NRC FORM 464 Part I (6-1998)

U.S. NUCLEAR REGULATORY COMMISSION

RESPONSE TO FREEDOM OF INFORMATION ACT (FOIA) / PRIVACY ACT (PA) REQUEST

FOIA/PA	RESPONSE NUMBER
2000-0041	3

RESPONSE TYPE: FINAL √ PARTIAL

REQUESTER: Joseph Pohl/Monica Gambino

DATE: JUL 12 2000

PART I. -- INFORMATION RELEASED

No additional agency records subject to the request have been located.

Requested records are available through another public distribution program. See Comments section.

APPENDICES — Agency records subject to the request that are identified in the listed appendices are already available for public inspection and copying at the NRC Public Document Room.

√ APPENDICES C — Agency records subject to the request that are identified in the listed appendices are being made available for public inspection and copying at the NRC Public Document Room.

√ Enclosed is information on how you may obtain access to and the charges for copying records located at the NRC Public Document Room, 2120 L Street, NW, Washington, DC.

√ APPENDICES C* — Agency records subject to the request are enclosed.

Records subject to the request that contain information originated by or of interest to another Federal agency have been referred to that agency (see comments section) for a disclosure determination and direct response to you.

√ We are continuing to process your request.

See Comments.

PART I.A -- FEES

AMOUNT *

$

* See comments for details

You will be billed by NRC for the amount listed.

You will receive a refund for the amount listed.

None. Minimum fee threshold not met.

Fees waived.

PART I.B -- INFORMATION NOT LOCATED OR WITHHELD FROM DISCLOSURE

No agency records subject to the request have been located.

Certain information in the requested records is being withheld from disclosure pursuant to the exemptions described in and for the reasons stated in Part II.

This determination may be appealed within 30 days by writing to the FOIA/PA Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Clearly state on the envelope and in the letter that it is a "FOIA/PA Appeal."

PART I.C COMMENTS (Use attached Comments continuation page if required)

***Records number C/267 is copyrighted and not enclosed. This record is available for inspection only at NRC's Public Document Room.**

SIGNATURE - FREEDOM OF INFORMATION ACT AND PRIVACY ACT OFFICER

Carol Ann Reed

RE: FOIA-2000-0041

APPENDIX C
RECORDS BEING RELEASED IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)
1.	11/23/70	Reinspection Report (1 page)
2.	01/04/71	Transmittal of Satisfactory Reply to Form AEC-592 (1 page)
3.	01/04/71	Ltr from Robert W. Kirkman to E. J. Cattabiani, Westinghouse Electric Corp. (1 page)
4.	12/29/70	Ltr from E. J. Cattabiani to Robert W. Kirkman (1 page)
5.	12/09/70	Ltr from Robert W. Kirkman to E. J. Cattabiani (1 page)
6.	12/09/70	Form AEC-592 (1 page)
7.	12/09/70	Statistical Data Sheet (1 page)
8.	12/17/70	Ltr from Walter R. Lorenz to Westinghouse Electric Corp. thru Hilbert W. Crocker (8 pages)
9.	No date	Radiation Exposure History (1 page)
10.	07/30/70	Ltr from Karl R. Schendel to Various Addressees (3 pages)
11.	07/20/70	Reinspection Report (1 page)
12.	09/09/70	Ltr from Robert W. Kirkman to D. J. Povejsil (1 page)
13.	No date	Routing Slip (1 page)
14.	08/20/70	Ltr from D. J. Povejsil to Robert W. Kirkman (1 page)
15.	08/31/70	Ltr from B. E. Mills to W. R. Lorenz (1 page)
16.	08/05/70	Ltr from Robert W. Kirkman to D. J. Povejsil (1 page)
17.	08/05/70	Form AEC-592 (Noncompliance with AEC regulations)(1 page)
18.	08/07/70	Ltr from W. R. Lorenz to Westinghouse Corp. (10 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
19.	05/22/70	Ltr from Donald A. Nussbaumer to Karl Schendel (1 page)
20.	No date	Ltr from Jack R. Roeder to K. A. Bodden (1 page)
21.	03/12/70	Ltr from W. C. Browne to Westinghouse Corp. (1 page)
22.	No date	Inspection Findings and License Acknowledgment (1 page)
23.	03/04/70	Ltr from Donald A. Nussbaumer to Karl R. Schendel (4 pages)
24.	11/04/69	Memo Route Slip from B. J. Youngblood to H. W. Crocker (1 page)
25.	10/31/69	Telecon from William Geiger to C. H. Bidinger (1 page)
26.	10/28/69	Notice of License Expiration (1 page)
27.	06/13/69	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)
28.	No date	Memo Route Slip from H. W. Crocker to J. R. Roeder (1 page)
29.	09/26/69	Ltr from C. W. Nilsen to File thru H. W. Crocker (2 pages)
30.	09/26/69	Back-Up Notes To Form AEC-591(7 pages)
31.	No date	Inspection Findings and Licensee Acknowledgment (1 page)
32.	06/13/69	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)
33.	05/20/69	Ltr from C. W. Nilsen to File thru H. W. Crocker (1 page)
34.	No date	M.S. L. Bldg. 7 - Smear Report (1 page)
35.	No date	Smear Meter (1 page)
36.	No date	Exhibit D (1 page)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
37.	No date	Exhibit E (1 page)
38.	No date	Exhibit H (4 pages)
39.	No date	Inspection Findings and Licensee Acknowledgment (1 page)
40.	03/28/69	Ltr from Donald A. Nussbaumer to Karl R. Schendel (2 pages)
41.	10/29/68	Notice of License Expiration (1 page)
42.	09/24/68	Inspection Findings and Licensee Acknowledgment (1 page)
43.	08/06/68	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)
44.	No date	Inspection Findings and Licensee Acknowledgment (4/9-11/68) (1 page)
45.	07/03/68	Ltr from C. W. Nilsen & W. R. Lorenz to File thru H. W. Crocker (12 pages)
46.	No date	Nuclear Fuel Division Chart (1 page)
47.	03/68	Industrial Relations AED, Cheswick Chart (1 page)
48.	01/18/68	TWX NR 300 (1 page)
49.	12/05/67	Ltr from D. J. Povejsil to Robert W. Kirkman (2 pages)
50.	12/06/67	Memo Route Slip from SD to JFB (1 page)
51.	11/16/67	Ltr from Robert W. Kirkman to D. J. Povejsil (2 pages)
52.	11/15/67	Memorandum from C. W. Nilsen to Files thru H. W. Crocker 1 page)
53.	09/01/67	Organization Charts (12 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
54.	10/16/67	Ltr from Donald A. Nussbaumer to Karl R.Schendel (2 pages)
55.	06/26/67	Memo Route Slip from R. S. Cleveland to R. Handler (1 page)
56.	No date	Routing Slip (1 page)
57.	06/21/67	Ltr from D. J. Povejsil to Robert W. Kirkman (2 pages)
58.	06/07/67	Ltr from Robert W. Kirkman to J. J. Povejsil (1 page)
59.	06/07/67	Form AEC-592 -5/22-23/67 (1 page)
60.	06/08/67	Memorandum from Charles W. Nilsen to File (1 page)
61.	06/08/67	Back-Up Notes To Form AEC-592 (7 pages)
62.	04/21/67	Summary of Emergency Procedures (1 page)
63.	04/03/67	Ltr from Donald A. Nussbaumer to Karl Schendel (2 pages)
64.	03/27/67	Ltr from Donald A, Nussbaumer to Karl Schendel (1 page)
65.	03/21/67	Corporate Information for Licenses (4 pages)
66.	03/08/67	Pre-Licensing Inspection Report (8 pages)
67.	02/01/67	Memorandum from William B. Grant to File thru Paul R. Nelson (1 page)
68.	No date	Inspection Findings and Licensee Acknowledgment (1 page)
69.	03/03/67	Memorandum from C. W. Nilsen to Files (7 pages)
70.	12/27/65	Memorandum From William B. Grant to Paul R. Nelson(3 pages)
71.	12/12/66	Ltr from Robert W. Kirkman to Wes Piros (2 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
72.	12/14/66	Ltr from Donald A. Nussbaumer to Karl Schendel (1 page)
73.	12/22/66	Ltr from Donald A. Nussbaumer to Karl Schendel (1 page)
74.	08/03/67	Back-Up For AEC-591 (11 pages)
75.	02/16.66	Ltr from Donald A. Nussbaumer to Karl Schendel (1 page)
76.	11/24/65	Routing Slip (1 page)
77.	11/16/65	Ltr from E. C. Amtsberg to Robert W. Kirkman (2 pages)
78.	11/10/66	Memo Route Slip from R. S. Cleveland to R. G. Page(1 page)
79.	11/03/65	Memo Route Slip from R. S. Cleveland to R. G. Page(1 page)
80.	11/01/65	Ltr from Robert W. Kirkman to E. C. Amtsberg (1 page)
81.	11/08/66	Ltr from Donald A. Nussbaumer to Karl Schendel (2 pages)
82.	11/01/66	Safeguards Control Of Nuclear Material At The Cheswick Site (1 page)
83.	09/28/66	Ltr from Donald A. Nussbaumer to Karl Schendel (1 page)
84.	No date	Ltr from Donald A. Nussbaumer to Karl Schendel (4 pages)
85.	07/20/66	Proprietary Information - Application (2 pages)
86.	No date	Inspection Findings and Licensee Acknowledgment (6/1-2/66) (1 page)
87.	No date	Part 70 Inspection - Expanded Notes to File (6 pages)
88.	No date	Organization Charts (3 pages)
89.	06/23/66	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
90.	04/21/66	Memorandum from Leo Dubinski to R. W. Kirkman (1 page)
91.	04/14/66	Memorandum from Donald A. Nussbaumer to Leo Dubinski (1 page)
92.	05/13/66	Ltr from Donald A. Nussbaumer to Karl R. Schendel (5 pages)
93.	10/29/65	Form AEC-592 (1 page)
94.	12/04/69	Ltr from D Nussbaumer to K Schendel (1 page)
95.	10/18/65	Memorandum from H. W. Crocker to R. W. Kirkman (11 pages)
96.	03/29/68	Corporate Information for Licenses (1 page)
97.	10/13/65	Exhibit C (1 page)
98.	10/18/65	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)
99.	08/18/65	Ltr from C. P. Skillern to Donald A. Nussbaumer (1 page)
100.	10/14/65	Ltr from Karl R. Schendel to Donald A. Nussbaumer (1 page)
101.	04/07/65	Ltr from Donald A. Nussbaumer to C. P. Skillern (1 page)
102.	10/08/65	Ltr from H. T. Babb to D. A. Nussbaumer (1 page)
103.	05/21/65	Ltr from H. T. Babb to D. A. Nussbaumer (1 page)
104.	09/07/65	Ltr from Charles H. Weaver to Harold L. Price (2 pages)
105.	05/19/65	Ltr from Robert W. Kirkman to M. Amtsberg (1 page)
106.	05/19/65	Form AEC-592 (1 page)
107.	05/14/65	Part 70 Inspection (6 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
108.	05/14/65	Memorandum from Hilbert W. Crocker to R. W. Kirkman (2 pages)
109.	05/14/65	Ltr from Robert W. Kirkman to H. C. Amtsberg (1 page)
110.	05/14/65	Form AEC-592 4/29-30/65 (1 page)
111.	04/30/65	Ltr from Richard A. Cordin to Lyall E. Johnson (1 page)
112.	01/28/65	Memorandum from Paul R. Nelson to All Inspectors (1 page)
113.	01/11/65	Ltr from William E. Rowe to Donald A. Nussbaumer (2 pages)
114.	04/16/65	Ltr from Donald A. Nussbaumer to C. F. Skillern (1 page)
115.	04/07/65	Ltr from Donald A. Nussbaumer to C. F. Skillern (1 page)
116.	11/12/64	Part 70 Inspection (4 pages)
117.	09/64	Appendix A Reactor Engineering & Material Dept. (1 page)
118.	06/10/64	Ltr from Donald A. Nussbaumer to C. F. Skillern (1 page)
119.	06/08/64	Compliance Inspection Report for Westinghouse (1 page)
120.	05/19/64	Ltr from C. P. Skillern to Lyall Johnson (1 page)
121.	01/20/64	Memorandum from Hilbert W. Crocker to Jack R. Roeder (7 pages)
122.	01/09/63	Ltr from Donald A. Nussbaumer to L. A. Meierkord Jr (1 page)
123.	12/04/62	Ltr from W. D. Kelley to D. A. Nussbaumer (2 pages)
124.	10/02/62	Ltr from W. D. Kelley to D. A. Nussbaumer (2 pages
125.	No date	Ltr from Donald A. Nussbaumer to L. A. Meierkord Jr (1 page)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
126.	08/20/62	TWX INCOMING (2 pages)
127.	09/11/62	TWX INCOMING (2 pages)
128.	09/11/62	TWX Correction (1 page)
129.	08/16/62	Ltr from NYOO Compliance Division to Donald A. Nussbaumer (1 page)
130.	No date	Atomic Equipment Division Organization (1 page)
131.	08/13/62	Message (1 page)
132.	08/07/63	TWX INCOMING (2 pages)
133.	No date	Shipments (1 page)
134.	06/29/63	Ltr from H. C. Amtsberg to USAEC (2 pages)
135.	06/21/62	TWX INCOMING (1 page)
136.	06/08/62	Figure 1 (1 page)
137.	06/08/62	Figure 2 (1 page)
138.	06/06/62	Ltr from Ebert R. Price to H. C. Amtsberg (2 pages)
139.	06/13/62	Ltr from L. A. Meierkord Jr. to D. A. Nussbaumer (7 pages)
140.	05/08/62	Ltr from P. K. Morrow to D. A. Nussbamer (4 pages)
141.	03/02/62	Form AEC 591 (1 page)
142.	02/020/62	Note from J. Sears to F. Nolan (5 pages)
143.	02/15/62	Ltr from P. K. Morrow to Paul B. Klevin (1 page)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
144.	02/05/62	Ltr from Robert W. Kirkman to P. K. Morrow (1 page)
145.	01/18/62	Ltr from Donald A. Nussbaumer to P. V. Morrow (3 pages)
146.	01/16/62	TWX INCOMING (1 page)
147.	No date	Chart (1 page)
148.	No date	Chart (1 page)
149.	01/18/62	Reference TWX (1 page)
150.	07/13/61	Ltr from T. Sainsbury to R. Lowenstein (1 page)
151.	03/22/66	Ltr from Karl R. Schendel to Dr. J. A. McBride (5 pages)
152.	03/15/66	Ltr from Karl R. Schendel to R. L. Doan (4 pages)
153.	02/06/74	Ltr from James P. O'Reilly to C. E. Anthony (1 page)
154.	12/10/73	Ltr from C. E. Anthony to James P. O'Reilly (2 pages)
155.	11/16/73	Ltr from James P. O'Reilly to C. E. Anthony (16 pages)
156.	No date	Summary of Investigation (7 pages)
157.	04/13/73	Ltr from C. E. Anthony to J. P. O'Reilly (1 page)
158.	04/05/73	Ltr from James P. O'Reilly to C. E. Anthony (1 page)
159.	03/22/73	Ltr from Daniel J. Donoghue to David W. Rees (1 page)
160.	04/25/73	Ltr from Alvin F. Ryan to F. A. Dreher (1 page)
161.	04/11/73	Ltr from C. E. Anthony to Robert T. Carlson (1 page)
162.	04/03/73	Ltr from James P. O'Reilly to Donald F. Knuth (9 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
163.	03/30/73	Ltr from Robert T. Carlson to C. E. Anthony (1 page)
164.	03/29/73	Ltr from C. E. Anthony to Robert T. Carlson (1 page)
165.	03/27/73	Ltr from Paul R. Nelson to File: Management Meeting (1 page)
166.	02/05/73	Ltr from Robert T. Carlson to E. J. Cattabiani (11 pages)
167.	10/04/73	Ltr from David Schweller to W. E. Piros (2 pages)
168.	No dates	Regulatory Operations - Statistical Data (1 page)
169.	11/08/73	Ltr from James P. O'Reilly to E. J. Cattabiani (1 page)
170.	10/13/72	Ltr from E. J. Cattabiani to James P. O'Reilly (2 pages)
171.	06/27/72	Ltr E. J. Cattabiani to James P. O'Reilly (2 pages)
172.	No date	Regulatory Operation - Statistical Data (1 page)
173.	10/10/72	Ltr from Hilbert W. Crocker to G. W. Roy (2 pages)
174.	02/05/73	Ltr from H. W. Crocker to G. W. Roy (1 page)
175.	06/26/72	Ltr from T. W. Brockett to Files (1 page)
176.	06/21/73	Ltr from Charles E. MacDonald to Karl P. Schendel (1 page)
177.	02/04/72	NFD Manufacturing Accident Health Physic Summary(3 pages)
178.	02/04/72	Ltr from K. A. Bodden to Walter Lorenz (1 page)
179.	No date	Virgin Powder Storage (1 page)
180.	01/28/71	Ltr from C. W. Bates to All Foremen (2 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
181.	No date	Safety Review For New, Modified, Or Relocated Equipment (3 pages)
182.	No date	Exhibit G: Nuclear Fuel Division Safety Observers 1965 through 1972 (3 pages)
183.	11/16/71	Exhibit I: Evacuation Drill Cheswick Site (2 pages)
184.	No date	Industrial Hygiene Rules for Nuclear Fuel Division (1 page)
185.	05/06/71	Exhibit L: Ltr from W. E. Piros to Thomas Paden (2 pages)
186.	06/15/71	Exhibit M: Ltr from Thomas J. Paden to W. E. Piros (1 page)
187.	04/21/72	Investigation Report No. 72-01 (3 pages)
188.	02/15/72	Ltr from R. H. Engelken to J. P. O'Reilly (2 pages)
189.	06/09/72	Ltr from James P. O'Reilly to E. J. Cattabiani (3 pages)
190.	06/08/72	Draft: Note to Paul Nelson, RG-I (1 page)
191.	06/06/72	TWX INCOMING (1 page)
192.	05/26/72	Ltr from Karl P. Schendel to R. B. Chitwood (12 pages)
193.	No date	Ltr from R. H. Engelken to James P. O'Reilly (2 pages)
194.	02/04/72	Ltr from K. A. Bodden to Walter Lorenz (1 page)
195.	02/04/72	Ltr K. A. Bodden to W. E. Piros (3 pages)
196.	No date	Virgin Powder Storage (1 page)
197.	04/18/72	Current List of Licenses (1 page)
198.	04/27/72	License Conditions Proposed for Docket 70-337 (2 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
199.	04/18/72	Corporate Information for Licenses (1 page)
200.	03/07/72	Ltr from W. R. Lorenz to OSHA Information Call (1 page)
201.	No date	Memo Route Slip (1 page)
202.	02/04/72	Outgoing Telecommunication Message (2 pages)
203.	12/10/71	Ltr from Karl R. Schendel to Donald A. Nussbaumer (2 pages)
204.	11/01/71	Ltr from C. D. W. Thornton to Karl L. Schendel (1 page)
205.	09/22/71	Ltr from Karl L. Schendel to C. D. W. Thornton (1 page)
206.	10/14/71	TWX INCOMING (1 page)
207.	No date	Handwritten note to H. W. Crocker (2 pages)
208.	11/02/71	Ltr from H. W. Crocker to G. W. Roy (1 page)
209.	No date	Compliance Statistical Data (1 page)
210.	10/27/71	Ltr from James P. O'Reilly to E. J. Cattabiani (1 page)
211.	11/04/71	Field Notes for 71-02 (7 pages)
212.	No date	Monitor Pit Number 2 (1 page)
213.	No date	MPC from 10CFR Appendix B, Table II Col. (1 page)
214.	No date	Chart (1 page)
215.	09/22/71	NFD Cheswick Air Sampling Report (5 pages)
216.	09/31/71	Health Physics Report #38 (3 pages)
217.	No date	NFD Rod Loading (1 page)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
218.	No date	Location of Roof Vents - Bldg 5 B NFD (1 page)
219.	10/05/71	Handwritten notes (14 pages)
220.	No date	NFD Gamma Alarm and Dosimeter Location (1 page)
221.	090/02/71	MBA Monthly Inventory Report For SS Material (2 pages)
222.	09/15/71	TWX to Donald Nussbaumer (1 page)
223.	09/17/71	TWX to Donald Nussbaumer (1 page)
224.	09/21/71	TWX to Karl Schendel (1 page)
225.	02/20/71	Ltr from Donald A. Nussbaumer to Karl R. Schendel (4 pages)
226.	09/28/71	Ltr from Karl R. Schendel to Donald A. Nussbaumer (1 page)
227.	08/27/71	Ltr from J. C. Rengel to Harold L. Price (2 pages)
228.	07/12/71	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)
229.	05/26/71	Ltr from Donald A. Nussbaumer to Karl R. Schendel (3 pages)
230.	04/28/71	Corporate Information for Licenses (1 page)
231.	No date	Compliance Statistical Data Input Report (1 page)
232.	04/26/71	Ltr from Robert W. Kirkman to P. Koppel (1 page)
233.	No date	Routing Slip (1 page)
234.	04/16/71	Ltr P. J. Koppel to Robert W. Kirkman (1 page)
235.	04/01/71	Ltr from Robert W. Kirkman to F. Koppel (2 pages)
236.	04/06/73	Application for Amendment of License SNM-338 Docket 70-337 (17 pages)

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NO.	DATE	DESCRIPTION/(PAGE COUNT)
237.	01/25/71	Inquiry Report (1 page)
238.	01/25/71	Ltr from H. W. Crocker to Gen W. Roy (1 page)
239.	03/22/71	Ltr from Karl R. Schendel to Various Addressees (6 pages)
240.	11/21/73	Ltr from Walter G. Martin to Theodore Stern (6 pages)
241.	04/18/72	Ltr Karl R. Schendel to Various Addressees (5 pages)
242.	02/11/74	Ltr from Karl R. Schendel to Leland C. Rouse (10 pages)
243.	11/20/73	Note to File from Jim (1 page)
244.	05/13/74	Termination of License SNM-338, Docket 70-337 (2 pages)
245.	08/20/74	Ltr from L. C. Rouse to Karl R. Schendel (1 page)
246.	07/19/74	Inspector Evaluation from Phillip C. Jerman (1 page)
247.	07/19/74	Ltr from Paul R. Nelson to Theodore Stern (3 pages)
248.	02/28/72	Ltr from C.D.W. Thornton to Karl L. Schendel (6 pages)
249.	No date	Ltr from R. P. Wischew to Frederick Forscher (5 pages)
250.	04/28/71	Ltr from C.D.W. Thornton to Karl R. Schendel (7 pages)
251.	02/17/69	Ltr from R. P. Wischow to D. J. Povejsil (23 pages)
252.	08/09/71	Ltr from C.D.W. Thornton to Karl R. Schendel (3 pages)
253.	06/25/70	Ltr from Ralph G. Page to Dr. F. Forscher (6 pages)
254.	04/26/72	Ltr from C.D.W. Thornton to Karl R. Schendel (6 pages)

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RECORDS BEING RELEASED IN THEIR ENTIRETY

NO.	DATE	DESCRIPTION/(PAGE COUNT)
255.	06/15/70	Ltr from Ralph G. Page to Karl R. Schendel (8 pages)
256.	01/08/70	Report of the Inspection of Safeguards Control of Nuclear Material of License No. SNM-338 (5 pages)
257.	06/20/69	Ltr from R. P. Wischow to K. R. Schendel (8 pages)
258.	04/28/69	License Amendment for Special NMS (7 pages)
259.	07/23/68	Survey No. NY-250 (16 pages)
260.	05/31/67	Memo Route Slip (29 pages)
261.	05/29/68	Memorandum from V. J. D'Amico to R. K. Kirkman (12 pages)
262.	03/09/67	Division of Compliance Memo Route Slip (11 pages)
263.	No date	Docket Input Form (1 page)
264.	02/07/78	Analysis Form (7 pages)
265.	11/19/64	Notice of License Expiration (1 page)
266.	No date	Exhibit C - Schedule of Receipts (1 page)
267.	02/03/72*	Newspaper Article (1 page)
268.	12/30/70	Ltr from K Schendel to D Nussbaumer (1 page
269.	06/17/70	Ltr from K Schendel to D Nussbaumer (2 pages)
270.	10/13/71	Ltr from Karl R. Schendel to Richard E. Cummingham(35 pages)
271.	04/13/72	Application for Amendment of License (2 pages)
272.	07/26/71	Ltr from Karl R. Schendel to Charles MacDonald (1 page)
273.	12/10/70	Application for Amendment of License SNM-338 (1 page)

APPENDIX C
RECORDS BEING RELEASED IN THEIR ENTIRETY

274.	12/22/69	Ltr from Karl R. Schendel to Donald Nussbaumer (1 page)
275.	12/04/69	Ltr from Donald A. Nussbaumer to Karl R. Schendel (1 page)
276.	10/20/69	Ltr from Karl R. Schendel to Donald A. Nussbaumer (2 pages)
277.	No date	TWX NR 857 (1 page)
278.	07/26/68	Ltr from Karl R. Schendel to Donald A. Nussbaumer (2 pages)
279.	11/12/69	Ltr from Karl R. Schendel to Donald Nussbaumer (1 page)
280.	09/06/66	TWX NO 490 (3 pages)
281.	No date	Ltr from Donald A. Nussbaumer to Karl R. Schendel (7 pages)
282.	07/15/64	Ltr from H. C. Amtsberg to D. A. Nussbaumer (4 pages)
283.	10/24/72	Ltr from Karl R. Schendel to Charles MacDonald (1 page)
284.	10/23/72	Ltr from Karl R. Schendel to R. B. Chitwood (1 page)
285.	08/11/72	Ltr from Karl R. Schendel to R. B. Chitwood (4 pages)
286.	07/18/74	RO Inspection Report No: 70-337/74-01 and 70-1143/74-03 (8 pages)
287.	Various	Blue Prints (20 pages)

1. LICENSEE: Westinghouse Electric Corp. DOCKET NO. 70-337 PRIORITY AND/OR CATEGORY A(1)I

FACILITY: Cheswick, Pennsylvania LICENSE NO. SNM-338

REGION MAKING INSPECTION: CO:I INSPECTOR: W. R. Lorenz

INSP./INVEST. DATES: FROM November 23 TO 25, 1970 REPORT NO.:

2. TYPE OF REPORT: INSP: ( ) INIT, (X) REINSP; ( ) INVEST; ( ) INQUIRY; ( ) VENDOR.

3. REPORT ACTION: ( ) CLEAR; ( ) DRL/DML FOR INFO; (X) 592; ( ) CDN; ( ) HQS FOR ACTION.

4. CHARACTER OF ENFORCEMENT ACTION: ( ) SAFETY ITEM: ( ) NONCONFORMANCE:
( ) NONCOMPLIANCE – W/LIC COND ____ ____ ____ ____ 10CFR 201(b) ____ ____ ____ ____

5. FIELD ACTION AS A RESULT OF INQUIRY: ( ) CONDUCT INVESTIGATION; ( ) REVIEW NEXT INSP.;
( ) REFER TO ; ( ) NO FURTHER ACTION.

6. A

REASON INSP. REPORT TO HQS FOR ACTION:

( ) IMMED. THREAT TO H & S
COMPLEX ITEM INVOLVING:
( ) NONCOMPLIANCE
( ) LICENSING PROBLEM
( ) POLICY MATTER
( ) INTERPRETATION
( ) SAFETY ITEM
( ) COSTLY TO CORRECT
( ) >180 DAYS TO CORRECT
( ) UNCORRECTED N/C
( ) NO CORRECTIVE ACTION PLANNED
( ) INADEQ. CORRECT ACTION PLANNED
( ) 592, CDN NO REPLY RECEIVED
( ) 592, CDN INADEQ REPLY
( ) UNREVIEWED SAFETY ITEM
( ) DESIGN CHANGE W/O DRL APPR.
( ) APPROPRIATE FOR HQS ACTION
( ) DISCRETION OF REG. OFFICE
( ) REVIEW
( ) OTHER

B

SUBJECT OF INQUIRY OR INVESTIGATION:

TYPE ( ) A , ( ) B
( ) OVEREXPOSURE
( ) INT ( ) EXT
( ) RELEASE
( ) LOSS OF FACILITY
( ) PROPERTY DAMAGE
10 CFR 20.405
( ) OVEREXPOSURE
( ) INT ( ) EXT
( ) EXCESSIVE RAD LEVELS
( ) EXCESSIVE CONC LEVELS
( ) CRITICALITY
( ) LOSS OR THEFT
( ) CONTAMINATION
( ) UNSAFE OPERATION
( ) FIRE, EXPLOSION
( ) HUMAN/OPERATOR ERROR
( ) COMPLAINT
( ) PUBLIC INTEREST
( ) LEAKING SOURCE
( ) TRANSPORTATION
( ) EXPIRED LICENSE
( ) OTHER

C

HQS ACTION ON INSPECT. AND INVEST. REPORTS:

( ) NO ACTION
( ) LETTER – CLEAR
( ) LETTER – N/C
( ) LETTER – SAFETY ITEM
( ) PART 2 NOTICE
( ) PART 2 NOTICE AS RESULT OF FOLLOWUP TO 592, CDN
( ) ORDER
( ) LICENSE AMENDMENT
( ) ENFORCEMENT VISIT
( ) APPLICATION DENIAL
( ) REFER TO DRL FOR RESOLUTION
( ) REFER TO DRL FOR INFORMATION
( ) OTHER

( ) EXPOSURE REPORTED AND FOUND INVALID
( ) CONST./EQUIP. DEFICIENCY
( ) EQUIPMENT FAILURE
( ) EXCEED LIC/TECH SPEC REQ'S
( ) DEPARTURE FROM FSAR/TS'S

7. REGIONAL OFFICE ACTION DATES:
ISSUE 592 OR CDN 12/9/70
TRANSMIT REPORT TO HQS 12/18/70
RECEIVE LICENSEE REPLY 12/31/70

8. HQS ACTION DATES:
ISSUE NOTICE, ORDER ____
FORWARD REPORT ____
RECEIVE LICENSEE REPLY ____

9. CHARACTER OF LICENSEE REPLY: (X) ADEQ ( ) INADEQ ( ) NOT REQUIRED.

10. COMMENTS:

ITEM # 1

JAN 4 1971

Gus W. Roy, Chief, Materials Inspection and
Enforcement Branch, Division of Compliance, HQ

TRANSMITTAL OF SATISFACTORY REPLY TO FORM AEC-592

Enclosed are copies of communications between CO:I and the indicated licensee. The licensee's reply is satisfactory.

Licensee	Date of Inspection	Transmittal Date of Form AEC-592
Westinghouse Electric Corporation Box 217 Cheswick, Pennsylvania 15024 License No. SNM-338	November 23 - 25, 1970	December 9, 1970

CO:I:WRL

Wilbert W. Crocker
Senior Fuel Facilities Inspector

Enclosures:
1. Reply dtd 12/29/70
2. Acknowledgement dtd 1/4/71
3. Completed statistical Form

cc: A. Giambusso, CO
L. Kornblith, CO
R. Engelken, CO

ITEM # 2

OFFICE ▶	CO					
SURNAME ▶	Lorenz/nvk	Crocker				
DATE ▶	1/4/71					

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1968 O-320-507

JAN 4 1971

Westinghouse Electric Corporation
Box 217
Cheswick, Pennsylvania 15024

Attention: Mr. E. J. Cattabiani, General Manager

Gentlemen:

Thank you for your letter dated December 29, 1970, informing us of the steps you have taken to correct the items of apparent noncompliance which we brought to your attention in our letter dated December 9, 1970. We will review these matters during our next inspection.

Your cooperation with us is appreciated.

Very truly yours,

Robert W. Kirkman
Director

CO:I:WRL

bcc: Gen W. Roy, CO
A. Giambusso, CO
L. Kornblith, CO
R. Engelken, CO

ITEM # 3

OFFICE ▶	CO					
SURNAME ▶	Lorena/nvk	Crocker	Kirkman			
DATE ▶	1/4/71					

Westinghouse Electric Corporation Power Systems

Electro Mechanical Division

Box 217
Cheswick Pennsylvania 15024
Cable WECHESWICK
(412) 274 6300
(412) 363 8700

December 29, 1970

Mr. Robert W. Kirkman, Director
U. S. Atomic Energy Commission
Division of Compliance, Region I
970 Broad Street
Newark, New Jersey 07102

Dear Mr. Kirkman:

In response to your letter dated December 9, 1970, concerning our activities under License SNM-338, Docket 70-337, the following information is presented regarding the items listed under Section 5 of the AEC Form 592 which accompanied it.

Our procedures have been modified so as to accurately reflect the time period during which personnel are present in specific airborne radioactivity areas. A daily record is made for each individual which shows the time he spent in each radioactivity area and the measured airborne radioactivity concentration for each area. From these records a CT (Concentration X Time) value is established for each day. As the work week progresses, these CT values are evaluated in relation to the permissible exposure levels and at the end of each seven-day period the daily CT values are summed for comparison with 40 MPC hours.

Where it is necessary to evaluate personnel exposures to airborne radioactive materials by use of air samplers at several locations, the individual's exposure is determined by averaging the concentrations at each of the sampling stations. This will maintain consistency in all evaluations of this type.

These modifications in our procedures were put into effect December 2, 1970.

Very truly yours,

E. J. Cattabiani
General Manager

cc Mr. D. J. Povejsil
Mr. P. J. Koppel
Mr. E. C. Barnes
Mr. W. E. Piros

C/4

ITEM # 4

ITEM # 5

3948

DEC 9 1970

Westinghouse Electric Corporation
Box 217
Cheswick, Pennsylvania 15024

Attention: Mr. E. J. Cattabiani, General Manager, Electromechanical Division

Gentlemen:

This letter relates to the discussion Mr. Walter Lorenz of this office held with Mr. E. J. Cattabiani following the inspection conducted on November 23-25, 1970 of the activities authorized under AEC Special Nuclear Materials License No. SNM-338.

It appears that certain of your activities were not conducted in full compliance with conditions of the license. The item and reference to the pertinent requirement are listed in Item 5 of the enclosed form AEC-592.

The purpose of this letter is to give you an opportunity to advise us in writing of your position concerning this item, of the corrective steps you have taken or plan to take with respect to it, and the date all corrective action was or will be completed. Your reply should be sent to us within 20 days of the date of this letter to ensure that it will receive proper attention in our further evaluation of this matter.

Should you have any question concerning this matter, you may communicate directly with this office.

Very truly yours,

Robert W. Kirkman
Director

CO:I:WRL

Enclosure:
Form AEC-592

cc: Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230
Attn: Mr. D. J. Pavejsil, General Manager,
Nuclear Fuels Division

bcc: Gen W. Roy, CO, w/backup
A. Giambusso, CO
L. Kornblith, CO
R. Engelken, CO

OFFICE ▶ w/enclosure			COMPLIANCE			
SURNAME ▶			Lorenz/caz	Crocker	Kirkman for	
DATE ▶			12/8/70			

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1968 O—320-507

1/5

Form AEC-592
(5-62)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

1. LICENSEE	2. REGIONAL OFFICE
Westinghouse Electric Corporation 3 Gateway Center Pittsburgh, Pennsylvania 15230	U. S. Atomic Energy Commission Region I, Division of Compliance 970 Broad Street Newark, New Jersey 07102
3. LICENSE NUMBER SNM-338 (Docket No. 70-337)	4. DATE(S) OF INSPECTION November 23 - 25, 1970

5. The following activities under your license (identified in Item No. 3 above) appear to be in noncompliance with AEC regulations or license requirements, as indicated.

Contrary to 10 CFR 20.201(b), "Surveys", inadequate evaluations were made of personnel exposures to airborne concentrations of radioactive materials as required by 10 CFR 20.103(a) and (b). The evaluations do not completely reflect the time period in which personnel are present, in airborne radioactive areas, nor the average concentration, to which personnel are exposed.

ITEM # 6

Supplementary page NONE attached.

W. R. Lorenz, Radiation Specialist — AEC Compliance Inspector

12/9/70 — Date

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ L&R HEADQUARTERS.

U.S. GOVERNMENT PRINTING OFFICE: 1969—O-888511

082-005

STATISTICAL DATA SHEET

LICENSEE: Westinghouse Electric Corp. DOCKET NO. 70-337 PRIORITY AND/OR CATEGORY I A,(1)

FACILITY: Cheswick NFD LICENSE NO. SNM-338 CATEGORY ____

REGION MAKING INSPECTION: I INSPECTOR: ____

INSP./INVEST. DATES: FROM 11/23 TO 25 REPORT NO.: ____

TYPE OF REPORT: INSP: ( ) INIT, (X) REINSP; ( ) INVEST; ( ) INQUIRY; ( ) VENDOR.

4. REPORT ACTION: ( ) CLEAR; ( ) DRL/DML FOR INFO; (X) 592; ( ) CDN; ( ) HQS FOR ACTION.

5. CHARACTER OF ENFORCEMENT ACTION: ( ) SAFETY ITEM: ( ) NONCONFORMANCE:
( ) NONCOMPLIANCE – W/LIC COND ____ ____ ____ ____ , 10CFR 20.(b) ____ ____ ____ ____

6. FIELD ACTION AS A RESULT OF INQUIRY: ( ) CONDUCT INVESTIGATION; ( ) REVIEW NEXT INSP.;
( ) REFER TO ; ( ) NO FURTHER ACTION.

A

REASON INSP. REPORT TO HQS FOR ACTION:

- ( ) IMMED. THREAT TO H & S
- COMPLEX ITEM INVOLVING:
  - ( ) NONCOMPLIANCE
  - ( ) LICENSING PROBLEM
  - ( ) POLICY MATTER
  - ( ) INTERPRETATION
- ( ) SAFETY ITEM
- ( ) COSTLY TO CORRECT
- ( ) >180 DAYS TO CORRECT
- ( ) UNCORRECTED N/C
- ( ) NO CORRECTIVE ACTION PLANNED
- ( ) INADEQ. CORRECT ACTION PLANNED
- ( ) 592, CDN NO REPLY RECEIVED
- ( ) 592, CDN INADEQ REPLY
- ( ) UNREVIEWED SAFETY ITEM
- ( ) DESIGN CHANGE W/O DRL APPR.
- ( ) APPROPRIATE FOR HQS ACTION
- ( ) DESCRETION OF REG. OFFICE
- ( ) REVIEW
- ( ) OTHER

B

SUBJECT OF INQUIRY OR INVESTIGATION:

TYPE ( ) A , ( ) B

- ( ) OVEREXPOSURE
  - ( ) INT ( ) EXT
- ( ) RELEASE
- ( ) LOSS OF FACILITY
- ( ) PROPERTY DAMAGE
- 10 CFR 20.405
- ( ) OVEREXPOSURE
  - ( ) INT ( ) EXT
- ( ) EXCESSIVE RAD LEVELS
- ( ) EXCESSIVE CONC LEVELS
- ( ) CRITICALITY
- ( ) LOSS OR THEFT
- ( ) CONTAMINATION
- ( ) UNSAFE OPERATION
- ( ) FIRE, EXPLOSION
- ( ) HUMAN/OPERATOR ERROR
- ( ) COMPLAINT
- ( ) PUBLIC INTEREST
- ( ) LEAKING SOURCE
- ( ) TRANSPORTATION
- ( ) EXPIRED LICENSE
- ( ) OTHER

C

HQS ACTION ON INSPECT. AND INVEST. REPORTS:

- ( ) NO ACTION
- ( ) LETTER – CLEAR
- ( ) LETTER – N/C
- ( ) LETTER – SAFETY ITEM
- ( ) PART 2 NOTICE
- ( ) PART 2 NOTICE AS RESULT OF FOLLOWUP TO 592, CDN
- ( ) ORDER
- ( ) LICENSE AMENDMENT
- ( ) ENFORCEMENT VISIT
- ( ) APPLICATION DENIAL
- ( ) REFER TO DRL FOR RESOLUTION
- ( ) REFER TO DRL FOR INFORMATION
- ( ) OTHER

- ( ) EXPOSURE REPORTED AND FOUND INVALID
- ( ) CONST./EQUIP. DEFICIENCY
- ( ) EQUIPMENT FAILURE
- ( ) EXCEED LIC/TECH SPEC REQ'S
- ( ) DEPARTURE FROM FSAR/TS'S

7. REGIONAL OFFICE ACTION DATES:
ISSUE 592 OR CDN 12/9/70 ✓
TRANSMIT REPORT TO HQS ____
RECEIVE LICENSEE REPLY ____

8. HQS ACTION DATES:
ISSUE NOTICE, ORDER ____
FORWARD REPORT ____
RECEIVE LICENSEE REPLY ____

9. CHARACTER OF LICENSEE REPLY: ( ) ADEQ ( ) INADEQ ( ) NOT REQUIRED. CA

10. COMMENTS:

ITEM # 1 ✓

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-3941

December 17, 1970

File
THRU: Hilbert W. Crocker, Senior Fuel Facilities
Inspector, Region I, Division of Compliance

WESTINGHOUSE ELECTRIC CORPORATION
PITTSBURGH, PENNSYLVANIA
LICENSE NO. SNM-338
DOCKET NO. 70-337
INSPECTION DATES - November 23 through 25, 1970 (Announced)

One item of noncompliance with respect to evaluating personnel exposure to radioactive air concentrations was noted and resulted in the issuance of an AEC-592.

Previous noncompliances were reviewed and noted as corrected.

The only problem at the NFD is the air concentrations generated by the process line equipment used. The worst pieces of equipment are the Cincinnati grinders in process lines 1 and 2. The licensee recognizes this and has made capital equipment requests to replace them, but this will take one year. In the interim, close control will have to be exercised of personnel operating such equipment to ensure that they will not be overexposed.

