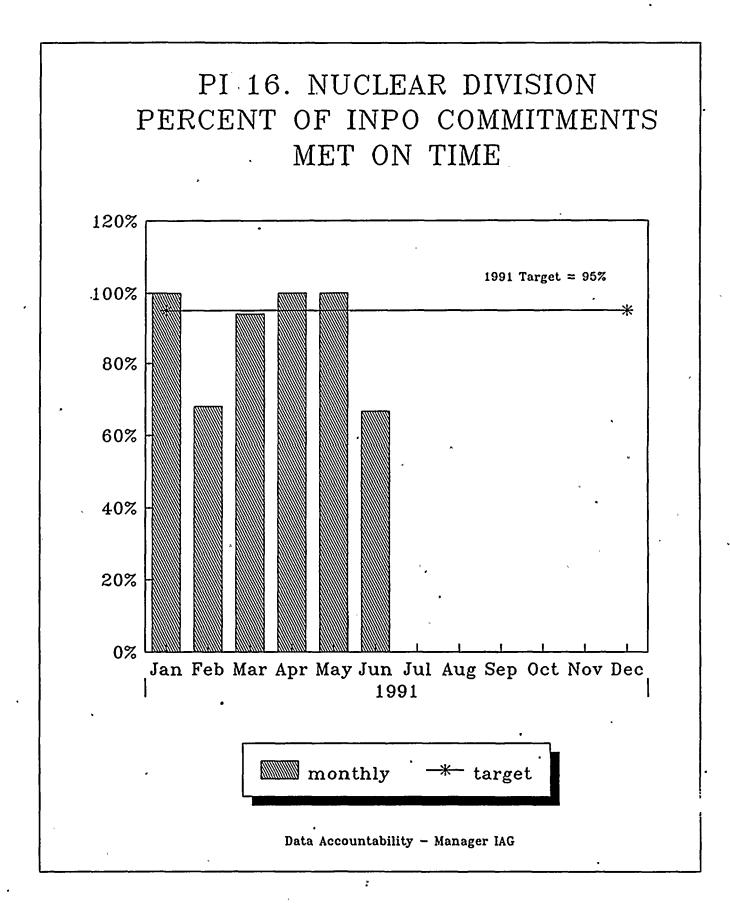


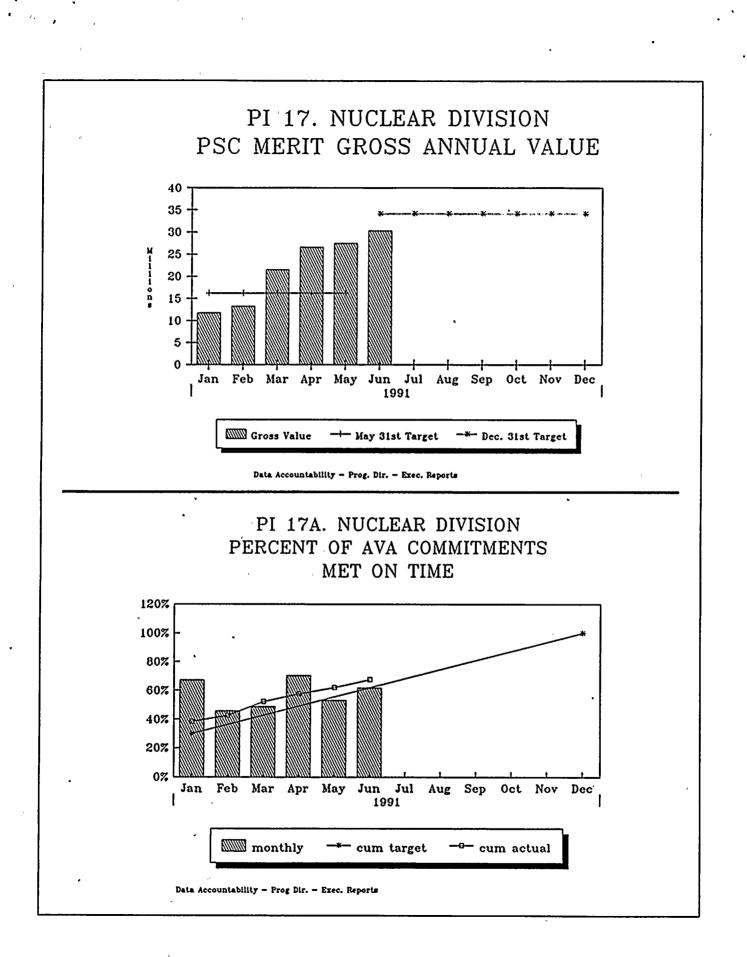


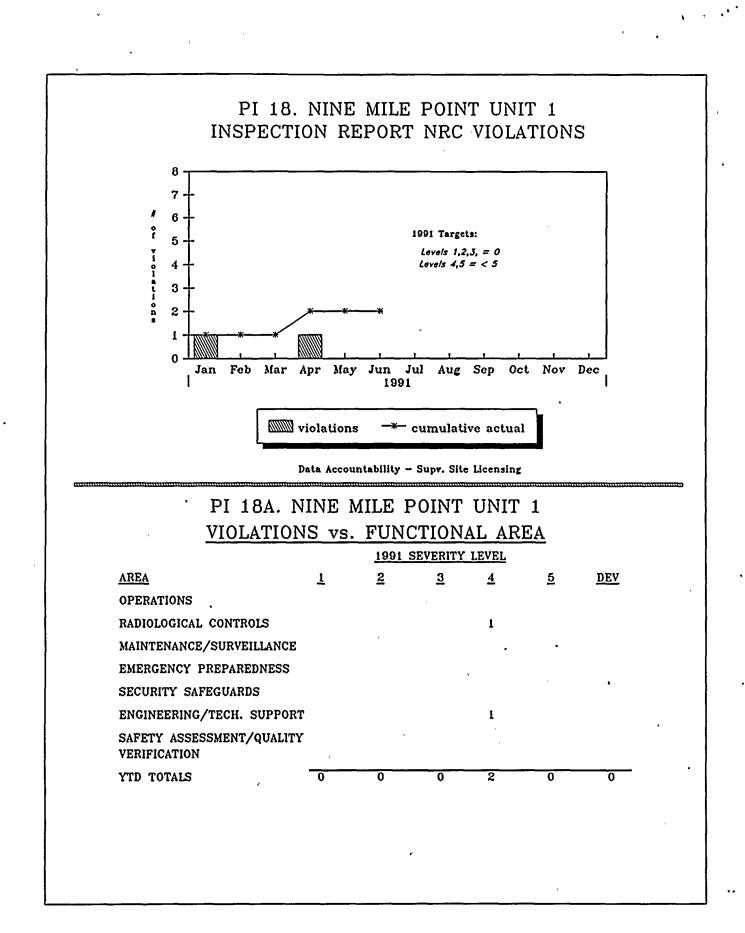
