



Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, NY 10003

Indian Point Station
August 11, 1978
File No. 4-879a-

Mr. Peter A. A. Berle, Commissioner
New York State Department of
Environmental Conservation
Albany, New York 12201

Dear Mr. Berle:

Attached is the data specified in Section 401 Certification for
the month of August, 1978.

Very truly yours,

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

William A. Monti
William A. Monti, Manager
Nuclear Power Generation Dept.
Indian Point Station
Buchanan, New York 10511

Attach.
EE/daf

cc/ Mr. Richard Baker (IP-2-NY 0004472 & IP-3-NY 0027605
Mr. Harvey Lunenfeld
→ Mr. Edson G. Case
Mr. Boyce H. Grier
Mr. John Blake

SPECIES CODE LIST

01	Alewife	49	Lookdown
02	Bay Anchovy	50	Clupeid Unidentified
03	American Shad	53	Grass Pickerel
04	Bluefish	54	Sea Horse
05	Bluegill	55	Logperch
06	Brown Bullhead	56	Trout Perch
07	Pumpkinseed	57	Northern Hogsucker
08	Black Crappie	58	Fathead Minnow
09	Carp	59	Cyprinid, Unidentified
10	American eel	60	Morone (Unidentified)
11	Goldfish	61	Redfin Pickerel
12	Golden Shiner	62	Tautog
13	Hogchoker	63	Four Bearded Rockling
14	Tessellated Darter	64	Striped Cuskeel
15	Banded Killifish	66	King Fish
16	Emerald Shiner (<i>Notropis atherinoides</i>)	67	Spot
17	Largemouth Bass	68	Moonfish
18	Mummichog	69	Brook Stickleback
19	Atlantic Menhaden	71	Northern Porgy
21	Chain Pickerel	72	Winter Flounder
22	Blueback Herring	73	Tidewater Silverside
23	White Sucker	74	Sea Lamprey
24	Atlantic Silverside	75	Gizzard Shad
25	Rainbow Smelt	76	Silver Hake
26	Smallmouth Bass	77	Striped Mullet
27	Shortnose Sturgeon	78	Threespine Stickleback
28	Spottail Shiner (<i>Notropis hudsonius</i>)	79	Brown Trout
29	Atlantic Sturgeon	80	Butterfish
30	Striped Bass	81	White Crappie
31	Fourspine Stickleback	82	Brook Trout
32	Atlantic Tomcod	83	Northern Pike
33	Unidentifiable	84	Green Sunfish
34	White Catfish	85	Silver Perch
35	White Perch	86	Northern Puffer
36	Yellow Perch	87	Blacknose Dace
37	Satinfin Shiner (<i>Notropis analostanus</i>)	88	Bridel Shiner (<i>N. bifrenatus</i>)
38	Rock Bass	90	Cutlips Minnow
39	Northern Pipefish	91	Yearling Striped Bass
40	Redbreast Sunfish	92	YOY Blueback Herring
41	Atlantic Needlefish (Silver Gar)	93	YOY American Shad
42	Crevalle Jack	94	YOY Alewife
43	Silvery Minnow	95	Yearling White Perch
44	Fallfish	96	Centrarchid Unidentified
45	Weakfish	97	Spotfin Shiner
46	Comely Shiner (<i>N. amoenus</i>)	98	Squirrel Hake, Red Hake (<i>U. chuss</i>)
47	Common Shiner (<i>N. cornutus</i>)	99	Others
48	Mimic Shiner (<i>N. volcellus</i>)		

August 1978

UNIT 1, 2, 3 CIRC. WATER TEMP.