No immediate health and safety or nuclear safety problems appear evident as a result of this inspection, and a routine reinspection should be scheduled.

Walter R. Lorenz
Radiation Specialist

cc: Gen W. Roy, CO, w/backup
A. Giambusso, CO
L. Kornblith, CO
R. Engelken, CO

ITEM # 8

(8)

592 BACKUP NOTES

Region I, Division of Compliance
Newark, New Jersey

Licensee: Westinghouse Electric Corporation
3 Gateway Center
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

Date of Visit: November 23 to 25, 1970 (Announced)

This report does not contain any company confidential material.

Inspected by: W R Lorenz
W. R. Lorenz, Radiation Specialist — Date 12/18/70

Reviewed by: H W Crocker
H. W. Crocker, Sr. Fuel Facilities Inspector — Date 12/18/70

ITEM # [redacted]

By : Walter R. Lorenz, Radiation Specialist

Title: Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

Inspection Dates: November 23 to 25, 1970 (Announced)

Introduction and Summary

1. During this routine inspection of the subject facility, the previous items of noncompliance were reviewed in addition to a review of the licensee's procedures with respect to nuclear and health safety practices, and compliance with federal regulations. The previous inspection was made on July 20 to 24, 1970.

2. Basically the facility is a production facility converting low enriched powder, as received, to ceramic pellets for fuel rods, and the loading, assembling, and shipping of reactor core assemblies.

3. The previous noncompliance items of posting airborne radioactivity areas and excessive air concentrations released to unrestricted areas were corrected. One new noncompliance was noted in that the licensee is inadequately evaluating air concentrations to which personnel are being exposed to establish that no persons are in air concentrations in excess of 40 mpc/hr or its equivalent as required by 20.103(a) and (b).

DETAILS

Scope

4. During this inspection, the facility was toured and records of in-plant air concentrations were reviewed in detail. In addition, personnel monitoring records were reviewed, organizational changes, safety committee organization, criticality audits, records, and various other safety procedures, controls and findings.

ITEM # _____

Organization

5. Only one change has been made in the organization since the last inspection in July 20 to 24, 1970. Mr. Peter Koppel, former manager of the production facility at Columbia S.C., has switched managerial responsibilities with Mr. Brian Mills. This change in managers was effective on November 1, 1970.

6. The only other change at the Cheswick site, is that the ARD facility is no longer licensed under SNM-338, but is now separately licensed under SNM-1170. An application was also submitted to remove the MSL from the SNM-338 license, but was subsequently withdrawn by Westinghouse.

Persons Contacted

7. W. E. Piros, Safety and Services Manager
K. Bodden, Health Physicist
P. Koppel, Manager, NFD at Cheswick
C. Collum, Superintendent, NFD Cheswick Production
E. J. Cattabiani, General Manager, EMD and Site Landlord

Nuclear Safety Committee

8. The site Nuclear Safety Committee, according to Piros includes the following persons:

J. J. Miller, Chairman, Manager Services WNCO
C. C. Collum, Vice Chariman, Supervisor Oper. NFD
R. Wiggins, Manager, PFDL
Jacoby, Manager, ARD
R. Lange, Manager, MSL
C. Bates, Safety Administrator
W. Piros
J. Mathis, Works Engineer
E. Constable, Consultant

This committee meets monthly and reviews license changes, criticality control changes, approves SOP's, and any other safety considerations brought up involving any and all of the site licenses and also non-licensing matters.

9. Within the NFD (SNM-338), there is a safety committee which includes C. C. Collum, E. Flowers, foreman high bay area, P. Harragy, foreman pellet line and W. Ward, foreman rod loading area. This committee also meets regularly and reviews radiological and industrial safety practices within the NFD only.

ITEM # [redacted]

Criticality Monitors

10. In the NFD manufacturing areas there are nine pairs of NMC-GA-2 type criticality monitors. To reduce the probability of false alarms, both monitors must detect the criticality incident. Three pairs of monitors are located in the high bay area, one pair covers the rod loading and furnace area, four pairs cover the pellet lines and one pair is located in the vault area.

11. According to Bodden, the monitors are checked quarterly, two of the quarterly checks involve calibration. The monitors also are calibrated each time they are repaired. The last calibration was in March, 1970. The monitors are all set between 5 and 20 mR/hr.to sound the alarm.

Laundry

12. The licensee supplies all the workers at the Cheswick site with protective clothing of one type or another. Bodden estimates that no activity is contained on the WNCO, PFDL, ARD, and EMD groups. On the NFD laundry, he estimates 420 grams of UO_2 at less than 5% enrichment per daily batch of clothing. Laundry from the NFD is bagged out daily. Laundry bags are surveyed using an Eberline PRM-5 Na-I crystal gated at ±20% of the 185 KEV U-235 gamma peak. A sample set of curves have been established for this monitoring system using varying quantities and distributions of activities within the laundry bags. According to Bodden, the counting error is approximately 95% and the error due to shielding and absorption is approximately 50%. Other considerations include a clothing density approximately equal to water, with a average energy of 150 KEV yielding a half value layer (HVL) of 24.93 cm as compared to an average clothes distance of from 22 to 30 cm from the center of the clothes bag.

13. All clothes are shipped to NUMEC for laundering.

Roof Sampling

14. Since the last inspection, the licensee has closed off all ventilation from the building except for two 10,000 cfm exhaust blowers in the roof over the line one and line two process and the heat exhaust from the drying ovens in the fuel loading area (~1000 cfm).

15. These exhausts are now sampled at .6 CFM continuously. Glass fiber filter paper is used and no decrease in air flow sampling rates have been noted, according to Bodden. Isokinetic sampling is performed within a duct on the exhaust side of the two 10,000 cfm exhaust blowers, and on the exhaust side of the HEPA filter on the exhaust side of the drying oven exhaust fan.

ITEM # _____

16. Sample results for these three exhaust all indicate less than 4 $d/m/m^3$ (~50% of MPC) and average approximately 25% of MPC.

In-Plant Air Sampling

17. The licensee continues to in plant air sample process equipment as a means of controlling air concentrations. Many sample stations have been established. Process equipment causing the greatest airborne levels of radioactivity include the centerless grinder equipment. Further, Bodden has identified the Cincinnati Grinder, when operated, to cause levels in 24 hour periods of up to 700 $d/m/m^3$. The Royal grinders cause levels of approximately 1/2 that of the Cincinnati Grinder. Notification has been made in writing to operations from health physics that no persons are to operate the grinder equipment more than two days per week.

18. In January, 1970, Bodden began a system by which NFD operators time spent on equipment by the day and half day was logged. This information was visually scanned in conjunction with process air sample results to maintain control over personnel exposures to air concentrations. In November, 1970, Bodden's system was further refined so that the air concentration a person was exposed to during a given day was logged on a per person basis for each week. Currently this system does not take into account the exact time an individual spends in a given area nor the correct average concentration to which the person was exposed. In view of the above, the licensee is in noncompliance with 20.201(b) in that these additional evaluations have not been made nor incorporated into the control system to ensure that personnel are not exposed to levels greater than that specified in 20.103(a) and (b).

19. According to the new manager, the Cincinnati grinders are scheduled for replacement in about one year. During the inspection of the facility, an unused or rarely used Royal Grinder was noted in the MSL, and was pointed out, by the inspector, to all concerned that if appropriate, this grinder could substitute for one of the currently used Cincinnati grinders. The licensee agreed to look into the matter.

Personnel Exposures

20. The licensee uses the same method for personnel monitoring at the NFD, as described in Paragraph 46 through 48 of our April 9 to 11, 1968 inspection report.

21. The method for recording the results has been changed and currently the man's entire history ~~from~~ external and bioassay results are recorded on

ITEM # _____

one form. This form is enclosed as Exhibit A and B. This system has recently been introduced to the NFD and all the other divisions at the Cheswick site.

22. A record review indicates that no NFD personnel receive whole body exposures greater than 300 mrem/quarter.

Nuclear Safety Audits

23. Weekly nuclear safety audits are made by W. Piros, facility managers and supervisors for the various divisions. A review of these records indicate that criticality and housekeeping deficiencies are noted and corrective actions with dates and responsibilities are recorded.

24. One recurring operational problem is the buildup of sludge from the Cincinnati Grinder. This sludge builds up in a centrifuge used for cleaning the water for reuse. The centrifuge requires frequent cleanout.

Administrative Procedures

25. The licensee operates the NFD facility using the license applications as the rules. These rules are additionally detailed with the issuance of standard operating procedures (SOP's). These SOP's are not part of the license. Administrative procedures are changed by a license amendment, SOP's are changed by safety committee approval. Foremen are directly responsible to production supervisors and for the operators. The foremen are responsible for production and safety.

Evacuation Drills

26. The last evacuation drill held in September, was only for NFD personnel and was actuated using the criticality monitors. The drill was announced for the specific day, not time. According to Bodden, the evacuation time was one minute. A management critique of the drill indicated satisfactory. The emergency procedures as described to the Commission and summarized inside the plant telephone book were followed. According to Bodden, drills are conducted two times per year.

Incidents and Special Problems

27. The licensee, Bodden and Piros, report no incidents, loss of SNM, or theft of materials. The only special problem currently at hand is the replacement of the Cincinnati grinders.

Security

28. Security of the facility is accomplished by receptionist control at the only entrances to the buildings by day and personnel attendence in areas during day and night shifts. During other than day shift operations, the entire facility is guard patrolled and locked except for those areas where personnel are in attendence processing material.

ITEM # [redacted]

Criticality Calculation

29. No criticality calculations have been necessary in recent years, but should such calculations be required, they are made by Mr. W. Geiger, stationed at Columbia S. C. The calculations are then reviewed by W. Piros for mathematical errors and then submitted to the Commission for approval.

Management Discussion

30. A management discussion was held with Mr. E. J. Cattabiani, General Manager, EMD, since the one item of noncompliance related to the evaluation of personnel exposures to airborne concentrations of radioactivity. These evaluations are the responsibility of the health and safety services department, who reports to Mr. Cattabiani, who is the site landlord.

31. Also attending the discussion were Messrs. Piros and Bodden.

32. The current status of Bodden's personnel exposure evaluation was reviewed and the deficiency to the total evaluation pointed out. All agreed that corrective action would be forthcoming on this deficiency in their program.

33. The inspector informed the licensee that the deficiency in the form of an item of noncompliance will be sent to them from CO:I on a Form AEC-592, and they will be required to describe their corrective action taken concerning this item.

ITEM # 

ITEM # 9 RADIATION EXPOSURE HISTORY

NAME _____

BADGE NO. (S/S NO.) _____

TYPE DOSIMETRY
(Film Badge, TLD, Pocket Chamber, Calculated ,etc.)
X-Gamma ( ) Neutrons ( ) Beta ( ) Extremity ( )

PAST EXPOSURE HISTORY IN REM
From AEC 4 Form ( )
From W Form ( )
New Employe ( )

Whole Body (H) Skin (I) Extremity (J)

ASSIGNED DOSE IN REM

MONTH	WHOLE BODY				SKIN	EXTREMITY
	X and Gamma (A)	Neutron (B)	Total (A + B)	Beta (C)	Total (A+B+C)	
JANUARY						
FEBRUARY						
MARCH						
1st Qtr. Total						
APRIL						
MAY						
JUNE						
2nd Qtr. Total						
JULY						
AUGUST						
SEPTEMBER						
3rd Qtr. Total						
OCTOBER						
NOVEMBER						
DECEMBER						
4th Qtr. Total						
TOTAL FOR YEAR			(E)		(F)	(G)
JANUARY						
FEBRUARY						
MARCH						
1st Qtr. Total						
APRIL						
MAY						
JUNE						
2nd Qtr. Total						
JULY						
AUGUST						
SEPTEMBER						
3rd Qtr. Total						
OCTOBER						
NOVEMBER						
DECEMBER						
4th Qtr. Total						
TOTAL FOR YEAR			(L)		(M)	(N)

SUMMARY IN REM

197____ Age _____
Lifetime Total:
Whole Body (H+E) Skin (F+I) Extremities (G+J)

Perm. Acc. Dose (K)
5 (Age - 18)

Unused part of Permissible Acc. Dose
K - (H+E)

COMMENTS
( ) See Attached Page

197____ Age_____
Lifetime Total:
Whole Body (L+H+E) Skin (M+F+I) Extremities (N+G+J)

PERM. Acc. Dose (O)
5 (Age - 18)

Unused part of Permissible Acc. Dose
O - (L+H+E)

COMMENTS
( ) See Attached Page

Exhibit A (over)

Vestinghouse Electric Corporation

Westinghouse Building
Gateway Center
Pittsburgh Pennsylvania 15222

July 30, 1970

HARRY PRESSMAN
PLS PUT A COPY OF THIS IN
EACH ACTIVE DOCKET FILE
TKS
PoBC.

For Div. of Compliance

RECEIVED
AUG 3 1970

U. S. Atomic Energy Commission
Washington, D. C. 20545

Attention: Dr. Peter A. Morris, Director
Division of Reactor Licensing

Mr. Lyall E. Johnson, Acting Director
Division of Materials Licensing

Gentlemen:

Subject: Change of Corporate Address

All of the licenses on the attached list have been issued to the Westinghouse Electric Corporation as the licensee. The address given is:

3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Karl R. Schendel

This letter is to notify you that on or about August 8, 1970, the address of the Corporation will be:

Westinghouse Building
Gateway Center
Pittsburgh, Pennsylvania 15222

Attention: Karl R. Schendel

I wish to emphasize that the address change applies to the Corporate Headquarters. There will be no changes in the locations designated for the use of the licensed materials.

ITEM # 10

2417

Please note this change on those licenses enumerated on the attached list.

If you have any questions, please write to me at the above address, or telephone collect (412) 255-3907.

Very truly yours,

Karl R. Schendel

Karl R. Schendel
License Administrator

KRS: sw

Attachment: List of Licenses
28 copies transmitted

U.S. AEC

July 30, 1970

CURRENT LIST OF LICENSES

Users and Site	License Numbers
Nuclear Energy Systems	
Cheswick	SNM-338, 1120; 37-05809-01, 37-05809-02 SMB-355
Columbia, S.C.	SNM-1107
Forest Hills	37-00497-09
Waltz Mill	SNM-576, 738, 770; CX-11; 37-09442-04; TR-2
Astronuclear Laboratories	
Cheswick	37-05809-03
Large	SNM-951; 37-09442-02; SMB-915
Waltz Mill	37-09442-01
Research Laboratories	
Churchill	SNM-47; 37-00497-06; SMB-550
Headquarters Industrial Hygiene Laboratory	
East Pittsburgh	37-00497-13; 37-00497-18
Semiconductor Division	
Youngwood	37-07934-01

ITEM # _____

1. LICENSEE: Westinghouse Electric Corporation DOCKET NO. 70-337 PRIORITY A(I)
FACILITY: Cheswick LICENSE NO. SNM-338 AND/OR CATEGORY
REGION MAKING INSPECTION: ~~Region I~~ INSPECTOR: Lorenz
INSP./INVEST. DATES: FROM July 20 TO 24, 1970 REPORT NO.:

2. TYPE OF REPORT: INSP: ( ) INIT, (X) REINSP; ( ) INVEST; ( ) INQUIRY; ( ) VENDOR.

3. REPORT ACTION: ( ) CLEAR; ( ) DRL/DML FOR INFO; (X) 592; ( ) CDN; ( ) HQS FOR ACTION.

4. CHARACTER OF ENFORCEMENT ACTION: ( ) SAFETY ITEM: ( ) NONCONFORMANCE:
( ) NONCOMPLIANCE – W/LIC COND ____ ____ ____ ____ 10CFR ~~203 (d)(2) 106(a)~~ ____

5. FIELD ACTION AS A RESULT OF INQUIRY: ( ) CONDUCT INVESTIGATION; ( ) REVIEW NEXT INSP.;
( ) REFER TO ; ( ) NO FURTHER ACTION.

6. A

REASON INSP. REPORT TO HQS FOR ACTION:

( ) IMMED. THREAT TO H & S
COMPLEX ITEM INVOLVING:
( ) NONCOMPLIANCE
( ) LICENSING PROBLEM
( ) POLICY MATTER
( ) INTERPRETATION
( ) SAFETY ITEM
( ) COSTLY TO CORRECT
( ) >190 DAYS TO CORRECT
( ) UNCORRECTED N/C
( ) NO CORRECTIVE ACTION PLANNED
( ) INADEQ. CORRECT ACTION PLANNED
( ) 592, CDN NO REPLY RECEIVED
( ) 592, CDN INADEQ REPLY
( ) UNREVIEWED SAFETY ITEM
( ) DESIGN CHANGE W/O DRL APPR.
( ) APPROPRIATE FOR HQS ACTION
( ) DESCRETION OF REG. OFFICE
( ) REVIEW
( ) OTHER

B

SUBJECT OF INQUIRY OR INVESTIGATION:

TYPE ( ) A , ( ) B
( ) OVEREXPOSURE
( ) INT ( ) EXT
( ) RELEASE
( ) LOSS OF FACILITY
( ) PROPERTY DAMAGE
10 CFR 20.405
( ) OVEREXPOSURE
( ) INT ( ) EXT
( ) EXCESSIVE RAD LEVELS
( ) EXCESSIVE CONC LEVELS
( ) CRITICALITY
( ) LOSS OR THEFT
( ) CONTAMINATION
( ) UNSAFE OPERATION
( ) FIRE, EXPLOSION
( ) HUMAN/OPERATOR ERROR
( ) COMPLAINT
( ) PUBLIC INTEREST
( ) LEAKING SOURCE
( ) TRANSPORTATION
( ) EXPIRED LICENSE
( ) OTHER

C

HQS ACTION ON INSPECT. AND INVEST. REPORTS:

( ) NO ACTION
( ) LETTER – CLEAR
( ) LETTER – N/C
( ) LETTER – SAFETY ITEM
( ) PART 2 NOTICE
( ) PART 2 NOTICE AS RESULT OF FOLLOWUP TO 592, CDN
( ) ORDER
( ) LICENSE AMENDMENT
( ) ENFORCEMENT VISIT
( ) APPLICATION DENIAL
( ) REFER TO DRL FOR RESOLUTION
( ) REFER TO DRL FOR INFORMATION
( ) OTHER

( ) EXPOSURE REPORTED AND FOUND INVALID
( ) CONST./EQUIP. DEFICIENCY
( ) EQUIPMENT FAILURE
( ) EXCEED LIC/TECH SPEC REQ'S
( ) DEPARTURE FROM FSAR/TS'S

7. REGIONAL OFFICE ACTION DATES:
ISSUE 592 OR CDN August 5, 1970
TRANSMIT REPORT TO HQS September 8, 1970
RECEIVE LICENSEE REPLY August 20 and 31, 1970

8. HQS ACTION DATES:
ISSUE NOTICE, ORDER ____
FORWARD REPORT ____
RECEIVE LICENSEE REPLY ____

9. CHARACTER OF LICENSEE REPLY: (X) ADEQ ( ) INADEQ ( ) NOT REQUIRED.

10. COMMENTS:

ITEM # 11

c/11

September 9, 1970

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. D. J. Povejsil, General Manager,
Nuclear Fuels Division

Gentlemen:

Thank you for your letters dated August 20 and 31, 1970, informing us of the steps you have taken to correct the items of apparent noncompliance which we brought to your attention in our letter dated August 5, 1970. We will review these matters during our next inspection.

Your cooperation with us is appreciated.

Very truly yours,

Robert W. Kirkman
Director

CO:I:WRL

ITEM # 12

C/12

OFFICE ▶	COMPLIANCE					
SURNAME ▶	Lorenz/bc	Crocker	Kirkman			
DATE ▶	9/9/70					

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62761-3

Region I, Division of Compliance

Routing Slip

To: _____
Inspector

X Response by licensee adequate

____ Response by licensee inadequate

Comment on Inadequacy

8/24/70 - Telecon Phone to Pino -
will send in dates which will reflect
when full compliance will be obtained -

HWL -
Reviewer

Hold for Supplemental ltr.

____ Concurrence

____ Non Concurrence

Ltr. received dated 8/31/70

Comment on Non Concurrence

ITEM # 13

C/13

Westinghouse Electric Corporation

Power Systems

D J Powejsil
General Manager
Nuclear Fuel Division

Penn Center
Box 355
Pittsburgh Pennsylvania 15230

August 20, 1970
NFD-231

Mr. Robert W. Kirkman, Director
United States Atomic Energy Commission
Division of Compliance, Region I
970 Broad Street
Newark, New Jersey 07102

Dear Mr. Kirkman:

In answer to your letter of August 5, 1970, relative to the Division of Compliance inspection dated July 20 thru July 24, 1970, following are the steps taken by the Nuclear Fuel Division.

(1) Signs noted as missing in section 5A of the inspection report have been posted as required by 10 CFR 20.203(d)(2).

(2) Section 5B notes concentrations in effluents to unrestricted areas as exceeding limits when averaged over one year. We have been taking our samples of this effluent at 3 CFH and now feel that this practice is giving rise to erroneously high results: consequently, we are procuring equipment which will permit sampling at higher air velocity and feel that, with greater accuracy in our measurement, the effluent concentration will be seen to be within limits.

Concurrently, we are exploring alternate methods of exhaust filtration and should the above action prove that effluent concentrations are, in fact, beyond limits, we will design and install an absolute filtration system to reduce the discharge levels to be within limits.

Very truly yours,

D. J. Powejsil

Mr. R. E. Bish
Mr. B. E. Mills
Mr. W. E. Piros

ITEM # 14

Westinghouse Electric Corporation Power Systems

Nuclear Fuel Division
Box 217
Cheswick Pennsylvania 15024

August 31, 1970

SNM 338

Mr. W. R. Lorenz
U. S. Atomic Energy Commission
Region I, Division of Compliance
970 Broad Street
Newark, New Jersey 07102

Dear Mr. Lorenz:

I offer the following comments in reply to your telephone call to Mr. Piros requesting a date when we anticipate being in compliance with stack effluence at this plant.

1. We have relocated the air sampling heads and increased the flow rate to 36 CFH and are sampling isokenitically.

2. Results since we made this change on August 14 indicate that the releases are: Stack #1, 1.87 $D/M/M^3$; Stack #2, 1.28 $D/M/M^3$ and Stack #3, 4.93 $D/M/M^3$; all of which are well below the maximum permissible concentration.

3. We will continue to collect air sampling data on stack effluents and we feel that by September 15 we will have collected sufficient data to assure compliance with the regulations.

Very truly yours,

B. E. Mills, Manager
Cheswick Plant Operations
Nuclear Fuel Division

BEM:rd

cc: Mr. W. E. Piros

ITEM # 15

15

August 5, 1970

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. B. J. Povejsil, General Manager
Nuclear Fuels Division

Gentlemen:

This letter relates to the discussion Mr. Lorenz of this office held with Mr. B. J. Povejsil following the inspection conducted on July 20 - 24, 1970 of the activities authorized under AEC Special Nuclear Materials License No. SNM-338.

It appears that certain of your activities were not conducted in full compliance with conditions of the license. The items and references to the pertinent requirements are listed in item 5 of the attached Form AEC-592.

The purpose of this letter is to give you an opportunity to advise us in writing of your position concerning these items, of any corrective steps you have taken or plan to take with respect to them, and the dates all corrective action was or will be completed. Your reply should be sent to us within 20 days of the date of this letter to ensure that it will receive proper attention in our further evaluation of these matters.

Should you have any questions concerning these matters, you may communicate directly with this office.

Very truly yours,

Robert W. Kirkman
Director

Enclosure:
Form AEC-592

cc: W. E. Pirog, Supervisor,
Industrial Health & Safety,
w/enclosure

ITEM # 16

Form AEC-592
(5-63)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

1. LICENSEE	2. REGIONAL OFFICE
Westinghouse Electric Corporation 3 Gateway Center Pittsburgh, Pennsylvania 15230	U. S. Atomic Energy Commission Region I, Division of Compliance 970 Broad Street Newark, New Jersey 07102
3. LICENSE NUMBER	**4. DATE(S) OF INSPECTION**
SNM-338, Docket No. 70-337	July 20 thru 24, 1970

5. The following activities under your license (identified in Item No. 3 above) appear to be in noncompliance with AEC regulations or license requirements, as indicated.

A. Contrary to 10 CFR 20.203(d)(2), "Caution Signs, Labels and Signals", at times weekly air concentrations exceed Appendix B, Table I, Column 1 levels around operating equipment and general air sample results indicated levels exceeding 25% of Appendix B, Table I, Column 1 levels and no "Caution Airborne Radioactivity Area" signs with symbols were posted.

B. Contrary to 10 CFR 20.106(a), "Concentrations in Effluents to Unrestricted Areas", stack effluent concentrations indicated levels exceeding the limits specified in Appendix B, Table II, Column 1, when averaged over one year.

ITEM # 17

Supplementary page None attached.

W. R. Lorenz, Radiation Specialist — August 5, 1970
AEC Compliance Inspector — Date

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ L&R HEADQUARTERS.

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-665311

882-995

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-

August 7, 1970

File

Thru: H. W. Crocker, Senior Fuel Facilities Inspector

WESTINGHOUSE ELECTRIC CORPORATION
PITTSBURGH, PENNSYLVANIA
LICENSE NO. SNM-338
DOCKET 70-337
INSPECTION DATE: JULY 20-24, 1970

Two items of noncompliance and one poor practice were noted during the inspection and an AEC-592 form has been issued.

During an April 1969 inspection of the facility the inspector suggested to Mr. K. Bodden that although in plant general air sample results were indicating only 11 $d/m/m^3$, that stack samples should be obtained. By the next inspection, in September, initial grab samples were obtained with the results indicating within permissible limits. However, the inspector considered the first results preliminary data to a stack sampling program. As of this inspection a full program is in effect and the results indicate noncompliance with part 20. Although the licensee feels that they are evaluating the condition the inspector is hoping for faster action on the part of the licensee to correct the situation.

Initial process sampling around the equipment by Bodden has indicated that the equipment is not containing the material as initially thought and that some design changes and/or equipment changes appear in order. Other general health and safety aspects appear adequate.

The licensee's corrective action and time required to operate in full compliance with the regulations will be followed closely. A routine re-inspection of the facility will be scheduled after the licensee's corrective action is indicated in their response to our AEC-592.

W. R. Lorenz
Radition Specialist

ITEM # 18

CLP

U. S. ATOMIC ENERGY COMMISSION
Division of Compliance
Region I

Licensee: Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

Dates of Visit: July 20-24, 1970

This report does not contain any company confidential material.

Inspector: W. R. Lorenz 8/7/70
W. R. Lorenz, Radiation Specialist Date

Reviewed by: H. W. Crocker 8/7/70
H. W. Crocker, Senior Fuel Facilities Inspector Date

ITEM # [redacted]

BACK-UP NOTES TO FORM AEC-592

By : W. R. Lorenz, Radiation Specialist, CO:I Date: AUG 7 1970

Title : WESTINGHOUSE ELECTRIC CORPORATION
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338 (Docket No. 70-337)
Date of Inspection: July 20-24, 1970

INTRODUCTION AND SUMMARY

1. This announced inspection was made of the subject facility by W. R. Lorenz, Radiation Specialist.

2. During this visit, special environmental soil samples were collected with reference to SNM-1120, the PFDL. These samples were sent to Idaho for analysis.

3. License SMB-355 issued to this site was also inspected, a clear AEC 591 was issued, and the inspection results are contained in a separate report.

4. The licensed activities covered by SNM-338 were reviewed relative to safety and compliance with license conditions and regulations. The facility, primarily the Nuclear Fuels Division (NFD) was toured, and records were reviewed. Emphasis was placed on air concentration evaluations within and out of plant areas.

5. During the tour of the facility one poor practice was noted in that a man turned off a main electrical switch for a granulator. The switch also turned off the local exhaust ventilation. He then proceeded to put his gloved hand and bare arm into the granulator to free it from binding.

6. During a review of the records of in plant air concentrations, the results indicated noncompliance with posting "Caution, Airborne Radioactivity Area" signs in the NFD area and around equipment, in that no signs were posted. (See paragraphs 26,27&28).

7. In addition the records indicated that air concentrations released to the unrestricted area from the building were in excess of part 20 limits in noncompliance with 20.106(a). (See paragraph 33).

DETAILS

Organization

8. No changes in the organization have been made since the change noted during the August 27 thru 28, 1968 visit. In the immediate future the Advanced

Reactor Division operations dealing with plutonium will be re-licensed under a separate license. Management will, however remain the same.

9. Persons Contacted

W. Piros, Safety and Services Manager
K. Bodden, Senior Health Physicist
B. Mills, Manager NFD at Cheswick
C. Collum, Superintendent of NFD Cheswick Production
D. J. Povejsil, General Manager NFD
E. J. Cattabiani, General Manager, Electromechanical Division (EMD), and Site Landlord

Production

10. Currently, in the NFD commercial fuel manufacturing facility, Indian Point II and San Onofre fuel assemblies are being processed. After these contracts are completed a general slowing down in production is expected, according to Mr. C. Collum superintendent of production.

11. The Materials Systems Laboratory (MSL) is only processing 10 - 12% enriched pellets on a speciality basis. Only two technicians operate the equipment in this facility. All processes, i.e., presses, blending, weighing, are enclosed. Only oxides are currently processed in the facility.

Tour of the Facility (NFD)

12. During this visit the NFD was toured. A layout of the receiving and powder handling areas is as shown in Exhibit A. The powder handling areas was formerly a five line area which is now fully converted to a three line area. Each line area is separated from the other lines and each line processes fuel to the vault then in turn is brought to the tube loading areas (not shown).

13. Lines one and two are semi-automatic lines having four presses, one granulator, two loading hoods, two centerless grinders, one slugger, and six furnaces. Line three is automated and differs from the semi-automatic lines in that it only has one centerless grinder and two furnaces. All lines are supplied from one common powder storage area.

14. During the tour of the area the inspector noted one operator (Tony Frost) working on a granulator. The granulator was binding. The operator, to free the granulator, turned off the switch to the granulator as a safety precaution, and then as a double safety contingency turned off the main switch to the unit. This main switch also turned off the local ventilation to the unit. The operator then with gloved hand but bare arm, reached in to free granulator. This practice was brought to Collum's and Bodden's attention as a poor practice in that the ventilation system was turned off and the man's arm became visibly and grossly contaminated.

15. During a tour of the high bay area, the area where tubes are loaded, welded, inspected and assembled, a rack used to store the welded and sealed tubes prior to visual inspection was noted filled. The criticality control limit for the rack was 3-1/2 inches thick of loaded tubes. According to Collum and Mills, the instruction to the technician is that loaded tubes are not to exceed 3-1/2 inches thick. The tubes are approximately 12 feet long. The technician has side boards of approximately 4-1/2 inches high on edge and marked at the 3-1/2 inch height as the guide.

16. On two racks the boards used by the technician to indicate the 3-1/2 inch criticality safety limit was properly located. The loaded tubes in the rack being only approximately 3" thick. However the boards on the other edges of each rack were located upside down so that the board marks were at approximately 1" above the rack bed. Thus the 3" thick loading of tubes exceeded the guide marks used as a criticality control. The inspector pointed out that although the official control is by instruction not to exceed 3-1/2" of loaded tubes in the rack, that the technician in choosing to implement this control by marking boards at the maximum high, should install the boards properly and not violate his own rule by exceeding the control mark.

17. Future plans, according to Collum, are to convert one of the semi-automatic lines to a fully automated line and eliminate the Cincinnati centerless grinders and replace them with Royal Master Grinders (thus attempting to reduce air concentrations resulting from operating this equipment).

MSL Tour

18. This facility is an R&D type facility working with minimal quantities of uranium. Currently only two technicians work in the area making special ceramic pellets of 10 - 12% enriched uranium for experimental purposes only. The prototype direct conversion from UF_6 to UO_2 study has been terminated for over one year and the full scale operation is in use in the licensee's Columbia S.C. facility.

19. In passing thru a non fuel handling area, the inspector noted two items in a storage area (non SNM) that were marked with signs indicating "Caution Radioactive Materials" with the standard symbol. According to Bodden, these items were not radioactive nor contaminated. The inspector suggested that the inappropriate signs be removed. Bodden concurred.

Liquid Effluents

20. No contaminated liquid wastes are released from the MSL or the ARD.

21. Liquid wastes from the NFD centrifuge, scrub water, and decon water go to a 2500 gal. waste collection tank. Wastes from the NFD chem lab go to a 1800 gal. waste collection tank. Both tanks have high level alarms and are

checked daily during each of three shifts. The water is homogenized with built in mixers and sampled for radioactivity. The concentration is then diluted to 10 CFR 20 MPC limit in adjacent tanks. The liquid waste is then released thru a Delpar (roughing filter) to a 150 micron filter to a 50 micron filter to a 5 micron filter and then to the sanitary sewer system. The effluent joins the liquid effluent from the remainder of the site building.

22. Review of the effluent records show that in the year 1969, 603,000 gallons of liquids were released with an average concentration of 2.1×10^{-5} uCi/cc and a total of 4.69×10^{4} uCi of alpha activity.

In Plant Air Concentrations

23. In plant air samples are collected routinely in the MSL and ARD. The sample locations are the same as indicated in the inspection report of September 9-11,1969. The sample results for the MSL for 1969 averaged less than 10 $d/m/m^3$ (MPC is 220 $d/m/m^3$). The sample results for the ARD for 1969 averaged 0 $d/m/m^3$.

24. In both the above two facilities air is sampled using a fixed vacuum system, sampling air at the rate of 0.6 CFM filtered through glass fibre filter paper.

25. In the NFD manufacturing area pellet process lines a fixed system of air samples is installed as shown by numbered locations on Exhibit A. A total of 28 stations are installed, five of which are general area air samples, the remainder are process samples. Glass fibre filter paper is used with air sampled at the rate of 3.0 CFH. Process samples are concentrated on hoods, presses, granulators and grinder equipment.

26. Air sample results were reviewed for the period January 1, 1970 through the present. With respect to pellet line #1 the station #6 (grinder) sample results frequently exceeded 220 $d/m/m^3$ (MPC for a week) and as high as 1000 $d/m/m^3$. Sample station #9 (granulator) less frequently exceeded 220 $d/m/m^3$. Sample station #10 (hood) occasionally exceeded 220 $d/m/m^3$. All these results are based on 24 hour collection periods. The results when averaged over a one week period also exceeded 220 $d/m/m^3$.

27. One general air sampler is located in the press area of the pellet line #1 and is marked X on Exhibit A. The results of this sampler for January 1, 1970 to the present ranged between 25 and 125 $d/m/m^3$ based on 24 hour sampling. The average results indicated 70 $d/m/m^3$. These results when averaged over a one week period exceeded 55 $d/m/m^3$ (25% of 220 $d/m/m^3$) on frequent occasions during the period for which the records were reviewed.

28. Process air sample results for pellet line #2 were also reviewed for the period January 1, 1970 thru the present and these 24 hour results indicated as follows: sample station #16 (grinder) frequently indicated over 220 $d/m/m^3$, sample station #12 (hood) less frequently indicated over 220 $d/m/m^3$ and sample station #19 (grinder) occasionally indicated over 220 $d/m/m^3$. One week averages of these stations exceeded 220 $d/m/m^3$.

29. The above data reviewed during this inspection indicates that the licensee is in noncompliance with 10 CFR 20.203(d)(2) in that none of the above areas were posted with any "Caution Airborne Radioactivity Area" sign with the standard symbol.

Exhaust Stack Sampling

30. During the September 9-11, 1969 inspection preliminary grab sample results were reviewed and the results are reported in that inspection report. The results indicated less than 8.8 $d/m/m^3$ (MPC).

31. From the NFD manufacturing area the licensee has three natural vents over the pellet line areas, four 10,000 cfm exhausts from the heat side of the pellet line, and finally a 1350 cfm ducted exhaust from the rod loading area furnaces. These locations are shown on Exhibit B.

32. A stack sampling system was installed in March of this year. Sample #1 is collected from the natural vent over pellet line #1, sample #2 is collected from after an 85% efficient filter in the furnace exhaust line, sample #3 is collected at the exit from the 10,000 cfm exhaust over pellet line #1, sample #4 is collected at the exit from the 10,000 cfm exhaust over pellet line #2, and finally sample #5 is collected from the natural vent over pellet line #2. These sample locations are indicated on Exhibit B.

33. A review of the data obtained from the sampled stacks indicated essentially all results over 8.8 $d/m/m^3$. The maximum result noted was from sample #2 the furnace exhaust. The result was 160 $d/m/m^3$ when 24 hour sampled and decay counted. On May 15, 1970 an 85% efficient filter was mounted in the exhaust line and the results were reduced to approximately 50 $d/m/m^3$. The other stack sample results indicated approximately 30 $d/m/m^3$ (average). MPC is 8.8 $d/m/m^3$. The facility has been operating in the same manner since at least January 1970. If the results are averaged over the remaining period of the year 1970, and the licensee stopped all operation, the average yearly stack effluent would still exceed part 20 limits. This is in noncompliance with 10 CFR 20.106(a).

Shipping Containers

34. During this inspection, a visit was made to the empty shipping container storage area behind the NFD Manufacturing building. The containers were noted marked with "Empty" tags and also with the DOT numbers on each of the containers. In addition other specific and further identifying information was noted stenciled on each of the various containers.

Management Discussion

35. A summary discussion was first held with Piros and Bodden, then again summarized with B. Mills, Manager of NFD, then again summarized with Cattabiani, General Manager of EMD and site landlord, and finally with D. J. Povejsil, General Manager of NFD.

36. The final summation included the following :

    a. Noncompliance with 10 CFR 20.203(d)(2) in that air sample results indicated levels in a week above Appendix B, Table I, Column 1 levels around operating equipment and general levels in a week period exceeding 25% of the Appendix B, Table I, Column 1 levels, and no "Caution Airborne Radioactivity Area" signs with symbols were posted.

    b. Noncompliance with 10 CFR 20.106(a) in that concentrations of effluents from their stacks indicate levels exceeding the limits specified in Appendix B, Table II, Column 1 when averaged over a year.

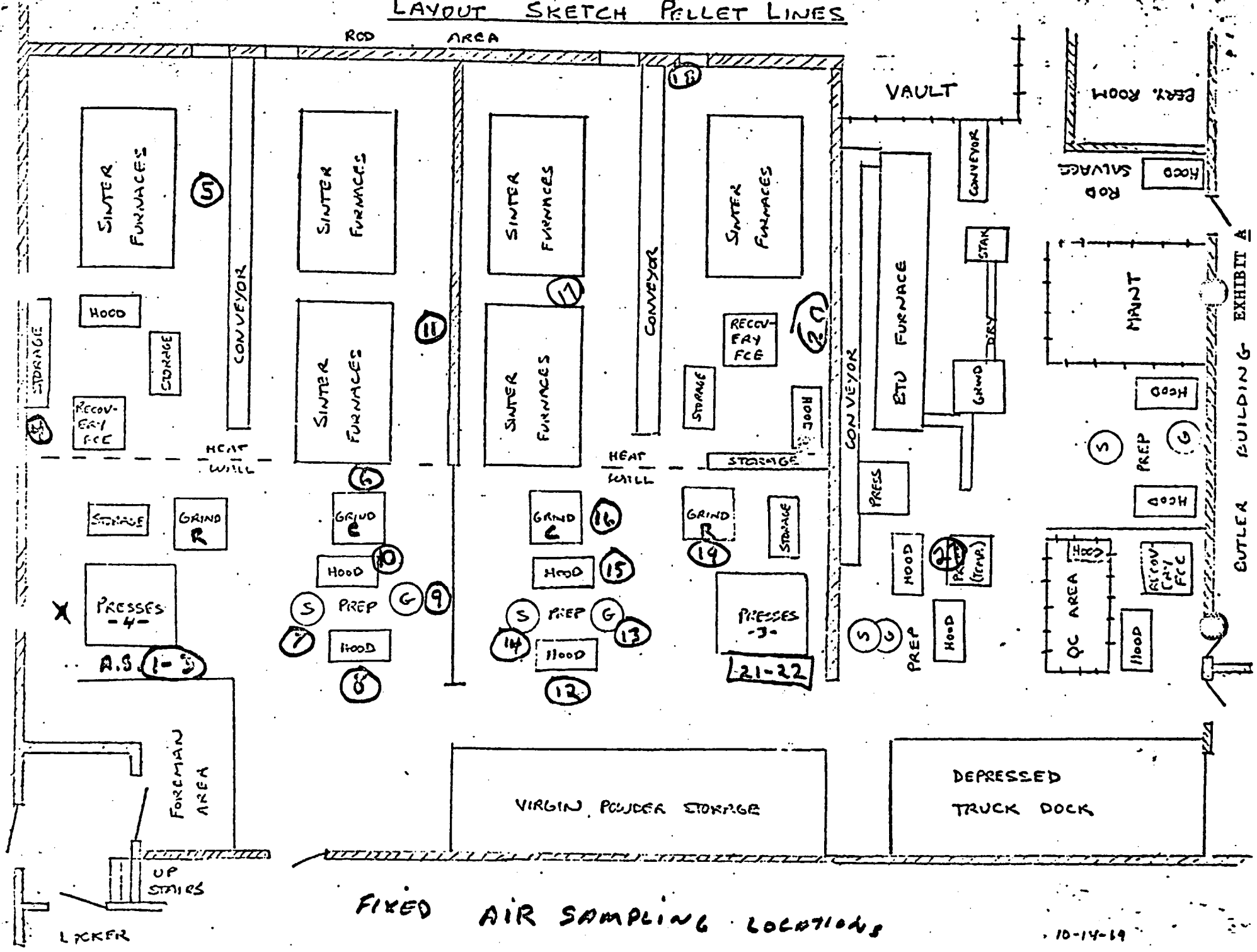
    c. During a tour of the facility a man was observed placing his bare arm but gloved hand into a granulator to repair the equipment. This was done after the granulator switch and the main switch to the operating station was turned off. The purpose of turning off the switches was a double safety precaution the man afforded himself. However, the action also turned off the exhaust ventilation equipment. The man was not wearing any respirator. This action on the part of the operator was viewed as a poor practice and that the inspector felt that measures should be taken by the licensee to insure that; (1) the exhaust ventilation is not turned off for such repairs, (2) that the man should not perform such repairs without protective cloth on bare portions of his body which will become contaminated, as in this instance.