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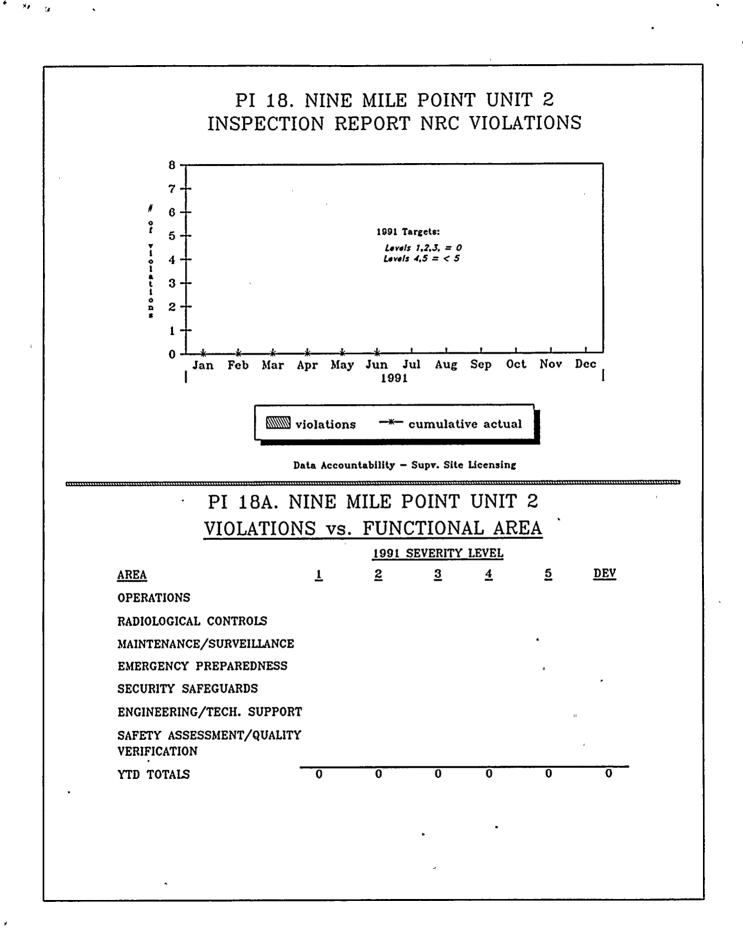




