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(2-76)

U.S. NUCLEAR REGULATORY COMMISSION

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INPUT FORM

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1 SIGNED

DESCRIPTION

1p

ENCLOSURE

Consists of monthly report on
impingment of fish for June, 1977....

6p

PLANT NAME: COOK UNITS 1 & 2
jcm 09/30/77

1 ENCL *

#2 FOR ACTION/INFORMATION

#1

BRANCH CHIEF:

KNIEL

BC: DAVIS (7)

PROJECT MANAGER:

MEYANICZAK

LIC. ASST: **

LEE

**FOR DISTRIBUTION AS FOLLOWS:

1 EACH TO EPA HQS, EPA REGION, NOAA, F & W, & F & D

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LPDR: ST. JOSEPH PH.

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Envis
772730121
GD

REGULATORY DOCKET FILE COPY



INDIANA & MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106

September 15, 1977

Directorate of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20545

Docket No. 50-315
50-316

Gentlemen:

Pursuant to the requirements of Section 4.1.2.1.2 of the Appendix B Environmental Technical Specifications for the Donald C. Cook Nuclear Plant, the attached monthly report on impingement of fish is submitted.

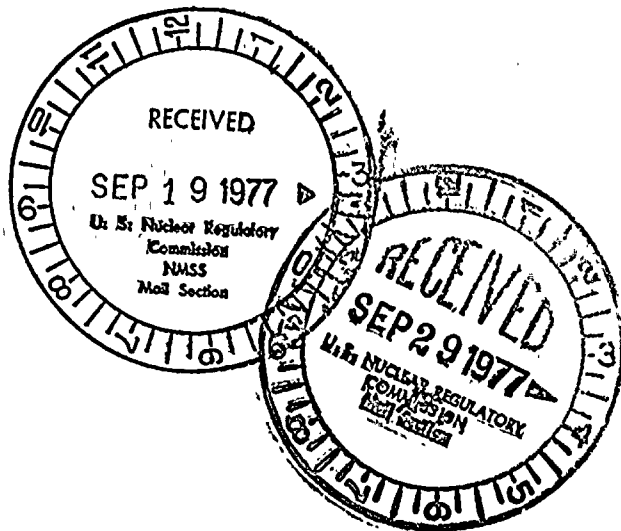
This report covers the month of June, 1977.

D. V. Shaller
Plant Manager

DVS/mj

Attachments

cc: R. W. Jurgensen
J. E. Dolan
G. E. Lien
R. J. Vollen
K. R. Baker RO: III
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NRC RO: III
PNSRC File



772730121



ABBREVIATIONS AND STATION IDENTIFICATIONS FOR MONTHLY FIELD DATA REPORTS

Stations:

A - north of plant 0-2 m
B - south of plant 0-2 m
C - south of plant 6.1 m
D - south of plant 9.1 m
E - off Cook Plant 21.3 m
F - Warren Dunes 0-2 m
G - Warren Dunes 6.1 m
H - Warren Dunes 9.1 m
Q - north of plant 9.1 m
R - north of plant 6.1 m
W - Warren Dunes 21.3 m

Time:

D = day
N = night

Numbers in catch:

F - few (1-9 fish)
M - many (10-50 fish)
A - abundant (50 fish)
When numbers are given it
is the exact number of fish.

Species:

Alewife-----AL	Goldfish-----GF	River redhorse-----RR
Atlantic salmon-----AS	Grass pickeral-----GP	Rock bass-----RB
Bigmouth shiner-----BS	Green sunfish-----GN	Round whitefish-----RW
Black bullhead-----BB	Johnny darter-----JD	Sand shiner-----SH
Black crappie-----BC	Lake chub-----LC	Sauger-----SA
Bloater-----BL	Lake Herring-----LH	Sea lamprey-----SL
Bluegill-----BG	Lake sturgeon-----LG	Shorthead redhorse-----SR
Bluntnose minnow-----BM	Lake trout-----LT	Shortnose gar-----SG
Bowfin-----BF	Lake whitefish-----LW	Silver chub-----SC
Brook trout-----TB	Largemouth bass-----LB	Slimy sculpin-----SS
Brown trout-----BT	Log perch-----LP	Smallmouth bass-----SB
Burbot-----BR	Longnose dace-----LD	Splake-----SX
Carp-----CP	Longnose gar-----LR	Spoonhead sculpin-----PN
Channel catfish-----CC	Longnose sucker-----LS	Spotfin shiner-----SF
Chestnut lamprey-----CL	Mimic shiner-----MC	Spottail shiner-----SP
Chinook salmon-----CH	Mottled sculpin-----MS	Steelhead-----ST
Common shiner-----CS	Mudminnow-----MM	Tiger muskey-----TM
Creek chub-----CR	Ninespine stickleback-----NS	Trout-perch-----TP
Emerald shiner-----ES	Northern pike-----NP	Unidentified coregonid-----XC
Fathead minnow-----PP	Pirate perch-----PR	Unidentified pisces-----XX
Fourhorned sculpin-----FS	Pink salmon-----PK	Walleye-----WL
Freshwater drum-----FD	Pumpkinseed-----PS	White crappie-----WC
Gizzard shad-----GS	Quillback-----QL	White sucker-----WS
Golden redhorse-----GR	Rainbow smelt-----SM	Yellow bullhead-----YB
Golden shiner-----GL	Rainbow trout-----RT	Yellow perch-----YP
		Zero fish caught-----ZZ



MONTH: JUNE, 1977

WEIGHT IN KILOGRAMS
TEMPERATURE IN DEGREES CENTIGRADE
PERCENTAGES ARE OF TOTAL SAMPLED THIS MONTH

TEMP C	1		2		3		4		5		6		7		8	
	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	15.7 NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	17.2 NUMBER	WEIGHT
SPECIES																
SP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.03
AL	0	0.0	0	0.0	0	0.0	78	2.33	0	0.0	0	0.0	0	0.0	177	5.56
SM	0	0.0	0	0.0	0	0.0	1	0.03	0	0.0	0	0.0	0	0.0	15	0.10
YP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.52
TP	0	0.0	0	0.0	0	0.0	1	0.01	0	0.0	0	0.0	0	0.0	21	0.12
JD	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.00
NS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.00
SS	0	0.0	0	0.0	0	0.0	2	0.01	0	0.0	0	0.0	0	0.0	20	0.11
XC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.03
BR	0	0.0	0	0.0	0	0.0	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
TOTALS	0	0.0	0	0.0	0	0.0	83	2.58	0	0.0	0	0.0	0	0.0	244	6.47
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	3.52	4.10	0.0	0.0	0.0	0.0	0.0	0.0	10.35	10.25

MONTH: JUNE, 1977

WEIGHT IN KILOGRAMS
TEMPERATURE IN DEGREES CENTIGRADE
PERCENTAGES ARE OF TOTAL SAMPLED THIS MONTH

TEMP C	9		10		11		12		13		14		15		16	
	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	16.5 NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	16.2 NUMBER	WEIGHT
SPECIES																
CP	0	0.0	0	0.0	0	0.0	2	0.03	0	0.0	0	0.0	0	0.0	3	0.02
SM	0	0.0	0	0.0	0	0.0	375	10.48	0	0.0	0	0.0	0	0.0	186	5.53
YP	0	0.0	0	0.0	0	0.0	1	0.05	0	0.0	0	0.0	0	0.0	0	0.0
TP	0	0.0	0	0.0	0	0.0	1	0.01	0	0.0	0	0.0	0	0.0	4	1.12
JD	0	0.0	0	0.0	0	0.0	5	0.03	0	0.0	0	0.0	0	0.0	2	0.02
NS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.00
SS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
XC	0	0.0	0	0.0	0	0.0	3	0.02	0	0.0	0	0.0	0	0.0	0	0.0
BR	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
TOTALS	0	0.0	0	0.0	0	0.0	387	10.62	0	0.0	0	0.0	0	0.0	196	6.70
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	16.41	16.83	0.0	0.0	0.0	0.0	0.0	0.0	8.31	10.63

