



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

July 26, 1988

Docket No. 50-305

Mr. D. C. Hintz
Vice President - Nuclear Power
Wisconsin Public Service
Corporation
P.O. Box 19002
Green Bay, Wisconsin 54037-9002

Dear Mr. Hintz:

SUBJECT: TRANSMITTAL OF PERFORMANCE INDICATOR DATA

The NRC Office for Analysis and Evaluation of Operational Data (AEOD) issues quarterly a report entitled "Performance Indicators for Operating Commercial Nuclear Power Reactors." Six performance indicators have initially been approved for implementation in the NRC's performance indicator program: automatic scrams while critical, safety system actuations, significant events, safety system failures, forced outage rate and equipment forced outages per 1000 critical hours. The latest report dated May 1988 was issued in two parts. The first part contains summary performance indicator information (e.g., number of scrams) in the form of graphs and trend charts. The second part contains more detailed performance indicator information (e.g., description of scrams) and tabular data used in the performance indicator statistics. In accordance with the policy guidance provided in SECY-87-207, a copy of this report has recently been placed in the Public Document Room (PDR).

Provided for your information are pages from the May 1988 Performance Indicator Report that are most pertinent to Kewaunee. Attachment 1 contains charts for each of the six performance indicators that show the quarterly data for Kewaunee against the quarterly industry average data. A four-quarter moving average of the data is also plotted on the charts to provide trend information. Attachment 2 includes two bar charts. The top bar chart is a measure of Kewaunee's recent performance (last two-quarter average) compared to earlier performance (previous four-quarter average). The bottom bar chart is a measure of the performance indicator four-quarter moving average for Kewaunee relative to the industry four-quarter moving average. Note that the bar graphs provide summary information that can also be obtained from the charts in Attachment 1.

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Mr. D. C. Hintz

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In reviewing this data, it is important to recognize that the performance indicators are intended only for use as one of several tools which the NRC utilizes to monitor trends in performance for each plant. The Systematic Assessment of Licensee Performance (SALP) program, for example, is another independent approach for determining licensee and plant performance. Our approach to these performance indicators is that they can be used as assessment tools to identify declining performance, but only when the underlying causes of this declining performance are carefully assessed, evaluated and understood. Without this understanding, use of performance indicators can lead to a misinterpretation of the data.

Attachment 3 contains a 7-year history of the collective radiation exposure for Kewaunee (Table 11.1) and Attachment 4 contains a 3-year moving average of this same data (Table 11.2). Table 11.12, provided as attachment 5, contains the unit critical hours for each of the eight quarters considered in this report. Finally, Attachment 6 contains a brief description of Safety System Actuations (SSA's), Safety System Failures (SSF's), scrams and significant events (SE's).

You should note that the notation "PREDECISIONAL" has been crossed out on each page of the report. With placement of this report in the PDR and issuance of the pertinent pages to the holders of operating licenses, this designation is no longer applicable.

As discussed with Dan Ropson of your staff, there should be no safety system actuations counted for quarter 87-3 and no significant events counted for quarter 86-2. The next quarterly performance indicator report will reflect the corrected data.

If you have any questions on this matter, please contact me at (301)492-1379.

Sincerely,

Joseph G. Giitter, Project Manager
Project Directorate III-3
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
As stated

cc: See next page

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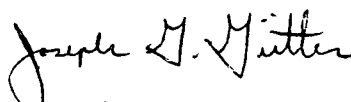
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cc: See next page

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Chief Engineer
Wisconsin Public Service Commission
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Madison, Wisconsin 53707

FIGURE 4.45

PREDECISIONAL

KEWAUNEE

86-2 to 88-1

Legend:

-  Indicator
-  Older Plant Average
-  Critical Hours
-  4 Quarter Moving Average