DATE	Inlet			Outlet		
	MIN.	MAX.	AVG.	MIN.	MAX.	AVG.
1	77.5	80.5	78.8	91.7	94.5	92.5
2	78.5	80.5	79.4	92.0	94.0	93.0
3	78.5	81.5	79.4	92.3	94.3	93.1
4	78.5	81.0	79.4	92.0	93.8	92.9
5	78.4	79.1	78.9	92.0	94.9	92.9
6	78.8	80.0	79.2	92.5	93.1	92.9
7	78.0	81.0	79.6	92.4	97.2	94.4
8	79.5	82.0	80.5	95.8	97.8	96.9
9	78.5	82.2	80.3	93.4	95.5	94.6
10	79.2	81.7	79.9	93.7	95.5	94.7
11	79.2	81.2	79.9	94.2	95.4	94.8
12	79.0	81.5	80.0	93.0	95.3	94.5
13	80.0	81.8	80.7	93.8	95.6	94.9
14	80.0	82.2	81.5	93.3	95.2	94.3
15	78.0	81.0	79.8	90.2	93.8	91.8
16	78.8	81.0	79.6	91.3	96.2	92.7
17	79.2	81.5	80.3	92.0	98.0	95.2
18	78.8	80.5	80.0	93.5	98.0	94.8
19	79.4	81.0	80.1	93.4	97.0	94.9
20	79.4	81.0	80.2	93.8	96.4	95.1
21	78.2	80.2	79.3	93.5	95.6	94.4
22	78.4	80.0	79.2	89.0	97.5	94.8
23	78.3	80.8	79.6	89.2	96.3	94.8
24	79.0	80.7	79.9	92.0	96.2	94.3
25	78.6	80.8	79.7	90.0	92.8	91.6
26	78.3	80.5	79.1	90.0	94.4	91.9
27	77.9	81.0	79.0	90.7	97.2	94.5
28	78.1	80.8	79.0	95.6	100.2	97.7
29	77.2	81.0	79.0	95.2	100.0	97.3
30	77.9	82.1	79.7	95.3	98.5	96.4
31	79.0	81.7	80.1	90.5	99.0	95.8

August 1978

UNIT NO. 2 ELECTRICAL OUTPUT

DATE	Kilowatts			Gross
	MINIMUM	MAXIMUM	AVG.	KILOWATT HRS.
1	850,000	880,000	862,917	20,710,000
2	865,000	880,000	868,333	20,840,000
3	870,000	875,000	866,667	20,800,000
4	860,000	875,000	862,500	20,700,000
5	820,000	870,000	849,167	20,380,000
6	870,000	870,000	867,083	20,810,000
7	870,000	870,000	866,250	20,790,000
8	870,000	870,000	856,250	20,550,000
9	860,000	870,000	855,417	20,530,000
10	855,000	860,000	848,750	20,370,000
11	855,000	860,000	854,167	20,500,000
12	860,000	860,000	850,833	20,420,000
13	860,000	860,000	853,333	20,480,000
14	855,000	860,000	850,417	20,410,000
15	860,000	860,000	852,083	20,450,000
16	740,000	860,000	837,917	20,110,000
17	810,000	860,000	837,083	20,090,000
18	855,000	860,000	848,333	20,360,000
19	855,000	860,000	845,417	20,290,000
20	860,000	865,000	856,250	20,550,000
21	865,000	865,000	847,083	20,330,000
22	440,000	870,000	835,000	20,040,000
23	520,000	865,000	828,334	19,880,000
24	860,000	865,000	855,000	20,520,000
25	860,000	865,000	860,000	20,640,000
26	860,000	865,000	847,917	20,350,000
27	860,000	865,000	851,250	20,430,000
28	860,000	870,000	861,667	20,680,000
29	840,000	865,000	849,167	20,380,000
30	865,000	870,000	862,917	20,710,000
31	845,000	865,000	849,167	20,380,000

