

Iowa Electric Light and Power Company

August 27, 1982

DAEC - 82 - 595

Mr. James Keppler,
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

PRINCIPAL STAFF			
RA		DI	
D/RA		ENF	
A/RA		SP	
DP&RP		PAQ	
DEP&OS		SLO	
DESTP			
ML			
OL		FILE	

SUBJECT: Semiannual Effluent Release Report
for the Duane Arnold Energy
Center, Unit NO. 1

FILE: A-118e

Dear Mr. Keppler:

Please find enclosed a copy of the Semiannual Report for the Duane Arnold Energy Center, Unit No. 1, for the period January 1, 1982 through June 30, 1982. This report satisfies the requirements for the Semiannual Effluent Release Report as stated in the Radiological Technical Specifications, (Appendix B to the Operating License DPR-49).

Daniel L. Mineck
Plant Superintendent-Nuclear
Duane Arnold Energy Center

DLM/KDY/lh

Enclosure

cc: L. Root w/o
R. McGaughy w/o

8209080643 820827
PDR ADDCK 05000331
R PDR

SEP 3 1982

SEMI-ANNUAL REPORT

Radioactive Effluent Releases

January 1, 1982 through June 30, 1982

~~D-PE~~
~~8209080379~~

RADIATION EFFLUENT REPORT

January 1, 1982 through June 30, 1982

ITEM	UNITS	1ST QUARTER 1982	2ND QUARTER 1982
A. Gaseous Effluents			
1. Gross Radioactivity	curies	2.25 E1	2.07 E1
2. Maximum 1 hour Release Rate	μCi/sec	2.57 E1	2.37 E1
3. Nuclides Released			
Xe-138	curies	4.74 E0	1.02 E1
Kr-87	curies	7.40 E-2	5.00 E-3
Kr-88	curies	2.01 E-1	3.40 E-1
Kr-85m	curies	3.34 E-1	2.51 E-1
Xe-135	curies	8.20 E0	5.26 E0
Xe-133	curies	4.89 E0	2.22 E0
Kr-85(cal.)	curies	<2.4 E-2	<1.2 E-2
Xe-135m	curies	3.78 E0	2.08 E0
Ar-41	curies	1.01 E-1	7.10 E-2
N-13	curies	1.59 E-1	3.17 E-1
4. Tritium Released	curies	1.48 E0	4.00 E-1
5. Percent of ETS (16% of Limit)	%	0.074	0.031

RADIATION EFFLUENT REPORT

January 1, 1982 through June 30, 1982

ITEM	UNITS	1ST QUARTER 1982	2ND QUARTER 1982
B. Iodine Releases			
1. Total I-131 Released	curies	3.46 E-3	1.35 E-3
2. Total I-133 Released	curies	4.87 E-3	1.58 E-3
3. Total I-135 Released	curies	5.64 E-3	1.13 E-3
4. Percent ETS Limit (I-131) Note 2	%	0.95 %	0.26 %
C. Particulate Releases			
1. Total Released	curies	2.19 E-3	9.24 E-4
2. Gross Alpha Released	curies	8.27 E-6	2.76 E-5
3. Nuclides Released Ba-140	curies	1.58 E-4	4.78 E-5
Cs-138	curies	9.22 E-4	5.98 E-4
Co-60	curies	9.65 E-5	2.72 E-5
Mn-54	curies	2.00 E-5	1.86 E-6
Cs-137	curies	3.50 E-6	None
Rb-89	curies	4.87 E-6	None
K-40	curies	2.91 E-5	None

RADIATION EFFLUENT REPORT

January 1, 1982 through June 30, 1982

ITEM	UNITS	1ST QUARTER 1982	2ND QUARTER 1982
Co-58	curies	2.41 E-6	None
Cr-51	curies	None	1.79 E-5
Bi-214	curies	None	6.24 E-5
Nb-95	curies	None	8.40 E-7
Sr-89	curies	6.53 E-5	1.65 E-5
Sr-90	curies	4.54 E-6	2.71 E-6
Unidentified	curies	8.8 E-4	1.49 E-4
4. Percent ETS Limit (Part.)Note 3	%	1.52 %	.62 %
5. Percent ETS Limit (I-131 α Part.)Note 4	%	2.50 %	0.89 %