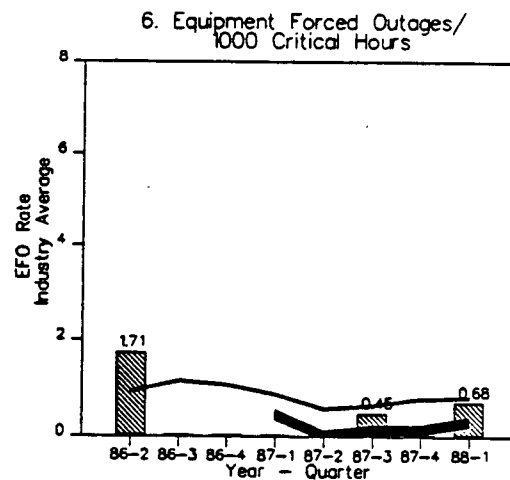
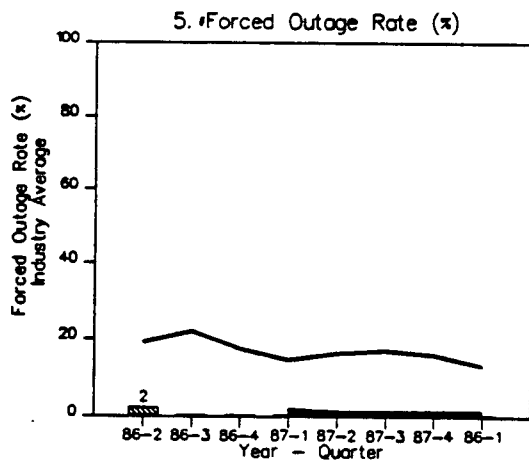
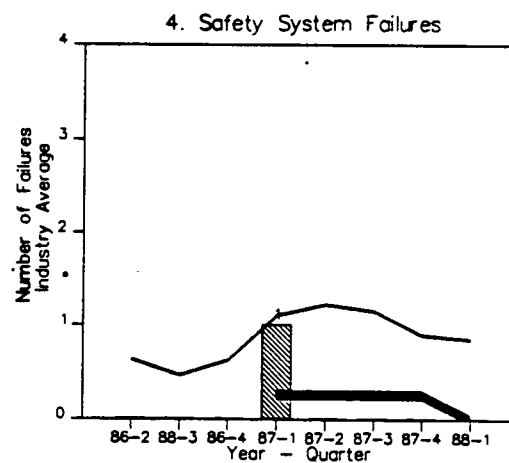
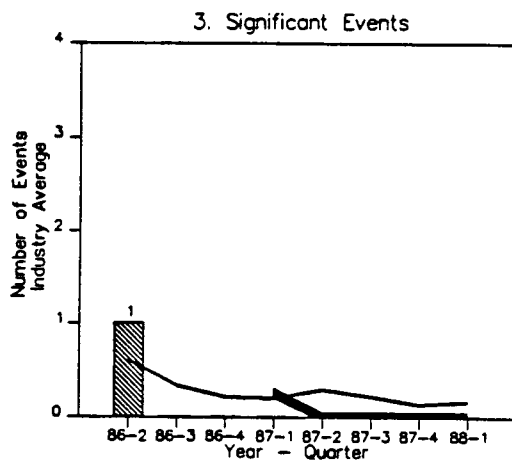