August 1978

UNIT NO. 3 ELECTRICAL OUTPUT

DATE	Kilowatts			Gross	
	MINIMUM	MAXIMUM	AVG.	KILOWATT	HRS.
1	0	0	0		0
2	0	0	0		0
3	0	0	0		0
4	0	0	0		0
5	0	0	0		0
6	0	0	0		0
7	0	0	0		0
8	0	0	0		0
9	0	0	0		0
10	0	0	0		0
11	0	0	0		0
12	0	0	0		0
13	0	0	0		0
14	0	0	0		0
15	0	0	0		0
16	0	0	0		0
17	0	0	0		0
18	0	0	0		0
19	0	0	0		0
20	0	0	0		0
21	0	0	0		0
22	0	0	0		0
23	0	0	0		0
24	0	0	0		0
25	9,000	9,000	4,167	100,000	
26	8,000	120,000	42,917	1,030,000	
27	13,000	630,000	344,167	8,260,000	
28	680,000	880,000	834,167	20,020,000	
29	840,000	890,000	868,750	20,850,000	
30	850,000	900,000	867,500	20,820,000	
31	6,000	890,000	700,417	16,810,000	

Unit River Water Discharge

*Denotes flow setting only, not actual flow.

August 1978

Unit River Water Discharge

Circulator 21				Circulator 22				AVG. TOTAL UNIT
ON	OFF	HRS.	%FLOW	ON	OFF	HRS.	%FLOW	DISCH., GPM X10 ³
		24	100*			24	100*	870.0
		↓						
		24						870.0
1645	1152	1907						830.8
		24						870.0
								868.7
								870.0
								870.0
		↓						853.2
		24						823.8
2243	1925	2042						860.2
		24				24		850.4
				1655	1535	2240		870.0
						24		870.0
								870.0
								870.0
								870.0
								870.0
								870.0
								870.0
								801.4
								870.0
		↓				↓		821.0

*Denotes flow setting only, not actual flow.

August 1978

Unit River Water Discharge

DATE	Circulator 23				Circulator 24			
	ON	OFF	HRS.	%FLOW	ON	OFF	HRS.	%FLOW
1			24	100*			24	100*
2								
3								
4							24	
5					1120	0930	2210	
6							24	
7								
8								
9								
10								
11								
12								
13								
14								
15								
16			24					
17	0450	0317	2227					
18			24				24	
19					0410	0215	2205	
20							24	
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

*Denotes flow setting only, not actual flow.

August 1978

Unit River Water Discharge

DATE	Circulator 25				Circulator 26			
	ON	OFF	HRS.	%FLOW	ON	OFF	HRS.	%FLOW
1			24	100*			24	100*
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15			24					
16		2100	2100					
17	0313		2047				24	
18			24		0428	0253	2225	
19							24	
20								
21								
22								
23								
24								
25								
26								
27								
28								
29	1445	958	1930		2152	1445	1653	
30			24				24	
31			24			1540	1540	

*Denotes flow setting only, not actual flow.

August 1978

Unit River Water Discharge

Circulator 31				Circulator 32				AVG. TOTAL UNIT
ON	OFF	HRS.	%FLOW	ON	OFF	HRS.	%FLOW	DISCH., GPM X10 ³
		0	100*			0	100*	10.0
								10.0
								10.0
								10.1
								10.0
								10.0
								8.6
		0						13.4
2053		307						34.2
		24						164.2
		24						228.0
								310.0
0827		827						219.0
		0						167.1
								165.0
								165.0
								152.2
								170.0
								170.0
1435		925						279.2
		24						557.8
						0		590.0
				0440		1920		704.5
						24		735.0
						24		735.0
						24		735.0
								696.7
				1714	1106	1806		

*Denotes flow setting only, not actual flow.

August 1978

Unit River Water Discharge

Circulator 33					Circulator 34				
DATE	ON	OFF	HRS.	%FLOW	ON	OFF	HRS.	%FLOW	
1			0	100*			0	100*	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22			▼						
23			0						
24	1437		923						
25			24						
26									
27									
28									
29									
30									
31			▼	▼			▼	▼	

*Denotes flow setting only, not actual flow.