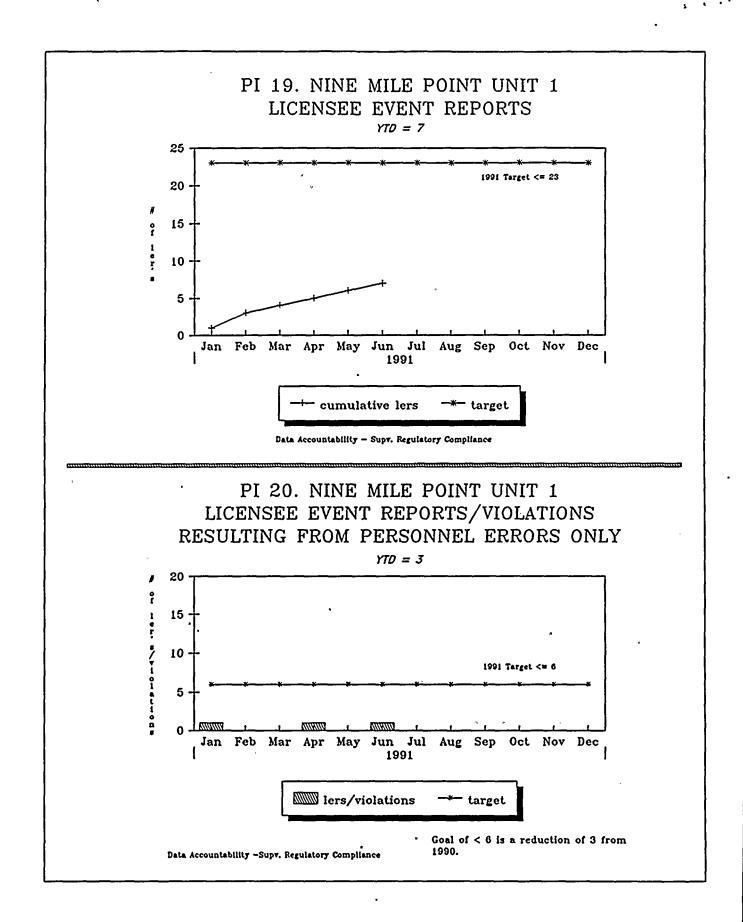




I-15



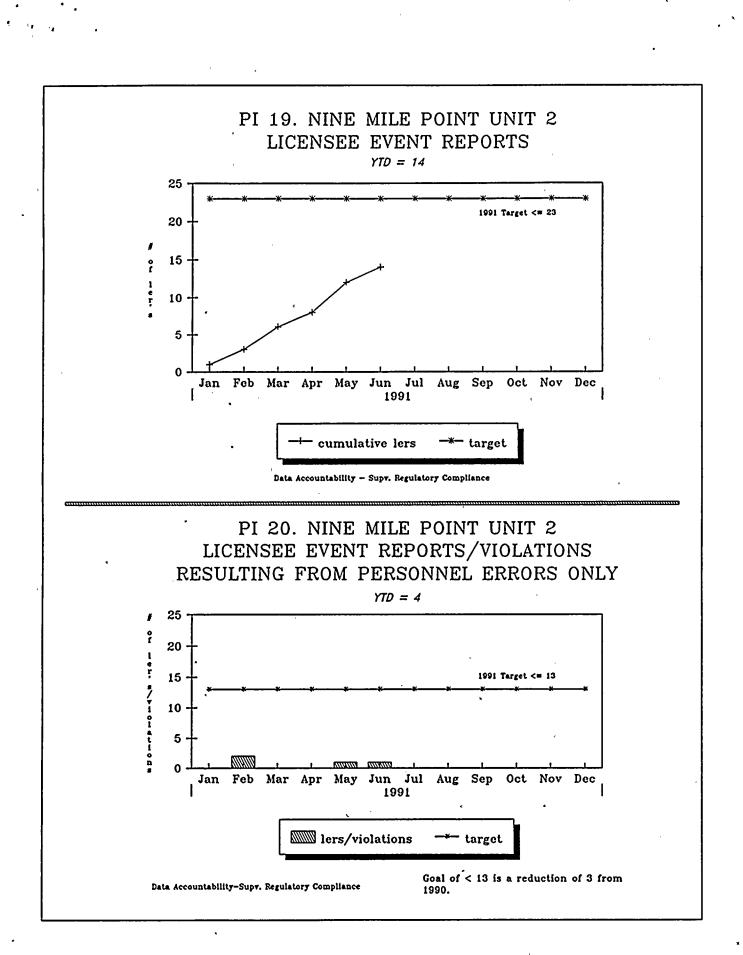
II-15



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I-16



#### **II-16**

# NRC ACTIVITIES

# **VIOLATIONS**

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Unit 1 - None

Unit 2 - None

# ENFORCEMENT ACTION

Unit 1 - None

Unit 2 - None

# **INSPECTIONS**

91-11 Combined Units Resident Inspection Completed June 26th.

There have been twelve (12) inspections to date in 1991.

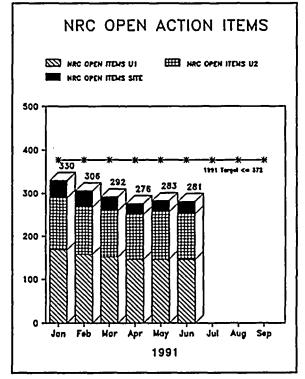
# SCHEDULED INSPECTIONS

July - Water Chemistry Inspection.