MONTH: JUNE, 1977

WEIGHT IN KILOGRAMS
TEMPERATURE IN DEGREES CENTIGRADE
PERCENTAGES ARE OF TOTAL SAMPLED THIS MONTH

TEMP C	17		18		19		20		21		22		23		24	
	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	20.9 NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	20.2 NUMBER	WEIGHT
SPECIES																
SP	0	0.0	0	0.0	0	0.0	10	1.47	0	0.0	0	0.0	0	0.0	0	0.0
AL	0	0.0	0	0.0	0	0.0	209	5.32	0	0.0	0	0.0	0	0.0	815	18.43
SM	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
YP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.59
TP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.04
JD	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
SS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.01
XC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
BR	0	0.0	0	0.0	0	0.0	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
TOTALS	0	0.0	0	0.0	0	0.0	220	7.09	0	0.0	0	0.0	0	0.0	825	19.07
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	9.33	11.24	0.0	0.0	0.0	0.0	0.0	0.0	34.99	30.22

MONTH: JUNE, 1977

WEIGHT IN KILOGRAMS
TEMPERATURE IN DEGREES CENTIGRADE
PERCENTAGES ARE OF TOTAL SAMPLED THIS MONTH

SPECIES	25		26		27		28		29		30		31		TOT. NO.	TOT. WT.
	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	21.5 NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT	NO SAMPLING NUMBER	WEIGHT		
SP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	18	1.56
AL	0	0.0	0	0.0	0	0.0	395	9.62	0	0.0	0	0.0	0	0.0	2235	57.27
SM	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	17	0.17
YP	0	0.0	0	0.0	0	0.0	6	0.93	0	0.0	0	0.0	0	0.0	18	3.18
TP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	32	0.22
JD	0	0.0	0	0.0	0	0.0	1	0.00	0	0.0	0	0.0	0	0.0	4	0.01
NS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.00
SS	0	0.0	0	0.0	0	0.0	1	0.01	0	0.0	0	0.0	0	0.0	29	0.16
XC	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.03
BR	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.50
TOTALS	0	0.0	0	0.0	0	0.0	403	10.56	0	0.0	0	0.0	0	0.0	2358	63.09
PERCENT	0.0	0.0	0.0	0.0	0.0	0.0	17.09	16.74	0.0	0.0	0.0	0.0	0.0	0.0	100.00	100.00

MONTH: JUNE, 1977

WEIGHT IN KILOGRAMS
TEMPERATURE IN DEGREES CENTIGRADE
PERCENTAGES ARE OF TOTAL SAMPLED THIS MONTH

SPECIES	DAILY AVG NUMBER	STD DEV NUMBER	DAILY AVG WEIGHT	STD DEV WEIGHT	PERCENT NUMBER	TOTAL NUMBER	PERCENT WEIGHT	TOTAL WEIGHT	ESTIMATED TOTALS FOR MONTH NUMBER	WEIGHT
SP	2.57	3.55	0.22	0.55	0.76	18	2.47	1.56	77	6.67
AL	319.29	245.95	8.18	5.30	94.78	2235	90.77	57.27	9578	245.43
SM	2.43	5.56	0.02	0.04	0.72	17	0.27	0.17	72	0.72
YP	2.57	2.30	0.45	0.47	0.76	18	5.04	3.18	77	13.62
TP	4.57	7.46	0.03	0.04	1.36	32	0.35	0.22	137	0.95
JD	0.57	0.79	0.00	0.00	0.17	4	0.01	0.01	17	0.04
NS	0.14	0.38	0.00	0.00	0.04	1	0.00	0.00	4	0.01
SS	4.14	7.10	0.02	0.04	1.23	29	0.25	0.16	124	0.68
XC	0.29	0.76	0.00	0.01	0.08	2	0.05	0.03	8	0.13
BR	0.29	0.49	0.07	0.13	0.08	2	0.80	0.50	8	2.15
TOTAL	336.86	242.12	9.01	5.21	100.00	2358	100.00	63.09	10105	270.39

THERE WERE 7 DAYS ON WHICH SAMPLES WERE TAKEN.
ESTIMATED TOTALS FOR THIS MONTH ARE BASED ON 30 DAYS OF IMPINGEMENT.

EXECUTION TERMINATED 02:08:45 T=.476 RC=0 \$.35