August 1978

Unit River Water Discharge

DATE	Circulator 35				Circulator 36			
	ON	OFF	HRS.	%FLOW	ON	OFF	HRS.	%FLOW
1			0	100*			0	100*
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15					1313		1047	
16							24	
17							24	
18							24	
19							24	
20			0				24	
21	1234		1126		0945		945	
22			24				0	
23							0	
24							0	
25					0530		1830	
26							24	
27								
28								
29								
30								
31								

*Denotes flow setting only, not actual flow.

CHEMICAL DISCHARGES

Aug. 1978

	DATE Aug. 2		DATE Aug. 9		DATE Aug. 16		DATE Aug. 23	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
pH	7.5	7.6	7.2	7.5	7.4	7.4	7.2	7.6
CHROMIUM mg/l	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
BORON mg/l (2)	0.45	0.45	0.50	0.50	0.40	0.39	0.45	0.32
PHOSPHATE mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HYDRAZINE mg/l	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
CYCLOHEXYLAMINE mg/l (1)								
LITHIUM HYDROXIDE mg/l (3)								
CHLORINE mg/l								
TOTAL SUSPENDED SOLIDS mg/l	< 20	< 20	< 20	< 20	< 20	< 20	28	< 20
DISSOLVED OXYGEN mg/l	8.4	6.9	5.7	6.0	5.7	4.9	6.2	6.6

- NOTES:
- (1) Cyclohexylamine not used at this time.
 - (2) Boron and LiOH results are attached.
 - (3) Chlorination report of August 30th is attached.

CHEMICAL DISCHARGES

Aug. 19 78

	Aug. 30		DATE		DATE		DATE	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
pH	7.5	7.5						
CHROMIUM mg/l	<.003	<.003						
BORON mg/l	0.20	0.20						
PHOSPHATE mg/l	<0.1	<0.1						
HYDRAZINE mg/l	<.005	<.005						
CYCLOHEXYLAMINE mg/l								
LITHIUM HYDROXIDE mg/l								
CHLORINE mg/l								
TOTAL SUSPENDED SOLIDS mg/l	< 20	< 20						
DISSOLVED OXYGEN mg/l	5.3	5.3						

NOTES:

CHEMICAL DISCHARGES

Aug., 19 78

DATE	ppm Boron	ppm LiOH	DATE	ppm Boron	ppm LiOH
1	.01	1×10^{-4}	16	.01.	1×10^{-4}
2	.01		17	.01	
3	.01		18	.01	
4	.01		19	.01	
5	.01		20	.01	
6	.01		21	.01	
7	.01		22	.01	
8	.01		23	<.01	
9	.01		24	.01	
10	<.01		25	.01	
11	.01		26	.01	
12	<.01		27	.01	
13	.01		28	.01	
14	.01		29	.01	
15	.01	Y	30	<.01	
			31	<.01	Y

NOTES: (1) The Boron and LiOH concentrations were calculated by the following formula:

$$\text{Diluted ppm} = \frac{(\text{ppm of tank}) (\text{gpm. Disch. Rate})}{(\text{Actual circulator flow})}$$

INDIAN POINT STATION
CONSOLIDATED EDISON CO., INC.