37. Regarding a. above, the licensee will post the areas as appropriate. Regarding b. above the licensee (Mr. Mills in D. J. Povejsil's presence) did not wish to commit themselves as to when or what would be done to comply with 20.106 but that their action would be indicated in a reply letter to our noncompliance notification.

38. Regarding c., above, additional instructions would be given the operator regarding such repairs.

NFD-MFG

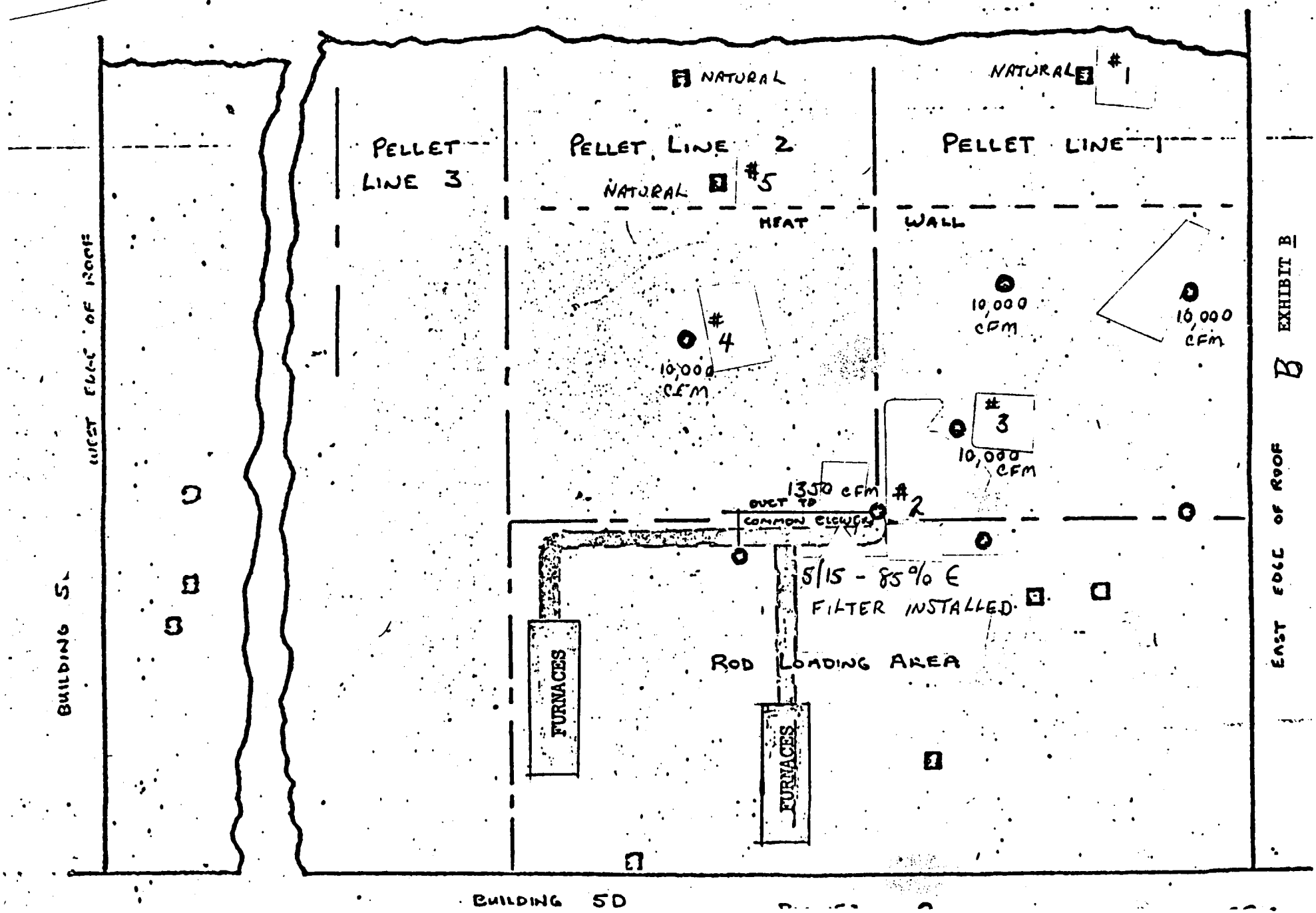
LAYOUT SKETCH PELLET LINES



FIXED AIR SAMPLING LOCATIONS

10-14-19

LOCATION OF ROOF VENTS - BUILDING 5B NFD



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

May 22, 1970

70-337
SNM-338

DISTRIBUTION:
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See Docket File 70-25 for additional distribution

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl Schendel
License Administrator

Gentlemen:

Enclosed is an amendment to Title 10, Chapter 1, Code of Federal Regulations, Part 71, which was published in the FEDERAL REGISTER on April 17, 1970. This amendment provides an additional general license for delivery of licensed material to a carrier for transport in packages specifically licensed for use by another licensee, under certain stated conditions. One of the conditions is that the specific license authorizes such use under the general license.

Pursuant to Title 10, Code of Federal Regulations, Parts 70 and 71, the specific licenses identified on the enclosed list dated April 17, 1970, are hereby amended to authorize the use of the packages identified under the general license provided by paragraph 71.7(b) of 10 CFR 71. In order to use such packages under the general license, the conditions specified in paragraph 71.7(b) must be fulfilled.

If you have any question regarding the implementation of the general license provisions of paragraph 71.7(b), please let us know. A copy of this letter should be filed with your Special Nuclear Material License.

FOR THE ATOMIC ENERGY COMMISSION

Donald A. Nussbaumer, Chief
Fuel Facility and Materials
Transportation Branch
Division of Materials Licensing

Enclosures:
As stated

cc: Mr. William A. Brobst
Department of Transportation

ITEM # 19

C/19

CO: I

Reply to attention of
Charles F. Eason, AMCRR

Mr. K. A. Bodden, Supervisor
Industrial Hygiene
Electro Mechanical Division
Westinghouse Electric Corporation
Box 217
Cheswick, Pennsylvania 15024

Dear Mr. Bodden:

Thank you for your letter of March 23, 1970 advising us that 117 individuals were monitored during 1969 and that eight individuals have terminated employment with your company.

Consistent with the reporting requirements set forth in 10 CFR 20.408, and in order that the exposure information for the eight individuals can be properly recorded in the central repository, your cooperation in advising us as to their termination dates (month, day) will be appreciated.

Very truly yours,

/s/ George Lee Ring

for Jack R. Roeder, Chief
Materials Inspection and
Enforcement Branch
Division of Compliance

bcc: CO, Headquarters
CO, Region I ✓

WCRR	WCRR	CO
ERichardson	HEKneeland	JRRoeder
5/7/70	5/ /70	5/ /70

ITEM # 20

C/20

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-

MAR 12 1970

File
Thru: H. W. Crocker, Senior Fuel Facilities Inspector, CO:I

WESTINGHOUSE ELECTRIC CORPORATION
CHESWICK, PENNSYLVANIA
LICENSE NO. SNM-338
DOCKET NO. 70-337

No items of noncompliance were noted during the inspection of the plant on February 16 thru 18, 1970, and an AEC-591 form was issued.

There were two instances where the slab storage of SNM was compromised by the introduction of a 3 gallon cardboard carton which is normally a batch controlled container. In both cases there was insufficient SNM in the carton to create any nuclear safety problem, but this practice indicates to the inspectors that some of the operators do not thoroughly under stand the control system. The corrective action taken immediately, and the planned re-instruction of the operators is considered satisfactory, but this problem will be reviewed again during the next inspection.

It was observed that two of the Westinghouse fuel pellet inspectors touched the uranium oxide pellets with their bare hands. Other operators working on the production line were wearing gloves. Since these inspectors do no work continuously on this job the exposure may be minimal, but it is a questionable technique. Mr. Piros agreed to study the potential for contamination and review the procedures and instructions on this subject. This problem will be reviewed during the next inspection.

The re-arrangement of the pellet lines and the system used for loading fuel rods and then assembling them into fuel elements appeared to be an efficient system that is kept under good administrative control. General housekeeping in the area was good.

W. G. Browne
Fuel Facilities Inspector

ITEM # 21

421

U. S. ATOMIC ENERGY COMMISSION
Division of Compliance
Region I

Licensee: WESTINGHOUSE ELECTRIC CORPORATION
Cheswick, Pennsylvania
License No. SNM-338
Docket No. 70-337

Period of Visit: February 16 thru 18, 1970

This report contains company confidential information in paragraph 5.

Inspectors: W Lorenz for — MAR 12 1970
W. G. Browne, Fuel Facilities Inspector — Date

W Lorenz for — MAR 12 1970
C. W. Nilsen, Fuel Facilities Inspector — Date

Reviewed by: W Lorenz for — MAR 12 1970
H. W. Crocker, Senior Fuel Facilities Inspector — Date

BACK-UP NOTES TO FORM AEC-591

By : W. G. Browne and C. W. Nilsen, Fuel Facility Inspectors, CO:I

Date: MAR 12 1970

Title : WESTINGHOUSE ELECTRIC CORPORATION
CHESWICK, PENNSYLVANIA
License No. SNM-338
Docket No. 70-337
Inspection Dates: February 16 thru 18, 1970

INTRODUCTION AND SUMMARY

1. An announced inspection was made of the subject licensee's facilities at Cheswick, Pennsylvania on February 16 thru 18, 1970, by C. W. Nilsen and W. G. Browne, Fuel Facilities Inspectors, CO:I. The purpose of the visit was to review the nuclear safety program, compliance with the license conditions and to acquaint Mr. Browne with the licensee's facilities. The last inspection of this license was made on September 9 thru 11, 1969.

2. No items of noncompliance were noted during the inspection and a form AEC-591 was issued in the field. During the inspection of the plant it was observed that two inspectors were touching pellets with their bare hand and that the slab storage of SNM was in two cases compromised by the presence of batch controlled cardboard cartons, each of which contained very small quantities of SNM. These items were discussed with the licensee and they promised to take corrective action in each case.

DETAILS

Scope

3. The nuclear safety controls and the storage of SNM were reviewed. Process operations were inspected and Mr. Browne was acquainted with the facilities covered by License SNM-338.

Persons Contacted

4. B. E. Mills, Manager of the Cheswick Plant Operations (NFD)
W. E. Piros, Safety and Service's Manager

Others as noted in the report.

Production - Nuclear Fuels Division

5. Mr. Bryan E. Mills, Manager of the Cheswick Plant Operation, NFD, said that he now has three pellet lines running one at full capacity and the other two as needed. They are producting about 23,000 pounds of pellets per week, and he believes that this is about the maximum production rate that will be used for this contract. Production schedules are firm for 1971 through 1973, but there may be a lull in production toward the end of 1970. He expects a few more changes in equipment usage and in the receipt, storage and shipment of materials when the Columbia South Carolina plant goes into full operation. Although one shipment of powder has been received from the South Carolina plant, it was returned because it didn't meet specifications.

Plant Inspection

6. The operation of the pellet lines and the handling and storage of SNM was inspected. The following observations were made:

   a. The UO_2 powder is received in cardboard cartons. A plastic bag inside the carton contains the 18 Kilograms of UO_2 powder.

   b. The enrichment of the SNM and the contract (all less than 5% U-235) are identified by a color code. As an example, the 3.02% enrichment UO_2 for the Indian Point fuel is identified with purple tape and light green tape.

   c. Sludge from the centerless grinder is removed when the accountability records on pellets going into and out of the centerless grinder show a loss of 200 grams of U-235, or earlier if the foreman wishes to have the sludge re-processed.

   d. It was observed that trays of sludge were being stored in a slab control array on the shelf of a cabinet. Adjacent to the trays was a three gallon cardboard carton which is normally a batch controlled container. The carton had only a little calcined sludge in the bottom of the carton, less than an inch deep, so it did not actually violate the slab thickness of the storage system, but Mr. Mills was informed that mixing a geometry control and a batch control system was a poor practice. The carton was immediately moved to a storage cubicle. He said that the specific operator in the area would be re-instructed and that all other operators would be cautioned to prevent mixing SNM storage control systems.

e. Although the operators in the processing area all wore gloves while handling pellets, it was observed that two men inspecting the pellets, touched the pellets with their bare hands. Mr. Mills said that these men would be instructed to wear gloves whenever they touched or handled pellets. The men had been taken from another job to do the inspection work and they had only been working there a couple of hours.

f. It was observed that in the SNM pellet storage vault, pellets in trays were stored on a table top in a slab array. A three gallon cardboard carton was on the table and it contained some dust and sweepings that were estimated at less than 100 grams of 3% enriched UO_2 powder. Mr. Mills was reminded that this was a poor practice (similar to item d., above) and that even though the carton was essentially empty, it could lead to a careless attitude about SNM storage controls. The carton was moved to a storage cubicle and Mr. Mills said the vault custodian would be re-instructed to prevent mixing geometry and batch controls for SNM.

g. All SNM was properly stored in the storage vaults and although two thirds of the storage spots were full, the records were current and the system for transfers in and out of the vault appeared to be well controlled. The general appearance of the vault was clean and well ordered.

h. The storage, transfer and assembly of fuel rods in the processing area was observed to be in accord with the posted rules.

Management Discussion

7. An inspection finding meeting was held with Mr. B. E. Mills on February 18, 1970, prior to the management discussion meeting that was held in Mr. E. J. Cattabiani's office. Those present at the management discussion meeting were: E. J. Cattabiani, General Manager of the Electro-Mechanical Division, who has the "Landlord" responsibility for the Cheswick plant, and Mr. W. E. Piros of Westinghouse. Mr. Nilsen and Mr. Browne represented the AEC Division of Compliance.

8. Mr. Cattabiani was told that no items of noncompliance had been observed during the inspection and that an AEC-591 form had been issued.

9. The two instances where slab geometry was being used for the control of SNM and how it was compromised by a cardboard carton being next to the slab system, was discussed. Although no nuclear safety problem resulted from

either situation, Mr. Piros said that re-instruction of the operators would be used to assure that mixed SNM control systems are not allowed to occur.

10. The handling of uranium pellets with bare hands was discussed and Mr. Piros said that although there had been no indications of unusual uranium ingestion according to their bioassay data, he would study the situation and make sure that the men do not unnessarily expose themselves to uranium ingestion. He pointed out that gloves are worn for the other pellet processing operations.

Form AEC-591
(7/67)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

A(1)

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION 3 Gateway Center P. O. Box 2278 Pittsburgh, Pa., 15230	U. S. ATOMIC ENERGY COMMISSION Region I Division of Compliance 970 Broad Street Newark, New Jersey 07102
3. LICENSE NUMBER(S) SNM-338	4. DATE OF INSPECTION Reinspection

5. INSPECTION FINDINGS

- ☒ A. No item of noncompliance was found.
- ☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42
- ☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42
- ☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)
- ☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)
- ☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)
- ☐ G. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)
- ☐ H. Form AEC-3 was not properly posted. 10 CFR 20.206(c)
- ☐ I. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)
- ☐ J. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)
- ☐ K. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51
- ☐ L. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)
- ☐ M. Records of inventories were not maintained. 10 CFR 34.26
- ☐ N. Utilization logs were not maintained. 10 CFR 34.27

C. W. Nilsen W. G. Browne
(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

ITEM # 22

(Date) (Licensee Representative — Title or Position)

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ CO ENFORCEMENT

C/8

MEMO ROUTE SLIP
Form AEC-98 (Rev. May 14, 1947)

See me about this.	For concurrence.
Note and return.	For signature.
For action.	✓ For information.

TO (Name and unit)	INITIALS / DATE	REMARKS
H. W. CROCKER CO: I		file in SNM-338 WESTINGHOUSE SNM
TO (Name and unit)	INITIALS / DATE	REMARKS CHESWICK - COLUMBIA
TO (Name and unit)	INITIALS / DATE	REMARKS ~~WRT~~ the results of the check on air samples at Ches. Incidents. I've been how they have been running recently.
FROM (Name and unit) B. J. YOUNGBLOOD CO: Hq		REMARKS
PHONE NO.	DATE 11-4-69	

USE OTHER SIDE FOR ADDITIONAL REMARKS

C43—16—79903—1 GPO : 1967 —277-337

ITEM # 24 C/24

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION II - SUITE 818
230 PEACHTREE STREET, NORTHWEST
ATLANTA, GEORGIA 30303

TELEPHONE: 526-4537

OCT 31 1969

Telecon - 10/31/69

From: William Geiger, Manager, Criticality and Health Physics
Westinghouse, Columbia, South Carolina

To: G. H. Bidinger, CO:II

Geiger reported that W-Columbia had started production of enriched UO_2 yesterday, 10/30/69. The product, UO_2 powder, will be sent to W-Cheswick for pelletizing and encapsulation. Next week, W-Cheswick will begin sending rods to W-Columbia for bundle assembly (production, not shakedown).

One UF_6 to UO_2 conversion line is operating. The second should be in operation next summer. The pellet grinders are in, but shakedown has not started yet. Rod loading and welding equipment is not in yet.

A scrubber has been installed for the vaporization and hydrolysis areas. It is not working too well and the scrubber on the second conversion line is being used as backup. The fixed air sampling system was operated yesterday for the first time. W-Cheswick has been making BZ samples around the grinders and is reporting higher results than with previous area samples. Geiger is concerned that W-Columbia will need more ventilation than previously planned. The W-Columbia ventilation system was modeled after the W-Cheswick system.

bcc: B. J. Youngblood, CO:HQ [redacted]

ITEM # 25 C/25

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

REF:DML:ND
70-337

OCT 2 8 1969

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen: Attention: Mr. Karl R. Schendel

Notice is given that Special Nuclear Material License Number SNM-338 expires on December 31, 1969.

If you desire to continue your program using special nuclear material(s), an application for renewal of the license should be filed with this office pursuant to Title 10, Code of Federal Regulations, Part 70, Section 70.33. The application should be in letter form and seven copies submitted.

It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. Your program will then be covered by your existing license until action is taken on your application for license renewal. (Section 70.33(b)). If an application is received less than 30 days prior to the expiration date of your license and cannot be processed before your existing license expires, this could result in your possessing special nuclear material without a valid license.

If you do not wish to renew your license, please complete the enclosed form "Certification of Status of Special Nuclear Material Activities Under United States Atomic Energy Commission Special Nuclear Material License Number 338 ", and return it to this office.

If you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for timely submission of an application for license renewal remains with the licensee.

Sincerely,

Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

Compliance

ITEM # 26

Enclosure:
"Certification . . ."

1

C1 26

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JUN 13 1969

DML:RLL
70-337

Sum 336

Westinghouse Electric Corporation
5 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

In our letter dated March 18, 1969, we requested additional information that was needed in connection with our review of your application dated January 21, 1969.

As of this date, we have not received this information. Accordingly, it is requested that you submit this information within sixty (60) days from the date of this letter.

Sincerely,

Original Signed by
Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear
Materials Branch
Division of Materials Licensing

DISTRIBUTION:
Docket File
Document Room
Compliance, HQ - 2
N. Doulos, DML
C. Luke, DML
Branch Reading File
Division Reading File

JUN 17 1969

ITEM # 27

MEMO ROUTE SLIP
Form AEC-93 (Rev. May 14, 1947) AECM 0240

☐ See me about this.	☐ For concurrence.	☐ For action.
☐ Note and return.	☐ For signature.	☐ For information.

TO (Name and unit)	INITIALS	REMARKS
J. R. Roeder CQHQ	DATE	Attached are the 591 back-up notes for Westinghouse Electric Corporation inspection conducted 9/9-11/69.
TO (Name and unit)	INITIALS	REMARKS
	DATE	
TO (Name and unit)	INITIALS	REMARKS
	DATE	
FROM (Name and unit) H. W. Crocker CO:I		REMARKS
PHONE NO.	DATE 1/29	

USE OTHER SIDE FOR ADDITIONAL REMARKS

GPO : 1966 O—294-619

ITEM # 28
C12

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-3943

September 26, 1969

File
Thru: H. W. Crocker, Senior Fuel Facilities Inspector, CO:I

BACK-UP NOTES TO FORM AEC-591
WESTINGHOUSE ELECTRIC CORPORATION
CHESWICK, PENNSYLVANIA
LICENSE NO. SNM-338
DOCKET NO. 70-337

No items of noncompliance were observed during the inspection and a form AEC-591 was issued at the completion of the inspection.

Activity under this license is currently limited to the fuel production being performed in the Nuclear Fuel Division (NFD) area. The NFD area has been changed and the normally good housekeeping for the area appears to be better. Contamination control is also improved.

Attached to this memo is a form on which Westinghouse requires signature for official entry into their NFD area. Nilsen has signed the form with the added statement shown on the lower left hand corner. During this inspection it was apparent that additional emphasis is being given to use of the form. The inspectors stated that in the future they do not intend to sign the form.

C. W. Nilsen
Fuel Facilities Inspector

Enclosure:
Visitors Register
Form 54816

ITEM # 29

C/29

(2)

2397

VISITORS REGISTER
Form 54816

WELCOME TO WESTINGHOUSE

Person to be Visited B. E. Mills Date _____ Badge Issued _____

Company or Affiliation USAEC U.S. Citizen: Yes [X] No [ ]

Westinghouse Nuclear Fuel Division welcomes you to our Manufacturing facilities. We are ready to make your visit a memorable one for you. If we may assist you in any way with your travel plans or be of help in any other way, please feel free to ask any of your hosts during your visit here.

Our plant produces nuclear fuel in modern facilities; many of our processes and much of our equipment is proprietary. Naturally, we must provide for the security of our know-how. In order to protect our proprietary position you, both in your behalf and in behalf of the employer or affiliate with which you are associated (hereinafter severally and collectively called "Visitor"), are requested to read the following and acknowledge by checking one of the two blocks as appropriate to your visit.

A. Visitor will be visiting in the office only. [ ]

B. Visitor will be visiting in the factory area and will be observing Westinghouse techniques and processes employed in the manufacture of nuclear fuel for use in commercial nuclear reactors. During this visit, Visitor will be provided personally with an understanding of these techniques and processes subject to the restrictions below respecting use and disclosure to others of this information.

In checking the box below, Visitor acknowledges reading and agreeing to employ all reasonable efforts not to use and to prevent the disclosure to all other persons any and all information received in the course of such visit, including information pertaining to such facilities, techniques, equipment, processes and/or demonstrations thereat; provided, however, that Visitor shall not be liable for disclosure of any such information to unauthorized persons and/or use of such information if:

1. Such information was known to the trade or public generally at the time it was received by Visitor or becomes known generally to the trade or public either from a source other than Westinghouse or other than by an improper act on the part of Visitor, or
2. Such information was known to Visitor at the time it was received or becomes known to Visitor from an unrestricted source.

Having read and understood the foregoing, and if you agree to the terms and stipulations, please indicate your agreement by checking this box. [XX]

It is understood and agreed that this visitor will prepare a report for distribution within the USAEC and that this report will not be disseminated outside of the USAEC for any purpose.

B. E. Mills 9/10/69

Company or Affiliate USAEC

Signature [signature]

Approved B. E. Mills

U. S. ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
Region I

Title: WESTINGHOUSE ELECTRIC CORPORATION
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

Period of Visit: September 9-11, 1969

There is no confidential material contained in this report.

Inspectors: C. W. Nilsen 9/26/69
C. W. Nilsen, Fuel Facilities Inspector Date

W. R. Lorenz for 9/26/69
W. R. Lorenz, Radiation Specialist Date

Reviewed by: H. W. Crocker 9/26/69
H. W. Crocker, Senior Fuel Facilities Inspector Date

ITEM # 30

c/30

(1)

BACK-UP NOTES TO FORM AEC-591

By : C. W. Nilsen, Fuel Facilities Inspector
W. R. Lorenz, Radiation Specialist, CO:I

Date: September 25, 1969

Title: WESTINGHOUSE ELECTRIC CORPORATION
Pittsburgh, Pennsylvania
License No. SNM-338
(Docket No. 70-337)
Inspection Dates: September 9-11, 1969

INTRODUCTION AND SUMMARY

1. An announced inspection was made of the subject licensee's facilities on September 9-11, 1969 by C. W. Nilsen, Fuel Facilities Inspector and W. R. Lorenz, Radiation Specialist, CO:I. The purpose of the visit was to review the licensee's safety program and compliance with the license and federal regulations. The inspectors were accompanied by Reactor Inspectors Fleishman and Westerman. This license was last inspected on April 14-16, 1969.

2. A form AEC-591 was issued at the completion of the inspection indicating that there were no items of noncompliance or unsafe practices noted.

3. A tour was made of all areas. The only production being performed was in the Nuclear Fuel Division area, where production is scheduled through 1971.

4. Plutonium carbide fuel work in the Cheswick Fuel Facility, Advanced Reactor Division, has been discontinued. Some work is being performed in this area on the development of plutonium oxide fuel.

DETAILS

Scope

5. All SNM processing areas were toured and health physics sampling results reviewed. Air effluents from NFD to unrestricted areas were reviewed.

Organization

6. No major changes in plant organization were observed.

7. Persons with whom significant discussions were held, are as follows:

Advanced Reactors Division (ARD)

Cheswick Fuel Facility
W. R. Jacoby, Manager
R. W. Horgos, Engineer

Nuclear Fuel Division (NFD)

Manufacturing
B. Mills, Manager Cheswick Plant Operations

Engineering
R. J. Wiggins, Materials Systems Laboratory Manager

Atomic Equipment Division

Electromechanical Division

Industrial Relations
W. E. Piros, Safety and Services Manager
K. E. Bodden, Senior Health Physicist

8. Health Physics Review - Nuclear Fuel Division (NFD)

A summary of health physics surveillance for the NFD from January thru June 1969 indicated the following:

Average within plant air concentration - 12 $d/m/m^3$

Average smear survey results - 17,250 $d/m/100\ cm^2$

(Results high due to equipment modification during this period. All areas over 1,000 $d/m/100\ cm^2$ immediately cleaned) Total activity released in liquid effluents - 17.248 Kg at 2-3% enrichment. Average of 88 urine bioassay samples - 12 d/m/sample (13 results exceed 25 d/m/sample).

Production - NFD

9. The NFD schedule shows a full production load through 1971. Fuel for the 2nd core of the swiss reactor was being fabricated.

10. Major changes in the production area have been made. The changes include relocating equipment to permit a more efficient operation with respect to manpower and material movement. The elaborate conveyor system which had been used for material transfer has been modified and more use is being made of transfer carts. According to Mills the modifications have resulted in a 20 man reduction in work force and a 100% increase in production capacity.

Tour - Nuclear Fuel Division

11. The NFD process lines were toured. According to the foreman, only process line #1 is in full production. Process and general air samples for this line were noted to be operating. According to the foreman, the former process lines #2, #3, #4, and #5 have been revamped. These lines have been condensed into 2 lines #2 and #3. As yet these lines have been operated only on an intermittent basis. The general and process air sampling system has been operated intermittently. At the time of this visit the air compressor for the new #2 and #3 lines was not operating, nor were the process lines in operation. Assurance was received from Bolden that the compressor would be repaired before line operations begin.

Roof Exhausts - Nuclear Fuel Division

12. The licensee does not exhaust any of its process line filter system to the roof. All processes which are likely to cause excessive air concentrations are exhausted through pre and absolute filters to the process area. The process area air is in some areas exhausted for specific equipment such as heat generated from the furnaces. Process areas are also naturally ventilated.

13. On August 26, 1969 exhaust air samples were taken at the roof using a high volume Staplex air sampler with an impactor adaptor. Samples were collected over a 10 minute period.

14. The results indicated 7.55, 4.5 and 2.1 $d/m/m^3$. These samples were collected from roof exhausts over the pellet process line.

15. On September 8, 1969, roof exhaust samples were collected in the same manner from the reclaimation area, furnace area, and the pre sintering area. The results indicated 1.5, 7.7, and 6.1 $d/m/m^3$ respectively.

16. These preliminary results indicate that the roof exhausts concentrations are within permissible limits. Bodden agreed to make a more extensive study of the exhaust air concentration.

Materials Systems Laboratory (MSL) - NFD

17. No activities were being performed with SNM in the MSL area. The laboratory will be making aluminum oxide fuel to be used in studies on fuel bursting. There are currently no SNM jobs scheduled for MSL.

18. All fuel was properly stored. This fuel included vault stored oxide and several fuel rods.

19. A summary of health physics surveillance from January thru June 1969 at the MSL indicated the following:

Average within plant air concentrations	-	2 $d/m/m^3$
Average smear survey results	-	570 $d/m/100\ cm^2$
Total radioactive liquid effluents release	-	0 uCi

Bioassay results averaged 0.6 d/m/sample in 10 samples submitted. (None over 25 d/m/sample).

Advanced Reactors Division - Cheswick Fuel Facility

20. Plutonium carbide fuel development work in the ARD facility has been discontinued. The glove boxes have been cleaned of all carbide fuel waste. This area will be used for plutonium oxide fuel studies.

21. No unsafe practices or items of noncompliance were observed.

22. A summary of health physics surveillance for the ARD from January thru June 1969 indicated the following:

Average within plant air concentrations	-	0 $d/m/m^3$
Average smear survey results	-	0 $d/m/100\ cm^2$
Average personnel whole body exposure	-	15 mrem/mo.
Average personnel extremity exposure	-	25 mrem/mo.

Bioassay results of 31 urine samples submitted averaged .01 d/m/sample and of 10 fecal samples submitted averaged 0.22 d/m/sample.

23. Fire protection was reviewed. The building meets Class I fire code. CO_2 Met-L-X, and dry chemical extinguishers are located in the process area with Met-L-X in the boxes. The processing area is contained in one room of cement block construction. (No windows or direct doors to the outside). The glove boxes are stainless steel with safety plate windows. The process boxes have inert atmosphere. The filters used are fire resistant. The area does not have an emergency alternate ventilation system.

24. The licensee has an extensive fire program which includes an on site fire brigade. The fire brigade has a routine training program which included special training for the subject facility. The local fire departments are also used at the site, if required, under direction of the site safety people. The local fire departments are within ten minutes of the facility. Fire equipment is checked routinely.

Evacuation Drills

25. A plant wide evacuation drill was held on June 25, 1969. According to the written review all employees were out of the buildings within two minutes. No major problems were noted.

NFD Analytical Laboratory

26. The NFD Analytical Lab was toured and found to have adequate SNM control. The lab is controlled with a limit of 350 gms SNM in process. All other SNM is stored in geometrically safe containers or safe masses with a one foot separation.

27. The inspector questioned the wording of the signs used for posting the limits. He was told they would be changed the following day to remove the possibility of misinterpretation. The people working in the lab knew and were using the proper limits.

Summary Review

28. Summary reviews were held separately with Wiggins and Jacoby by Nilsen on their operations licensed by SNM-338. They were informed that no safety or noncompliance items were observed in their respective areas.

29. A summary review was held with Mills (NFD) by Nislen and Lorenz. Mills was informed that no items of noncompliance were noted in the NFD area. The inspector did state that the signs in the analytical lab could be improved for better clarity. Mills and Piros indicated the signs would be re-written.

30. Mr. B. Mills promised to have the air compressor repaired and in running condition prior to any full scale operation of the #2 and #3 process lines. Bodden, Piros and Mills agreed to have additional exhaust sample results to further substantiate the intial data and pointed out in a letter from Mr. Bish that plans were underway to accomplish this.

Form AEC-591
(7/67)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

A(I)

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania	U. S. ATOMIC ENERGY COMMISSION Region I, Division of Compliance 970 Broad Street Newark, New Jersey 07102
3. LICENSE NUMBER(S) SNM-338 ~~and 37-05009-03~~ OWL	4. DATE OF INSPECTION Reinspection

5. INSPECTION FINDINGS

☐ A. No item of noncompliance was found.

☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42

☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42

☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)

☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)

☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)

☐ G. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)

☐ H. Form AEC-3 was not properly posted. 10 CFR 20.206(c)

☐ I. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)

☐ J. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)

☐ K. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51

☐ L. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)

☐ M. Records of inventories were not maintained. 10 CFR 34.26

☐ N. Utilization logs were not maintained. 10 CFR 34.27

C. W. Nilsen — W. R. Lorenz
(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

(Date) — (Licensee Representative — Title or Position)

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ CO ENFORCEMENT

ITEM # 31

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JUN 13 1969

DML:RLL
70-337

SNM 338

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

In our letter dated March 28, 1969, we requested additional information that was needed in connection with our review of your application dated January 21, 1969.

As of this date, we have not received this information. Accordingly, it is requested that you submit this information within sixty (60) days from the date of this letter.

Sincerely,

Original Signed by
Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear
Materials Branch
Division of Materials Licensing

DISTRIBUTION:
Docket File
Document Room
Compliance, HQ - 2
N. Doulos, DML
C. Luke, DML
Branch Reading File
Division Reading File

JUN 17 1969

ITEM # 32 C/32

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-3943

File
THRU: H. W. Crocker, Senior Fuel Facilities Inspector
Region I, Division of Compliance

BACK-UP NOTES FOR FORM AEC-591
WESTINGHOUSE ELECTRIC CORPORATION
3 GATEWAY CENTER
BOX 2278
PITTSBURGH, PENNSYLVANIA
LICENSE NO: SNM-338, 37-5807-3

No items of noncompliance or safety deficiencies were noted during the inspection and a Form AEC-591 was issued.

The tour of all areas again indicated that the licensee is maintaining good housekeeping practices and control of SNM in process and storage.

Discussion was held with Bodden and Piros concerning their 1 d/m/sample action point for plutonium content in urine. The licensee personnel firmly defended this action point but also conceded that in practice they would use a lower value.

5/20/69

C. W. Nilsen
Fuel Facilities Inspector

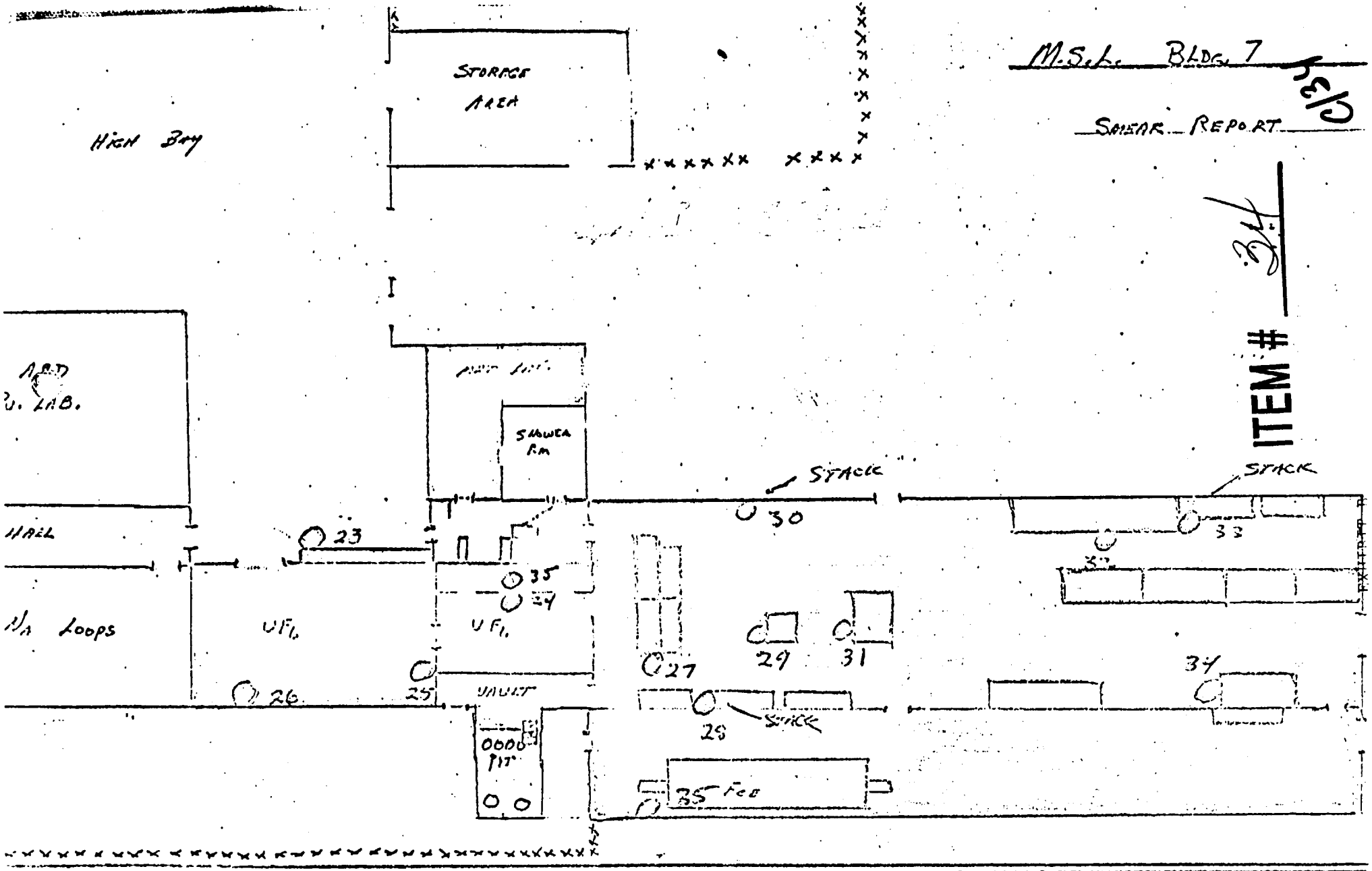
ITEM # 33

e/33

M.S.L. BLDG. 7

SAFEAR REPORT

ITEM # 13



DATE

SURVEY BY

COMPUTED BY

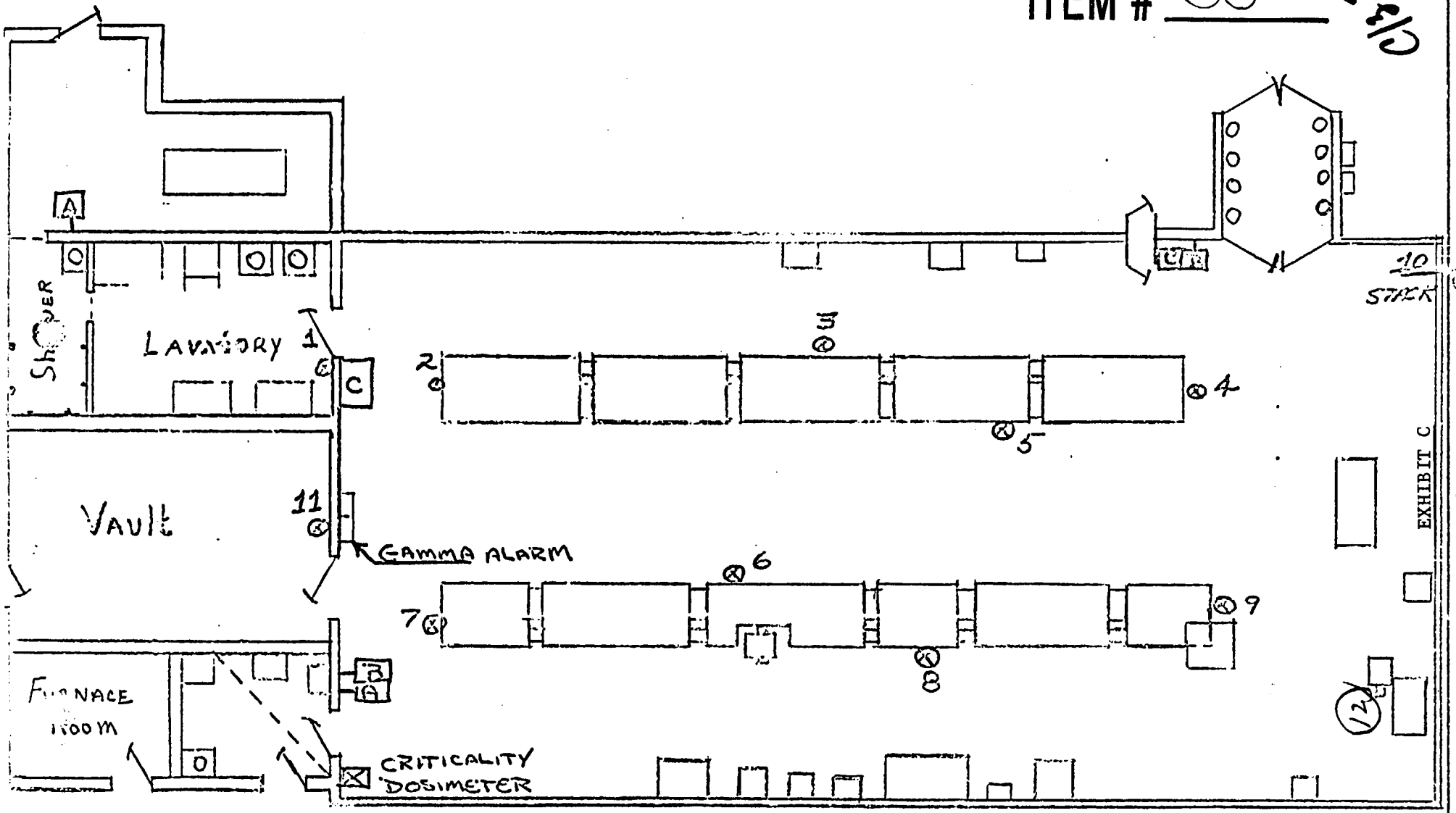
CONTINUATION

ALPHA DIM 1100 cm²

1		7		13		19		25		31	
2		8		14		20		26		32	
3		9		15		21		27		33	
4		10		16		22		28		34	
5		11		17		23		29		35	

WARD PU LP.