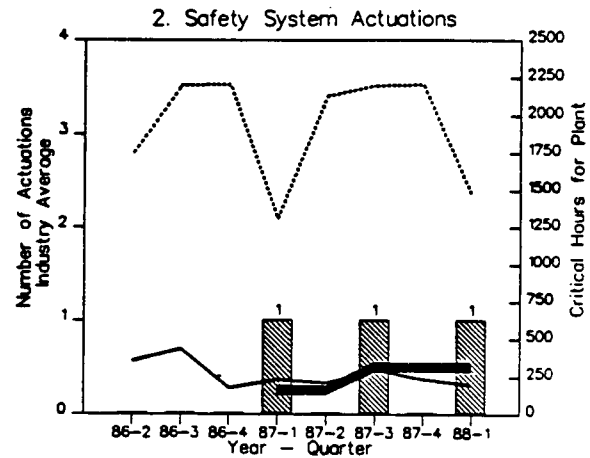
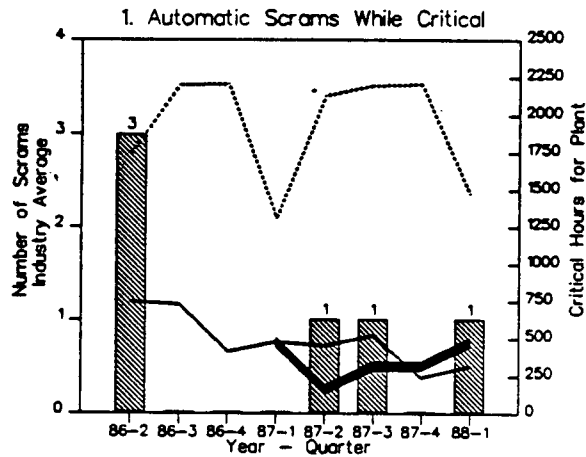
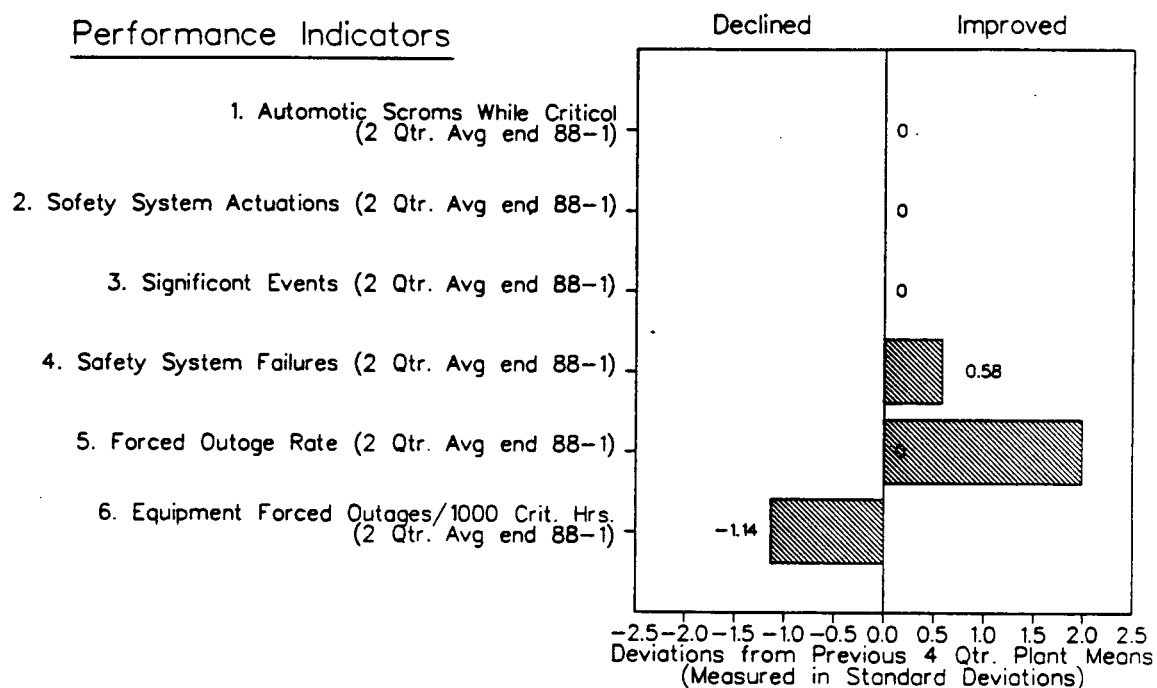