DATE 8-30-78

CHLORINATION TIME: START 1230 , FINISH 1330

HYPOCHLORITE (NaOCl) % 12.5

HYPOCHLORITE FEED RATE gpm 5.5

HYPOCHLORITE VOLUME gallons 320

CHLORINE DEMAND ppm 1.2 Time Sampled 1130

CIRCULATION WATER FLOW CHLORINATED gpm 420,000

CIRCULATION WATER FLOW, TOTAL gpm 1,850,000

RESIDUAL CHLORINE, FREE AND TOTAL
CONDENSER SECTION

DISCHARGE CANAL

TIME		21	22	23	24	25	26	1 meter	3 meters
<u>1225</u>	FREE	<.05	<.05	<.05	—	—	—	<.05	<.05
	TOTAL	<.05	<.05	<.05	—	—	—	<.05	<.05
<u>1235</u>	FREE	<.05	<.05	<.05	—	—	—	<.05	<.05
	TOTAL	<.05	<.05	<.05	—	—	—	<.05	<.05
<u>1245</u>	FREE	<.05	<.05	.36	—	—	—	<.05	<.05
	TOTAL	<.05	<.05	.38	—	—	—	<.05	<.05
<u>1255</u>	FREE	<.05	.30	.57	—	—	—	<.05	<.05
	TOTAL	<.05	.40	.62	—	—	—	<.05	<.05
<u>1305</u>	FREE	—	—	—	.37	.40	<.05	<.05	<.05
	TOTAL	—	—	—	.40	.42	<.05	<.05	<.05
<u>1315</u>	FREE	—	—	—	.36	.56	<.05	<.05	<.05
	TOTAL	—	—	—	.59	.62	<.05	<.05	<.05
<u>1325</u>	FREE	—	—	—	.23	<.05	<.05	<.05	<.05
	TOTAL	—	—	—	.29	<.05	<.05	<.05	<.05
<u>1335</u>	FREE	—	—	—	.05	<.05	<.05	<.05	<.05
	TOTAL	—	—	—	.05	<.05	<.05	<.05	<.05

REMARKS: No visible damage to the aquatic life.

AUGUST 1978
INDIAN POINT STATION
DAILY FISH COUNTS FROM INTAKE SCREENS
UNIT NO. 2

DATE	1	2	3	4	6	7	10	11	12	13	14	15	18	19	22	25	28	30	32	34	35	39	41	42	45	50	92	93	94	99	TOTAL NUMBER	TOTAL WT (LBS)	SITE TOTAL
1		1456		46		1	2	1		13						11	1	91	585	1	348				179	18	836	188	179		3956	28.4	3956
2			NO	C O L L E C T I O N																													
3		1428		32		1	9	1	1	17				1	1	28	1	85	383	4	326				177	31	416	139	197		3278	29.7	3278
4	3	2331		40			8	1		24						22	1	145	113	1	354				299	52	454	209	293		4350	32.6	4350
5	1	881		6				1		11						25	1	61	613		375				233	150	70	178		2606	22.6	2606	
6	1	987		14			3			7						10	1	39	713	2	223		1		137	27	112	72	84		2433	24.2	2433
7	3	3665		17			5			69	1			2	1	56	1	300	2929		1367	4			445	85	701	446	334		10431	83.2	10431
8	4	3953		26	1	1	4			52	1				1	54	1	232	1706	2	1561	1	2		340	88	320	313	181		8844	69.8	8844
9	4	1312		12						39	2			3		36		73	502	2	488				76	33	93	173	64		2913	24.0	2913
10	3	1433		17			4			59	2				3	34		80	484		561	1			116	24	150	183	145		3299	31.3	3299
11	7	1852		5			3			88	1	1			3	65	1	108	1303	2	658	5			92	24	125	269	181		4794	47.8	4794
12	1	2030	1	6			3			189	1			1	2	45	2	104	3412	2	879	2			178	95	285	283	206		7727	88.4	7727
13	2	1869		9		1	4			132	1				1	35		67	3168		733	4			141	33	200	178	129		6707	64.8	6707
14	5	4590		18			5	2		157	2	1			1	90	1	113	4297	1	862	7			142	60	444	343	393		11554	103.1	11554
15	2	1743		1			4			79		1		1		32		36	3145	2	414	2			99	27	372	172	55		6187	60.5	6187
16	2	3612		4			7			176		1	1			57		86	5099	2	625	2			125	40	701	298	76		10914	96.7	10914
17		2673		3	1		2			52					1	19	1	53	1108		89				41	15	127	257	42	1	4485	35.7	4764
18	2	1340		1			5			64						18		43	1360	1	104	1			12	22	56	152	20		3201	28.6	3295
19	1	1746		2		1	1			78	1			1		78		44	2317		107	3			64	27	144	239	30		4884	43.9	5170
20	3	889		5		1	5			138					3	175		79	4010		184				66	60	355	196	29		6198	56.9	6380
21	1	728	1	4		1	10			107		1			1	166	1	89	2901	3	336	14			27	16	158	234	48	1	4848	54.0	4935
22	3	1223		4			5			111	2				2	453	3	126	2468	2	315	13		1	68	28	515	227	63		5632	46.1	5691
23		779		2	3	2	3			96	3				3	336	1	101	1565		271	9			64	30	422	156	52		3898	32.6	3985
24	2	311		3			5			58	2					98	1	51*	1061*		177*	3			28	8	185	91	32		2118	7.4	2142
25	2	239	1	3	1		2			60	2			2	1	63	1	24	2667		134	11			108	7	100	54	12		3494	34.7	4729
26	2	322		2			3			47	1				1	27	2	30	1525		164	5			71	5	104	65	18		2394	23.5	3759
27	1	393					1			40					1	7	1	19	627		166	14		1	10	15	94	48	26		1464	16.3	1647
28	1	351			2					28						9		18	231		124	8			11	5	227	48	38		1101	9.2	1447
29		165		2	1	2	2			78				2		2	2	17	100		82	6			3	14	123	45	32		678	9.7	771
30	1	74		1						28				1		1	2	16	75	1	60	3			4	17	155	24	8	1	472	5.8	617
31		76		1		1				24					2	1	1	6	18	1	30	2			1	15	53	12	11		255	4.1	350