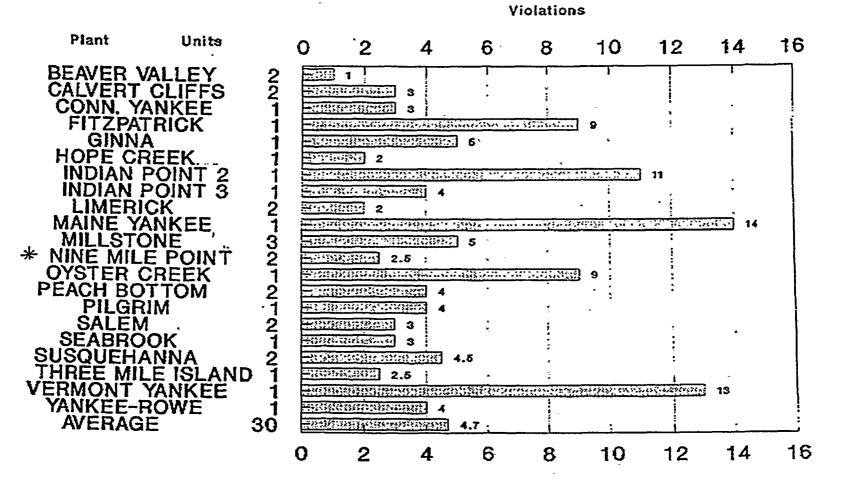
July/August - Radiological Controls Inspection.

July - Fitness For Duty.

Sept./Oct. - Electrical Distribution System Functional Inspection.



# Region 1 Violations Per Unit



**VIOLATIONS PER UNIT** 

C-17a

# INPO STATUS

Action items associated with the commitments for the 1990 August and 1989 Site Evaluations have been identified and accountability has been assigned. All commitments associated with the Spring 1989 Corporate Evaluation have been completed. There are currently four (4) open commitments as a result of INPO Evaluations.