FIGURE 4.45

PREDECISIONAL

KEWAUNEE: Trends

Performance Indicators

KEWAUNEE: Deviations from Older Plant Means

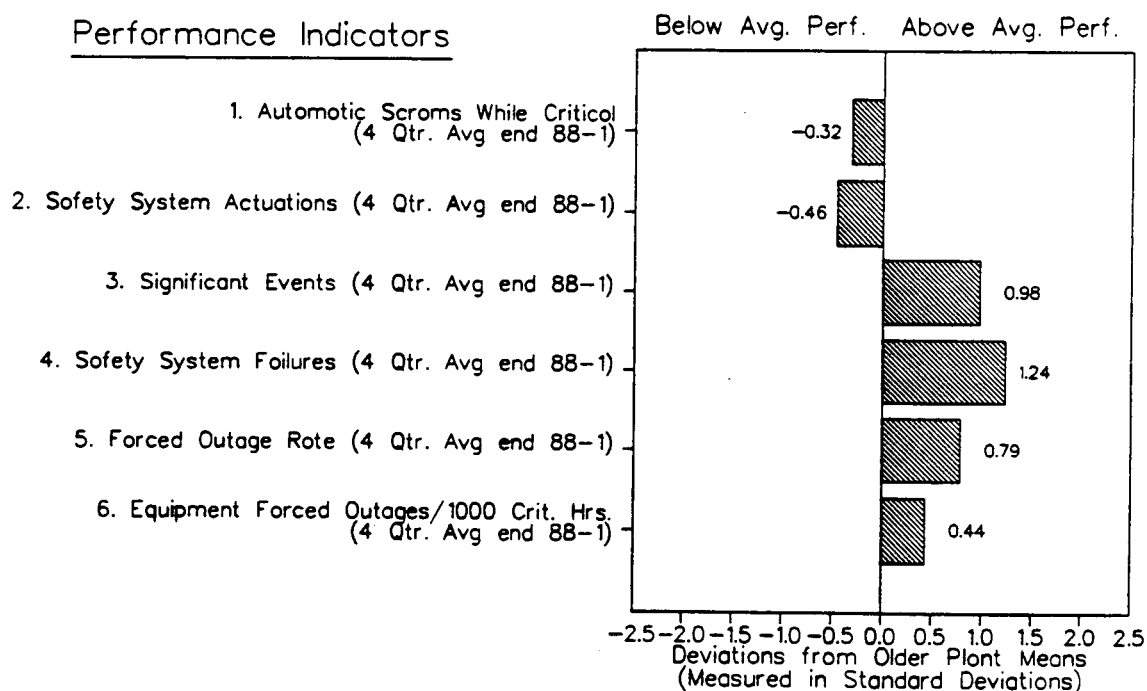
Performance Indicators

TABLE 11.1

COLLECTIVE RADIATION EXPOSURE					-- YEARLY DATA			
NAME	1980	1981	1982	1983	1984	1985	1986	1987
ARKANSAS 1	171	551	402	699	403	155	571	191
ARKANSAS 2	171	551	402	699	403	155	571	191
BEAVER VALLEY 1	553	229	599	772	504	60	627	210
BEAVER VALLEY 2								
BIG ROCK POINT	354	160	328	263	155	291	84	222
BRAIDWOOD 1								
BRAIDWOOD 2								
BROWNS FERRY 1	608	793	740	1121	647	386	525	394
BROWNS FERRY 2	608	793	740	1121	647	386	525	394
BROWNS FERRY 3	608	793	740	1121	647	386	525	394
BRUNSWICK 1	1935	1319	1896	1738	1630	1402	955	710
BRUNSWICK 2	1935	1319	1896	1738	1630	1402	955	710
BYRON 1							104	835
BYRON 2								
CALLAWAY						70	225	393
CALVERT CLIFFS 1	339	304	529	334	240	347	174	206
CALVERT CLIFFS 2	339	304	529	334	240	347	174	206
CATAWBA 1							143	225
CATAWBA 2							143	225
CLINTON 1								
COOK 1	247	328	350	329	381	473	373	333
COOK 2	247	328	350	329	381	473	373	333
COOPER STATION	859	579	542	1293	799	1333	320	112
CRYSTAL RIVER 3	625	408	177	552	49	689	472	524
DAVIS-BESSE	154	58	164	80	177	71	124	47
DIABLO CANYON 1							304	168
DIABLO CANYON 2								168
DRESDEN 2	702	934	974	1194	591	843	1398	623
DRESDEN 3	702	934	974	1194	591	843	1398	623
DUANE ARNOLD	671	790	229	1135	189	1112	187	667
FARLEY 1	435	256	242	511	451	1276	429	299
FARLEY 2		256	242	511	451	1276	429	299
FERMI 2								
FITZPATRICK	2040	1425	1190	1090	971	1845	411	940
FORT CALHOUN	668	458	217	433	563	632	74	389
FORT ST. VRAIN								
GINNA	708	655	1140	855	394	426	357	344
GRAND GULF							436	420
HADDAM NECK	1353	1036	126	1384	1216	101	1567	750
HATCH 1	225	669	730	650	1109	445	749	408
HATCH 2	225	669	730	650	1109	445	749	408
HOPE CREEK								117
INDIAN POINT 2	971	2731	1635	486	2644	192	1250	1217
INDIAN POINT 3	308	364	1226	607	230	570	202	500
KEWAUNEE	165	141	101	165	139	176	169	226
LASALLE 1					252	343	475	725