ITEM # 35



Q=AIR SAMPLE STATIONS
A= NON ENTRY LIGHT SWITCH
B= LAB EVAC. FLASHER SWITCH
C= FIRE EXTINGUISHER

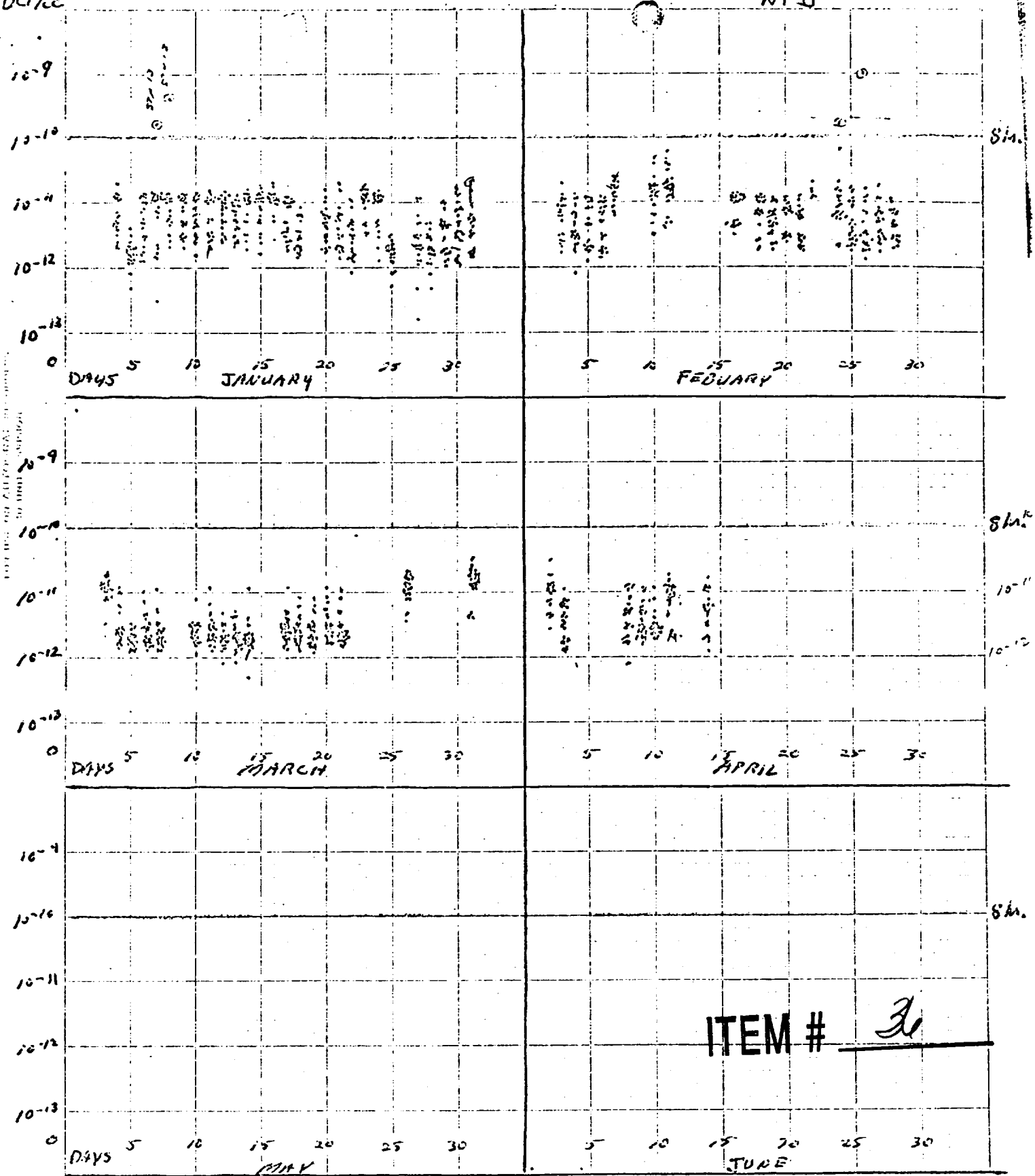
DATE
SURVEY BY
TIME

BACKGROUNDS
CONTAMINATION

1	5	9	13	17	21		
2	6	10	14	18	22		
3	7	11	15	19	23		

1967

NFD



ITEM # 21

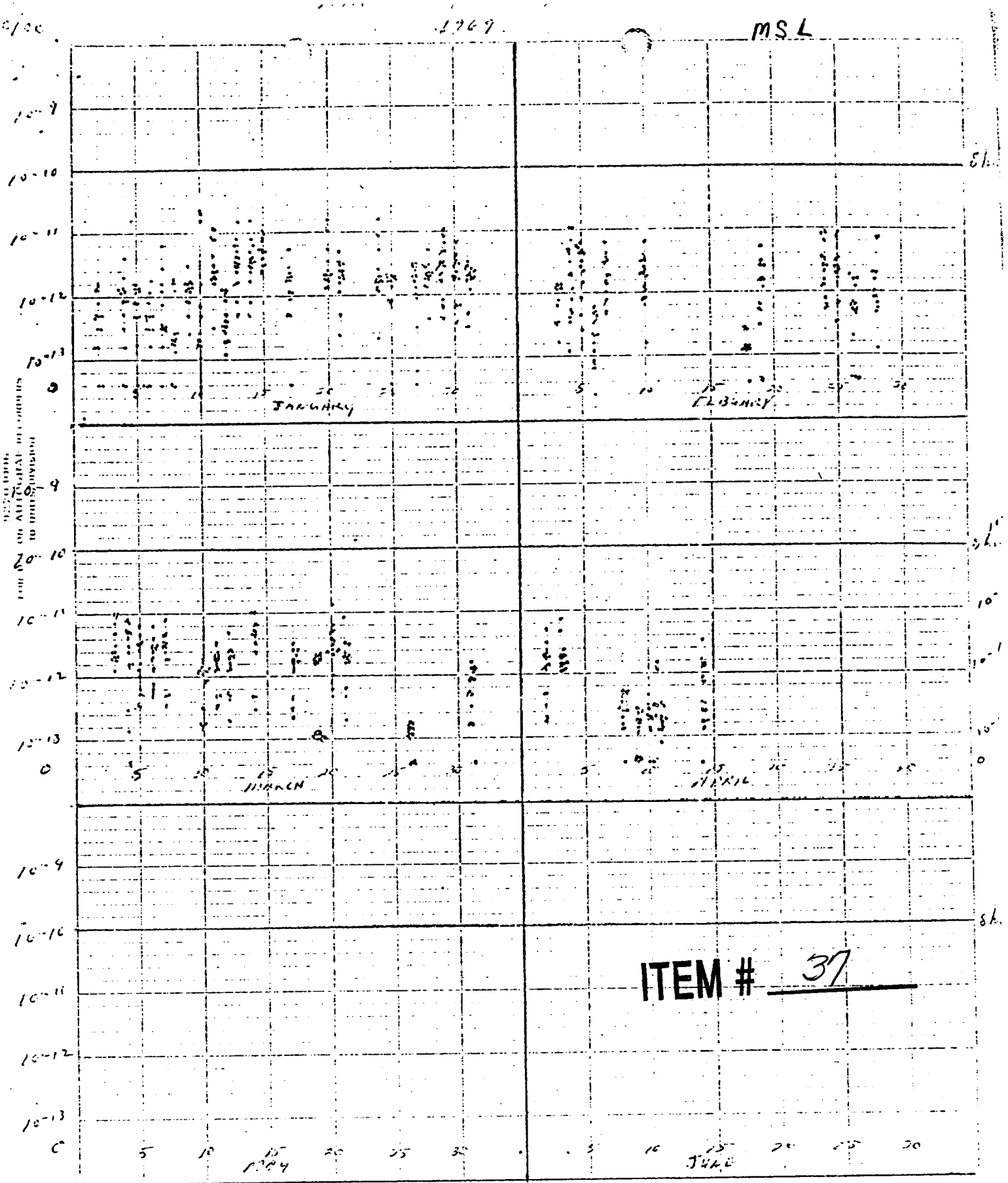
Limit from 10 CFR 20 1966 and U.S. Hand Book 69
M.P.C. 40 hr. wk.

Uranium 2-4% enriched
Sample rate 24 hrs. at 4 CFH
Decay 24 hrs.

All results are divided by 3

EXHIBIT D

C136



ITEM # 37

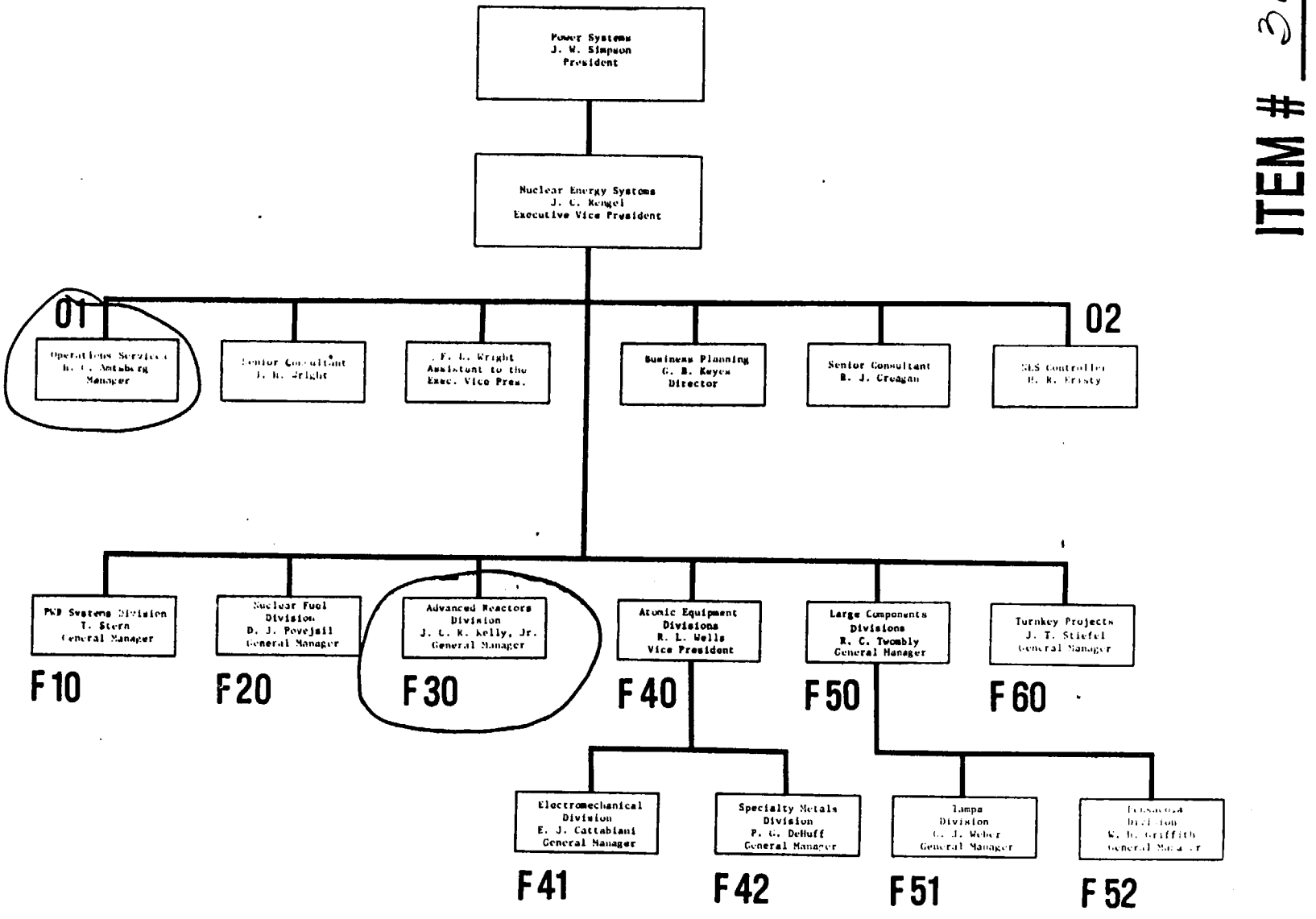
EXHIBIT E

D. T. GALM

ITEM # 38

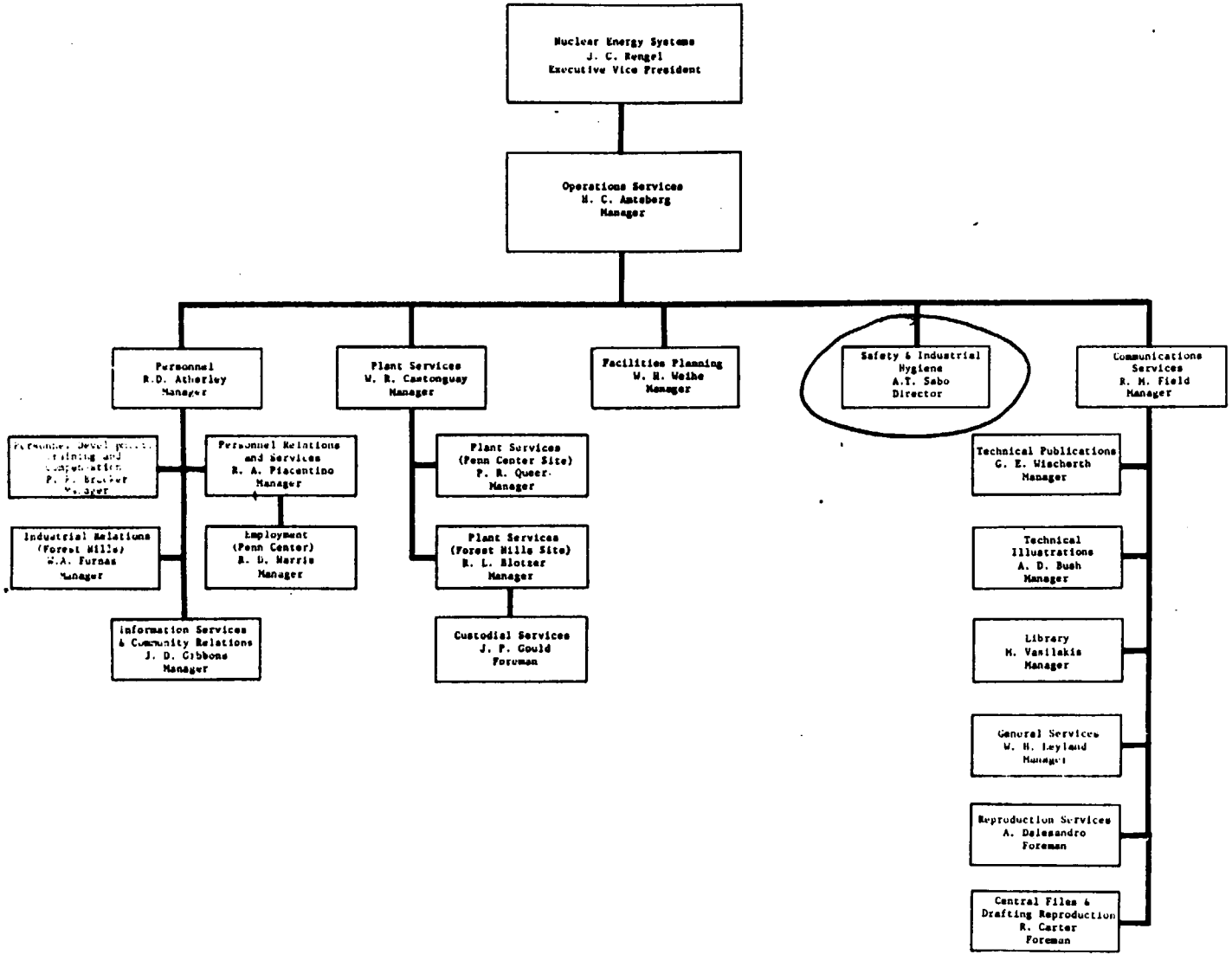
EXHIBIT H

Page 1 of 5



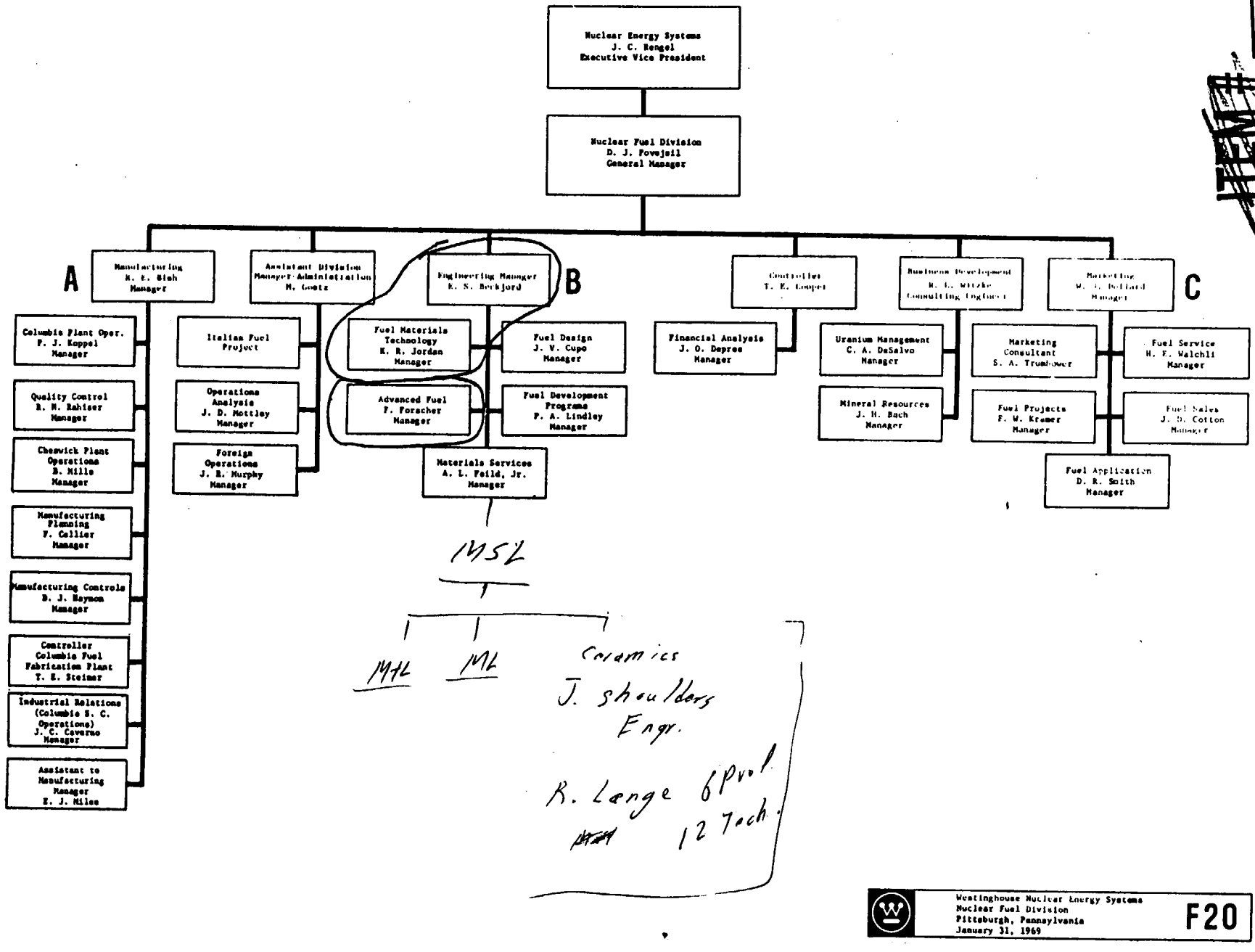
Westinghouse Nuclear Energy Systems
Pittsburgh, Pennsylvania
January 31, 1969

F



Westinghouse Nuclear Energy Systems
Operations Services
January 31, 1969

F01

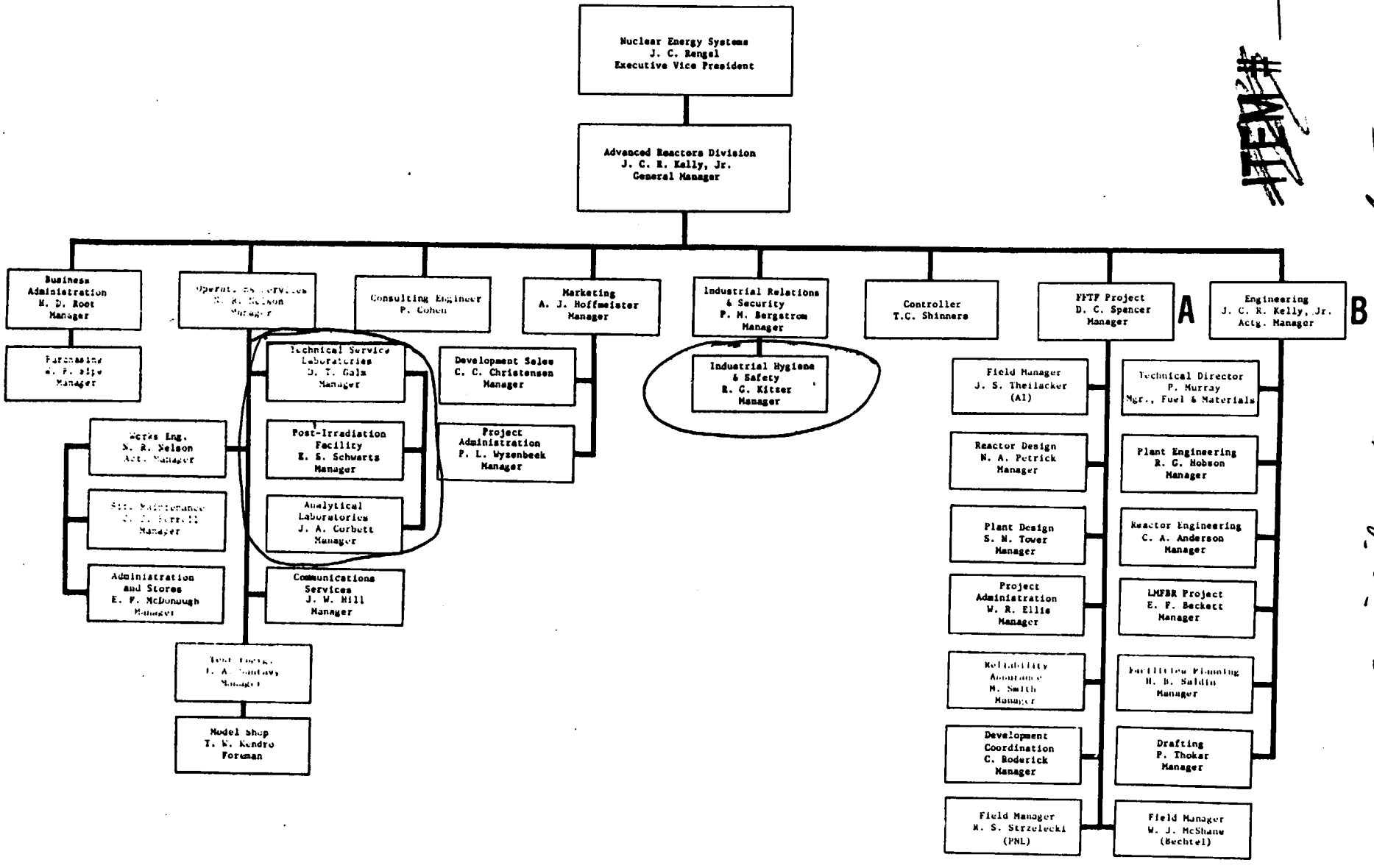


Westinghouse Nuclear Energy Systems
Nuclear Fuel Division
Pittsburgh, Pennsylvania
January 31, 1969

F20

ITEM #

Exhibit H Rev 3 DRS



Westinghouse Nuclear Energy Systems
Advanced Reactors Division
Pittsburgh, Pennsylvania
January 31, 1969

F30

Form AEC-591
(7/67)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

1. LICENSEE	2. REGIONAL OFFICE A-I
WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania	U. S. ATOMIC ENERGY COMMISSION Region I, Division of Compliance 970 Broad Street Newark, New Jersey 07102
3. LICENSE NUMBER(S) SNM-338 and 37-5809-3 (A-1)	4. DATE OF INSPECTION April 14, 15, 16, 1969 (Reinspection)

5. INSPECTION FINDINGS E(1) II

- ☒ A. No item of noncompliance was found.
- ☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42
- ☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42
- ☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)
- ☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)
- ☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)
- ☐ G. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)
- ☐ H. Form AEC-3 was not properly posted. 10 CFR 20.206(c)
- ☐ I. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)
- ☐ J. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)
- ☐ K. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51
- ☐ L. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)
- ☐ M. Records of inventories were not maintained. 10 CFR 34.26
- ☐ N. Utilization logs were not maintained. 10 CFR 34.27

C. W. Nilson — M. R. Lorenz
(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

(Date) _____ (Licensee Representative — Title or Position) _____

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ CO ENFORCEMENT

ITEM # 39 Cl 39

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

MAR 2 8 1969

DML:RLL
70-337

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

Amend # 12

This refers to your application dated January 21, 1969, transmitting the Cheswick Division's Plant Emergency Procedures, Rev. 9/68, and confirms the telephone conversations on March 4 and 11, 1969, between your Mr. Karl R. Schendel, and Mr. Robert L. Layfield of this office.

As discussed with Mr. Schendel, rather than incorporate the referenced procedures manual as a license condition, we request that you submit an abbreviated plan which would identify the primary objectives of your emergency procedures and the means and capabilities for achieving these objectives. The plan should include the following:

A. The lines of administrative authority under emergency conditions including authorization for reentry.

B. The immediate steps to be taken and reports to be made in the event of fire, release to the environment, power failures, activation of alarm signals, or discovery of an accidental criticality.

C. The type of instruction and frequency of emergency drills which will be given to all employees.

D. Training and orientation given to local fire departments and to in-plant brigades in order to familiarize them with special precautions to be taken in accidents involving radioactive materials.

APR

ITEM # 40.51

C140

MAR 2 8 1969

E. Arrangements made with nearby hospitals and physicians and ambulance services for care of injured persons who may be contaminated and/or who may have received high radiation exposure.

F. The performance criteria of emergency equipment to be located at Emergency Assembly Points including the bases for such criteria and provisions for maintenance of such equipment.

G. The criteria for making a decision to reenter a plant after an emergency evacuation.

H. Provisions for determining the magnitude of the release of radioactive materials including the evaluation of the need for offsite assistance.

I. Provisions for emergency onsite first aid and personnel decontamination.

Sincerely,

Original Signed by
Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials
Branch
Division of Materials Licensing

DISTRIBUTION:
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Document Room
Compliance, HQ - 2
N. Doulos, DML
C. Luke, DML
R. Woolsey, DML
Branch Reading File
Division Reading File

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 9 1968

R F:DHL:ND
70-337

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen: Attention: Mr. Karl R. Schendel

Notice is given that Special Nuclear Material License Number SNM- 338 expires on December 31, 1968.

If you desire to continue your program using special nuclear material(s), an application for renewal of the license should be filed with this office pursuant to Title 10, Code of Federal Regulations, Part 70, Section 70.33. The application should be in letter form and seven copies submitted.

It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. Your program will then be covered by your existing license until action is taken on your application for license renewal. (Section 70.33(b)). If an application is received less than 30 days prior to the expiration date of your license and cannot be processed before your existing license expires, this could result in your possessing special nuclear material without a valid license.

If you do not wish to renew your license, please complete the enclosed form "Certification of Status of Special Nuclear Material Activities Under United States Atomic Energy Commission Special Nuclear Material License Number- 338", and return it to this office.

If you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for timely submission of an application for license renewal remains with the licensee.

Very truly yours,

Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

Compliance

C141

Enclosure:
Certification

ITEM # 41

Form AEC-591
(7/67)

U. ED STATES ATOMIC ENERGY COMMISSI
DIVISION OF COMPLIANCE

SEP 24 1968

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

1. LICENSEE	2. REGIONAL OFFICE
Westinghouse Electric Corporation Pittsburgh Pennsylvania	U. S. Atomic Energy Commission Region I - Div. of Compliance 970 Broad Street Newark, New Jersey
3. LICENSE NUMBER(S) SNM-338	4. DATE OF INSPECTION (Reinspection)

5. INSPECTION FINDINGS

- ☐ A. No item of noncompliance was found.
- ☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42
- ☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42
- ☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)
- ☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)
- ☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)
- ☐ G. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)
- ☑ H. Form AEC-3 was not properly posted. 10 CFR 20.206(c)
- ☐ I. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)
- ☐ J. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)
- ☐ K. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51
- ☐ L. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)
- ☐ M. Records of inventories were not maintained. 10 CFR 34.26
- ☐ N. Utilization logs were not maintained. 10 CFR 34.27

C. W. Hilsen, Fuel Facilities Inspector
(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

ITEM # 42

(Date)

(Licensee Representative — Title or Position)

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ CO ENFORCEMENT

C142

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

I

DML:RLL
70-337

SNM 22F

AUG

HGP

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

Thank you for your letter dated July 8, 1965, providing us with a layout designating the relative locations of the pellet processing lines in the Nuclear Fuel Division's Manufacturing Department. This information shall be taken into consideration in our evaluation of your license applications involving these facilities.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

DISTRIBUTION:
Supplement
Document Room
Compliance, HQs 2
N. Doulos, DML
C. Luke, DML
Branch Reading File
Division Reading File

ITEM # 43

C143

From GO - Hdqrs.

Form AEC-591
(7/67)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

AO) I

1. LICENSEE	2. REGIONAL OFFICE
Westinghouse Electric Corporation Pittsburgh Pennsylvania	U. S. Atomic Energy Commission Region I - Div. of Compliance 970 Broad Street Newark, New Jersey
3. LICENSE NUMBER(S)	**4. DATE OF INSPECTION**
SNM-338	April 9 - 11, 1968 RI

5. INSPECTION FINDINGS

☒ A. No item of noncompliance was found.

☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42

☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42

☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)

☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)

☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)

☐ G. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)

☐ H. Form AEC-3 was not properly posted. 10 CFR 20.206(c)

☐ I. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)

☐ J. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)

☐ K. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51

☐ L. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)

☐ M. Records of inventories were not maintained. 10 CFR 34.26

☐ N. Utilization logs were not maintained. 10 CFR 34.27

(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

ITEM # 44

(Date)

(Licensee Representative — Title or Position)

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ CO ENFORCEMENT

C144

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

AREA CODE: 201-
TELEPHONE: 645-3943

IN REPLY REFER TO:

July 3, 1968

File
THRU: H. W. Crocker, Senior Fuel Facilities Inspector
Region I, Division of Compliance

BACK-UP NOTES TO FORM AEC-591
WESTINGHOUSE ELECTRIC CORPORATION
3 GATEWAY CENTER
BOX 2278
PITTSBURGH, PENNSYLVANIA
LICENSE NO. SNM-338
(DOCKET NO. 70-337)

Proper attention is being given to the overall safety program. No hazards were noted and there appeared to be sufficient health physics staffing for the present operations performed. The increase in plutonium work at Cheswick may require an increase in the nuclear safety staff which Mr. Piros indicated he was considering.

It appears that at times procedures are somewhat overorganized and during other than hazardous situations when immediate action is required, protocol requires that chain of command lines be followed prior to action. This does not appear to present a problem.

C. W. Nilsen, Fuel Facilities Inspector

W. R. Lorenz, Radiation Specialist

ITEM # 45

C45

(12)

U. S. ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
Region I

Title: WESTINGHOUSE ELECTRIC CORPORATION
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

License 37-5809-1 (Pump Repair)
37-5809-2 (Radiography)

Period of Visit: April 9 - 11, 1968

Inspectors: _____ 7/3/68
C. W. Nilsen, Fuel Facilities Inspector — Date

_____ 7/3/68
W. R. Lorenz, Radiation Specialist — Date

Reviewed by: _____ 7/3/68
H. W. Crocker, Senior Fuel Facilities Inspector — Date

BACK-UP NOTES TO FORM AEC-591

By : C.W. Nilsen, Fuel Facilities Inspector
W. R. Lorenz, Radiation Specialist

Date: 2 June 1968

Title: WESTINGHOURSE ELECTRIC CORPORATION
Cheswick, Pennsylvania
License No. SNM-338
Docket No. 70-337

License 37-5809-1 (Pump Repair)
37-5809-2 (Radiography)

Inspection Dates: April 9-11, 1968

INTRODUCTION AND SUMMARY

1. An announced insepction was made of the subject licensee's Cheswick facilities on April 9-11, 1968 by C. W. Nilsen Fuel Facilities Inspector and W. R. Lorenz Radiation Specialist CO:I. The purpose of the visit was to review the licensee's program and compliance with license conditions and federal regulations.

2. Activities performed by the licensee were reviewed and three AEC Form 591's were issued indicating that no items of noncompliance or unsafe practices were noted under license SNM-338, 37-5809-1 and 37-5809-2.

3. The new facility being built at the site to be used for plutonium oxide fuels is scheduled for startup in November of this year. The process will include plutonium nitrate to oxide conversion and some scrap recovery.

DETAILS

Scope

4. The inspection included a tour of all SNM processing areas and the the new plutonium facility, physical security review, training, review of previous items of noncompliance, air sampling programs and personnel monitoring. The Pump Repair Facility (License 37-5809-1) and Radiography (License 37-5809-2) were toured.

Organization

5. One change that was noted in the Nuclear Power Division is that R. J. Allio is now Consulting Engineer and E. J. Beckjord has taken over as Engineering Manager (See Attachment 1).

6. A change in the Advanced Reactors Division has removed W. E. Ray from responsibility in Ceramic Development and Dr. Jacoby now reports to Mr. Bolfax who reports to P. G. DeHuff, Engineering Manager.

7. The health physics organization at the Westinghouse Cheswick facility is headed by W. Piros, Health and Safety Manager (See Attachment 2). Since the last inspection, Piros has hired a senior health physicist, Mr. Keith Bodden, who will assume a major portion of the health physics responsibilities. Assisting Bodden are eight health physics technicians, two in the NFD facility, two in the MSL and ARD facility, one at the pump repair facility, and three at the Astronuclear facility. The radiography operations are covered by one of the NRD technicians, and total night (12:00 p.m. to 8:00 a.m.) coverage, when appropriate, is covered by one of the Astronuclear facility technicians.

8. Persons with whom significant discussions were held, are as follows:

Advanced Reactors Division (ARD)

Engineering, Advanced Materials
W. R. Jacoby, Ceramic Development Manager
R. M. Horgos, Ceramic Development

Nuclear Fuel Division (NFD)
J.J. Powejsil, General Manager

Manufacturing
R.E. Bish, Manufacturing Manager
F. Cellier, Manufacturing Planning Manager
T. Gutman, Criticality Engineer

Engineering, Advanced Fuels
R. J. Wiggins, Materials Systems Lab Manager
A. Sugarman, Engineer Materials Systems Lab

Atomic Equipment Division

Industrial Relations
W. E. Piros, Health, Safety and Services Manager
K. E. Bodden, Senior Health Physicist
H. C. Lape, Security Officer

Previous Items of Noncompliance

9. During the previous inspection of SNM-338 on 10/17 - 19/67, the licensee was cited for not promptly resampling personnel whose urinalysis results exceeded 25 D/m/liter. During this inspection it was observed that the licensee has set up a tickler and suspense system on urinalysis sample results to ensure that results exceeding 25 D/m/liter will have

prompt follow-up action as reported in their letter response dated 12/5/67 to the noncompliance notice of 11/16/67.

10. No items of noncompliance were noted as a result of the September, 1964 inspection of license 37-5809-2.

Nuclear Fuel Division - Manufacturing

11. The fuel facilities are being expanded to include one additional fuel fabrication line. The new line has been checked out with depleted uranium and is expected to be ready for fuel processing by the first part of June. The new line is automated to a high degree and will be the pilot for the design of the equipment in the new plant.

12. Control of in process fuel has been changed. The old system used to employ taping the floor for material control with each taped area limited to one batch or geometry control. The tape has been removed and each piece of equipment is now considered the control zone.

13. Administrative control is being used to maintain a 12" spacing between carts containing SNM and SNM processing equipment. The previous system required that carts containing SNM be kept outside of the taped areas.

14. The inspector commented on a slab control tray that was over filled with broken moly boats and stored in an SNM storage rack. Mr Bish concurred with the inspector that the situations was a poor practice.

Nuclear Fuel Division, Advanced Fuel

15. The Materials System Laboratory (MSL) was toured and everything appeared to be in good order. There was no SNM processing being done in the area. Activity will start in July on the fabrication of fuel pins for Saxton 2A core. This job requires about 140 Kgs of 12.5% and 130 Kgs of 9.5% U-235.

16. A part of the Lab is being used for pilot plant studies for the UF_6 fluid bed conversion to be installed at the new fuel plant. The system has been tested on depleted uranium and consideration is being given for use with enriched uranium. A license amendment is being written to permit its use.

Advanced Reactors Division, Advanced Materials

17. The Cermic Development Laboratory was toured. The fuel pins that are currently being fabricated contain about 20% Pu and 30% Uranium (93% enriched). The previous fuel pins were fabricated with 20% Pu and 80% natural uranium.

18. All glove boxes are posted with the limits and current inventory. The box inventory is recorded on both sides of the box as work is performed on both sides.

19. The licensee was storing contaminated waste contained in 55 gallon drums in the vault. They had just previously received permission from the commission to bury it as it is commission material. There were about 8 drums which contain 15 grams of Pu. The licensee plans on having an area established outside the building were this material can be stored while awaiting shipment for burial.

Training

20. In the Materials Systems Lab the work is directly under the control of an engineer. All activities are reviewed for industrial and nuclear safety by both Mr. Wiggins and Mr. Piros, in writing, before startup or changing an existing operation. There is a 1:1 ratio of professional to technicians and Mr Wiggins stated that he does not hire technicians who are inexperienced in working with radioactive materials.

21. In the Ceramic Development area an extensive training program has been followed as it is the first plutonium work to be performed at the site. The training included lectures on criticality and other safety items with practice in the changing of gloves and other contamination control procedures. The licensee also has a Plutonium Laboratory Description and Operation Manual which is kept current. The manual includes the following main sections: 1.) Introduction 2.) Safety Considerations and Practices in Handling Plutonium 3.) General Description 4.) General Operating Procedures 5.) Maintenance and 6.) Emergency Procedures. The Manual includes diagrams of all systems (vacuum, Argon, Helium, water, air sampling etc) in the laboratory.

22. Operator training in the fuel shop is based on the use of procedures and and specific instructions by the foreman. The individual foreman are responsible for training the operators. Activities in the fuel shop do not change at a frequency that requires a special training program.

23. Mr. Piros or his staff does see all new employees and gives a general orientation in safety. He also is directly involved in the plant safety meetings.

24. A new emergency manual and training program is being prepared by Mr. Piros which will include all the new activities at the site. He is planning on formalizing the training program to include punch card records for initial and retraining activities. With the increase in activities at the site he feels the more formal program will be required.

Physical Security

25. Site security was discussed with Mr. Lape, Security Officer. Mr Lape reports to Mr Piros.

26. During the normal working day access to the various ~~SAIM~~ SNM processing areas is controlled by recognition. The fuel shop is planning to change the entrance to require sign in before entry into the processing area.

27. The limited area and activities in the Materials Laboratory and the Ceramic Development area lend themselves to recognition control although entry to the area (the inspector believes) might be gained before recognition could be established. Entry to the fuels area requires passing through the engineering office area where recognition contact should be made.

28. On off shift hours the guard force (3 guards/shift with "L" clearance) surveys of the area. The round includes 28 report stations. The guard rounds are not routinized but the area is checked every two hours between 1800 and 0600 hours. All gates and doors are also locked on the off-shift hours and a guard stationed at the alarm panel can see the parking lots and main doors to all facilities.

29. During working hours doors other than the main entrances are controlled by working personnel such as for material receiving and shipments etc.

30. All material is kept in vaults or locked areas and is under the control of specified individuals who are responsible for accountability and/or materials control. The access to the storage areas is therefore limited.

31. The material in the Ceramic Development is carried under AEC contract area and meets the Security Group I requirement as reviewed by the AEC. The fuel shop material is less than 20% U-235 and therefore is in the inaccessible form as defined in the security standards. The materials processed in the Materials Laboratory usually fall in the inaccessible form or security Group 3.

Air Sampling Program (Restricted Areas)

32. General air sampling of the licensee's restricted areas is made daily from the following areas: core manufacturing area (NFD): plutonium laboratory (ARD); material systems laboratory (MSL): and the pump repair facility (PRF).

33. In the NFD facility, typical pellet type fuel rods are manufactured. The flow of material is from receipt to storage, to compacting, to granulating, to a lubricant additive, to pelletizing, to sintering,

34. Located about this facility are 16 general air sampling stations equipped with rotometers drawing air thru 1" Whatman #41 filter paper at the rate of 4 CFH. An additional seven stations are planned to cover additional new process lines. Samples are normally collected over a 24-hour period and changed at approximately 4 PM. The general air sampling frequency is increased to two times per day (16 hr. and 8 hr.) when special work such as duct removal or relocation is performed, modifications of old equipment is done, assembly line relocations are done, etc.