Nine Mile Site - Status of INPO commitments

- There are a total of 117 action items in response to the INPO 1990 August evaluation.
- Through June, one hundred fifteen (115) items are complete.
- NMPC committed to ninety-four (94) action items in response to the INPO 1989 Spring Plant Evaluation.

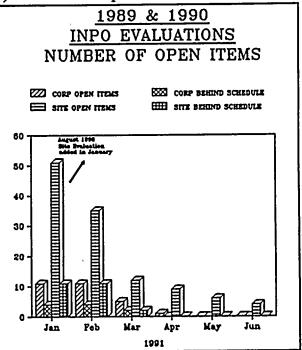
Through June, ninety-two (92) items are complete.

Corporate - Status of INPO commitments

• Complete

# Schedule

• A six (6) month update status report of commitments associated with the August 1990 evaluation was submitted to INPO during June.



 Bruce MacKenzie from INPO is assisting Quality Assurance in the HPES area June 27 - August 23, 1991.

# INPO\_STATUS (Cont<sup>3</sup>d)

- P. Wilde will participate in HPES Training July 8 through July 12.
- T. Evans, D. Hosmer and L. Pisano will participate in an INPO Outage Management Workshop July 16 through July 18.
- D. Zink will attend NPRDs Users Group meeting July 24 through July 26.
- R. Sanaker will participate as a peer evaluator for simulator visit at Dresden plant.
- The next site evaluation will be from September 9, 1991 through September 20, 1991, and the next corporate evaluation will be from September 30, 1991 through October 4, 1991. Simulator observations will commence July 15, 1991 and July 22, 1991 for Units 1 and 2 respectively.

# PSC ACTIVITIES

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The Nine Mile 2 Performance Incentive filing date has been extended to September 6, 1991. The extension was requested, in part, to provide the management committee sufficient time to review the proposal.

	A/ 05 70747	TARGET	]
NUCLEAR MERIT GOALS	% OF TOTAL MERIT AWARD	IARGEI	
		CRITERIA	S MILL.
Nine Mile 1 Reduce Amount of LLRW Disposal Volume	1.67	<339.5M <sup>3</sup> to	.50
Reduce Amount of LLRAY Disposal volume	1.07	≥319.5M <sup>3</sup>	~~~
Reduce Radiation Exposure	1.10	<130ManRem to <u>&gt;</u> 110ManRem	.33
Engineering Outage Support	1.67	Complete concep. Engr. of refuel	.50
Work Requests: Reduction of WR's to:		outage mods	
- Radwaste	.33	<50 <u>&gt;</u> 25	.10
- Fire	.33	<50 <u>&gt;</u> 25	.10
- Power Block Backlog	.66	<450 to <u>&gt;</u> 400 <20 to <u>&gt;</u> 15	.20 .10
Reduction of Nuisance Annunciators		<20 to ≥13	
Subtotal Nine Mile 1	6.09		1.83
Nine Mile 2			
Reduce Amount of LLRW Disposal Volume	1.67	<254.8M <sup>3</sup> to <u>&gt;</u> 234.8M <sup>3</sup>	.50
Net Electric Generation	6.67	4,705,000MWH	2.00
Reduce Radiation Exposure	1.10	<65ManRem to <u>&gt;</u> 55ManRem	.33
Engineering Outage Support	1.67	Issue Engineering installation plans	.50
Work Requests:	.47	<1650 to >1500	.14
Reduction Total Work Request Backlog Perform Safety Related PM's	.70	>96% to <u>&lt;</u> 99%	.21
Reduction of Nuisance Annunciators	.50	<35 to <u>&gt;20</u>	.15
Subtotal Nine Mile 2	12.78	·	3.83
Common			
Reduce Site Radiation Exposure	1.13	<195ManRem to <u>&gt;</u> 165ManRem	.34
Grand Total	20.0%		<b>\$</b> 6.0

# NMPC NUCLEAR FORECAST MERIT AWARD 6/1/91 - 12/31/91 JUNE 20, 1991

Note: The Nuclear Division's target for AVA savings will be determined at a later date.