TABLE 11.2

RADIATION EXPOSURE		-- THREE YEAR MOVING AVERAGE				
(3 years ending in)						
NAME	1982	1983	1984	1985	1986	1987

ARKANSAS 1	375	551	501	419	376	419
ARKANSAS 2	375	551	501	419	376	419
BEAVER VALLEY 1	460	533	625	445	397	445
BEAVER VALLEY 2						
BIG ROCK POINT	281	250	249	236	177	236
BRAIDWOOD 1						
BRAIDWOOD 2						
BROWNS FERRY 1	714	885	836	718	519	718
BROWNS FERRY 2	714	885	836	718	519	718
BROWNS FERRY 3	714	885	836	718	519	718
BRUNSWICK 1	1717	1651	1755	1590	1329	1590
BRUNSWICK 2	1717	1651	1755	1590	1329	1590
BYRON 1						
BYRON 2						
CALLAWAY						70
CALVERT CLIFFS 1	391	389	368	307	254	307
CALVERT CLIFFS 2	391	389	368	307	254	307
CATAWBA 1						
CATAWBA 2						
CLINTON 1						
COOK 1	308	336	353	394	409	394
COOK 2	308	336	353	394	409	394
COOPER STATION	660	805	878	1142	817	1142
CRYSTAL RIVER 3	403	379	259	430	403	430
DAVIS-BESSE	125	101	140	109	124	109
DIABLO CANYON 1						
DIABLO CANYON 2						
DRESDEN 2	870	1034	920	876	944	876
DRESDEN 3	870	1034	920	876	944	876
DUANE ARNOLD	563	718	518	812	496	812
FARLEY 1	311	336	401	746	719	746
FARLEY 2	249	336	401	746	719	746
FERMI 2						
FITZPATRICK	1552	1235	1084	1302	1076	1302
FORT CALHOUN	448	369	404	543	423	543
FORT ST. VRAIN						
GINNA	834	883	796	558	392	558
GRAND GULF						
HADDAM NECK	838	849	909	900	961	900
HATCH 1	541	683	830	735	768	735
HATCH 2	541	683	830	735	768	735
HOPE CREEK						
INDIAN POINT 2	1779	1617	1588	1107	1362	1107
INDIAN POINT 3	633	732	688	469	334	469
KEWAUNEE	136	136	135	160	161	160
LASALLE 1					357	298

TABLE 11.12

CRITICAL HOURS

-- QUARTERLY DATA

(The latest quarter data are preliminary)