TOTAL 57 44451 3 286 9 12 105 6 1 2121 22 5 1 16 28 2053 27 2336 50485 29 12137 122 3 2 3357 921 8177 5184 3156 3 135115 1277.6 139675

See attached sheet for species identification.

*Weights of these species for this date were unavailable and are not included in the total.

AUGUST 1978
INDIAN POINT STATION
DAILY FISH COUNTS FROM INTAKE SCREENS
UNIT NO. 3

DATE*	1	2	4	5	6	7	10	11	13	14	19	22	25	28	30	32	34	35	39	45	50	70	92	93	94	TOTAL NUMBER	TOTAL WT(LBS)
17	1	21							5				1		1	214		22		4	1		1	5	3	279	3.1
18	1	10				1			1				3			70		4		1				3		94	1.4
19		7	1						3				4		2	255		4		5			1	2	2	286	3.1
20	2	15				1				1			11			134		5		1			8	4	2	182	1.9
21		6	1				2		4				3		3	51		7	1		2		4	3		87	1.4
22		4							1				6			40		3			1		1	2	1	59	0.9
23		2			1	1					1		6		1	69		4					1			87	2.0
24		1											2			19				1					1	24	0.2
25	1	69					1		5	3			44		3	928		48	1	44			46	28	14	1235	13.5
26	2	173	4						7		1	1	8		6	884	2	96	2	52	2		67	37	21	1365	17.0
27		20	1						5		1	1	2		2	72		35			2		11	13	16	183	4.2
28	2	68	3			1	3	1	14		1		2	2	8	32		71		5	4		32	34	65	346	9.2
29		37				1	4		1		1	1			1	7		19			1		5	6	9	93	4.9
30	3	57	1	1							2		1			15		28		2	1		8	11	15	145	4.9
31	3	21					3		3		1				5	7	2	21				1	14	2	12	95	4.5
TOTAL	15	511	11	1	1	5	13	1	49	4	8	3	93	2	32	2797	4	367	4	116	14	1	199	150	159	4560	72.2

See attached sheet for species identification.

*Prior to August 17 all circulators at Unit No. 3 were shutdown.