35. Air samples are counted in a Technical Associates Model ACU-11 automatic alpha scintillation detection unit after 24 hours decay. An insoluble U-235 limit of 1×10^{-10} uc/ml (220 D/m/m^3) is used as per Part 20. The specific sample results are maintained by the NFD health physics technician and summary results are plotted and followed by Bodden. The summary results indicated an average air concentration of 3×10^{-12} uc/ml with no 24 hr sample results exceeding 1×10^{-10} uc/ml. During special work (duct removal) on 3/2 - 3/68, special air sample results for stations 3, 4 and 5 indicated 2 x 10-9 uc/ml, 2×10^{-9} and 3×10^{-10} uc/ml. These samples were collected from the area in which the work was performed. Bodden said that all workmen wore full face MSA respirators with "ultra filters". Nose smears on the workmen indicated 0 CPM.

36. Special high volume air samples are collected using a Staplex sampler on start up of new equipment and in the lunchroom when special general air sampling is required. During duct work removal on 3/2 and 3/68, high volume air sample results in the lunchroom indicated less than 2×10^{-12} uc/ml. 24-hour counting was done in the Technical Associates ACU-11 counter. No other special high volume sampling has been performed in the last six months.

37. Breathing zone personnel sampling is performed using 1" Whatman #41 filter paper sampling at .65 cfm. In the past three months, results collected on five occasions indicated two times the levels indicated on the general air samples. Breathing zone sampling is new at the facility and procedures on the use and operations of the equipment is still being developed.

38. In the ARD facility, the licensee has two glove box lines of eight glove boxes each. One glove box line is used to process metallic plutonium and uranium with carbon to form ceramic pellets. Currently the fuel ratio is 20% plutonium to 80% natural uranium. Shortly the uranium will be 93% enriched. The other glove box line is used as a support to the process line, such as chemical analysis, weight checks, etc.

39. In this facility, there are 10 locations in which air is sampled using 1" Whatman #41 filter paper sampling air at .6 cfm. General air samples mounted on the glove boxes are 24 hour counted daily in the Technical Associates ACU-11 scintillation counter proviously mentioned. The Part 20 level of 4 x 10^{-11} uc/ml for insoluble Pu-239 is used as the permissible limit. Radioactive work started in the facility in February of 1968, and since then the general air concentrations have been less than 10^{-13} uc/ml.

40. According to Bodden, breathing zone lapel samples have been taken from persons performing glove or window changes and tube loading and the results have also indicated less than 10^{-13} uc/ml.

41. In addition to the above, the licensee also has an Eberline RATH continuous air monitor located in the laboratory but that its operation has been erratic to date. Little reliance is placed in its read-out results.

42. In the MSL facility, the licensee converts UO_2 to ceramic pellets for fuel rods in the same way as done at the NFD facility. The MSL facility is used mostly for small jobs and some development work in the pellet manufacturing process. Also under construction in this facility is a UF_6 to UO_2 conversion line which it is hoped will supply the NFD facility with UO_2.

43. There are nine stations sampling air concentrations on a 24-hour basis thru 1" Whatman #41 filter paper at the rate of .6 cfm. Air samples are 24-hour counted in the Technical Associates ACU-11 scintillation counter as previously mentioned. Air concentrations in this area run approximately 2 x 10^{-12} uc/ml during operations and 2 x 10^{-13} uc/ml during no work periods. The Part 20 limit for insoluble U-235 is 1 x 10^{-10} uc/ml.

44. In the PRF facility (License No. 37-5809-1) the licensee performs repair work on reactor primary loop pumps and valves. Approximately 10 - 15 pumps are repaired per year, and approximately 10 - 15 valves are repaired per year. The maximum radiation level is from the pumps and has been as high as 5 r/hr with the average being 1 r/hr. The level of radiation exists for approximately one day, after which, the radiation level is reduced substantially by decontaimination. The primary contaminant is Co-60. After decontaimination of equipment to levels of less than 2 mr/hr on contact and less than 400 D/m/100 cm^2 of beta activity, the equipment is considered clean enough to be worked on, repaired and reassembled in a clean high bay area of a

separate building. The facility is fenced and posted with a "Caution - High Radiation Area" sign. Access to the building is by interlock buzzer control, controlled from within. During non-working hours, the facility is locked.

45. In this facility five general air samples are collected on 1" Whatman #41 filter paper at a 10 CFH sampling rate. The samples are counted in an Eberline gas flow proportional counter at the facility. Air concentrations results indicate during working operations 5×10^{-11} uc/ml to 5×10^{-10} uc/ml. During non-working periods the level runs approximately 1×10^{-11} uc/ml. The Part 20 Co-60 insoluble limit is 8×10^{-9} uc/ml.

46. Personnel Monitoring

The licensee used monthly Landauer beta-gamma film badges on PRF, NFD, radiographer, traveling engineers, and MSL personnel to determine personnel exposures. ARD personnel use monthly Eberline beta-gamma neutron badges for personnel monitoring. AEC-5 forms, are maintained for these persons. In addition, AEC-4 forms have been completed for PRF personnel.

47. The licensee attempts to administratively limit quarterly exposures to a maximum of 1.25 R (whole body). A review of the records indicate that ARD and MSL personnel average 60 mr/month with a maximum of 210 mr/month. PRF personnel average 100 mr/month with a maximum of 400 mr/month. NFD, radiographers, and traveling engineers normally receive less than 20 mr/month. On special written approval from W. Piros, a traveling engineer may enter 300 mr level areas at other sites and the maximum exposure received, with approval, has been 1 R/quarter.

48. The filing system for AEC-5 and AEC-4 forms appeared to be complete but somewhat disorganized. Bodden said that for the next inspection a better filing system would be instituted.

49. License No. 37-5809-1

In addition tothe work previously described,the licensee also possesses a 9 mCi Cs-137 Nuclear Chicago RR-137 sealed source. The source is kept locked in the health physics counting lab (alpha counting) in a Nuclear Chicago lead pig. The course is used for instrument calibration. Leak test results performed on a six-month basis as per license condition 13, indicated less than .005 uc. The source is used approximately once per month in the healthphysics lab for less than 30 minutes to calibrate instruments.

50. The main use of material under this license is at the pump repair facility. The facility is as described in the previous inspection report, diagram of the facility is shown in the license back-up information. One health physics technician is assigned to the facility as indicated in the healthphysics Organization section of this report. Routine direct and smear surveys are conducted in this facility when repair work is in progress. All records are maintained on forms. The facility is operated under the direct supervision of Mr. S. Gopman, foreman. All persons are required to wear 0 -200 mr dosimeters in addition to film badges, for personnel monitoring. (See personnel monitoring section of this report for film badge results). Access to the fenced facility is by locked door.

License No. 37-5809-2 (Radiography)

51. The licensee uses the same facility to perform radiography as reported in the previous report. One radiographer is assigned to the facility. Isotopes (Co-60 and Ir-192 per their license have been used only two times in the last year for overnight exposures. Currently, the licensee possesses one Radioics Model A-60-1, Co-60 sealed source at .85 curies on 8/21/62 and one Radionics Model A-192-10 Ir-192 sealed source at 11 curies on 6/67. Both sources are stored in a Model L-60-5-2 exposure device kept in the exposure room. Remote controls are used for exposing the sources. The exposure room is locked or attended at all times. The radiation level at contact with the storage container was 5 mr/hr as measured by the inspector. A radiation survey of the facility with the .85 curies Co-60 sealed source exposed indicated that unrestricted area levels on contact with wall surfaces were less than .5 mr/hr. Activation by the inspector, of the alarm interlock on the room access door indicated the required warning sound.

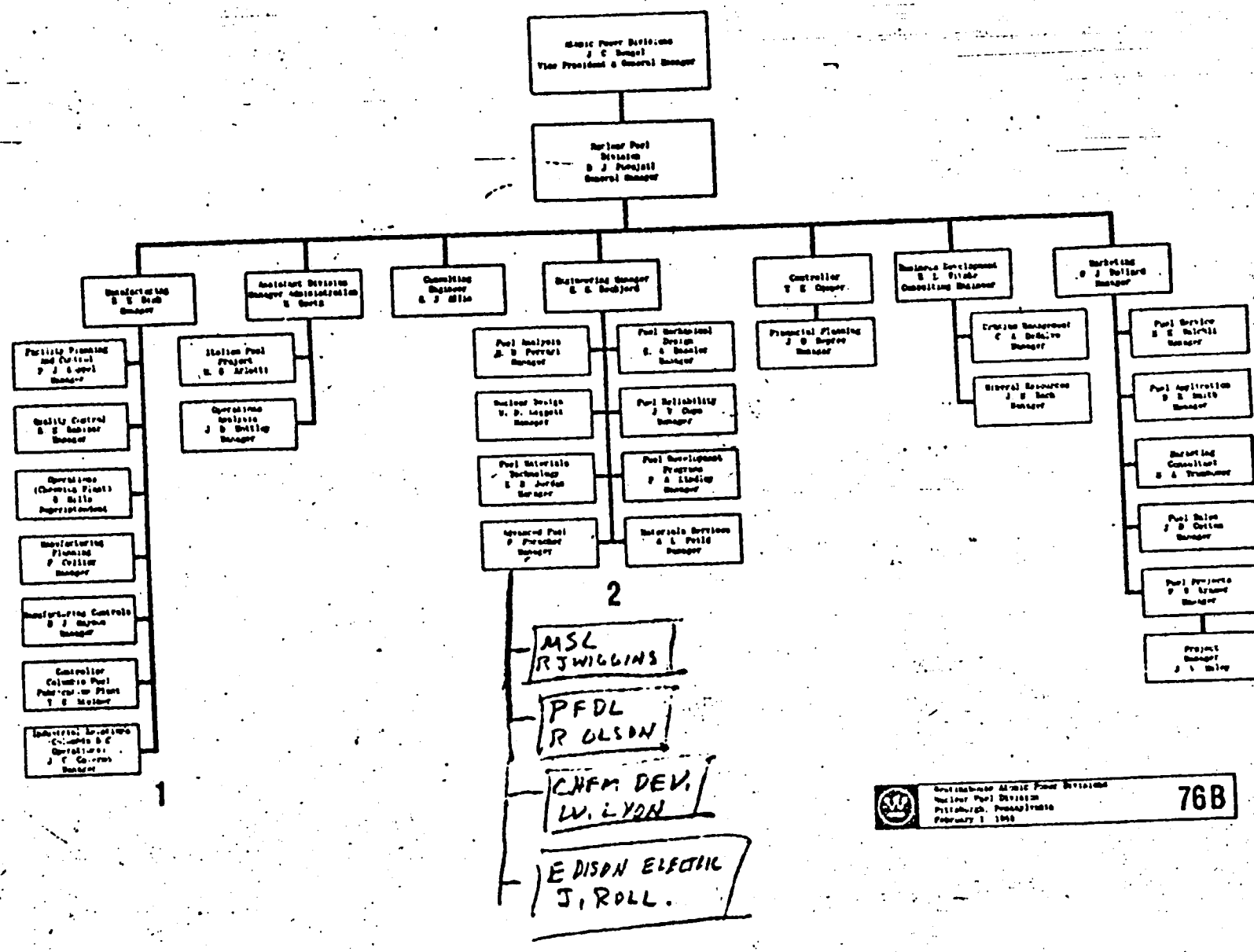
52. The licensee continued to maintain records of leak tests at six month intervals for both sources, (all less than .005 uc), survey meter calibrations, utilization log, quarterly inventory, and pocket dosimeter results on the source forms indicated in the previous inspection report. The area is posted with a "Caution - High Radiation Area" sign and the Model L-60-5-2 storage container is properly labelled.

Management Summation

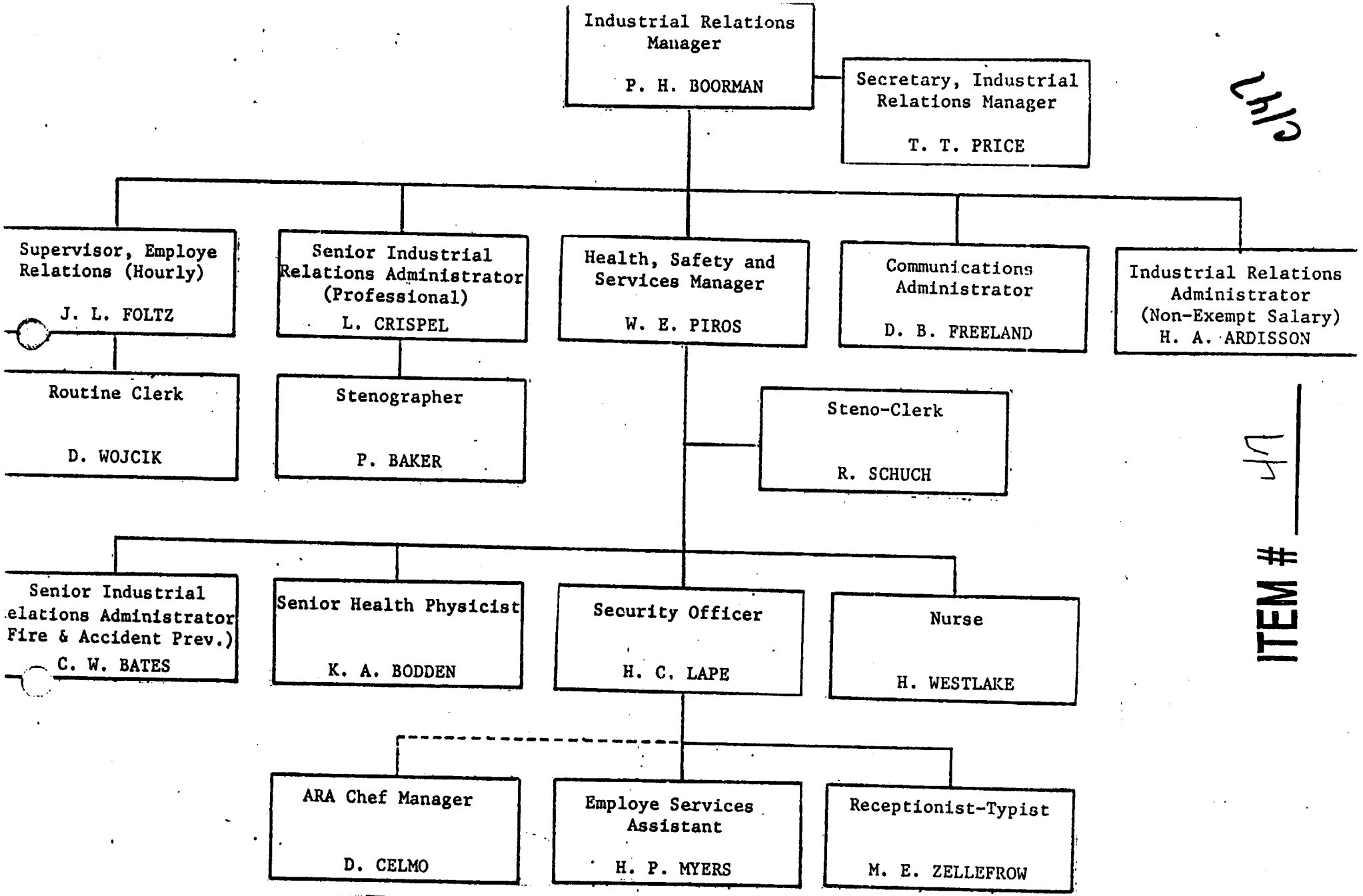
53. For licenses 37-5809-1 and -2 a management summation was held with Mr. R. A. Gabriel, Supervisor of Operations who reports thru Mr. Thomas, Manager of Manufacturing to Mr. P. M. Sarles, General Manager of AED. Both Mr. Thomas and Mr. Sarles were unavailable at this time. No items of noncompliance were noted and clear AEC-591 forms were issued for both licenses.

54. A summary review was held by the inspectors with J.J. Povejsil, General Manager, W. E. Piros, and K. A. Bodden. The inspectors reviewed the items covered by the inspection and issued a form AEC-591, for each of the three licenses inspected.

ITEM # 46 CHC


Atomic Power Divisions
J. C. Bengel
Vice President & General Manager
Nuclear Fuel
Division
R. J. Poujol
General Manager
Manufacturing
E. E. Roth
Manager
Assistant Division
Manager Administration
L. Gurtz
Cumming
Engineer
A. J. Allis
Engineering Manager
E. E. Roshaar
Controller
T. E. Cooper
Financial Planning
J. D. Dupre
Manager
Business Development
R. L. Fitzke
Consulting Engineer
Marketing
R. J. Bullard
Manager
Fuel Analysis
A. B. Ferrari
Manager
Nuclear Design
W. D. Leggett
Manager
Fuel Materials
Technology
E. B. Jordan
Manager
Advanced Fuel
Program
Manager
Fuel Mechanical
Design
E. L. Boesler
Manager
Fuel Reliability
J. V. Cope
Manager
Fuel Development
Program
P. A. Lindsay
Manager
Materials Division
A. L. Pohl
Manager
Fuel Service
R. E. Balzhiser
Manager
Fuel Application
R. E. Smith
Manager
Bursting
Consultant
E. A. Trautwein
Fuel Sales
J. D. Cotton
Manager
Fuel Projects
P. E. Krause
Manager
Project
Manager
J. L. Daley
1
2
MSL
R J WIGGINS
PFDL
R OLSON
CHEM. DEV.
W. LYON
EDISON ELECTRIC
J. ROLL.
Westinghouse Atomic Power Division
Nuclear Fuel Division
Pittsburgh, Pennsylvania
February 1, 1968
76B

#1



ITEM # 47

#2

Industrial Relations
AED, Cheswick 3/68

Jed
Steve Crocker
Bill Wilson

//RB

TWX NR 300

MR. CHARLES MCDONALD
U. S. ATOMIC ENERGY COMMISSION
DIVISION OF MATERIALS LICENSING
SOURCE AND SNM BRANCH
WASHINGTON DC
1-18-68 448PM

DOCKET NO. 70-337

For Div. of Compliance

CONFIRMING OUR TELEPHONE CONVERSATION OF 1/18/68' THE WESTINGHOUSE ELECTRIC CORPORATION REQUESTS AN AMENDMENT TO LICENSE SNM-338' DOCKET 70-337' TO AUTHORIZE DELIVERY OF SNM TO A CARRIER FOR TRANSPORT AS REQUESTED IN OUR APPLICATION DATED 12/15/67 AS MODIFIED BY THE FOLLOWING CHANGES --

SECTION 14.2' PAGES 34 AND 35 - CHANGE MAXIMUM ALLOWABLE ENRICHMENT TO 4 W/O /2 PLACES/.

SECTION 14.2 PAGE 35 - CHANGE MAXIMUM WEIGHT OF FISSILE CONTENT TO 4.0 KILOGRAMS U-235.

SECTION 14.3' PAGE 35 - CHANGE SECOND PARAGRAPH TO READ -- GENERAL CRITICALITY STANDARDS - CALCULATIONS USING LEOPARD PROCEDURES SHOW THAT A FULLY REFLECTED' 11.5 INCH DIAMETER' INFINITELY LONG CYLINDER IS NUCLEARLY SAFE FOR HOMOGENEOUS URANIUM ENRICHED EQUAL TO OR LESS THAN 4 W/O IN U-235 UNDER ANY CONDITIONS OF MODERATION. THESE CALCULATIONS ARE CONSERVATIVE SINCE NO CREDIT WAS TAKEN FOR THE FINITE LENGTH OF A SINGLE CONTAINER' OR FOR THE PARASITIC NEUTRON ABSORPTION OF THE SURROUNDING STEEL STRUCTURE AND BORON-CONTAINING FOAM.

THE CHANGE TO A MAXIMUM ENRICHMENT OF 4 W/O ADDS TO THE CONSERVATISM OF THE PACKAGE ARRAY EVALUATION.

IF THERE ARE ANY FURTHER QUESTIONS CONCERNING THIS APPLICATION' PLEASE TELEPHONE ME COLLECT AT 412-255-3907.

KARL R. SCHENDEL LICENSE ADMINISTRATOR WESTINGHOUSE ELEC CORP
GATEWAY CENTER PITTSBURGH PA

50END
A
18/2219Z JAN DV
//RB

ITEM # 48

From CO - Hdqrs.

RECEIVED JAN 19

c148

Westinghouse Electric Corporation

Atomic Power Divisions
Nuclear Fuel Division

Cheswick Site
Box 217, Cheswick, Pa. 15024

December 5, 1967

Mr. Robert W. Kirkman, Director
Region I, Division of Compliance
United States Atomic Energy Commission
376 Hudson Street
New York, New York 10014

Dear Mr. Kirkman:

In response to your letter of November 16, 1967, this will advise you of all steps taken and planned in regard to Item C of your Non-Compliance Report (AEC-592) dated November 15, 1967.

I. Administrative changes within the Industrial Health & Safety section have been initiated which provide for improved control and follow of resamples.

a) Records on active employes have been segregated from those of inactive employes.

b) All urinalysis records have been centralized under the control of one person.

c) A tickle and suspense system has been incorporated to identify and follow the progress of all required resamples.

d) Additional professional attention has been focused on the follow of the urinalysis program at the site.

e) Failures to immediately follow up on resampling will be immediately reported to the Supervisor, Industrial Health & Safety for further action.

ITEM # 49 C149

(2)

II. Programs have been initiated to provide for improved handling and service resulting in faster analysis of samples.

a) Mr. Piros has initiated discussions with those responsible for the analyses in an attempt to obtain more rapid turn-around.

b) Preliminary investigation has been made to find suitable alternate sources of analysis in the event that the existing source is unable to provide improved service.

c) Some improvement has been noted recently in this area resulting from procedural changes alone.

We trust that the actions outlined above will meet with your approval and satisfy your request for reply.

Very truly yours,

D. J. Povejsil, General Manager
Nuclear Fuel Division

cc: Mr. R. E. Bish
Mr. W. E. Piros

MEMO ROUTE SLIP
Form AEC-98 (Rev. May 14, 1947)

☐ See me about this. ☐ Note and return. ☐ For concurrence. ☐ For signature. ☐ For action. ☐ For information.

TO (Name and unit)	INITIALS	REMARKS
CWN JFB	DATE	20 days are up today & we have not received a reply for the 592.
TO (Name and unit)	INITIALS	REMARKS Dec. 7-1967 – Reply is on the way. Hold until 12-91
	DATE	
TO (Name and unit)	INITIALS	REMARKS
	DATE	
FROM (Name and unit) SD		REMARKS
PHONE NO.	DATE 12/6/67	

USE OTHER SIDE FOR ADDITIONAL REMARKS

U. S. GOVERNMENT PRINTING OFFICE : 1957—O-422007

ITEM # C/59

Ext. 388

CO:I:CWN

16 NOV 1967

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: D. J. Povejsil, General Manager, Nuclear Fuels Division

Gentlemen:

This letter relates to the discussion Messrs. Nilsen and Bresson of this office held with Mr. D. J. Povejsil following the inspection conducted on October 17 thru 19, 1967, of the activities authorized under AEC Special Nuclear Material License No. SNM-338.

It appears that certain of your activities were not conducted in full compliance with AEC requirements. The items and references to the pertinent requirements are listed in Item 5 of the attached form AEC-592. It is noted that items A and B on the attached form AEC-592 were corrected at the time of the inspection and no further correspondence is required regarding these matters.

The purpose of this letter is to give you an opportunity to advise us in writing of your position concerning item C, of any corrective steps you have taken or plan to take with respect to this item and the date all corrective action was or will be completed. Your reply should be sent to us within 20 days of the date of this letter to ensure that it will receive proper attention in our further evaluation of this matter.

Should you have any questions concerning this matter, you may communicate directly with this office.

Very truly yours,

Robert W. Kirkman, Director
Region I, Division of Compliance

Enclosure:
Form AEC-592

ITEM # 51

cc: W. E. Piros, Supervisor, Industrial Health & Safety w/enclosure

OFFICE ▶			COMPLIANCE			
bcc:	CO:HQ w/enclosure & back-up notes					
SURNAME ▶			BRESSON	NILSEN:maz	CROCKER	KIRKMAN
DATE ▶			11/16/67	11/16/67	11/16/67	

Form AEC-318 (Rev. 9-53)

U. S. GOVERNMENT PRINTING OFFICE 16—62761-8

Form AEC-592
(7/67)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

A(1) I

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION 3 Gateway Center Pittsburgh, Pennsylvania	U. S. ATOMIC ENERGY COMMISSION Region I, Division of Compliance 376 Hudson Street New York, New York 10014
3. LICENSE NUMBER	**4. DATE(S) OF INSPECTION**
SNM-338 - Docket No. 70-337	October 17 thru 19, 1967 (Reinspection)

5. The following activities under your license (identified in Item No. 3 above) appear to be in noncompliance with AEC regulations or license requirements, as indicated.

A. Contrary to the amendment application for Additional Criticality Controls in the Engineering Laboratory, dated November 25, 1964, and included in license no. SNM-338, dated June 2, 1967, various criticality stations were not separated by 12 inches as required.

B. Contrary to license no. SNM-338, amendment no. 1, which includes a February 14, 1967 letter, empty containers in the pit under the Materials Systems Laboratory storage vault, were not controlled as required.

C. Individuals who have submitted urine samples evaluated at greaterrthan 25 dpm/liter alpha, have not always promptly submitted resamples, contrary to procedures specified on pages 25 and 26 of Health Physics Manual WAED-HP-103, Revision 5, dated May, 1966. This manual is incorporated into the license by letter from DML dated September 12, 1966.

J. F. Bresson, Radiation Specialist

Supplementary page None attached. C. W. Nilsen, Fuel Facilities Insp. 11/15/67
AEC Compliance Inspector *Date*

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ CO-ENFORCEMENT

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : Files

DATE: November 15, 1967

THRU: H. W. Crocker, Senior Fuel Facilities Inspector
Region I, Division of Compliance

FROM : C. W. Nilsen, Fuel Facilities Inspector
J. F. Bresson, Radiation Specialist

SUBJECT: WESTINGHOUSE ELECTRIC CORPORATION
PITTSBURGH, PENNSYLVANIA
LICENSE NO..SNM-338

The deficiencies noted during the last inspection in the Materials Systems Laboratory under Mr. Wiggins have been corrected. It is obvious that management has taken a strong stand with respect to the nuclear safety in the Materials Systems Laboratory and proper follow-up action is being maintained. The items of noncompliance noted were not of major significance although the marking of criticality zones on the floor in an improper manner was based on a misinterpretation of the license. Mr. Wiggins now reports to Dr. Forscher. In talking to Dr. Forscher, it was evident that Dr. Forscher is going to run a good nuclear safety program. Dr. Forscher will be responsible for the new plutonium activities to be carried out at the Cheswick site.

All other areas under license no. SNM-338 appear to be in good control. No problems were noted at the plutonium facility under Dr. Jacoby and frequent inspections have been performed by the safety committee to ensure that all activities are being carried out in a safe manner.

Health Physics Evaluation

Health Physics operations at this facility appear to be adequately handled. It is felt that the health physics supervisor, W. E. Piros, has achieved an excellent rapport with various division managers. Further, he is able to discuss in some detail all phases of all operations taking place at the Cheswick site. He is also aware of the various problem areas within these operations, and in general the various existing radiological conditions.

Operations in Jacoby's Plutonium Laboratory have started slowly. It appears that as operations are performed, for the first time, proper attention is being given to health and safety.

Reinspection of this facility will take place in February, 1968. At that time, the plutonium facility operations will be more thoroughly reviewed as will the various other subjects, such as resolution of the urinalysis problem and determination of the adequacy of the various air sample programs.

Enclosure:
Back-up notes to Form AEC-592

ITEM # 52

CIS2

5010-106

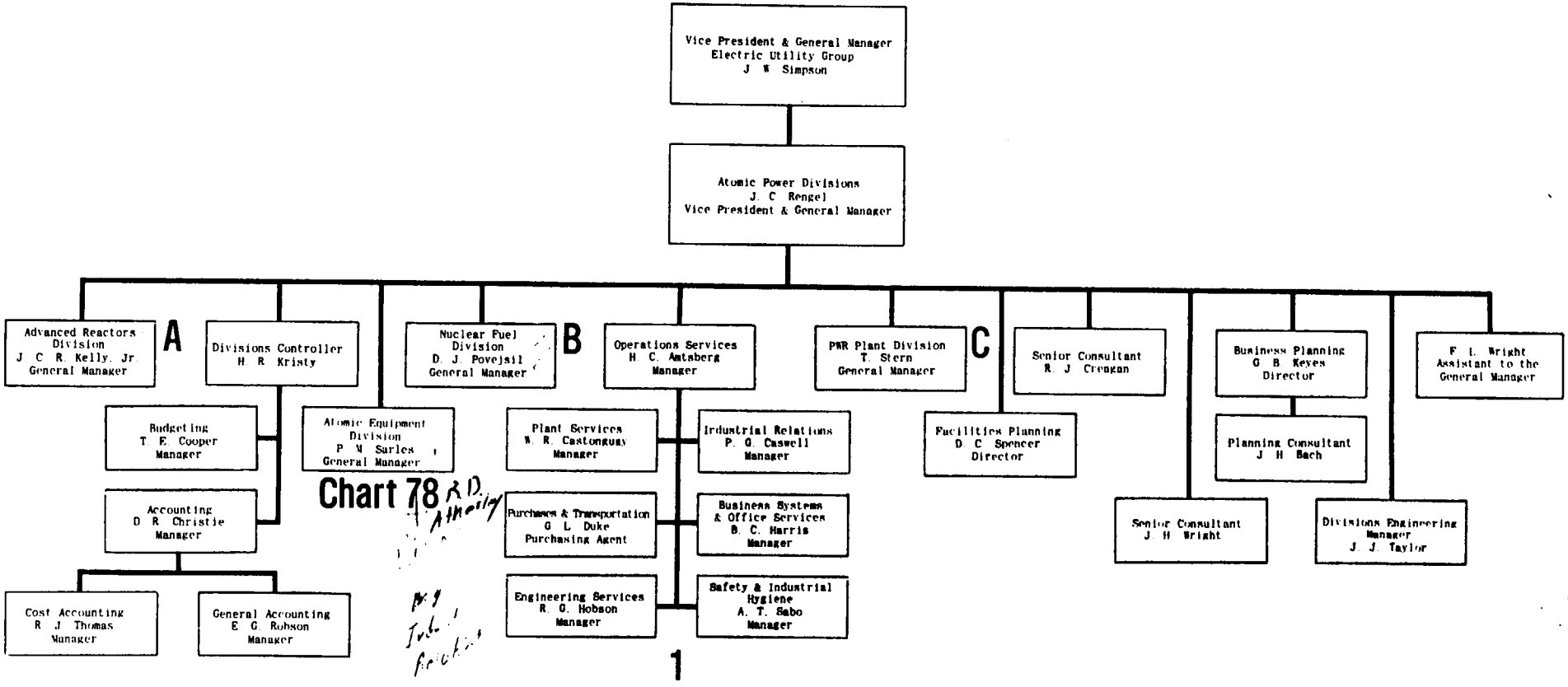
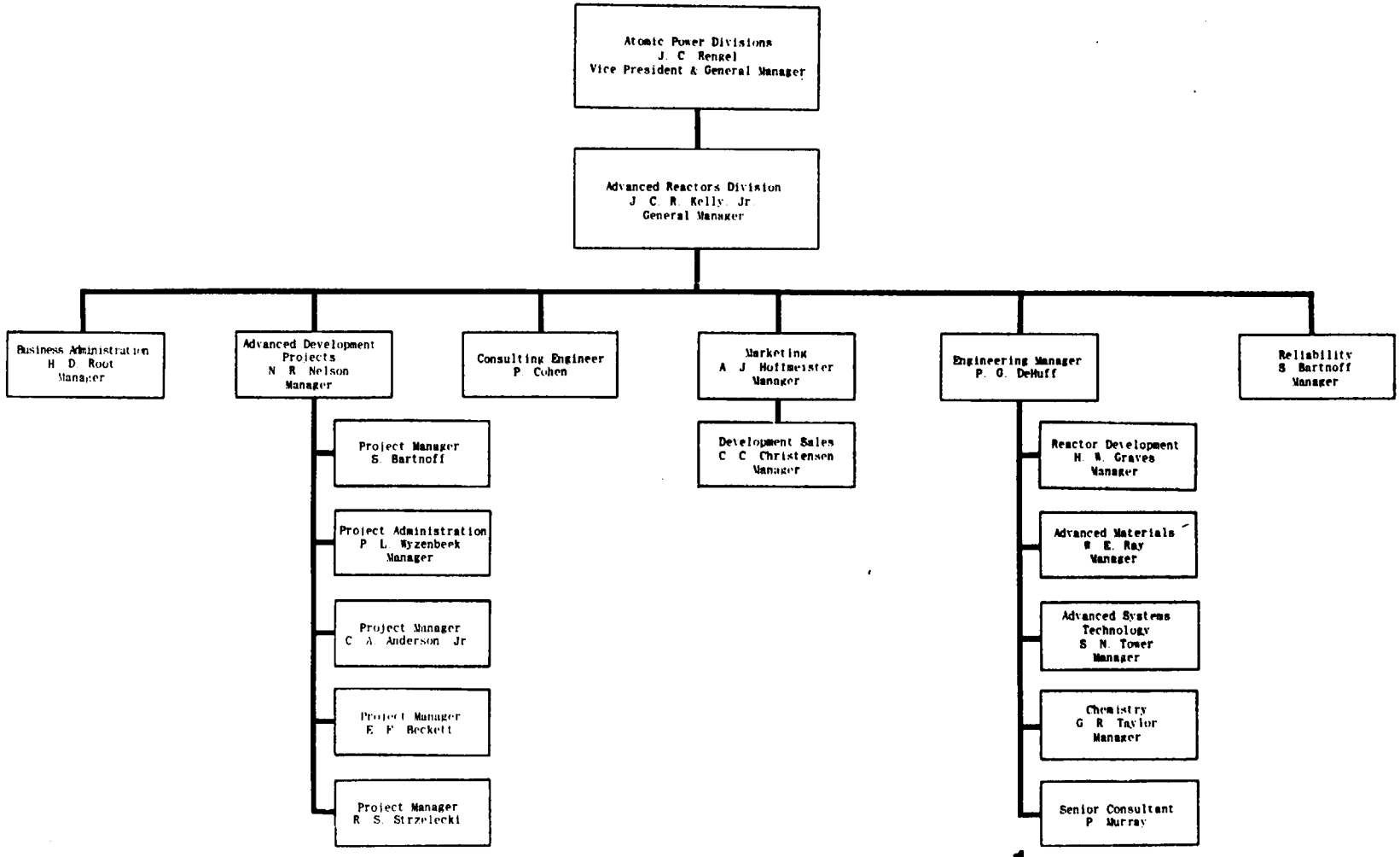


Chart 78

1

ITEM # 53



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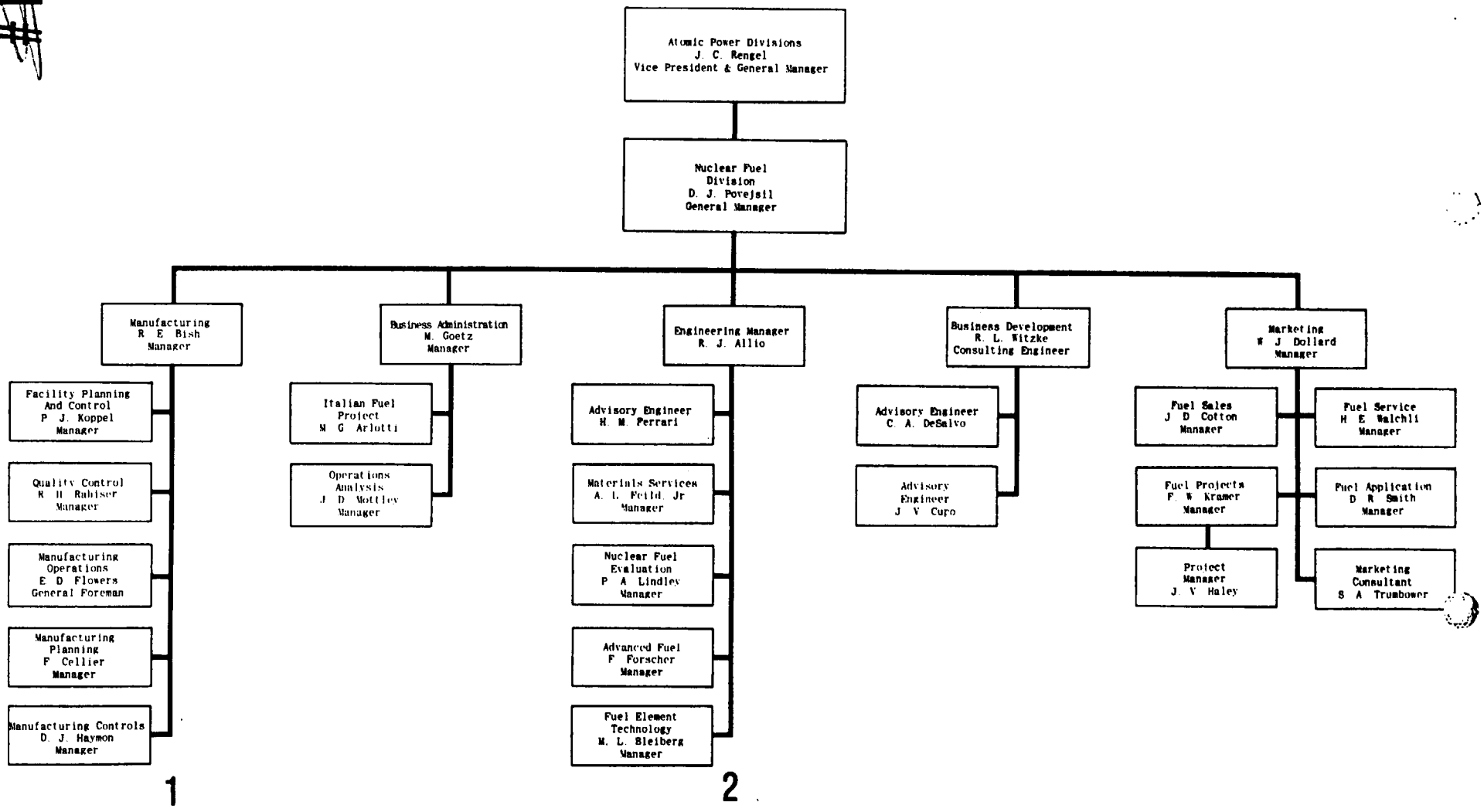
ITEM #

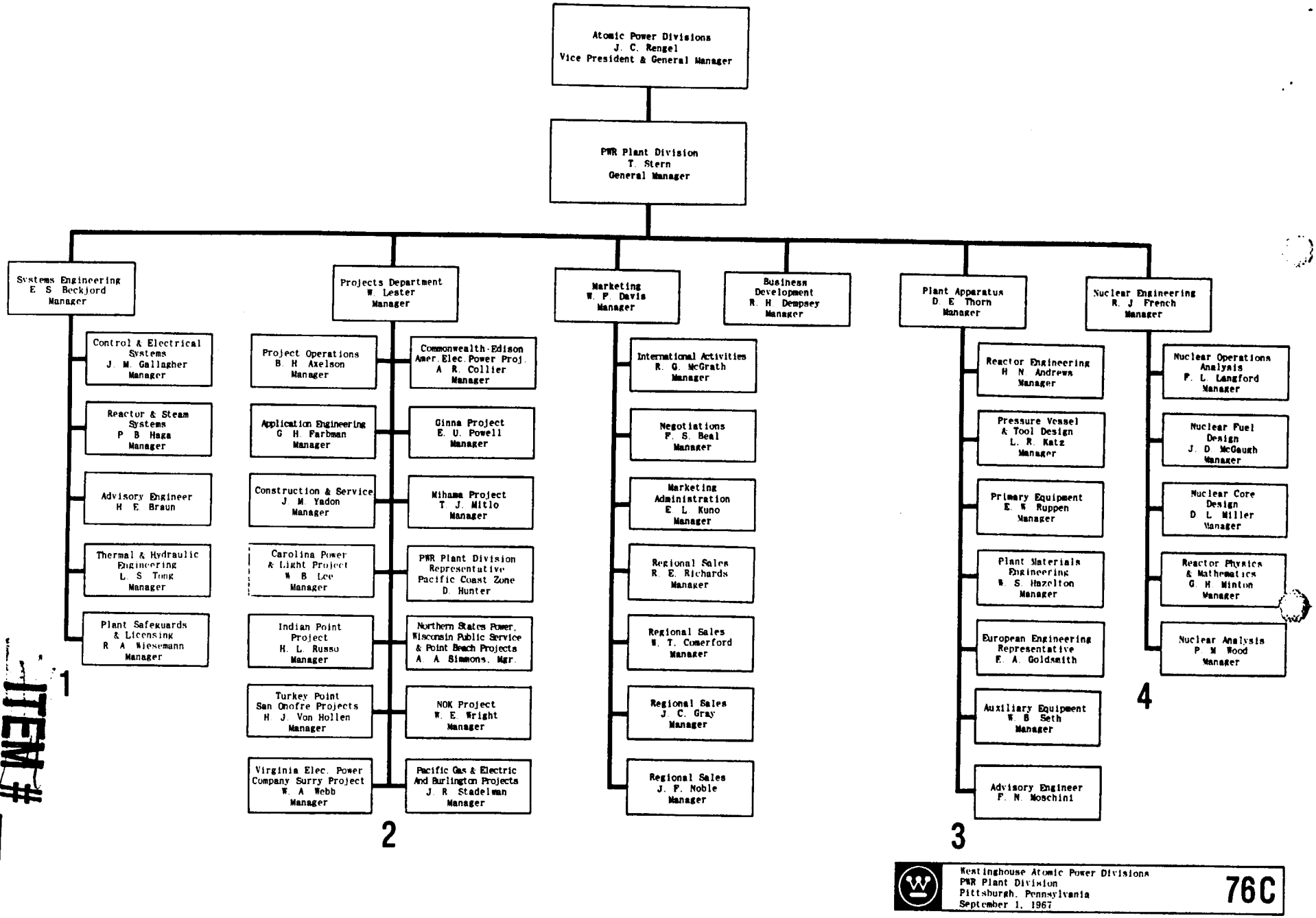
Westinghouse Atomic Power Divisions
Advanced Reactors Division
Pittsburgh, Pennsylvania
September 1, 1967