# NUCLEAR DIVISION

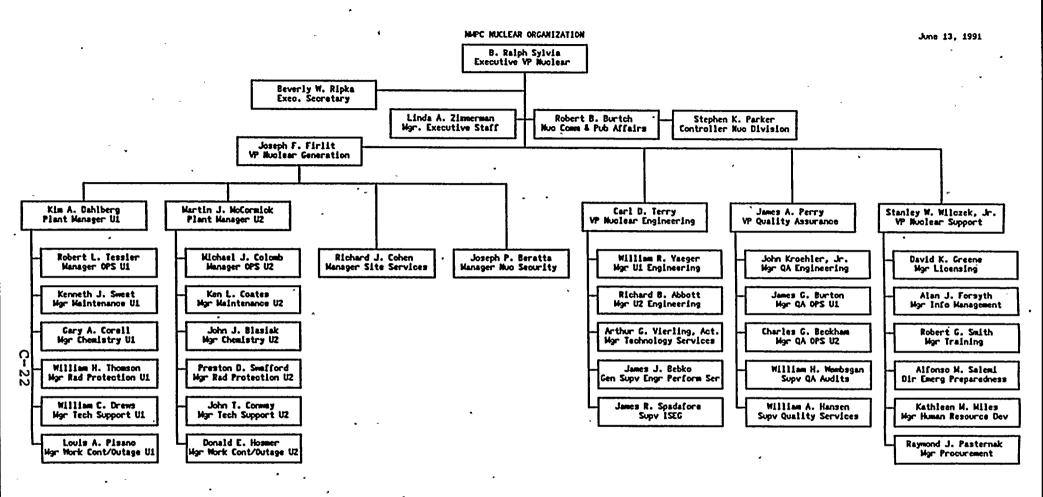
# **AVA Implementation Monthly Status Report**

June 1991

DEAS	This Month	<u>To Date</u>
deas implemented	120՝	1460
mplementation delayed (see current month exceptions below):		
verdue ideas (see current month exceptions below):	6	
deas No Longer Workable (see current month exceptions below):	52	294
pen Further Study (of 158)	17	41
otal Nuclear Division "Go" (includes "FS" ideas since made "Go")		2300
VA PROJECTED VALUE	This Month	<u>To Date</u>
et Savings Captured <sup>1</sup> :	\$2,130,700	\$37,018,900
incaptured savings <sup>2</sup> :	. \$2,158,900	\$1,665,350
991 Year-end target:	• • • • • • • • • • •	\$50,214,600
otal Nuclear Division AVA target:		\$61,052,530
	This Month	<u>To Data</u>
ross Annual Value of Ideas Implemented:	\$1.168.700	\$30,307,600
erit Goal (Dec. 1991)(Gross annual value excluding Unit 2 co-tenant sh	are):	\$34,049,900
OSITIONS (FTE'S)	This Month	To Date
aptured (see current month detail below):		-148
aptured (see current month detail below):	+20	
dded (see current month detail below):		-57 30
vertime FTE's captured:	+26.87	-156.30
otal captured to date:	"Color	, ,

<sup>1</sup> Indicates annualized savings that have started to accrue. Decreased this month due to PSC adjustment.

<sup>2</sup> Indicates annualized savings that will not be captured due to ideas that are no longer considered workable. Also includes any changes in original value in savings for ideas which have been implemented. Please note this was only reductions in original value on previous reports. This month several implemented ideas showed large additions and the report value now reflects both reductions and additions.



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# **DEFINITIONS**

#### CAPACITY FACTOR (MDC)

The capacity factor, maximum dependable capacity (MDC) is computed by dividing the net electrical energy generated (gross electrical output of the unit minus the station service loads) by the product of maximum dependable capacity times the gross hours in the reporting period.

#### CHEMISTRY PERFORMANCE INDEX (CPI) - Reactor Water

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

[(Cl)/15 ppb + (SO4)/15 ppb + Conductivity/0.2]

#### COLLECTIVE RADIATION EXPOSURE

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

#### FUEL RELIABILITY

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

Steady state is defined as continuous operations above 85 percent power for at least seven days.

The following data is required to determine each unit's value for this indicator:

BWRs the activity rate (microcuries/second) of the krypton-85m, krypton-87, krypton-88, xenon-133, xenon-135 and xenon-138 isotopes.