NAME	86-2	86-3	86-4	87-1	87-2	87-3	87-4	88-1
ARKANSAS 1	2173	1564	72	1935	2183	2177	1561	2152
ARKANSAS 2	1738	423	2093	2160	1413	1956	2186	1028
BEAVER VALLEY 1	1104	842	2182	2126	1278	2208	1727	744
BEAVER VALLEY 2						603	1714	1785
BIG ROCK POINT	2183	1963	2209	579	1597	2117	1921	1997
BRAIDWOOD 1					369	1060	2000	86
BRAIDWOOD 2								
BROWNS FERRY 1	0	0	0	0	0	0	0	0
BROWNS FERRY 2	0	0	0	0	0	0	0	0
BROWNS FERRY 3	0	0	0	0	0	0	0	0
BRUNSWICK 1	2122	2004	2163	1064	391	2125	2209	1531
BRUNSWICK 2	289	2093	1851	1801	2110	2208	2209	24
BYRON 1	2183	1691	2169	1058	815	2128	2209	2184
BYRON 2				1723	1592	1468	1549	2170
CALLAWAY	1548	2135	2209	2138	1240	1724	1126	2078
CALVERT CLIFFS 1	2183	2170	559	1909	857	1866	1983	2184
CALVERT CLIFFS 2	2142	1973	2208	1733	0	2121	2085	1382
CATAWBA 1	1610	704	1080	1816	2116	2029	114	1898
CATAWBA 2	418	1209	1052	1836	1941	1515	1923	378
CLINTON 1				509	1799	1869	1173	1875
COOK 1	1367	1822	2187	2160	1749	0	2092	2132
COOK 2	0	1999	2209	1479	1679	1158	1966	2184
COOPER STATION	2183	2177	78	2009	1998	2208	2209	1297
CRYSTAL RIVER 3	266	2208	1193	1657	2183	1494	0	1913
DAVIS-BESSE	0	0	178	2016	1301	1933	2176	1661
DIABLO CANYON 1	2183	1429	227	2013	2134	2208	2121	1531
DIABLO CANYON 2	2119	2121	2209	2061	72	2208	2058	2117
DRESDEN 2	1512	2097	1434	0	1649	1637	2183	2184
DRESDEN 3	0	760	2006	1778	2067	1449	2209	2066
DUANE ARNOLD	1903	2016	1662	1694	83	2069	1822	2184
FARLEY 1	2168	2166	816	2136	1957	2208	2007	2041
FARLEY 2	1110	2100	2209	1803	2183	2208	344	2184
FERMI 2	0	580	823	1345	1168	649	1986	831
FITZPATRICK	2105	2124	2015	356	1645	2041	2148	1802
FORT CALHOUN	2183	2129	2209	1571	621	2208	2209	2184
FORT ST. VRAIN	1366	0	0	0	1710	703	495	2149
GINNA	2183	2176	2188	1415	2183	2208	2209	1166
GRAND GULF	2097	1437	167	2026	2157	2119	891	1970
HADDAM NECK	1297	1679	1998	2160	2149	420	0	258
HATCH 1	1311	2132	2078	2136	678	2169	2209	2144
HATCH 2	2036	1750	574	2141	2165	2005	2209	616
HOPE CREEK	32	1144	1494	1989	2183	1788	1609	1045
INDIAN POINT 2	643	2174	1964	1924	2119	2208	96	1673
INDIAN POINT 3	1508	736	2193	1983	659	674	2180	2158
KEWAUNEE	1752	2208	2209	1314	2136	2202	2209	1478
LASALLE 1	0	240	2156	1753	1391	330	2135	1730

TABLE 10.45

KEWAUNEE

PI EVENTS FOR 87-4

NONE

PI EVENTS FOR 88-1

SCRAM 03/02/88 LER# 50.72#: 11654 POWER:

DESC: 4180V BUS BARS SHORTED CAUSING RX TRIP.

SSA 03/28/88 LER# 50.72#: 11884 POWER:

DESC: DURING DG LOAD SHED AND SEQUENCING TESTING RECEIVED UNANTICIPATED SI ACTUATIONS.

TYPE	86-2	86-3	86-4	87-1	87-2	87-3	87-4	88-1
SCRAMS >15% POWER/1000 CRITICAL HOURS	1.14	0.00	0.00	0.00	0.47	0.45	0.00	0.68
SCRAMS <15% POWER	1	0	0	0	0	0	0	0
TOTAL SCRAMS	3	0	0	0	1	1	0	1
SAFETY SYSTEM ACTUATIONS	0	0	0	1	0	1	0	1
SIGNIFICANT EVENTS	1	0	0	0	0	0	0	0
SAFETY SYSTEM FAILURES	0	0	0	1	0	0	0	0
FORCED OUTAGE RATE (%)	2	0	0	0	0	0	0	0
EQUIP. FORCED OUTAGES/1000 CRITICAL HOURS	1.71	0.00	0.00	0.00	0.00	0.45	0.00	0.68
CRITICAL HOURS	1752	2208	2209	1314	2136	2202	2209	1478