76A

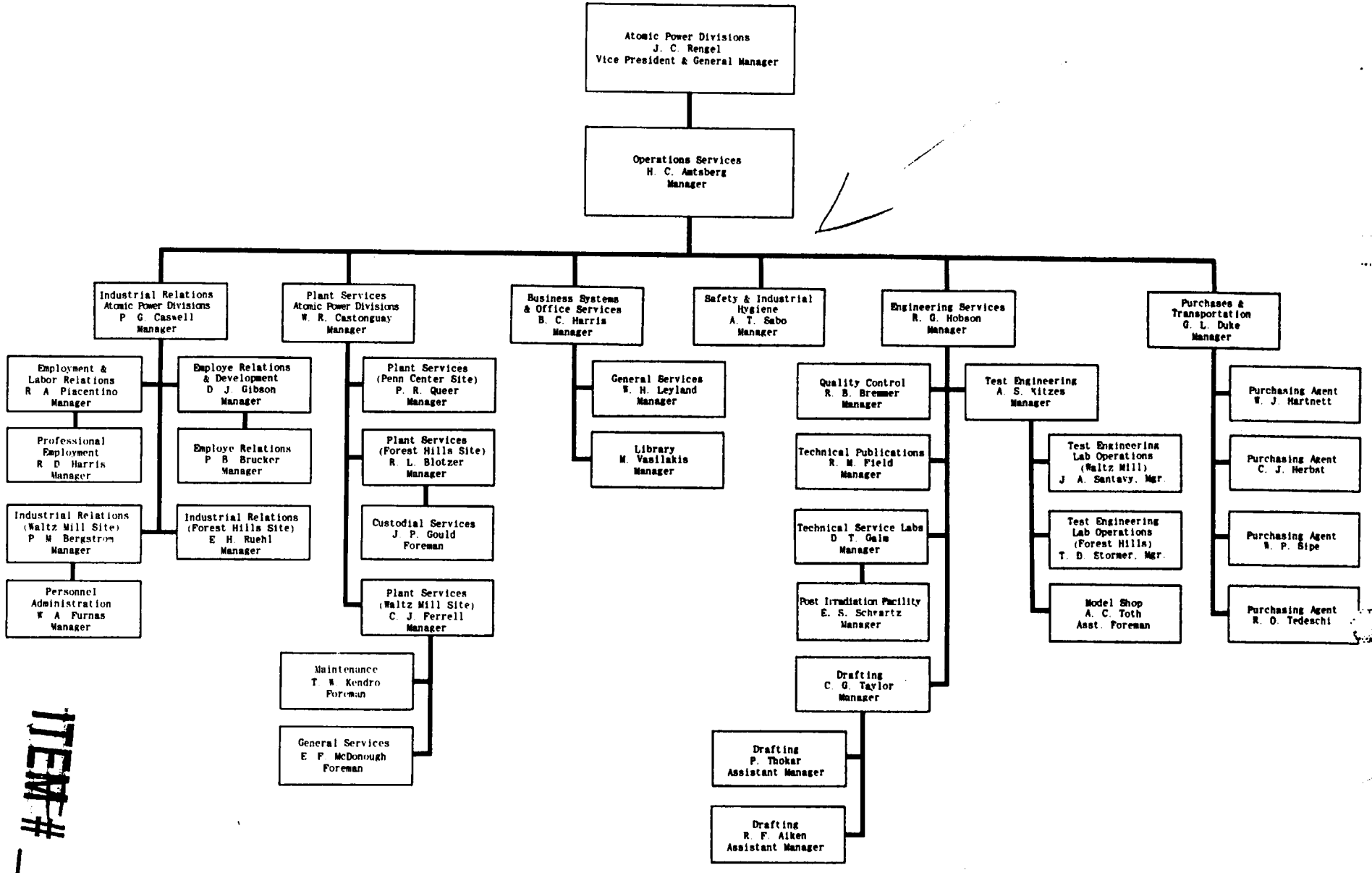


Westinghouse Atomic Power Divisions
Nuclear Fuel Division
Pittsburgh, Pennsylvania
September 1, 1967

76B


Atomic Power Divisions
J. C. Rengel
Vice President & General Manager
PWR Plant Division
T. Stern
General Manager
Systems Engineering
E. S. Beckjord
Manager
Control & Electrical Systems
J. M. Gallagher
Manager
Reactor & Steam Systems
P. B. Haga
Manager
Advisory Engineer
H. E. Braun
Thermal & Hydraulic Engineering
L. S. Tong
Manager
Plant Safeguards & Licensing
R. A. Wiesemann
Manager
1
Projects Department
W. Lester
Manager
Project Operations
B. H. Axelson
Manager
Application Engineering
G. H. Farbman
Manager
Construction & Service
J. M. Yadon
Manager
Carolina Power & Light Project
W. B. Lee
Manager
Indian Point Project
H. L. Russo
Manager
Turkey Point San Onofre Projects
H. J. Von Hollen
Manager
Virginia Elec. Power Company Surry Project
W. A. Webb
Manager
Commonwealth-Edison
Amer. Elec. Power Proj.
A. R. Collier
Manager
Ginna Project
E. U. Powell
Manager
Mihama Project
T. J. Mitlo
Manager
PWR Plant Division Representative
Pacific Coast Zone
D. Hunter
Northern States Power, Wisconsin Public Service & Point Beach Projects
A. A. Simmons, Mgr.
NOK Project
W. E. Wright
Manager
Pacific Gas & Electric And Burlington Projects
J. R. Stadelman
Manager
2
Marketing
W. F. Davis
Manager
International Activities
R. G. McGrath
Manager
Negotiations
F. S. Beal
Manager
Marketing Administration
E. L. Kuno
Manager
Regional Sales
R. E. Richards
Manager
Regional Sales
W. T. Comerford
Manager
Regional Sales
J. C. Gray
Manager
Regional Sales
J. F. Noble
Manager
Business Development
R. H. Dempsey
Manager
Plant Apparatus
D. E. Thorn
Manager
Reactor Engineering
H. N. Andrews
Manager
Pressure Vessel & Tool Design
L. R. Katz
Manager
Primary Equipment
E. W. Ruppen
Manager
Plant Materials Engineering
W. S. Hazelton
Manager
European Engineering Representative
E. A. Goldsmith
Auxiliary Equipment
W. B. Seth
Manager
Advisory Engineer
F. N. Moschini
3
Nuclear Engineering
R. J. French
Manager
Nuclear Operations Analysis
P. L. Langford
Manager
Nuclear Fuel Design
J. D. McGaugh
Manager
Nuclear Core Design
D. L. Miller
Manager
Reactor Physics & Mathematics
G. H. Minton
Manager
Nuclear Analysis
P. M. Wood
Manager
4
Westinghouse Atomic Power Divisions
PWR Plant Division
Pittsburgh, Pennsylvania
September 1, 1967
76C

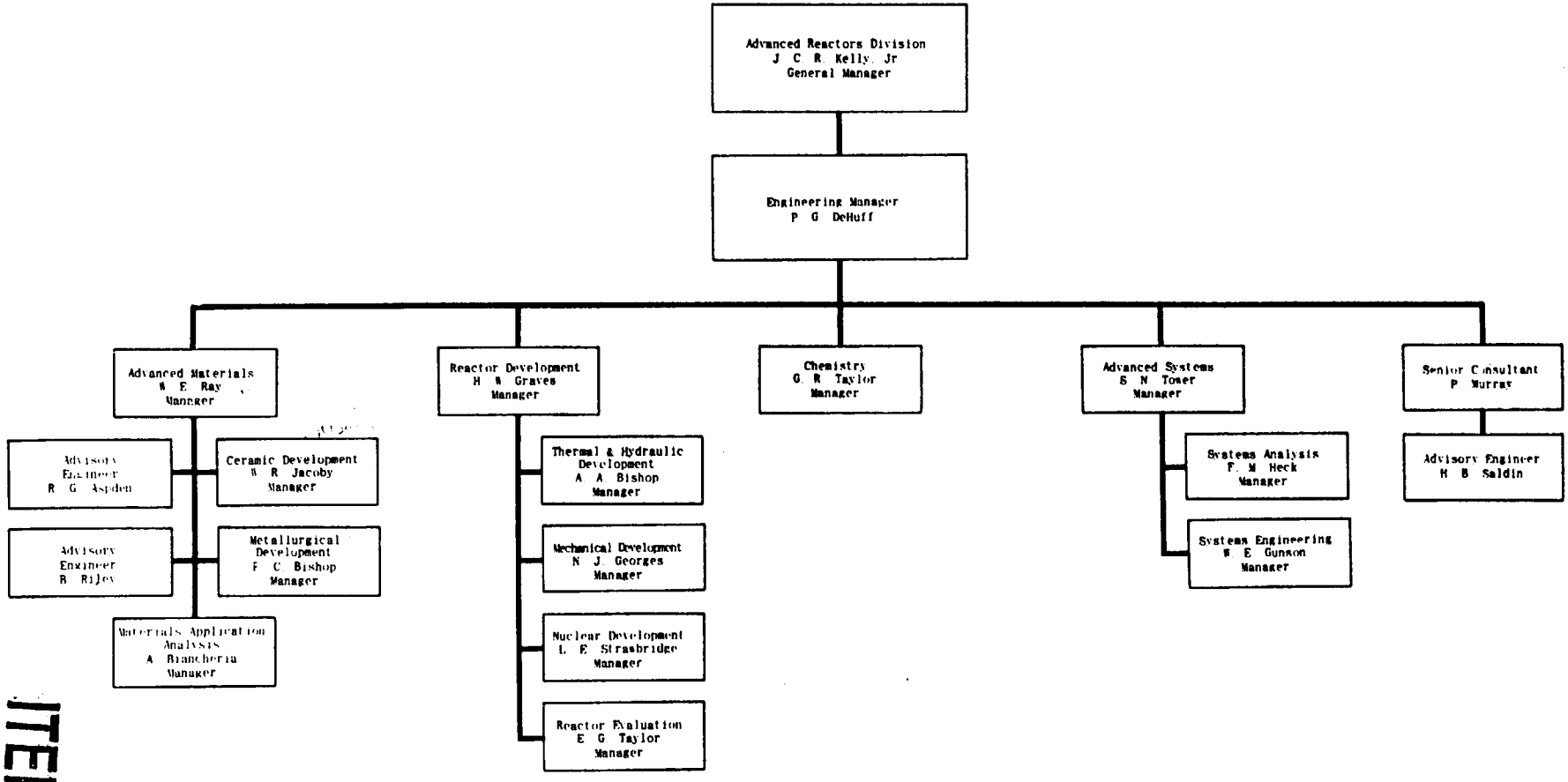
ITEM #



ITEM #

Westinghouse Atomic Power Divisions
Operations Services
September 1, 1967

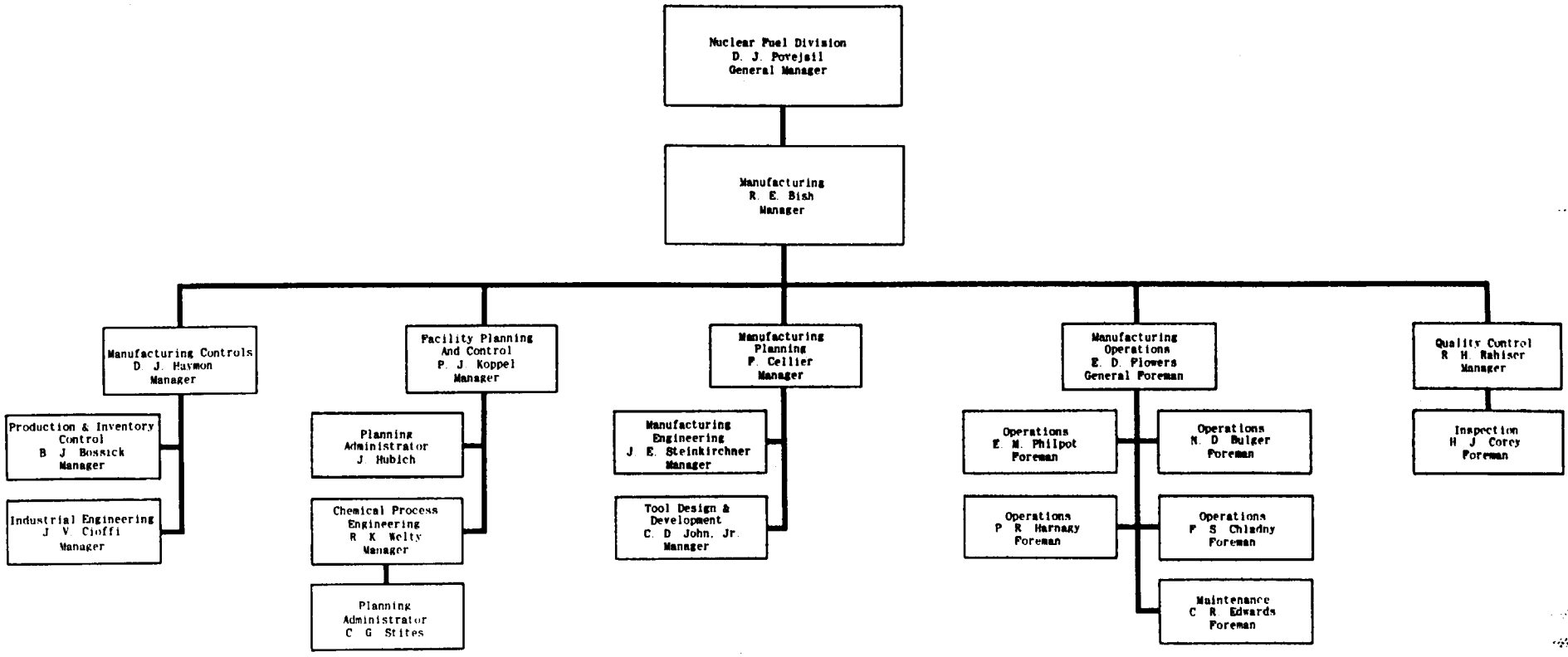
76-1



ITEM #

Westinghouse Atomic Power Divisions
Advanced Reactors Division
Engineering
September 1, 1967

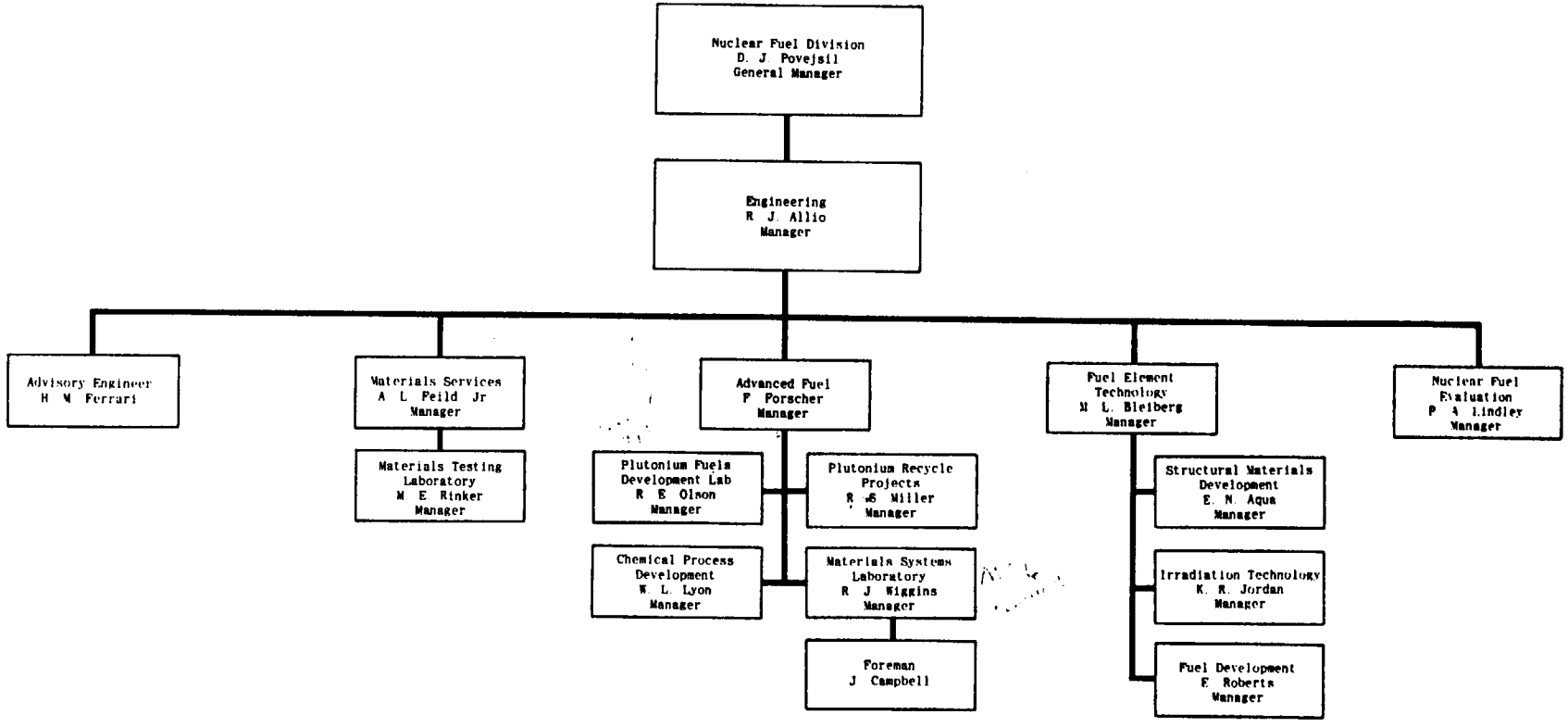
76A-1



ITEM #

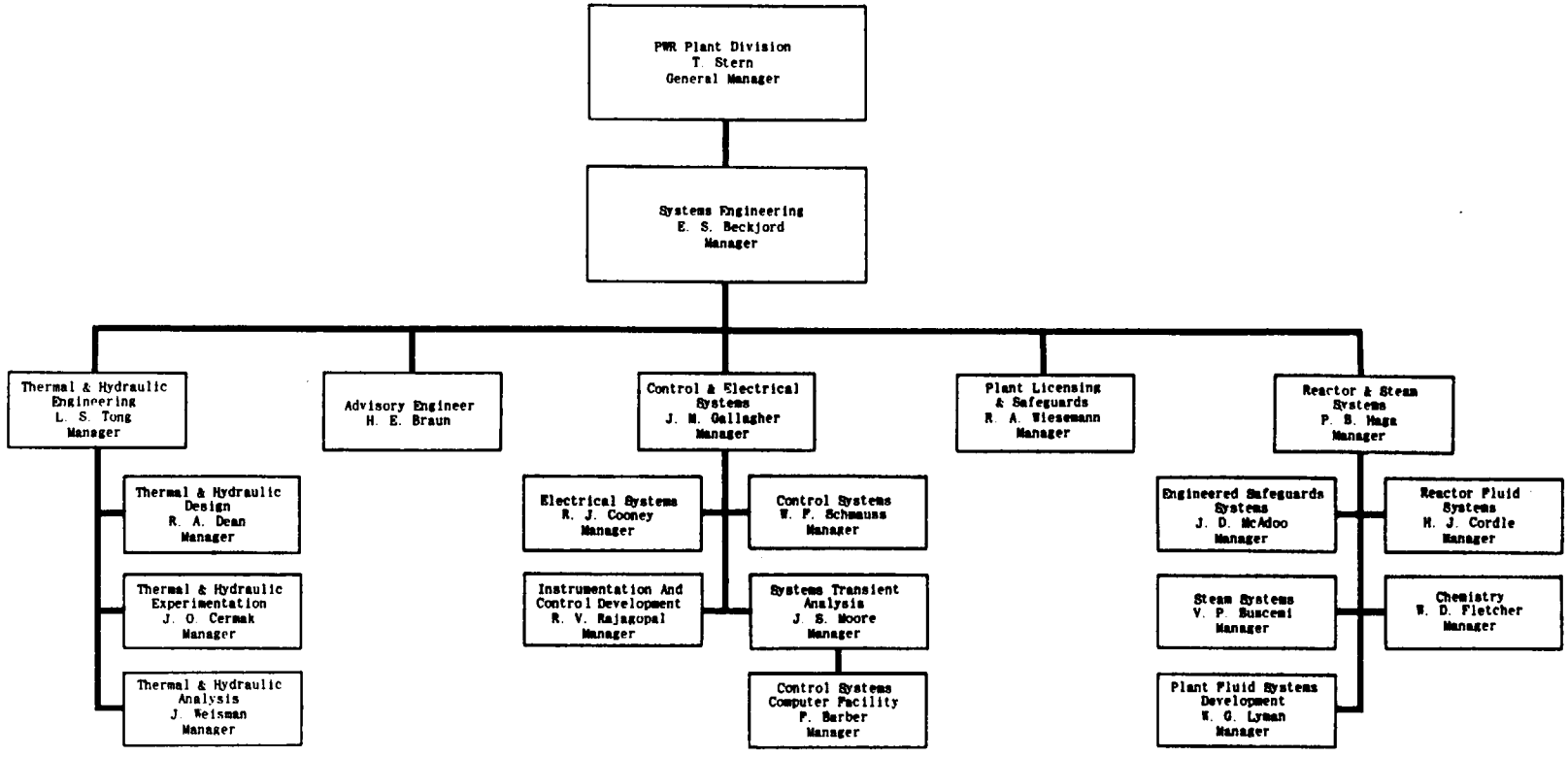
Westinghouse Atomic Power Division
Nuclear Fuel Division
Manufacturing
September 1, 1967

76B-1



Westinghouse Atomic Power Division
Nuclear Fuel Division
Engineering
September 1, 1967

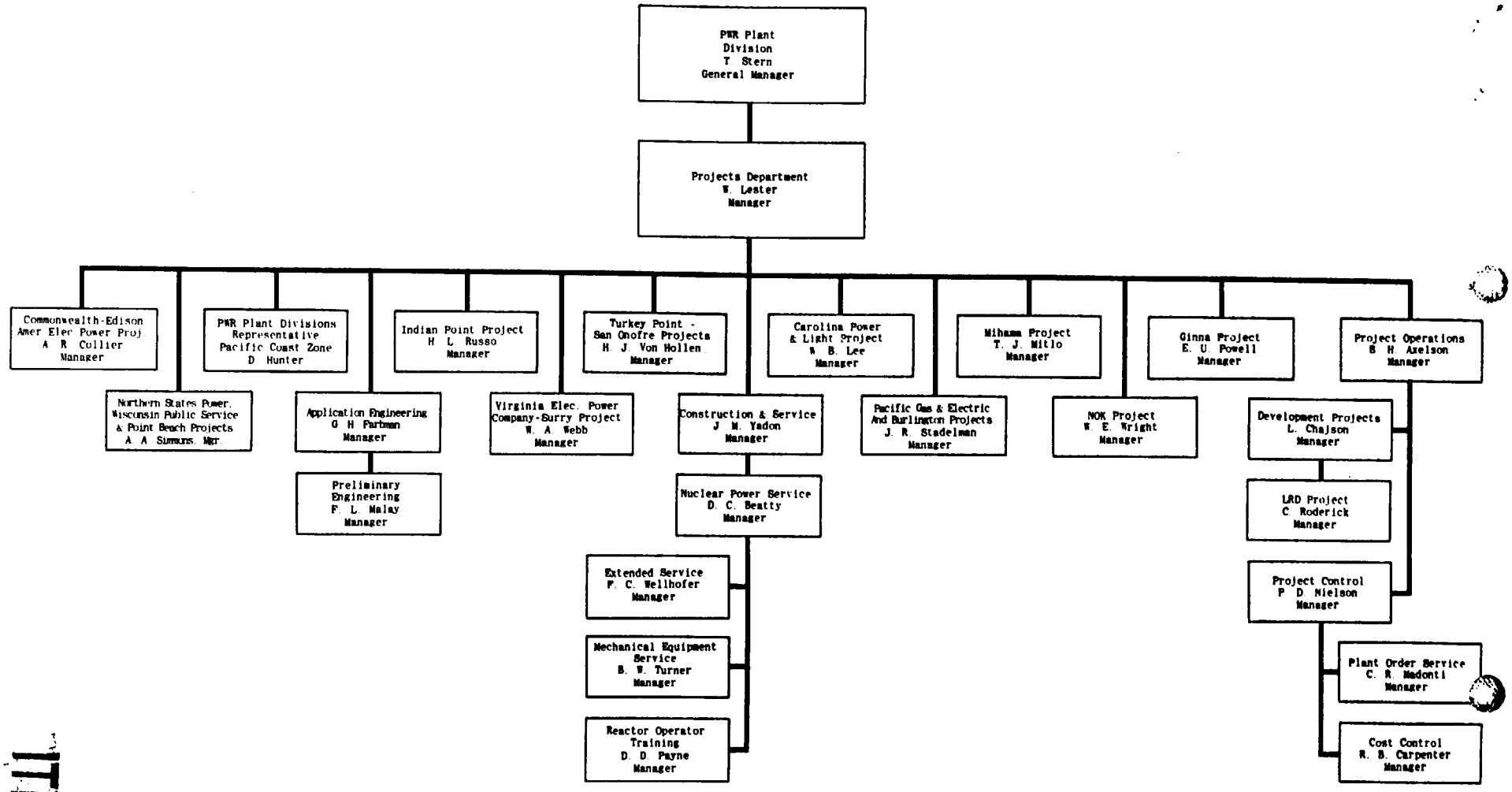
76B-2



ITEM #

Westinghouse Atomic Power Divisions
PWR Plant Division
Systems Engineering Department
September 1, 1967

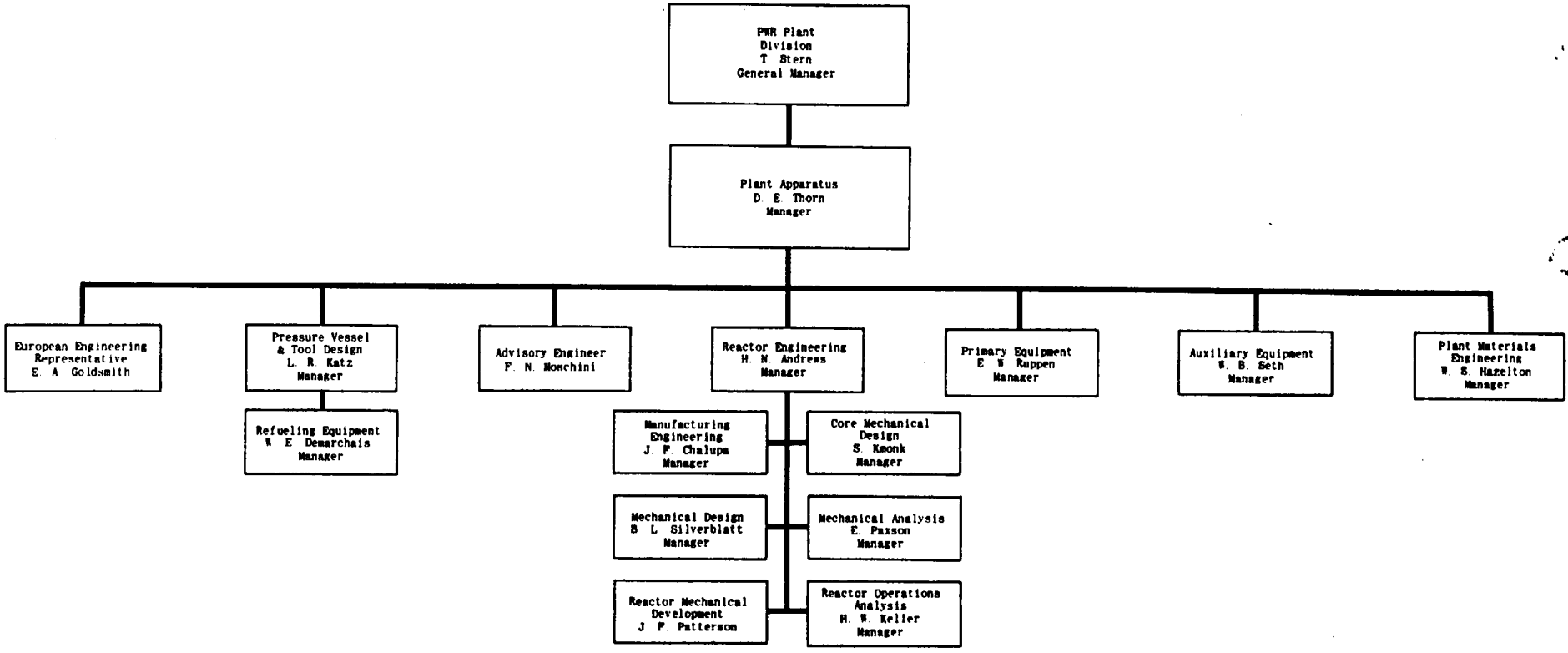
76C-1



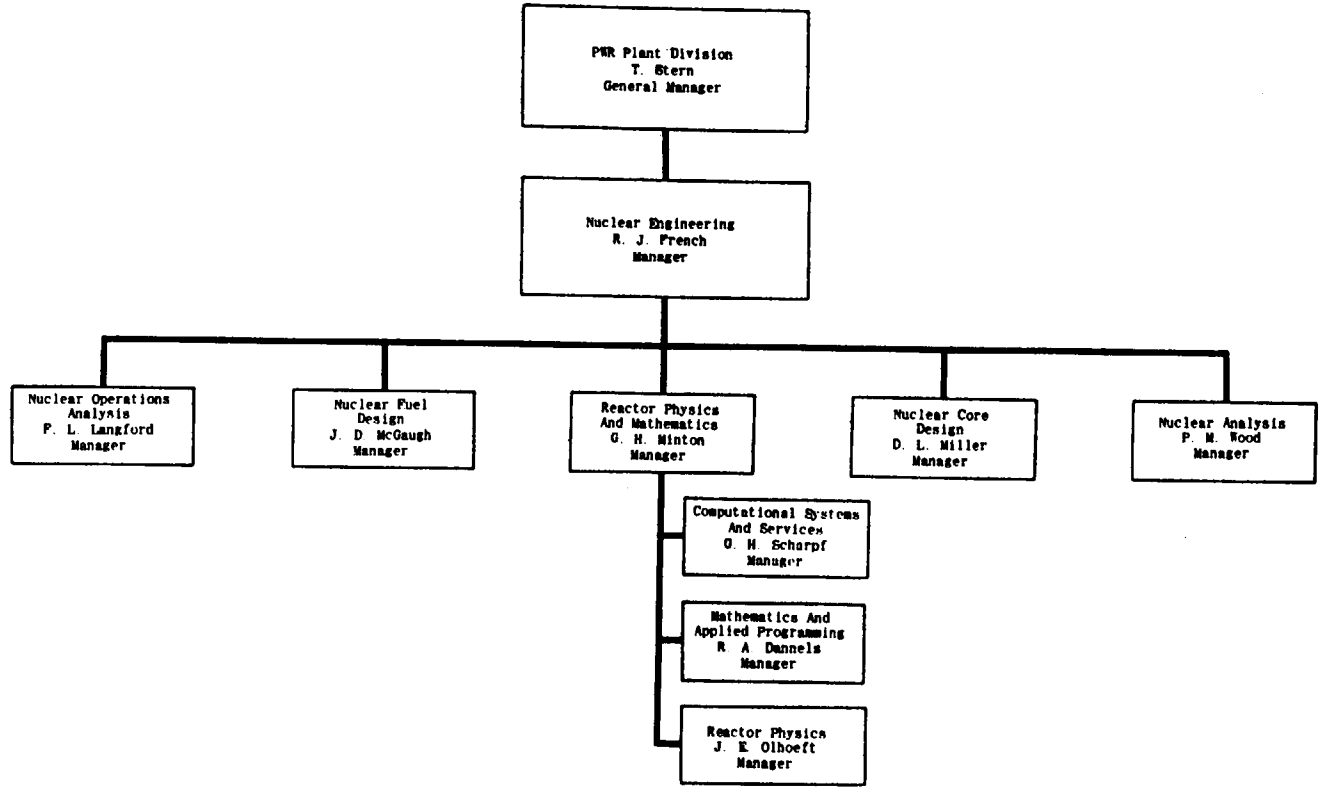
ITEM #

Westinghouse Atomic Power Divisions
PWR Plant Division
Projects Department
September 1, 1967

76C-2


PWR Plant
Division
T Stern
General Manager
Plant Apparatus
D E Thorn
Manager
European Engineering
Representative
E A Goldsmith
Pressure Vessel
& Tool Design
L R Katz
Manager
Refueling Equipment
W E Demarchais
Manager
Advisory Engineer
F N Moschini
Reactor Engineering
H N Andrews
Manager
Manufacturing
Engineering
J F Chalupa
Manager
Core Mechanical
Design
S Kmonk
Manager
Mechanical Design
B L Silverblatt
Manager
Mechanical Analysis
E Paxson
Manager
Reactor Mechanical
Development
J F Patterson
Reactor Operations
Analysis
H W Keller
Manager
Primary Equipment
E W Ruppen
Manager
Auxiliary Equipment
W B Seth
Manager
Plant Materials
Engineering
W S Hazelton
Manager

ITEM #


PWR Plant Division
T. Stern
General Manager
Nuclear Engineering
R. J. French
Manager
Nuclear Operations Analysis
P. L. Langford
Manager
Nuclear Fuel Design
J. D McGaugh
Manager
Reactor Physics And Mathematics
G. H. Minton
Manager
Nuclear Core Design
D. L. Miller
Manager
Nuclear Analysis
P. M. Wood
Manager
Computational Systems And Services
O. H. Scharpf
Manager
Mathematics And Applied Programming
R. A. Dannels
Manager
Reactor Physics
J. E. Olhoeft
Manager

ITEM #

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:

DML:RDS
70-337

Oct 16, 1967

DISTRIBUTION:
Document Room
Subject File
Compliance, Hqrs. (2)
C. D. Luke, DML:CB
Br. Reading File
Div. Reading File

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

This refers to your application dated September 11, 1967, requesting authorization to deliver special nuclear material to a carrier for transport in the BR 300-1 package.

You have based the structural integrity justification of this package on tests conducted on the 12-inch UF_6 cylinder protective package described in report K-1714. We note significant differences in package designs between the two packages which have not been taken into account in the application:

a. The BR 300-1 package does not appear to have wood block supports between the inner and outer container at the top, bottom, and sides of the package. Because of the difference in compressive strength between wood and the phenolic foam, the absence of these wood supports will affect the movement of the inner container and possibly the thermal insulation properties.

b. The base plate of the proposed inner container does not extend beyond the sides of the inner container in your package design. The inner container design shown in K-1714 has a base plate extending well beyond the sides of the inner container to act as a foam baffle and to increase the load bearing surface of the inner container.

The nuclear safety package array evaluation is based on the applicability of the array analysis in K-1714 to the BR 300-1, primarily on the basis

C154

ITEM # 24

From CO - Hdqrs.

that the oxide will be dry and has a lower density than the fluoride. There are several significant differences between the contents of the two packages which have not been considered in your evaluation:

a. The allowed H/total U atomic ratio of 0.8 in the BB 300-1, including internal packaging, is significantly higher than the value of 0.088 used in the UF_6 array analysis.

b. The BB 300-1 specification does not limit the oxide density.

c. There may be differences between the nuclear properties of the fluoride and the oxide significant to the array analyses.

The package description is incomplete, in that the product containers are described only as "six tightly closed Fiberpak drums", and does not include a description of the materials of construction, design, and physical properties of the drums.

Your proposed package should be evaluated to demonstrate that the package satisfies the standards specified in Subpart C, 10 CFR 71, as required by 71.35(a) of 10 CFR 71. This evaluation should consider the effects of the normal conditions of transport specified in Appendix A and the hypothetical accident conditions specified in Appendix B of Part 71. These effects should be presented either as actual test results or an engineering assessment. Your Fissile Class II and III analyses should be based on the results of the normal and accident conditions specified in Appendices A and B of Part 71.

We understand, from our meeting of October 10, 1967, that you plan to conduct tests on this package. In order to clearly establish the validity of the tests, the package should be loaded with contents which duplicate the proposed contents with respect to bulk density, total weight, and weight distribution. Our further consideration of this package will be based on the test results furnished.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials
Branch
Division of Materials Licensing

ITEM # 15/55

MEMO ROUTE SLIP
Form AEC-93 (Rev. May 14, 1947)

☐ See me about this. ☐ Note and return. ☐ For concurr ☐ For signature. ☐ For action. ☐ For information.

TO (Name and unit)	INITIALS / DATE	REMARKS
R. Handler, Acting Chief, Enforcement Branch, CO:HQ		RE: WESTINGHOUSE ELECTRIC CORPORATION 3 Gateway Center Box 2278 Pittsburgh, Pennsylvania 15230 Lic. No. SNM-338 (Docket No. 70-337)
L. Dubinski, Ass't Dir. for Operations CO:HQ		We feel the attached reply to Form AEC-592 is adequate.
		Attachment: Cy ltr dtd 6/21/67
FROM (Name and unit) R. S. Cleveland, Radiation Spec. (Review), CO:I		Original Signed by: R. S. Cleveland
PHONE NO. X-1382 / DATE 6-26-67		

USE OTHER SIDE FOR ADDITIONAL REMARKS

U. S. GOVERNMENT PRINTING OFFICE : 1957—O-422007

Region I, Division of Compliance

Routing Slip

To; 1. Nilsen
Inspector

[X] Response by licensee adequate

[ ] Response by licensee inadequate

Comment on Inadequacy

2. RGG
Reviewer

[ ] Concurrence

[ ] Non Concurrence

Comment on Non Concurrence

3.
Supervisor

C/56

ITEM # 56

Westinghouse Electric Corporation

Atomic Power Divisions
Nuclear Fuel Division
Box 355, Pittsburgh, Pa. 15230

June 21, 1967

Ref: CO: I: CWN

Mr. Robert W. Kirkman, Director
Region I, Division of Compliance
U.S. Atomic Energy Commission
376 Hudson Street
New York 10014

Dear Mr. Kirkman:

In reply to your letter of June 7, 1967 Westinghouse submits the following:

A. We have taken the following measures to strengthen our administrative procedures:

1) Procedures were discussed in detail with the Vault Custodian insuring that there is no chance for misunderstanding the importance of compliance with storage requirements.

2) A senior and experienced engineer (Dr. R. J. Herbst) was appointed as Ceramics Laboratory Administrator. This man is responsible for day-to-day operations and is to report all matters affecting criticality control directly to the Laboratory Manager (Mr. R. J. Wiggins).

3) Signs are being prepared and posted to clearly define storage and handling requirements. Each sign will bear authorized signatures (Mr. Piros and Mr. Wiggins) verifying that the instructions are in full compliance with license requirements. This action will be completed concurrent with the vault rennovation discussed in Part C of this letter.

4) The system of internal criticality audits was redefined and formalized. The Laboratory Health Physics Technician (William MacDonald) performs spot checks on a daily basis and Messrs. Piros and Wiggins conduct formal audits personally at least monthly and on a spot check basis periodically.

ITEM # 57

cl57

(2)

B. The separate storage vault employing 6.6 inch diameter containers resulted from changing storage requirements. The material in the racks in this vault is enrichment controlled, and no uranium enriched to greater than 23 w/o in U-235 is present in the racks. K-1019 lists a recommended maximum cylinder diameter of 6.6 inches for this maximum enrichment. Calculations show that interaction effects are conservatively safe, due to the lesser number of columns and the presence of the concrete blocks used in the construction of the racks. The nuclear safety of this arrangement has not been questioned.

C. An application for amendment of our license describing a new, more practical and versatile storage array was prepared and analyzed. This amendment application was submitted on Docket 70-337 on October 19, 1966. We reached final agreement with the Division of Materials Licensing on the details of our application on June 19, 1967 and expect formal approval shortly. On this basis, we will proceed to make preparations for the rearrangement so that all materials can be stored in full compliance with our amended new license within five working days after formal approval is received.

I trust that the preceding information is adequate for your evaluation of this matter. If I or my people can provide additional information regarding this matter, please do not hesitate to call.

Very truly yours,

D. J. Povejsil, General Manager
Nuclear Fuel Division

Ext. 384

CO:I:CWN

JUN 7 1967

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. J. J. Povejsil, General Manager, Nuclear Fuels Division

Gentlemen:

This letter relates to the discussion Mr. C. W. Nilsen of this office held with Mr. R. J. Williams following the inspection conducted on May 22 and 23, 1967, of the activities authorized under AEC license no. SNM-338.

It appears that certain of your activities were not conducted in full compliance with AEC requirements. The item and reference to the pertinent requirement are listed in item 5 of the attached form AEC-592. The purpose of this letter is to give you an opportunity to advise us in writing of your position concerning this item, of any corrective steps you have taken or plan to take with respect to it, and the date all corrective action was or will be completed. Your reply should be sent to us within 20 days of the date of this letter to ensure it will receive proper attention in our further evaluation of this matter.