#### LICENSEE EVENT REPORTS

Reports which identify events which meet the criteria of 1-CFR50.73.

# LOST TIME ACCIDENT RATE

A lost time accident is any injury which involves days away from work (at least one full work day other than the day of the injury).

The Lost Time Accident Rate is the number of lost time accidents per 200,000 man-hours worked (100 manyears).

### NON-OUTAGE POWER BLOCK BACKLOG

The total number of corrective maintenance work requests which do not require an outage to be worked on. Power block work requests are those associated with the safe, reliable generation of electricity and apply primarily to plant systems.

#### NRC VIOLATIONS BY DATE OF DISCOVERY

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

### PERCENT OF COMMITMENTS TO INTERFACING AGENCIES MET ON TIME

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

#### SAFETY SYSTEM PERFORMANCE

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

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

#### THERMAL PERFORMANCE

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Is defined as the ratio of the design gross heat rate (corrected) to the adjusted actual gross heat rate.

= Design gross heat rate corrected: is determined by correcting the initial plant design gross heat rate following plant modifications or operating deviations.

Thermal Performance is determined as follows:

design gross heat rate (corrected) x 100% adjusted actual gross heat rate

# UNIT CAPABILITY FACTOR

Unit capability factor is defined as the ratio of the available energy generation over a given time period to the reference energy generation over the same time period, expressed as a percentage. Both of these energy generation terms are determined relative to reference ambient conditions.

Available energy generation is the energy that could have been produced under reference ambient conditions considering only limitations within control of plant management, i.e., plant equipment and personnel performance, and work control.

Reference energy generation is the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions.

Reference ambient conditions are environmental conditions representative of the annual mean (or typical) ambient conditions for the unit.

The unit capability factor is determined for each period as shown below:

value for a unit =  $\frac{(\text{REG - PEL - UEL}) \times 100\%}{\text{REG}}$ 

where REG = reference energy generation for the period PEL = total planned energy losses for the period UEL = total unplanned energy losses for the period

#### UNPLANNED AUTOMATIC SCRAMS PER YEAR (7.000 CRITICAL HOURS)

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

### UNPLANNED CAPABILITY LOSS

Unplanned capability loss factor is defined as the ratio of the unplanned energy losses during a given period of time, to the reference energy generation, expressed as a percentage.

Unplanned energy loss is energy that was not produced during the period because of unplanned shutdowns, outage extensions, or unplanned load reductions due to causes under plant management control. Causes of energy losses are considered to be unplanned if they are not scheduled at least four weeks in advance. Causes considered to be under plant management control are further defined in the clarifying notes.

Reference energy generation is the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions throughout the period. Reference ambient conditions are environmental conditions representative of the annual mean (or typical) ambient conditions for the unit.

Reference energy generation is the energy that could be produced if the unit were operated continuously at full power under reference ambient conditions throughout the period. Reference ambient conditions are environmental conditions representative of the annual mean (or typical) ambient conditions for the unit.

The unplanned capability loss factor is determined for each period as shown below:

value for a unit = <u>UEL x 100%</u> REG

Where UEL = total unplanned energy losses for the period REG = reference energy generation for the period

#### UNPLANNED SAFETY SYSTEM ACTUATION

Occurs when a setpoint for the system is reached or when a spurious/inadvertent signal is generated and major equipment is actuated. The performance indicator, Unplanned Safety System Actuation, is the sum of the following actuations:

Emergency Core Cooling System actuations that result from off-normal conditions (setpoint reached, or spurious/inadvertent signals. HPCI actuations due to Turbine Trip are not included.

Emergency AC Power actuations as a result of loss of power to a safeguard's bus. Spurious/inadvertent starts of emergency diesel generators are not counted.

#### VOLUME OF LOW LEVEL SOLID RADWASTE

Average annual volume of Low-Level solid Radioactive Waste Generated (shipped or ready for shipmen) final form) per unit

- Low level solid radioactive waste includes dry, contaminated materials (e.g. trash, wood, tools), waste solidification system output, and dewatered resins, filters, and sludge. Spent nuclear fuel is not included.