NOTE 1

$$\% \text{ ETS} = \frac{\frac{Q_{SE}}{0.21} + \frac{Q}{(1.4 \times 10^5)(MPC)}}{0.16} \times 100$$

NOTE 2

$$\% \text{ETS(I-131)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q}{1.8 \times 10^{-7}}}{0.08} \times 100$$

NOTE 3

$$\text{ETS(PART)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q}{1.8 \times 10^{-7}}}{0.08} \times 100$$

NOTE 4

$$\text{ETS(PaI-131)} = \frac{\frac{Q_S}{1.3 \times 10^{-6}} + \frac{Q}{1.8 \times 10^{-7}}}{0.08} \times 100$$

LIQUID EFFLUENTS

No Liquid Releases

January 1, 1982 through June 30, 1982

SOLID RADIOACTIVE WASTE

January 1, 1982 through June 30, 1982

<u>Date</u>	<u>Volume(ft³)</u>	<u>Activity (Ci)</u>	<u>Type of Waste</u>
1/8/82	85	25.3	Solidified Resin
1/12/82	85	13.5	Solidified Resin
1/14/82	85	33.75	Solidified Resin
1/19/82	180	.3528	Trash
1/20/82	85	6.75	Solidified Resin
1/27/82	85	6.0	Solidified Resin
1/27/82	562.5	.2709	Trash
1/29/82	85	12.0	Solidified Resin
2/2/82	85	30.0	Solidified Resin
2/4/82	85	23.9	Solidified Resin
2/8/82	85	15.7	Solidified Resin
2/17/82	85	9.9	Solidified Resin
2/19/82	85	57.4	Solidified Resin
2/22/82	85	50.8	Solidified Resin
2/24/82	472.5	.2418	Trash
3/1/82	85	3.68	Solidified Resin
3/3/82	85	5.174	Solidified Resin
3/5/82	85	4.39	Solidified Resin
3/8/82	85	2.576	Solidified Resin
3/10/82	85	5.815	Solidified Resin
3/12/82	85	9.454	Solidified Resin
3/15/82	85	6.061	Solidified Resin
3/17/82	85	4.921	Solidified Resin
3/19/82	85	2.210	Solidified Resin
3/24/82	85	2.711	Solidified Resin
3/26/82	85	2.743	Solidified Resin
3/29/82	165	.1014	Trash
3/31/82	85	24.1	Solidified Resin
4/7/82	85	4.487	Solidified Resin
4/12/82	85	3.792	Solidified Resin
4/15/82	85	8.165	Solidified Resin
4/19/82	85	6.824	Solidified Resin
4/21/82	85	46.94	Solidified Resin

SOLID RADIOACTIVE WASTE

January 1, 1982 through June 30, 1982

<u>Date</u>	<u>Volume(ft³)</u>	<u>Activity (Ci)</u>	<u>Type of Waste</u>
4/23/82	85	16.88	Solidified Resin
4/27/82	442.5	.2688	Trash
4/30/82	85	21.96	Solidified Resin
5/3/82	85	23.0	Solidified Resin
5/5/82	85	20.5	Solidified Resin
5/7/82	85	18.27	Solidified Resin
5/12/82	85	2.972	Solidified Resin
5/18/82	85	25.0	Solidified Resin
5/20/82	85	3.69	Solidified Resin
5/24/82	85	47.22	Solidified Resin
5/25/82	532.5	.2904	Trash
5/26/82	85	2.487	Solidified Resin
6/3/82	85	9.570	Solidified Resin
6/7/82	85	2.63	Solidified Resin
6/11/82	85	3.808	Solidified Resin
6/14/82	85	6.451	Solidified Resin
6/16/82	85	3.278	Solidified Resin
6/18/82	85	16.2	Solidified Resin
6/23/82	247.5	.215	Trash
6/25/82	85	4.63	Solidified Resin
6/28/82	85	12.9	Solidified Resin

All shipments sent to Barnwell, South Carolina.

Compacted Trash	2602.5 F ³	1.7411 curies
Solidified Resin	4080.0 F ³	674.471 curies
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TOTAL	6682.5 F ³	676.2121 curies