If you have any questions concerning this matter, you may communicate directly with this office.

Very truly yours,

Robert W. Kirkman, Director
Region I, Division of Compliance

Enclosure:
Form AEC-592

cc: W. E. Piros, Supervisor, Industrial Health & Safety w/enclosure

bcc: L. Dubinski, CO:HQ - ATTN: R. B. Chitwood w/enc.
R. Handler, CO:HQ (Enf) w/enc.
J. McBride, DML - ATTN: A. Aikens and C. Luke w/enc.

OFFICE ▶	COMPLIANCE					
SURNAME ▶	NILSEN:maz	GILBERT			ITEM #	58
DATE ▶	6/7/67					

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62761-3

Form AEC-592
(5-63)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

III-A(1)

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION 3 Gateway Center Box 2278 Pittsburgh, Pennsylvania 15230	U. S. ATOMIC ENERGY COMMISSION Region 1, Division of Compliance 376 Hudson Street New York, New York 10014
3. LICENSE NUMBER	**4. DATE(S) OF INSPECTION**
SNM-338 Docket No. 70-337	May 22 and 23, 1967 (Reinspection)

5. The following activities under your license (identified in Item No. 3 above) appear to be in noncompliance with AEC regulations or license requirements, as indicated.

SNM material in the Materials Systems Laboratory vault was noted being stored contrary to conditions of the license which incorporate the requirements for storage of SNM material in this vault. Reference is made to a telegram dated October 15, 1959 which is part of the November 25, 1964, license application (page 5, item 6) incorporated in the license by letter dated January 29, 1965.

ITEM # 39

c/59

Supplementary page None attached.

Charles H. Nilsen
AEC Compliance Inspector

6/7/67
Date

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ L&R HEADQUARTERS.

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-685311

882-995

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : File

DATE: JUN 8 1967

FROM : Charles W. Nilsen, Inspection Specialist (Criticality) Chas. Nilsen
Region I, Division of Compliance

SUBJECT: NUCLEAR SAFETY ANALYSIS COMPLIANCE INSPECTION - MAY 22 AND 23, 1967
WESTINGHOUSE ELECTRIC CORPORATION, CHESWICK, PENNSYLVANIA
LICENSE NO. SNM-338, DOCKET NO. 70-337

Form AEC-592 was issued for the subject inspection. A deficiency was noted in the vault storage of SNM material in the Materials Systems Laboratory. The nuclear safety for the improper storage of material was not of major significance, but the breakdown of responsibilities and knowledge of the license associated with the improper storage was stressed.

A definite lack of communication and definition of responsibility with respect to the control of SNM was noted in the Materials Systems Laboratory. It was obvious to the inspector that Mr. Williams had assigned the various responsibilities and was assuming that proper action and control were being maintained. As a result of the inspection, Mr. Williams is re-defining the internal responsibilities for SNM control and is establishing a formal review and audit procedure. This will include the services of Mr. Wes Piros as the inspector questioned the ability of anyone on Mr. Williams' staff of being qualified to perform a nuclear safety audit or criticality analysis.

In conversations that were held at the site and subsequently by a phone call with Mr. Piros, the inspector feels that the situation is being handled adequately by the licensee and that followup by Westinghouse management will be maintained to ensure that no future infractions of this type result.

No items of noncompliance nor nuclear safety significance were noted in the review of the other facilities covered under license SNM-338. There is considerable plutonium production activity anticipated for the Cheswick site during the next year and these items will be watched closely to ensure that proper control is established.

Enclosure:
Back-up notes to Form AEC-592

cc: L. Dubinski, CO:HQ
Attention: R. B. Chitwood w/enc.
R. Handler, CO:HQ (Enf) w/enc.
J. A. McBride, DML
Attention: A. Aikens & C. Luke w/enc.

ITEM # 60 C/60

U. S. ATOMIC ENERGY COMMISSION
REGION I
DIVISION OF COMPLIANCE

TITLE: WESTINGHOUSE ELECTRIC CORPORATION
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

Date of Inspection: May 22 and 23, 1967

Inspector: C. W. Nilsen JUN 8 1967
C. W. Nilsen, Inspection Specialist (Criticality) Date

Reviewed by: R. G. Gilbert JUN 8 1967
R. G. Gilbert, Radiation Specialist Date

ITEM # 61

C/61

7

BACK-UP NOTES TO FORM AEC-592

TITLE: WESTINGHOUSE ELECTRIC CORPORATION
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

By: C. W. Nilsen, Inspection Specialist (Criticality)

INTRODUCTION

Scope

1. An announced inspection was made at the subject licensee's facilities on the 22nd and 23rd of May, 1967, by C. W. Nilsen, Inspection Specialist (Criticality), CO:I. The purpose of the visit was to review the licensee's nuclear safety program and compliance with the license and federal regulations. All facilities under the license where SNM material is being processed, were toured by the inspector. SNM accountability forms, current and future production plans, and plant organization, were reviewed.

Summary

2. A form AEC-592 was issued for a deficiency noted in the nuclear safety program of the Materials Systems Laboratory (See paragraphs 9 and 10). The violation pertains to improper storage of enriched uranium in the storage vault as a result of inadequate definitions of responsibility for SNM control and knowledge of the license. No items of noncompliance or significant safety hazards were noted in the other areas covered by the license.

3. Westinghouse has not started to process plutonium in the advanced materials laboratory as part of the fast reactor fuel program. They have received some plutonium and are storing this in their vault. Production in the power reactor fuel area was at a standstill and this production time was scheduled for use in the fabrication of fuel elements for the Malibu Reactor. Within the next two months production will start on fuel elements for the Zerita Reactor and production activities will remain at 100% capacity through 1973.

DETAILS

Organization - R. Tschiegg

4. Plant organization was reviewed and there have been no major changes since the January 9 - 10, 1967, inspection. There is a minor change in the Advanced Materials Laboratory where the fast reactor fuel elements are to be fabricated. W. E. Ray who is manager of this section and had his office at Cheswick, has recently been moved to Waltz Mill. Mr. W. R. Jacobi, Manager, Ceramic Process Development is now responsible for the activities of the fast reactor program at Cheswick. Mr. Jacobi reports to Mr. Ray.

5. Personnel with whom significant discussions were held are as follows:

Advanced Reactors Division (ARD)

Engineering - Advanced Materials

W. R. Jacobi, Ceramic Process Development Manager

R. M. Horgos, Facilities Engineering

Nuclear Fuel Division (NFD)

Manufacturing

R. E. Bish, Manufacturing Manager

F. Cellier, Manufacturing Engineering Manager

Engineering - Materials Systems Laboratory

R. J. Williams, Materials Systems Laboratory Manager

J. Campbell, Materials Systems Laboratory Foreman

D. Herbst, Engineer, Materials Systems Laboratory

L. Podowski, Technician

Operations Services

Safety and Industrial Hygiene

R. Tschiegg, Accountability

Atomic Equipment Division (AED)

Industrial Relations

W. E. Piros, Supervisor, Industrial Health and Safety

Except where noted otherwise, information within any section of the report was received from the individual noted next to the section title.

Nuclear Fuel Division - F. Cellier

6. No major changes have been made in the fabrication facilities at Cheswick, from those reported in the October 7 - 8, 1965, inspection. An addition is being

made to the building of approximately 10,000 square feet and this area will be used for additional storage of non-SNM hardware for fuel elements. Installation of the new fabrication line has not started but is expected to be completed by the end of the year. Production activities are currently associated with the completion of the fuel elements for Allis-Chalmers. The main fuel element job that had been scheduled for this time was the Malibu Reactor and this program was cancelled. The next major production scheduled for the facility is the Zerita Core. With the Zerita core and the following cores that are scheduled, the plant will be running at about 100% of capacity through 1973.

7. The production area was cleaned and well-posted. Numerous people associated with the fabrication of fuel elements have been assigned responsibilities in other areas until production starts on the Zerita core. The experienced people will return to work in the fabrication area so a large training program will not be required.

8. As mentioned in the report of January 9 - 10, 1967, the nuclear materials management audit revealed that a quantity of uranium oxide was in the duct work. According to the surveys performed by the audit group, the quantity was estimated at 25 kg of uranium. This duct work was cleaned and 228.5 kg of material was removed. There are no analytical results to date indicating how much of this material was uranium oxide and how much was other material that had accumulated in this type of duct work, such as dust, rust, etc.

Materials Systems Laboratory - J. Campbell

9. The Materials Systems Laboratory was inspected. The inspector noted an item of apparent noncompliance with the improper vault storage of PBF (Power Burst Facility) oxide at 21.01% enrichment. The storage was contradictory to a TWX dated October 15, 1959 which is part of the license application dated November 25, 1964 entitled, "Additional Criticality Controls in the Engineering Laboratory" (page 5, item 6) which is incorporated into the license by a letter dated January 29, 1965. The TWX indicated that all SNM material stored in the vault will be confined in columns along walls. If the density is less than 3.2 grams in U-235/ml, five 5" columns will be used. The licensee incorporates the column control by requiring the bottles of material to be placed in one-gallon pails of nominal 6" diameter before being placed in the storage rack.

10. Noncompliance was noted with respect to a pigeon hole in the storage rack that contained four 250 ml bottles and one 1-liter bottle of uranium oxide, not in a pail and a cabinet in the vault in which the material was being stored. When Mr. Campbell and Mr. Podowski were asked why the material in the rack was not in a pail, they indicated that they were out of one-gallon pails and that they did not know that the use of pails was required. The storage rack was posted with a sign indicating that all material is to be placed in one-gallon pails. The

cabinet contained uranium oxide pellets stored on three shelves vertically separated by 12 inches. The 12 inch spacing was maintained by taping the in-between shelves to visually indicate that they weren't to be used. The cabinet was not posted with storage limits and it was apparent that no one had officially authorized its use. Mr. R. J. Herbst indicated that he had authorized the use of the cabinet although he realized that he was not knowledgeable on what was required for this type of storage.

11. Under part of the vault there is a pit. This pit was inspected by the inspector. The pit was cluttered with extraneous, empty bottles and junk. One particular bottle, about 12 inches in diameter and 2 feet tall, was labelled to indicate that it contained material although it was empty. The storage of SNM in the vault and the condition of the put under the vault was discussed with management during a summary review.

12. The processing area in the Materials Systems Laboratory was clean and most operating areas were posted. There were no operations being performed with SNM.

Advanced Materials Laboratory - W. R. Jacobi

13. The licensee has not started to fabricate fuel elements for their fast reactor program. Work is continuing on checking out the glove boxes and training operators. One problem that is currently preventing startup is the glove box inert atmosphere control system. An inert atmosphere containing a total of about 100 parts oxygen plus water per million parts argon has not been achieved. The current glove box atmosphere contains about 500 parts oxygen per million parts argon which is not acceptable. The vendor for the glove box atmosphere purification system has been to the facility and is returning to try to correct the situation.

14. The licensee has received 1.8 kg of plutonium and this material is currently stored in the vault. The storage of this material was reviewed by the inspector and found to be as required.

15. Mr. Wes Piros has a copy of the license for this area and will ensure that all licensed conditions are met before plutonium is processed. Mr. Piros currently has a technician on duty at the facility and a technician will be assigned to the facility when plutonium is processed.

16. Problems associated with the criticality alarm system that were noted during the prelicensing inspection have been corrected. This equipment now functions as defined in the license.

17. Plutonium production work in this area is anticipated to start within about two months.

Atomic Equipment Division - W. Piros

18. The facilities for the production of PWR fuels was toured. All areas and storage racks were well-posted as to the limits and storage conditions. The signs were all signed and dated by Mr. Piros and he indicated that he is the only one authorized to change the signs and that he always initials a change and indicates when the change was performed.

19. All PWR activities are expected to be completed shortly after the first of the year. No future SNM activities are planned for this area.

Accountability - R. Tschiegg

20. Forms AEC-388 and AEC-578 were reviewed for License No. SNM-338. A spot-check was made and all forms appear to be completed as required.

Summary Review

21. A summary review was held with Mr. R. J. Williams, Materials Systems Laboratory. Mr. Piros and Mr. Tschiegg were attendants also. The inspector indicated to Mr. Williams that the storage of SNM in the vault was not in accordance with the license conditions and a Form AEC-592 would be issued. The inspector pointed out to Mr. Williams that the improper storage in itself was not of significant nuclear safety but that the administrative controls associated with the operation of the laboratory were inadequate to maintain a proper nuclear safety environment. The inspector also indicated to Mr. Williams that he thought the pit area underneath the vault did not show safe operating practice, and indicated a lack of control of extraneous material in the vault.

22. Mr. Williams told the inspector that the items noted would be corrected immediately and that an internal audit of the facility would be performed routinely to ensure that proper SNM control was maintained.

23. Subsequent to the summary review, Mr. Piros showed the inspector a letter Mr. Williams had written to Mr. Campbell indicating that he felt that the area under the vault was in abominable condition and was a disgrace to the corporation. This letter was written on April 24, 1967, and indicated that action should be taken by Mr. Campbell to correct the situation by April 26, 1967. Obviously, Mr. Campbell had not corrected the situation. Also subsequent to the summary review, it was pointed out to the inspector by Mr. Piros and Mr. Povejsil, General Manager, that action was being taken to correct the situation found in the Materials Systems Laboratory. Mr. Povejsil was contacted by the inspector via a telephone call on May 26, 1967, to inform him of the findings on the inspection and to acquaint him with the program. Mr. Povejsil was not available at the time of inspection. The inspector will perform a summary review with Mr. Povejsil following the next inspection of the facility.

24. A summary review was held with Mr. R. E. Bish and Mr. Cellier at the completion of the inspection of their facility. A summary review was held with Mr. Piros at the completion of the review of the PWR facilities and a summary review was held with Mr. Jacobi at the completion of the review of his facility. All were informed that their facilities were reviewed and no items of noncompliance or significant nuclear safety hazards were noted.

APR 21 1967

Westinghouse Electric Corporation
Cheswick, Pennsylvania
License No.: SNM-338
Summary of Emergency Procedures

Westinghouse has a Plant Emergency Procedures manual containing procedures for all major emergency conditions (nuclear incidents, large spills of radioactive materials, release of toxic chemicals, major fires, etc.). All employees are trained in emergency procedures and emergency drills are held every six months.

When an emergency requiring an evacuation occurs, the area siren is sounded. On sounding the siren the emergency procedure begins:

1. All personnel leave the area via marked exits and go to the designated assembly points.

2. The Emergency Director and other designated personnel assemble and direct the emergency actions.

3. The Emergency Director makes a preliminary determination of extent, type, and location of incident.

4. He then issues instructions to the various emergency units and coordinates activities. Emergency units include:

   a. Assembly Points Contact Team
   b. Radiation Surveys Team
   c. Area Monitors
   d. Medical
   e. Decontamination Room Team
   f. Back-up units which include fire and local guard units, Industrial Relations, etc.

The radiation detectors for criticality are connected in a multiple series circuit to obtain a coincidence feature that will necessitate two radiation detectors sensing gamma radiation before the evacuation signal is activated. This provides protection against false alarms.

Personnel receiving massive doses of radiation are isolated and directed to Pittsburgh's Presbyterian Hospital, which is equipped to handle such cases. Trained health physics personnel with instruments will accompany these injured individuals.

The emergency procedures were reviewed on 6/1-2/66 and appear to be adequate in all areas.

Prepared by: Charles W. Nilsen

ITEM # 62 C/62

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

APR 3 1967

I

IN REPLY REFER TO:
DML:RDS
70-337

DISTRIBUTION:
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Division Reading File

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl Schendel
License Administrator

Gentlemen:

This refers to your application dated November 18, 1966, for a superseding license to deliver special nuclear material to a carrier for transport, and to the discussions of March 9, 1967, relative to this application, between Mr. Schendel of Westinghouse and Mr. Smith of the AEC.

As was discussed, the information in the application is so limited that we cannot make a meaningful review of the packages against the requirements of 10 CFR 71. At this time, we can make the following general comments:

Fuel Element Packages (Models RCC, CC, FF, Yankee, and Special Purpose) -

1. We can agree with the normal array analysis for the packages containing unmoderated low enriched (less than 5%) uranium when hydrogenous packing material is not present. Your packaging description should include any such materials, and if present, your nuclear safety analysis should be based on the moderation contribution of hydrogenous packing material.

2. You have failed to provide a nuclear safety analysis of the array in the normal conditions of transport for the packages containing plutonium.

3. You have not provided an adequate description of the contents of the packages, as required by 71.22(b), 10 CFR 71. We cannot confirm the k_{eff} values.

4. Your nuclear safety analysis of an array of damaged packages assumes full reflection and moderation of

From CO - Wash. 9/63

ITEM # 63 (P)

pair of damaged packages, with isolation from other pairs provided by the presence of full density water. You should demonstrate that an array of damaged packages would be no more reactive if the standards of Sections 71.39 and 71.40 were applied (viz., any arrangement of packages, optimum or most reactive interspersed moderation, and close water reflection of the array).

Drum Type Packages (Models Double Barrel, Quadruple Barrel, and Special Purpose Barrel) -

1. Package and array reactivities were not evaluated for the 10-inch cylinder used for the primary container.

2. Your calculations do not appear to consider the effects of interspersed moderator.

3. For the Special Purpose package, you have failed to provide a description of the contents, as required by 71.22(b), 10 CFR 71, nor have you submitted a package evaluation required by 71.23, 10 CFR 71.

In order to continue our review of your application, please furnish, for each package, all of the information required and specified in Part 71. Please refer to our letter of July 28, 1966, which provided guidance information and a copy of Part 71. The subcriticality analysis for each package and each Fissile Class II and III array in both the normal and accident condition should include a description of the calculative method and an evaluation of the accuracy of the analysis taking into account the particular configuration of the specified contents. The additional information should also incorporate information which reflects our general comments above. This information should be submitted within sixty (60) days from the date of this letter.

The supplemental information submitted on March 9, 1967, in connection with the MP-1A package is under review and we will communicate with you when our review is completed.

The application for the Triple Barrel package, dated February 8, 1967, as supplemented March 9, 1967, as well as the application dated February 15, 1967, for the PWR package and the Scrap package are under review.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

MAR 27 1967

DML:RLL
70-337

Westinghouse Electric Corporation
3 Gateway Center
Room 2278
Pittsburgh, Pennsylvania 15222

Attention: Mr. Karl E. Schendel
License Administrator

Gentlemen:

Pursuant to Title 10, Code of Federal Regulations, Section [redacted]
to authorize the activities described in your application dated October 26, 1966, as amended by your applications dated December 22, 1966 and February 8, 1967.

FOR THE ATOMIC ENERGY COMMISSION

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials
Branch
Division of Materials Licensing

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RECEIVED
MAR 30 2 40 PM '67

DML DML
RLLayfield:jl DANussbaumer

ITEM # 64

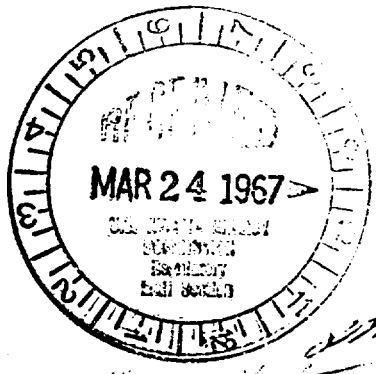
70-48 -337 -534, -698, -79?, -826 & -997

50-34 -87 40-974 -4739 I

Westinghouse Electric Corporation
For Div of Compliance
3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

SNM-338

March 21, 1967



U. S. Atomic Energy Commission
Washington, D. C. 20545

Attention: Dr. J. A. McBride, Director
Division of Materials Licensing

Dr. P. A. Morris, Director
Division of Reactor Licensing

Subject: Corporate Information for Licenses

Gentlemen:

We are submitting current information applicable to the Westinghouse Electric Corporation Licenses listed at the end of this letter. Corporate information was originally sent to you in a letter addressed to Mr. R. W. Lowenstein, Assistant Director of Regulation, dated April 3, 1964. The corporate information was subsequently updated in letters transmitted on April 22, 1965 and March 15, 1966. The March 15, 1966 letter was transmitted jointly to the addressees of this letter.

The Westinghouse Electric Corporation is incorporated in the Commonwealth of Pennsylvania, with principal offices located at 3 Gateway Center, P.O. Box 2278, Pittsburgh, Pennsylvania 15230. All of the Directors and Officers are citizens of the United States of America.

Westinghouse is a publicly held corporation whose stock is traded on principal securities exchanges. It is not owned, nor is there (to the best of our knowledge) an appreciable ownership of Westinghouse stock, by an alien, foreign corporation or foreign government. No individual is known, from the records of the Corporation, to own one percent or more of its capital stock.

Westinghouse has entered into Lease Agreement No. 245 with the U. S. Atomic Energy Commission.

ITEM # 65 From CO - Hdqrs.

C165

Attached is the annual report of the Corporation which gives the current financial condition and lists the elected officers. The following section of this letter presents a description of corporate technical qualifications.

The Westinghouse Electric Corporation has broad experience in the field of nuclear science and technology. The Corporation's participation in the atomic energy field dates from the discovery of methods for the production of metallic uranium at Bloomfield, New Jersey, in the 1920's and construction of the first industrial Van de Graaff generator in Pittsburgh in 1937. Westinghouse furnished a portion of the refined metallic uranium used in the first pile at Stagg Field, Chicago, early in the 1940's, at the beginning of the Manhattan District of the Corps of Engineers.

Westinghouse demonstrated the ability to execute complex programs in the atomic power business with the successful completion of the reactor plant for the first nuclear powered submarine, the U.S.S. NAUTILUS. In conjunction with this project, the Bettis Atomic Power Laboratory was organized in 1948 to furnish a research and development effort. Westinghouse currently operates this Laboratory, which provides facilities for developing nuclear power plants for naval and advanced civilian applications, for the AEC. The AEC also awarded Westinghouse the contract for the design and construction of the nation's first large nuclear reactor plant for an electric power generating station, the Shippingport Atomic Power Station. Other projects include a minimum of nine completed power reactors including the nuclear power plant for the Yankee Atomic Electric Company, a 185 MWe closed-cycle water reactor; the Belgian Thermal Reactor, an 11.5 MWe closed-cycle water reactor; the Saxton Reactor, a 23.5 MWe experimental closed-cycle water reactor which is currently operating on an advanced plutonium-uranium based fuel; and the Carolinas-Virginia Nuclear Power Associates prototype nuclear electric power generating station, an advanced heavy water, pressure tube design of 19 MWe. Currently, the Corporation is designing or building approximately seventeen additional large reactor facilities, ranging in size from 160 MWe to 1060 MWe. In addition, the fabrication of replacement regions for operating reactors is becoming a significant activity.

Westinghouse is a leader in the development of nuclear propulsion and auxiliary power equipment for space applications. The Westinghouse Astronuclear Laboratory is developing and manufacturing nuclear reactors for the NERVA program, as well as participating in the development of the SNAP [illegible] compact thermoelectric converters for the AEC.

ITEM # _____

Various divisions of the Corporation have demonstrated other major accomplishments in the atomic power field. Westinghouse developed canned motor and controlled leakage pumps, currently being manufactured for a variety of nuclear facilities, and it also manufactures many other non-nuclear components for reactor plants such as large heat exchangers, control rod drive mechanisms, valves, instrumentation and control equipment.

Westinghouse maintains a number of design and development groups in the Pittsburgh area (about 2,200 engineers and scientists) that contribute to these accomplishments in the nuclear field. There is a coordinator and consultant for radiation protection activities, a license administrator for coordination of licensing activities, an accident prevention administrator, and a medical services administrator located at the Gateway Center Headquarters in Pittsburgh. At another Westinghouse location in Pittsburgh, there is a headquarters industrial hygiene administrator whose engineering and laboratory facilities are available to all locations. Each site performing atomic activities has at least one full time supervisor, with additional engineers and technicians as needed, in support of radiation protection, industrial hygiene, and safety services. Full time scientists and engineers with extensive experience in nuclear design lend support to the various facilities for criticality analysis where special nuclear materials are used. Computer service is available for determining nuclear safety parameters in criticality analyses.

Facilities in the Pittsburgh area include a wide variety of operations, ranging from research and development to full scale manufacturing, which require handling and processing many types of radioactive materials ranging in quantity from a few microcuries up to megacuries. Approximately 6,700 employes (including the 2,200 engineers and scientists mentioned above) are engaged in atomic activities at facilities which occupy about 1,976,000 square feet of floor space.

Very truly yours,

Karl R. Schendel

Karl R. Schendel
License Administrator

Attachment: 1966 Annual Report
28 copies transmitted

ITEM # _____

Information for Licenses

March 21, 1967

CURRENT LIST OF LICENSES

User Division	License Numbers
Atomic Power Divisions	SNM-576, 738, 770, 783, 785; CX-6, 11; 37-497-9; 37-9442-3; TR-2
Atomic Equipment Division and Atomic Power Divisions	SNM-338; SMB-355
Atomic Equipment Division	37-5809-1; 37-5809-2
Research Laboratories	SNM-47; 37-497-6; SMB-550
East Pittsburgh Divisions	37-497-13
Astronuclear Laboratory	SNM-951 (application submitted); 37-5809-3; 37-9442-1; 37-9442-2
Semi-Conductor Division	37-7934-1

ITEM # _____

Richard B. Chitwood, Inspection Specialist
(Criticality), Division of Compliance, HQ

Charles W. Nilsen, Inspection Specialist
(Criticality), Region I, Division of Compliance

PRE-LICENSING INSPECTION REPORT
WESTINGHOUSE ELECTRIC CORPORATION
CHESWICK, PENNSYLVANIA
LICENSE NO.: SNM-338

Attached for your information is the subject report. The pre-licensing visit was made as discussed with R. Layfield, DML, and was limited to a review of the facilities and procedures as presented in the licensee's application of February 8, 1967 requesting broader licensing authorization to cover fast reactor fuel element fabrication.

Equipment installation and checkout is continuing on the fast reactor fuel facility at Cheswick, Pennsylvania with a planned startup date of April 1, 1967. Although it is doubtful that the April 1 date can be met, Westinghouse is anxious to get the license amended so they can start SNM procurement activities.

Several minor items which could give local contamination problems were noted during the inspection and brought to the attention of Westinghouse management. These are discussed in the report. It is felt that there is no significant nuclear safety or health physics problem associated with the startup of the facility.

Special note should be made of the contained water system to be used for glove box cooling purposes. This is discussed in the section entitled Contained Water System. Although no real hazard was found, a policy decision may be required by DML inasmuch as a potentially contaminated coolant system will be used in close proximity to the city drinking water system.

Attachment:
Orig of Rpt.

cc: D. Nussbaumer, DML
w/1 cy Rpt.

ITEM # 66

OFFICE ▶	CO	CO				
SURNAME ▶	NILSEN:cj	GILBERT				
DATE ▶	3/8/67					

Form AEC-318 (Rev. 9-53) U. S. GOVERNMENT PRINTING OFFICE 16—62761-8

U. S. ATOMIC ENERGY COMMISSION

DIVISION OF COMPLIANCE

REGION I

Licensee: WESTINGHOUSE ELECTRIC CORPORATION
Atomic Power Division
Cheswick, Pennsylvania
License No.: SNM-338
Docket No.: 70-337
Pre-licensing Visit

Dates of Visit: February 27 and 28, 1967

Inspectors: _____ 8 MAR 1967
C. W. Nilsen, Inspection Specialist (Criticality) Date

_____
W. B. Grant, Radiation Specialist Date

Reviewed by: _____
R. G. Gilbert, Radiation Specialist Date

[redacted]

Pre-licensing Inspection

WESTINGHOUSE ELECTRIC CORPORATION
Atomic Power Division
Cheswick, Pennsylvania

License No.: SNM-338, Docket No.: 70-337

Inspectors: C. W. Nilsen, Inspection Specialist
(Criticality), Region I, Division of Compliance

W. B. Grant, Radiation Specialist
Region I, Division of Compliance

Dates of Inspection: February 27 and 28, 1967

SUMMARY

A pre-licensing inspection was made of the facilities on February 27 and 28, 1967 by C. W. Nilsen, Inspection Specialist (Criticality), CO:I and Mr. W. B. Grant, Radiation Specialist, CO:I. The purpose of the visit was to evaluate the facilities against the application for overall safety and to relay such findings to DML.

Westinghouse has requested an amendment to their license to authorize the use of special nuclear materials for the development of materials and processes adapted to the fabrication of fast reactor fuel components. The facilities were toured and discussions were held with management to define license conditions and review the proposed operation for overall nuclear and health physics safety.

Construction activities and administrative details, such as procedure writing have not been completed. The work schedule includes the completion of line #1 (fabrication) for startup April 1, 1967 with subsequent completion and startup of line #2 (evaluation). Personnel training, fabrication and operating procedures are scheduled for a timely completion.

There are many construction and administrative details that have not been completed that are required by the application. Management insured the inspection party that all items required for startup will be completed before plutonium was introduced into the facility.

ITEM# _____

DETAILS

Persons Contacted:

W. E. Ray, Advanced Materials Section Manager
W. R. Jacoby, Ceramic Process Development Manager
R. M. Horgos, Facilities Engineering
W. E. Piros, Industrial Hygiene Supervisor
K. R. Schendel, License Administrator

Except where noted otherwise, information within any section of the report was received from the individual noted next to the section title.

Process - W. R. Jacoby

The first row of boxes as defined in the application for Processing Fast Reactor Fuel, submitted to DML on 2/8/67, is used for the fabrication of the plutonium fuel elements. Melt makeup is performed in glove box #1. This includes mechanical cleaning and weighing the required amounts of SNM material. The initial feed will be composed of metallic plutonium, metallic uranium and elemental carbon. The melts will contain between 35 and 50 grams total SNM at about 20% plutonium by weight. The second box will be used for arc melting the material to produce a button. The button is then mechanically broken to produce sub 44 micron material. This material is mixed with a carbo-wax binding and powdered iron or chromium carbide ($CR_{23}C_6$) at a weight ratio of 1% to each .1% of the difference between the theoretical and actual carbon content of the alloy. Theoretical carbon is 4.8 weight percent. This glove box also contains the press for producing a pellet approximately 1/4 inch in diameter and 1/2 inch long.

The third box contains a resistance heated furnace for sintering the pellets. This box also contains a muffle furnace and a production press which are not scheduled for operation at this time. The pellets are then passed into the fourth glove box for centerless grinding if required. The centerless grinder will be operated dry. The fifth glove box is used for quality control and a sixth glove box will be used to assemble the fuel elements. ; The first development contract includes using metallic sodium in the tube to ensure good heat transfer. The sodium will be added in glove box #6. The elements are then removed from the fabrication line and decontaminated and welded in separate boxes. The first elements will be about 5 inches long.

ITEM# _____

The second line of glove boxes is designated as the evaluation line and will include all analytical type activities. Work here will include various chemical analysis and mounting and grinding of samples. The first box in this analytical line is the only glove box not under Argon atmosphere.

Ventilation - W. R. Ray

The ventilation system was reviewed. The construction of the ventilation system has not been completed.

The exhaust ventilation system is to be used to establish proper negative pressure in the room and glove box. This system is operated by one blower with a second emergency blower installed in parrallel. The second blower will automatically start, if required to maintain the required air balance. The current plans are to maintain the plutonium room at a negative pressure of 0.1 inch of water and the glove boxes at a negative pressure of 0,5 inches of water, with respect to the room. The system exhausts through two absolute filters to a stack on the roof. A sampler is installed downstream of the filters. The room air will be continuously recirculated through an internal filter system to remove airborne contamination in the event of a release.

Alarm Systems - W. R. Jacoby

There is an emergency alarm panel mounted on the east wall of the process area. The panel includes the following detection systems:

a. Fire in the processing room.

b. Fire in the fabrication glove boxes.

c. Fire in the evaluation glove boxes.

d. Problem with the glove box atmosphere. The individual monitors on the glove box line have to be checked to determine which glove box has activated the unit. The units monitor for oxygen and water vapor.

e. Room differential pressure.

ITEM# _____

f. Glove box differential pressure.

g. Room air contamination. They are installing a constant air monitor in the processing room. The instrument has not been procured.

h. Low water in their contained water system.

i. High or low pressure in their contained water system.

The criticality monitors are located directly over this panel as defined in the license. The emergency alarm and the criticality alarm signals were questioned and the licensee was advised that he should review this system to ensure that he has an acceptable system. The system was questioned because the normal criticality evacuation for the area is a siren and the plutonium facility is using a bell which is inadequate even in the processing room.

Emergency Power - W. E. Ray

Westinghouse is going to rent an emergency power system for use with the ventilation fans, criticality alarms, argon drying units and low pressure water system. This emergency unit will be on hand when the facility is started. After sizing requirements have been determined for this and other activities to be performed at the plant, a permanent unit will be installed.

Contained Water System - W. E. Ray

Westinghouse has installed a contained water system for use in their glove boxes. This water is currently used for cooling their furnaces. By mechanical and hydraulic design, the water contained system is maintained at a pressure between a negative 6 inches and negative 9 inches of water. This negative pressure is to ensure that any leak in the glove box would leak air into the water line and not water out. This system has not been checked.

The system contains about 50 gallons of water and is not expected to be free of contamination. The water will be sampled periodically. City water is used for makeup in the system and the line has an air gap to prevent contamination from backing up into the city sanitary water system. The enclosed system also contains a heat exchanger to remove heat from the contained water supply. One side of the exchanger is, therefore, in contact with Pu-U contaminated solution and is tied to the city sanitary water system. Westinghouse has designed several safety features into this system which allows for only one barrier between the city water system and a contaminated system. The city water system maintains about 60 pounds of pressure and the heat exchanger is designed and tested for 2200 pounds of pressure. The city supply line also contains two manual valves, a check valve and a control valve for temperature control. Downstream of the heat exchanger the water flows directly to the drain. This water will be sampled periodically.

The inspector questioned the practive of having a contaminated system in proximity with the city sanitary water with the only barrier being a heat exchanger wall. Although this practice is not familiar to the inspector, it is hard to postulate any form of credible circumstances than would permit back contamination into the city water system. In discussing this with Westinghouse management, they say they have reviewed the situation and feel that they have a satisfactory design. Again the inspector emphasized the fact that he cannot postulate a situation that would allow contamination to return to the city water system although the system does not represent the standard practice that the inspector is familiar with.

The enclosed water system is not contained in a glove box or hood and, therefore, any water leaks from the system will contaminate the area. There is a drip pan under the equipment to localize contamination spread. Again the system is under a negative pressure and this should eliminate any possibility of gross spraying.

Inventory - W. E. Ray

Westinghouse is hiring a full-time accountability man to control special nuclear material in the facility. This man will have complete control over the vault inventory and of the inventory in the individual glove boxes. There will be inventory sheets posted on each glove box.

Argon System - W. R. Jacoby

Both glove box lines are operated under a controlled argon atmosphere. A separate purifying unit is used for each line. These units are designed to give maximum purity with respect to water vapor and oxygen. Installation of the units has not been completed and Westinghouse has not been informed about the internal working components. They have been assured that the units have been leak tested and are totally contained. The argon passes through absolute filters at the glove boxes to contain the contaminants in the boxes. No significant hazard was noted with respect to the system although the potential for contamination was discussed with management.

General - W. R. Ray

Westinghouse management assured the inspection team that all procedures would be written and approved as per the application and all internal audits and records of audits would be kept.

Although the training has not been completed, the inspection team again was ensured that all people would be adequately trained. Due to the nature of the work to be performed in this area, there will be a high ratio of professional to non-professional employees. Both engineers that are assigned to this area have plutonium experience.

There is an in-plant air sampling system installed in the area. This system contains about eleven remote sampling heads. The samples collected will be counted each day. A 5 cfm blower supplies the source air for the sampling heads with a separate roof exhaust. A rotor meter is installed on each sampling head to permit volume control.

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

ITEM # 67

TO : File

DATE: February 1, 1967

THRU: Paul R. Nelson, Senior Radiation Specialist
Region I, Division of Compliance

FROM : William B. Grant, Radiation Specialist
Region I, Division of Compliance

SUBJECT: WESTINGHOUSE ELECTRIC CORPORATION
LICENSE NOS.: SNM-338, SMB-355 AND 37-5809-3

Inspector's Evaluation

SNM-338

While the actual operation of the fuel processing could not be observed due to a strike of the hourly workers, the facilities seemed reasonably well organized and surprisingly clean for the type of activities conducted. Health physics program appears adequately carried out under Wes Piros, who is responsible for the entire industrial hygiene and health physics and safety program for the Cheswick site, as well as being responsible for the nuclear or criticality aspects of the site. Consequently, as reported in paragraph 32 of the previous inspection report, he does not have time to carefully examine each day-to-day operation detail and is forced to rely on his technicians. Piros reported that he realizes this and is looking for a man to handle the health physics aspects for the site, however, he has not been successful to date.

SMB-355

An R and D operation only were small amounts of material used exclusively in a laboratory setup. The program is apparently well run with the only lapse appearing in keeping a record of inventory which apparently embarrassed the conscientious Piros and Wiggins. Piros reported, by telephone, on December 12, 1966, that inventory had been taken and a man assigned that responsibility.

37-5809-3

The program as carried out in the Astro Nuclear Facility at the Cheswick site under this license appears to be well managed and no problems of health and safety were observed.

Reinspection dates are recommended for the licenses as follows:

SNM-338	A(1) - normal reinspection frequency; inspect December 1967
SMB-355	E(3) - add one year to the reinspection frequency; inspect December 1969
37-5809-3	E(1) - add six months to the reinspection frequency; inspect June 1968

ITEM # 68

Form AEC-591
(11/3/66)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

AIDI

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pa.	Region I, Division of Compliance U. S. ATOMIC ENERGY COMMISSION 376 Hudson Street New York, New York 10014
3. LICENSE NUMBER(S) SNM-338 Docket No. 70-337	4. DATE OF INSPECTION 1/9-10/67 (Reinspection)

5. INSPECTION FINDINGS

☒ A. No item of noncompliance was found.

☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42

☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42

☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)

☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)

☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)

☐ G. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)

☐ H. Form AEC-3 was not properly posted. 10 CFR 20.206(c)

☐ I. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)

☐ J. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)

☐ K. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51

☐ L. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)

☐ M. Records of inventories were not maintained. 10 CFR 34.26

☐ N. Utilization logs were not maintained. 10 CFR 34.27

C. W. Nilsen
(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

C168

(Date) (Licensee Representative — Title or Position)

COPIES: ☐ LICENSEE; ☐ COMPLIANCE REGION; ☐ DIV. OF ST. & LIC. REL.; ☐ DIV. OF COMPLIANCE

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

Renewal
F 99

TO : Files

DATE: March 3, 1967

FROM : C. W. Nilsen, Inspection Specialist
(Criticality) Region I, Division of Compliance

SUBJECT: WESTINGHOUSE ELECTRIC CORPORATION
ATOMIC POWER DIVISION
PITTSBURGH, PENNSYLVANIA
LICENSE NO. SNM-338
DOCKET NO. 70-337
INSPECTION DATE: JANUARY 9 - 10, 1967

The Form AEC-591 was issued with respect to nuclear safety for the subject announced inspection. At the time of the inspection the licensee was not processing SNM material due to a recent strike. Full production is scheduled to be resumed next month.

The licensee appears to have an adequate nuclear safety program. All areas are posted with appropriate criticality limits and weekly nuclear safety audits are performed. The processing area had the appearance of being scrubbed and waxed. The problem of a possible uranium build-up in the duct work was reviewed and appears to present no criticality problem.

A pre-licensing inspection is planned for the new plutonium fuel development facility.

ITEM # 69 C67

PART 70 INSPECTION - EXPANDED NOTES TO FILE

Licensee: WESTINGHOUSE ELECTRIC CORPORATION
Pittsburgh, Pennsylvania
License No. SNM-338
Docket No. 70-337

Dates of Inspection: January 9 and 10, 1967

By: Charles W. Nilsen, Inspection Specialist
(Criticality) Region I, Division of Compliance

Dates of Last Nuclear Safety Inspection: June 1 and 2, 1966

INTRODUCTION

An announced nuclear safety inspection was conducted at the subject licensee's Cheswick facilities by C. W. Nilsen, Region I, Division of Compliance on January 9 and 10, 1967. This was a general inspection to determine the licensee's compliance with their license and the adequacy of their nuclear safety program.

No items of noncompliance or nuclear safety significance were noted and a Form AEC-591 was issued.

The manufacturing activities in the Atomic Power Division, Nuclear Fuel Division were curtailed due to a recent strike. The strike against Westinghouse was settled on December 12, 1966, but the plant has not returned to full production. The strike was anticipated and Westinghouse management had scheduled their production so that when the strike occurred, it would be during a time of limited production. Full production is scheduled to resume in about a month.

The licensee is planning to install an additional line for fuel element fabrication which will increase capacity at the Cheswick plant by about 50%. (Attachment #1 shows the proposed area for the new line.) The current plans are for not installing the enriched uranium recovery plant at the Cheswick facility. The inspector was told that the enriched plant would be installed in the new fuel element fabrication plant to be built somewhere in Region II.

The glove boxes for plutonium fuel element fabrication at the Cheswick site are scheduled for completion on about February 1, 1967. The plans include one month of cold runs with plutonium being introduced into the line on about the first of March 1967.

DETAILS

Scope

The licensee's general nuclear safety program was discussed with members of the Atomic Power Division (APD) and the Atomic Equipment Division (AED). Control of in process SNM was discussed. All areas in which SNM material is handled were toured by the inspector.

Significant discussions were held with the following personnel:

APD

R. E. Bish, Manager, Nuclear Fuel Division (NFD)

F. Cellier, Manager, Manufacturing & Engineering (NFD)

R. E. Tschiegg, Licensing Coordinator, Plant Services (APD)

W. E. Ray, Manager, Advanced Materials Laboratory, Advanced Reactors Division

D. Herbst, Engineer, Materials Systems Laboratory (APD)

W. E. Piros, Supervisor, Industrial Health and Safety, Industrial Relations (AED)

Organization

A new special study group consisting of R. K. Welty and P. J. Koppel is working on plans for the new fuel element fabrication plant. This study team reports to R. E. Bish. E. D. Flowers had replaced Mr. Koppel as Superintendent of Fuel Element Fabrication. Mr. Flowers had previously been foreman of Fuel Element Fabrication.

APD - Nuclear Fuel Division

No major changes have been made in the fabrication facility at Cheswick. The current plans are to install an additional fuel element fabrication line which will increase capacity by about 50%. This line will be installed in an area where they have previously had some sintering furnaces. This area is shown on Attachment #1.

Production activities in the Nuclear Fuels Division have been scheduled through 1973. Jobs to be started in the near future include fuel for path finder scheduled for February 1967 and for Zerita around March 1967. These will be followed by the 4th Region core for Indian Point and Yankee, Rowe as indicated by Mr. Bish.

Mr. Bish told the inspector that they are not planning to install the enriched uranium recovery plant at Cheswick, as indicated by a license submission. He said that the recovery plant would be installed in a new fuel element fabrication plant to be built somewhere in Region II.

The SNM production areas were toured by the inspector. During the tour the location of criticality monitors was noted by the inspector. All SNM activities appeared to be monitored as required. No uranium pelletizing or tube loading was being performed during the inspection. Mr. Bish had Mr. Welty and Mr. Koppel accompany the inspection team. Mr. Bish indicated that he wanted them to become

acquainted with what goes on during a compliance inspection to help in planning for the new facility.

SNM material in the Nuclear Fuels Processing Area is controlled by posting and weekly audits. Each area is posted with a sign as to the job being performed and the basic nuclear safety parameters for the job. This sign states mass limit, maximum slab thickness and enrichment. When jobs or enrichment changes are made, the posting signs are changed. Mr. Bish stated that plans have been made to establish one basic limit which will cover all jobs and only be changed when a job does not fall in the criteria specified. He indicated this will permit a more standard operation. The basic limits would be based on a maximum enrichment of about 4-1/2%. Enrichments greater than this will require special posting.

When one reactor core requires several enrichments, each enrichment is run separately. In addition to this, each pellet is marked by the die during the pelleting operation to indicate enrichment. Mr. Bish stated that they are limited to about three markings and these include no marking, one slash or two slashes. Although this doesn't spell out the enrichment, Mr. Bish indicated that it did give them an added control over keeping the enrichments separated.

Weekly inspection audits of the SNM activities are performed. According to Mr. Bish, these inspection audits include nuclear and industrial safety. The inspection team includes managers from operations, quality control and engineering. The inspection team is normally made up of Mr. Cellier, Manager of Engineering, Mr. E. D. Flowers, Superintendent, Manufacturing, Mr. R. H. Rayhider, Manager, Quality Control and Mr. Bish. The audits were reviewed by the inspector and he noted that several minor criticality violations mentioned in the audits had been corrected immediately.

During December 1966 a nuclear materials management audit was performed at the Cheswick site. During the audit Mr. Cohen of New York Operations Office did a gamma survey of the duct work above the mixing and blending equipment in the pelletizing area. According to Mr. Cohen this survey indicated that about 25 kg of uranium is in the duct work.

Mr. Cohen's estimate is based on several readings using a gamma probe set to read 184 kev gamma.. This probe registers 130 counts using a standard source of 109.2 mg UO-2 at 3.35% enrichment with an equivalent amount of metal between the probe and the standard to duplicate a reading on the duct work. With this probe, readings on the duct work in the area mentioned gave about 33,000 counts in several areas. With this information the 25 kg estimate was made. Mr. Cohen readily recognizes that the estimate has a large probability of error.

Mr. Cohen's calculations for this estimate are based on his probe seeing approximately 3 linear feet of duct work. He estimated that there are possibly 25 places where readings could be taken although only about 5 readings were actually taken. Twenty-five locations at approximately 1 kg, therefore, represent Mr. Cohen's 25 kg estimate. This means that the 25 kgs is associated with 75 linear feet of duct work. The duct work ranges in diameter from about 6" to about 30" where it discharges into the filter system.

This point was discussed with Mr. Bish. He knew of Mr. Cohen's findings and indicated to the inspector that his plans included removal of this duct work towards the end of the year. He did not feel that there was a problem with material in the duct work and that the planned removal of the duct work is not a result of the readings of Mr. Cohen. He indicated that when the duct work was originally installed in about 1960, studies were performed that showed an equilibrium build-up of powder in the duct work. At that time they did not find the buildup to present a problem. Mr. Bish stated that he feels the readings merely confirm the expected equilibrium buildup.

If we assume 5% enrichment, this could represent about 1200 grams of U-235 in the duct work. At less than 5% enrichment that Westinghouse has been using for fuel elements, there is no possibility of an incident if the material is kept dry and there is no water permitted in the area. If the material is allowed to become wet, the critical mass for this material is about 2 kg at optimum geometry and moderation.

Materials Laboratory and Plutonium Facility - Building #7

The uranium oxide fuel development area was toured with Mr. Herbst. He indicated that there are no SNM activity currently being carried out in the area. They are anticipating doing some work on the Power Burst Facility (PBF) fuel rods (15% enriched UO_2). This job will require the fabrication of about twenty-five 18" long fuel rods. Approximately 7 kg of UO_2 will be required to complete to job.

The plutonium fuel development area was toured by the inspector. Mr. W. E. Ray stated that the two glove boxes are in the final stages of fabrication. He stated that glove box #1 would be ready for operation by February 1, 1967 and that glove box #2 would be ready about the middle of March. He said the month of February would be spent training operators in the techniques of handlong plutonium. They expected to introduce plutonium into the first hood on about the 1st of March. The first job in the new hoods will be test studies for plutonium carbide elements.

AED-Navy Reactor Fuel Shops

Navy reactor fuel shops were toured with Mr. Piros. He indicated that Westinghouse is planning on completing the current Navy work by the end of 1967 and does not plan on any additional Navy contracts. The only work that remains on the existing contracts is the assembly of some fuel modules and cores.

All areas where SNM work is being performed are posted with appropriate safety limits. The limits include handling restrictions and mass limits. Mr. Piros said that all equipment modifications or changes are cleared through him as he is responsible for both nuclear safety and industrial safety. In this manner all items are given a criticality review before action is taken.

SNM Inventory

The SNM inventory is as follows:

APD - 1200 kg U-235

AED - 388 kg U-235

Evacuation

The following criticality test evacuations were performed:

AED - July 20, 1966

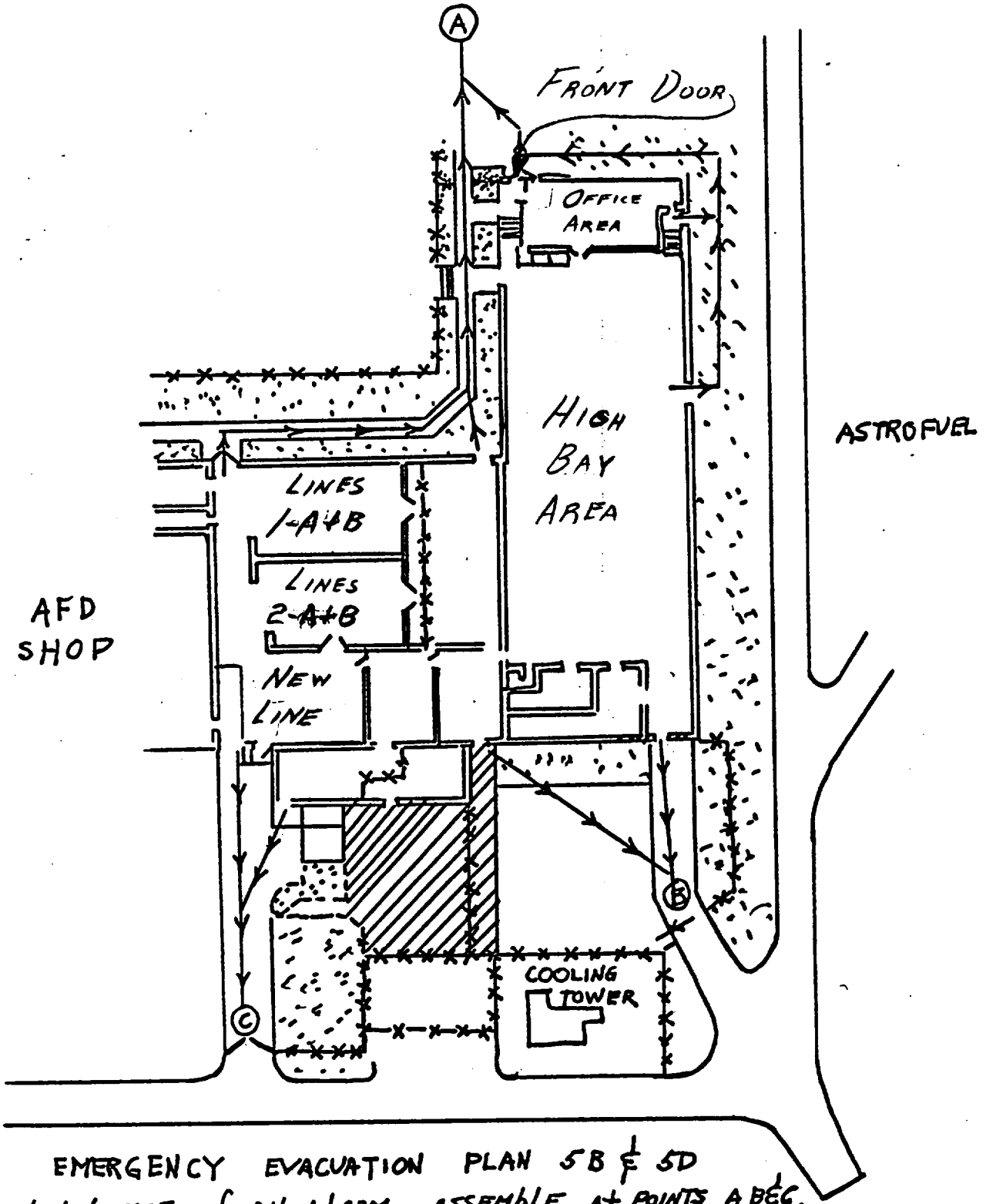
APD - June 11, 1966 and October 4, 1966

The evacuation of the APD facility on October 4, 1966 was performed without warning to the people involved. Mr. Bish had told Mr. Piros that he wanted an unannounced evacuation to permit a proper evaluation of the time required to exit the facility. Mr. Piros stated that the facility was evacuated in less than one minute.

Mr. Piros stated that the Cheswick facilities do not post evacuation routes. Before each test evacuation each employee is given a copy of the evacuation routes for his own personal use. It is felt, and has been determined, that some employees become confused if they are required to exit by one route. Instructions are to exit the building by any door that is posted with an exit sign. Mr. Piros stated that this procedure has proven to be very satisfactory.

Summary Discussion

A summary discussion was held with Mr. Bish, Mr. Tschiegg and Mr. Piros. The licensee was informed that the inspection covered only the nuclear safety program and a Form AEC-591 indicating no items of noncompliance were observed, was issued.



EMERGENCY EVACUATION PLAN 5B & 5D

1. IN CASE of AN ALARM - ASSEMBLE At POINTS A, B & C.
2. LEAVE PLANT BY NEAREST EXIT AS SHOWN IN EVACUATION PLAN.
3. AVOID ANY ROUTE REQUIRING BACK TRACKING.

ITEM # _____

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

5010-106

UNITED STATES GOVERNMENT

Memorandum

TO : Paul R. Nelson, Senior Radiation Specialist
Region I, Division of Compliance

DATE: DEC 7 1966

FROM : William B. Grant, Radiation Specialist
Region I, Division of Compliance

SUBJECT: COORDINATION OF COMPLIANCE VISIT WITH NYOO, NUCLEAR MATERIALS MANAGEMENT SURVEY OF WESTINGHOUSE ELECTRIC COMPANY, ATOMIC POWER DIVISION, CHESWICK FACILITY - SNM-338

The inspector assisted NYOO, Nuclear Materials Management (NMM) in an accountability survey of the subject licensee on December 5 - 8, 1966. NMM personnel involved in this nuclear materials accountability survey of Westinghouse included Mr. W. Browne, Mr. I. Cohen, and Mr. P. J. DeLorenzo. The review consisted of a comprehensive examination of all phases of nuclear management control, including records, measurements, losses and loss mechanisms. To accomplish the above, a physical inventory was made by NMM of all material. This inventory included a statistical sampling of material and an analytical gamma scan of a statistical sampling from material batches; a review of the licensee's losses and loss mechanisms; a review of the licensee's MUF; a check of the licensee's internal control of material; a review of the licensee's shipper-receiver differences; and a review of the licensee's laboratory practices, including calibration of scales, balances, and sampling procedures.

The inspector's assistance was predominantly in the survey areas of losses and loss mechanisms. In this regard, a review was made into the licensee's liquid and air effluents by Mr. Ira Cohen, NMM,and the inspector. During the review of liquid wastes, it was determined that the licensee keeps detailed records of all liquid wastes generated, but that the uranium contained in this waste is carried on the licensee's books as material unaccounted for (MUF). During the review of air effluents, it was determined that all filters in the processing area are wrapped and weighed after removal from the exhaust system. They are stored as accountable material and the uranium contained therein is carried on the licensee's books as a process loss.

Regarding the licensee's air effluents, the inspector and Mr. Cohen toured the process areas of the facility, and made a review of the health physics records regarding air effluents. Samples of the licensee's air effluents are reportedly made in the stack after final filtering. A review of the air effluents for a six month period ending November 1966 was made by the inspector. It was estimated, by the inspector, that the licensee released, through their stacks, approximately 48 grams of enriched uranium for that period. Since this amount of material is not carried as a loss in their

ITEM # 70

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B

material accounting system, it ends up being included as MUF. An attempt was made to determine quantities of uranium lost by being plated out or trapped in the duct work prior to the absolute filters. Mr. Hamen, Production Manager, and Mr. Ward, Process Foreman, stated that two of the four pellet processing lines have exhaust ducts leading from their very dusty type operations. An attempt was made to do a scintillation scan of sections of this duct work by Ira Cohen and the inspector. A very rough estimate indicated up to kilogram quantities in various sections. Mr. R. E. Tschiegg, Accountability Representative, stated that all material lost in this manner ends up being included in MUF.

Inquiries were made into the methods, if any, the licensee has for determining quantities of material disposed of in contaminated equipment, solid wastes, and laundry. Mr. Tschiegg stated that material disposed of through solid waste ends up being recorded as MUF and that equipment is never sent out as contaminated, but is decontaminated and, therefore, that material is also recorded as MUF and included as solid waste. There has been no previous accounting for material disposed of with contaminated laundry. An attempt was made by calling the Jennette Laundry, Jennette, Pennsylvania, to ascertain possible amounts from their effluents. The laundry was unable to supply a breakdown which would include only Westinghouse's laundry.

Full cooperation was enjoyed by all parties concerned and it is felt that the inspector assisted the survey team to the greatest extent in the areas of losses and loss mechanisms. The inspector was requested to be present at the management summation exit interview. Management summation was held with Mr. Ronald Bish, Manager, Nuclear Fuel Division, and personnel attending in addition to the inspector were NMM personnel; Mr. B. Ward, Process Foreman; Mr. R. Tschiegg; Mr. D. Hamen, Production Manager. Mr. Ira Cohen, head of NYOO survey team, stated that NMM's survey was simply to verify the licensee's survey and could be reduced to two criteria, (1) the quality and tagging of the licensee's material and (2) the quantitative analysis of the material using statistics and counting. In addition, Mr. Cohen, in considering the licensee's loss and loss mechanisms, suggested that stack and liquid effluents be considered as losses and not MUF. He stated further that solid wastes could be assigned specific value per drum and removed from the inventory at each shipment, rather than assigning the whole quantity to MUF at completion of the particular job. He stated that NMM has no objection to prorating such losses. Mr. Cohen stated that the survey team's measurements and verifications appeared satisfactory.

In the inspector's opinion the survey team did as good a job as possible during the inventory. One of the prime purposes of this survey was to reduce the licensee's MUF. This was accomplished to a degree through a detailed review of the licensee's losses and loss mechanisms.

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
376 HUDSON STREET
NEW YORK, NEW YORK 10014

TELEPHONE: YUKON 9-1000
Ext. 384

IN REPLY REFER TO:
CO:I:WBG

December 12, 1966

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Wes Piros

Re Lic.: SNM-338

Dear Sir:

Enclosed is your copy of Form AEC-591, Inspection Findings and Licensee Acknowledgment, issued pursuant to our inspection conducted on Dec. 5 - 8, 1966 . Item 5A, indicating that no item of noncompliance was found, has been checked. No further action is required on your part.

Your cooperation is appreciated.

Very truly yours,

Robert W. Kirkman, Director
Region I, Division of Compliance

Enclosure:
Form AEC-591

ITEM # 71

(2)

Form AEC-591
(6/1/65)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

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INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

DEC 12 1966

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania	U. S. Atomic Energy Commission Region I, Division of Compliance 376 Hudson Street New York, New York 10014
3. LICENSE NUMBER(S) SNM-338	**4. DATE OF INSPECTION** December 5 - 8, 1966 (Reinspection)

5. INSPECTION FINDINGS

☒ A. No item of noncompliance was found.

☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42

☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42

☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)

☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)

☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)

☐ G. ~~Storage containers were not properly labeled to show the quantity, date of measurement, or kind of radioactive material in the containers. 10 CFR 20.203(f) (4)~~

☐ H. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)

☐ I. Form AEC-3 was not properly posted. 10 CFR 20.206(c)

☐ J. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)

☐ K. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)

☐ L. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51

☐ M. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)

☐ N. Records of inventories were not maintained. 10 CFR 34.26

☐ O. Utilization logs were not maintained. 10 CFR 34.27

William B Grant

(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days. ITEM # _____

(Date)

(Licensee Representative — Title or Position)

COPIES: ☐ LICENSEE; ☐ COMPLIANCE REGION; ☐ DIV. OF ST. & LIC. REL.; ☐ DIV. OF COMPLIANCE

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

I

IN REPLY REFER TO:
DML:RDS
70-337

DEC 14 1966

Westinghouse Electric Corporation
3 Gateway Center
P. O. Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl Schendel
License Administrator

Gentlemen:

This is to acknowledge receipt of your consolidated application for a superseding license to deliver special nuclear material to a carrier for transport. Since your application dated November 18, 1966, was submitted within three months of the effective date of 10 CFR 71, you may continue to deliver special nuclear material to a carrier for transport under the conditions specified in your existing licenses or approvals, in accordance with the provisions of Section 71.12, 10 CFR 71.

Your application, along with others, will be reviewed as soon as possible. When final action has been taken on your application, the extended authority to deliver to a carrier granted by Section 71.12 will expire, and delivery of special nuclear material to a carrier for transport must then be made under the conditions of such superseding license as may be issued.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

DISTRIBUTION:
Supplement
Document Room
Compliance, HQs 2
Branch and Division Reading Files

ITEM # 12

C172

DEC 22 1966

DML:RLL
70-337

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

In our letter dated December 1, 1966, transmitting requests for information needed in connection with our review of your application dated October 26, 1966, we stated that Section 10, Maximum Credible Accident Analysis was still under review. In connection with our review of this Section, we request the following: In Paragraph 10.2, you have made the assumption that in the event of a fire in a glove box the local filter at the box would be damaged but the remote filters in the exhaust system would effectively remove 99% of the airborne particulate radioactivity. Please provide the information by which you conclude that such integrity would exist in the event of a fire in a glove box. Also, please specify the basis for Figure 10.5.1.

In regard to the consideration of fire, please describe the provisions for extinguishing and/or controlling fires that may occur in the facility, including the glove boxes.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

DISTRIBUTION:
Doc. Rm.
Br. & Div. rfs
Compliance (2) Hqrs
Suppl.
XXXXXXXXXXXXXXXXXX
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XXXXXXXXXXX

ITEM # 73

ITEM # 14

c/14

(11)

DRAFT
GRANT:cc
1/13/67

Reviewed by: EG H

Date: 8/3/67

BACK-UP FOR AEC-591

PART 70 INSPECTION

WESTINGHOUSE ELECTRIC CORPORATION
Pittsburgh, Pennsylvania

Inspector: W. B. Grant
Lic. No.: SNM-338

Place of Use: Cheswick, Pennsylvania

Date of Inspection: December 5 - 8, 1966

Persons Accompanying Inspector

None

Persons Contacted

W. A. Piros, Supervisor, Industrial Hygiene and Safety, Cheswick
William MacDonald, First Shift Health Physics technician, AED
R. E. Bish, Manager, AED, Fuel Manufacturing and Development
Roger Wiggins, Materials Systems Manager

REPORT DETAILS

Inspection History

1. Activities covered under license SNM-338 were inspected for health physics and general health and safety practices on October 5 - 8, 1965. License activities were inspected from the standpoint of criticality on October 7 and 8, 1965 and again on June 1 and 2, 1966. As a result of the penultimate and the last health physics and criticality inspections, the licensee was cited for: failure to evaluate concentrations of air borne radioactive materials in the restricted area of Building 5-B, during the oxidation-reduction operation and rejected pellets; failure to evaluate concentrations of airborne radioactive materials released

ITEM # _____

c174

to unrestricted areas from Fuel Manufacturing Exhaust Stack, shipment of kilogram quantities of reject UO_2 to unauthorized shipping containers. A clear AEC-591 was issued following the last criticality inspection.

Organization and Administration

2. According to Piros, there are three separate Westinghouse subdivisions located at Cheswick, Pennsylvania. These are: the Atomic Equipment Division which is primarily engaged in the manufacture of reactor pumps and other specialized reactor accessories; the Atomic Power Division which is engaged in the manufacture of reactor fuel for the Navy and fuel for commercial power reactors; and the Astro-Nuclear Fuel Facility which operates under NASA contract, manufacturing fuel for the space program. Piros stated that the Naval Nuclear Fuel ~~for~~ program was being phased out and would be completed within a few months. He added that all navy fuel in process was in the clad state and that the machinery used in the raw fuel manufacturing under naval contracts had been decontaminated and sold.

3. Piros stated that the Industrial Hygiene and Safety group, which is responsible for health physics at Cheswick, is part of the Industrial Relations Dept. of the Atomic Equipment Division. Piros stated that he reports to Mr. R. D. Atherly, Manager, Industrial Relations, who in turn reports to Mr. Peter Sarles, Manager of the AED. Piros stated that the overall radiation protection program for Westinghouse remains as depicted in Exhibit A of inspection report dated 10/29/65. Piros explained that he has jurisdiction for all industrial hygiene, health physics and safety problems at Cheswick. Piros further explained that he also reports with a "dotted line" responsibility to Mr. E. C. Barnes, Director of Radiation Protection, Westinghouse.

4. In addition to certain responsibilities for industrial hygiene, health physics and safety, Piros is responsible for criticality and nuclear safety aspects of the naval and commercial fuel programs.

5. Although all activities are conducted under license SNM-338, the naval fuel program and the commercial fuel program have been maintained as two completely separate operations. The safety aspects of both programs are reviewed by a Nuclear Safety Committee consisting of:

R. H. Pitzer, Manager, Marketing - Chairman

W. B. Piros, Supervisor, Industrial Hygiene - Secretary

E. C. Barnes, Director, Radiation Protection, ADSG

R. J. French, Manager, Nuclear Design, APD

B. W. Spaulding, Manager, Qaulity Control

6. The APD has a management inspection team consisting of R. E. Bish, Manager of the Fuel Manufacture and Development Facility; Frank Cellier, Manager of Manufacturing and Engineering; P. Koppel, Superintendant of Manufacturing; B. J. Bossick, Manager of Protection, Planning and Control; Wes Piros, Supervisor of Industrial Hygiene and Safety; and Mr. Lacy, Nuclear Design Group. The inspection team meets every week and tours the Atomic Power Facility ~~located~~ looking for items such as posting of operation limits, posting of the criticality limits, license limits, refuse records and inspects the location of uranium. All findings of this inspection team are recorded. Inspector reviewed these reports and they indicated that corrective action was taken to improve all deficiencies detected by the group. Piros stated that at the Cheswick site, he employed a total of 6 HP and Industrial Hygiene technicians. These technicians are assigned as follows:

At the Pump Repair Facility, the AED, one technician for each of the first and second shifts; one technician for each of the first and second shifts of the APD's Fuel Fabrication Facilities; one technician for each of the first and second shifts of the Astro Nuclear Fuel Facility. Piros stated that the shift assignments are flexible and that the technicians are available to any group needing additional health physics coverage, during any shift.

Scope and Conditions of License

7. License SNM-338 is issued to Westinghouse Electric Corporation, and authorizes fabrication of both naval and commercial reactor fuels. Naval reactor fuel uses highly enriched (93%) U-235. A commercial fuel uses U enriched in the isotope U-235 of less than 5%.

8. At the time of this inspection which was done in conjunction with a NMM survey, material possessed under SNM-338 totalled 69,320 kg source and special nuclear material. This figure includes 417 kg U-235 and 1600 grams Pu-239.

Facilities and Uses of Byproduct Material

9. Activities of the naval shop as described in para. 10 and 11 of the inspection report dated 10/29/65, is in the process of being phased out. According to Piros, these activities will be completed early in 1967, and all current work consists of clad plates which are being assembled into elements, subassemblies, and clusters.

10. The APD (commercial) fuel shop manufactures a low enrichment (less than 5%) the fuel for the Westinghouse Power reactors. The 4 pellet lines described in paragraph 12 of the inspection report dated 10/29/65 were noted to be as described in that report. The lines were not in operation during the inspection because of a strike of the hourly production workers. A minimal amount of work is being carried on in the

assembly area by supervisory personnel.

11. According to Piros, commercial fuel shop is involved in the same operations and they are performed in the same manner as described in para. 12 - 17 of the previous inspection.

12. According to Piros, there are normally about 107 people involved in the commercial fuel activities, about 60 people involved in the navy shop activities and 23 people in the materials system laboratory.

Radiological Safety Precautions and Procedures

13. Copies of Form AEC-3 were noted to be conspicuously located throughout the facilities. Piros stated that all new supervisory personnel get~~ting~~ one hour indoctrination with Piros as part of Industrial ~~XXXXXXXXX~~ Relations course. He added that all new employees are given introduction lectures on health physics and nuclear safety, but that the continuance of this program is the supervisor's responsibility. According to Piros, the employees are genuinely concerned about safety within the facility and that every so often they hold meetings to answer any questions employees may have with regard to their working assignments.

14. According to Piros, his technicians spent one month with the lead technician learning procedures. They then spend time, usually two weeks, helping the other technicians in other buildings. Piros stated that all his technicians receive formal training one day per week. He added that all technicians have authority through him to stop any operation at any time they feel it is unsafe.

15. Piros stated that the plant emergency procedures were up ~~to~~ dated 12/25/65 and that health physics manual was revised in ~~June of the same year~~ May 1966. Piros added that employees are instructed in emergency procedures

contained therein and that the evacuation drill was successfully conducted in June 1965.

16. Piros explained that the smear survey schedule is set up for the entire Fuel Facility. He added that levels of smearable activity up to 10 alpha dpm/sq ft are permitted for unrestricted areas and 1000 alpha dpm/sq ft for restricted areas. Piros stated that any level above those required immediate clean-up. Locker rooms, ~~the~~ APD pelletizing area and all exits are smeared daily. ~~the~~ APD powder receiving area ~~and~~ and assembly loading areas are smeared twice a week. Weekly smears surveys are conducted in the Fuel area, Metal lab, Chemistry Lab, Navy shop, Core Room area of the naval fuel facility, the Material Systems Lab, ~~and~~ the cafeteria. Records of these smears were reviewed and it was noted only a few smears indicated the level of activity above the prescribed action point. Piros explained that all areas are cleaned by janitorial staff and that these people leave the particular areas before the activity reached prescribed action points.

17. A total of 17 fixed air sampling stations have been set up in the Pelletizing area. Samplers are 1 inch sampling head using Wattman 41 filter paper drawing 4 cubic feet per hour for a total of 96 cubic feet per 24 hours. The samples are collected at the end of the second shift by the HP technician at approximately 11 pm. They are counted the following morning by the first shift HP technician at approximately 8 am. A correction factor is applied assuming 30% alpha absorption within the filter. ~~paper~~ Counting is done on a T/A multi sample tabulator Model MDS-201 having an efficiency of approximately 25%. These records were reviewed and it was noted that ~~most~~ 1.3×10^{-11} uc /ml with an average sample of 1×10^{-13} uc/ml. Each sample head was noted to be located at approximately breathing zone ~~@~~ height in close proximity to the dust producing activities. Mr. MacDonald, lead technician, first shift, APD, stated that special air samples are taken during all

special jobs, new operations, spills and emergencies. MacDonald stated that air samples are taken during all new operations until data shows no hazard exists. Records were reviewed of special air samples and a total of 13 samples have been taken since January 1965. MacDonald stated that all 13 samples were of new and special operations, one of which was noted to be the oxidation and reduction of rejected pellets, and these evaluations showed levels well within those prescribed in 20.103(a).

18. Since January 1966, samples have been collected of the stack effluent on an almost continuous basis. MacDonald stated that 24 hour samples is collected from one of two sampling points located in the stack on alternate days. He stated that this sampling line is evacuated for a 24 hour period to clear the line of all particulate residue and then sampled for 24 hours using a Wattman 41 filter paper. MacDonald stated that the stack is thereby sampled more than 2x per week, for a 24 hour period. Records were examined and it was noted that samples showed activity of 0.11 - 0.3 x 10^{-13} uc/ml.

19. Smears and air samples are counted on one of three instruments. Eberline SAC-2 or SAC-3 scintillation counters, or the automatic multi tabulator manufactured by T/A. Model MST-201 which also uses a scintillaton detector. Piros stated that they have currently on hand one Eberline constant air monitor, AIM-3, designated for plutonium lab work. He added that they have another AIM-3 on order.

20. In addition to the sample counter, the licensee was noted to maintain approximately 30 portable survey meters including 8 Cutie Pies, 2 PAC-3G, 3 Nuclear Measurements Air counter, 1 Eberline neutron counter, 2 Wm. B. Johnson GSM-5, 6 Thyac 389, two Eberline INBA radiation monitors, and 2 Eberline plutonium monitors WM-1. MacDonald stated that the instruments

are calibrated quarterly using Cs-137 and Pu-239 sources. The inspector noted instrument calibration records kept by MacDonald which lists all instruments, calibration data and date.

Waste Disposal

21. All low level liquid waste from the Fuel Manufacturing Areas is collected in 2500 gallon tanks. These tanks are sampled and then discharged into the sewer, a system which carries 100 - 150 gallons/minute of process water from the Westinghouse facility. According to Piros, the method of sample is as follows: Full tank is agitated for 20 minutes; a 1 quart sample is drawn and a 5 ml aliquot pipetted out; samples evaporated and counted; and dumped if less then 3 x 10^{-5} uc/ml. Piros stated that after the sample is counted and the liquid is released to the sewer, it passes through 100 mesh, 160 mesh and one 5 micron screen to the sewer. This low level waste from the Fuels Fabrication area total approximately one 2500 gallon tank per week and records indicated activity of from 2 to 3 x 10^{-5} uc/ml.

22. Piros stated that all solid waste are sent to Nuclear Fuels Services Erwin, Tenn; the last shipment of 34 drums was sent to NFS on 9/29/66. MacDonald keeps a special record log of all shipments. This log was examined and it was noted that all waste shipments are surveyed and smeared for exterior contamination and radiation. Piros stated that no estimate of amount of activity contained in the waste shipment is made by him or his department. It was noted from the log of shipments that they were made to NFS on about a 2 month interval.

Posting and Labeling

23. It was noted that the enriched uranium was stored in the prescribed storage area as described in the various applications for license.

It was noted that all bottles of uranium-oxide were labeled "CRM" with information as to percent enrichment, total content, and U-235 content. All areas were properly posted to identify the presence of radioactive materials. All areas were also noted to be posted with the maximum amount of material to be located in that particular area or in the particular piece of equipment.

Personnel Monitoring

24. It was noted that personnel monitoring is accomplished by film badges obtained monthly from R. S. Landauer and Co. Film badge records were reviewed and there were no exposures more than 100 mrem per month. with the general exposure being less the 20 mrem
It was noted that forms AEC-5 have been prepared for all employees. Forms AEC-4 have been prepared for all HP technicians and select personnel having employement where there is possibility of receiving exposures in excess of 1¼ rem/quarter. Piros stated that 4 ro 5 wrist badges were worn in the commercial oxide area during some new operations and exposures to hand and forearms as indicated by these badges showed less than 10 mrem, per exposure.

25. Urine samples are collected routinely at approximately 6 month intervals for personnel exposed to particulate activity in any forms. In addition, special samples are collected immediately following a suspected uptake. These samples are analyzed by Industrial Hygiene Lab of Westinghouse Electric Corporation located at their East Pittsburgh plant. Piros stated that in the event a sample collection showed 25 dpm/liter, a followup sample would be requested and an investigation to the cause would be initiated. He stated that 75 dpm/l would cause the employee to be removed from work with radioactivity and a complete investigation into the cause would be initiated. Review of the records indicated that since January 1, 1966, all urinalysis has been below

50 dpm/l.

Records

26. Records have been maintained and these records were reviewed by the inspector (smear surveys, air particulate surveys, personnel monitoring, and bioassay results, waste disposal). Piros reported that criticality alarms are calibrated using Cs-137 source twice a year. Records were noted to be maintained of this calibration since January 1966. During this inspection records of receipts and transfers were not reviewed. However, these procedures for receipt and shipment of materials and records were reviewed by Nuclear Materials Management survey team, concurrently.

Management Review

27. A management summation review was held concurrently with NMM personnel, the inspector and licensee management, on 12/7/66. Personnel attending in addition to the inspector were: Mr. Ronald Bish, Manager, Nuclear Fuel Division, Mr. R. Tschiegg, Mr. D. Hamen, Production Manager, Mr. B. Ward, Process Foreman, all of Westinghouse; Mr. Ira Cohen, Mr. P. J. DeLorenzo, and Mr. W. Brown of NMM, NYOO, Mr. Cohen stated that the purpose of the survey was to verify the licensee's survey. In addition, Mr. Cohen suggested that stack and liquid effluents be considered as losses and not material unaccounted for. He added that solid waste could be assigned specific value per drum and removed from the inventory after each shipment rather than assigning the whole inventory to MUF at the completion of the particular fuel job. He stated that NMM had no objecting to prorating such losses. The inspector stated that the HP program appears to be adequately carried out and that ~~any~~ deficiencies noted during the previous inspection were corrected. He stated

that records appear to be adequate for water and air effluents from the facility, but that some evaluation was necessary to determine activities in laundry and in solid waste drums. Considerable discussion was held on the quantity of uranium apparently in the duct work. Mr. Bish stated that Westinghouse would investigate that situation in the near future and determine just what amounts are being lost in the duct work, both for accountability and nuclear safety standpoints. Mr. Cohen stated that the survey teams' measurements and verifications appeared satisfactory.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:

FEB 16 1966

DML:RLL
40-4739
70-337

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

The Health Physics Manual WAPD-HP-103, Revision IV, dated June, 1965, submitted in your application dated November 22, 1965, appears satisfactory for use in your presently licensed operations involving source and special nuclear material. Accordingly, this manual has been incorporated into the license files for Special Nuclear Material License No. SNM-338 and Source Material License No. SMB-355.

In the event that you propose to process significant quantities of plutonium and/or uranium-233, further consideration would have to be given to this manual to determine its applicability to such materials.

If you have any questions regarding this letter, please contact us.

Very truly yours,

DISTRIBUTION:
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C. Luke, DML

[redacted] A. Hassbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Materials Licensing

ITEM # 15

c75

Compliance - Region I

Region I, Division of Compliance

Routing Slip

To: 1. Hyder
Inspector

☑ ? JEH Response by licensee adequate

☐ Response by licensee inadequate

Response to citation as stated appear adequate. Item B, both samples collected during 1965 have exceeded MPC. Phoned Price 11/18/65

Comment on Inadequacy

Price admits both samples for 1965 exceeded MPC but added samples for 1963 & 1964 were not excessive, and that were the ones referred to in letter. JEH

2. RGG 11/18/65
Reviewer

☑ Concurrence

☐ Non Concurrence

Comment on Non Concurrence

3. [illegible] 11/24/65
Supervisor

C176

ITEM # 16

Westinghouse Electric Corporation

Atomic Power Division
Box 355, Pittsburgh, Pa. 15230
Telephone: 391-2800
AREA CODE: 412

November 16, 1965

Mr. Robert W. Kirkman, Director
Region I, Division of Compliance
United States Atomic Energy Commission
376 Hudson Street
New York, New York 10014

Dear Mr. Kirkman:

This letter is in response to the Compliance Report submitted by Messrs. Hyder and Crocker dated October 5-8, 1965.

(a) Violation - health and safety 10 CFR 20.103(a)

Smear samples have been taken daily since the plant's inception. Following the compliance inspection, breathing zone samples were immediately collected at this operation. Air samples which were collected confirmed smear samples taken previously. The air samples showed the concentrations in air to be considerably below permissible levels given in Title 10 CFR Part 20. We will continue to periodically collect air samples in this area to assure compliance with 10 CFR 20.103(a).

(b) Violation - health and safety 10 CFR 20.201(b)

Samples have been taken randomly without incidence of excessive concentration. Presently we are performing a study of the exhaust stack to determine the most desirable method of installing a permanently mounted sampling unit. The installation should be completed in about 30 days. With a permanently mounted system in the stack, adequate sampling will be assured in compliance with 10 CFR 20.106(a).

ITEM # 77

C177

(c) Violation - SNM 338 approved amendment of 11/13/64

The material in question was shipped to NUMEC in approved and safe birdcages, however, belonging to NFS rather than NUMEC. This movement was in violation of the amendment stated and occurred as a result of administrative error in which the responsible functional Manager believed he had made proper legal arrangements for the transport only to realize later that he had not done so. The Manager and personnel in his organization have been thoroughly indoctrinated in the administrative procedures and have taken the necessary precautions to prevent any recurrence of the above violation.

Very truly yours,

WESTINGHOUSE ELECTRIC CORPORATION

H. C. Amtsberg, Manager
Administrative Services

cc: Mr. R. E. Bish
Mr. W. E. Piros
Mr. K. R. Schendel
Mr. F. Cellier

[redacted]

MEMO ROUTE SLIP
Form AEC-96 (Rev. May 14, 1947)

☐ See me about this. ☐ Note and return. ☐ For concurrence ☐ For signature. ☐ For action. ☐ For information.

TO (Name and unit)	INITIALS	REMARKS
. G. Page, Chief nforcement Branch LR	DATE	RE: WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania License No.: SNM-338
TO (Name and unit)	INITIALS	REMARKS
. Dubinski, Asst. ir. for Materials O:HQ	DATE	We feel the attached reply to Form AEC-592 is adequate.
TO (Name and unit)	INITIALS	REMARKS
	DATE	Enclosure: Cy ltr dtd 11-16-65
FROM (Name and unit)		REMARKS
R. S. Cleveland Radiation Specialist (Review), CO:I		
PHONE NO.	DATE	
X-1382	11-30-65	

USE OTHER SIDE FOR ADDITIONAL REMARKS

GPO 043 16 - 77649 - 1

ITEM # 78

Co:I

MEMO ROUTE SLIP
Form AEC-93 (Rev. May 14, 1947)

☐ See me about this. ☐ Note and return. ☐ For concurrence. ☐ For signature. ☐ For action. ☐ For information.

TO (Name and unit)	INITIALS	REMARKS
R. C. Page, Chief Enforcement Br. SLR	DATE	RE: WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania SNM-338 Attached is the AEC-592 issued to Westinghouse
TO (Name and unit) L. Dubinski, Asst. Director for Mtls. CO:HQ (3 cys)	INITIALS DATE	Electric Corporation as a result of our inspection on October 5 thru 8, 1965. Distribution of the complete report (materials & criticality) has
TO (Name and unit) cc: CO:II CO:III CO:V	INITIALS DATE	been made only to the Enforcement Branch. Distribution of the criticality section, with copies of the AEC-592 has been made to Regions
FROM (Name and unit) R. S. Cleveland, Radiation Specialist (Review), CO:I RCC for		REMARKS II, III, and V, and Compliance, HQ.
PHONE NO. 1382	DATE 11-3-65	

USE OTHER SIDE FOR ADDITIONAL REMARKS

GPO 043 16 - 77649 - 1

ITEM # 79

C/79

NOV 1 1965

CO:I:JEH

Ext. 384

Westinghouse Electric Corporation
Pittsburgh, Pennsylvania

Attention: Mr. H. C. Amtsberg, Manager Administration
Service, Department, WAPD

Gentlemen:

This letter relates to the discussions Mr. J. E. Hyder of this office and Mr. R. W. Crocker of our Region III office held with Messrs. P. M. Earles, F. Collier and W. Pirus following the inspection conducted on October 5-8, 1965 of the activities authorized under AEC Special Nuclear Material License No. SNM-338.

As noted during the discussions, it appears that certain of your activities were not conducted in full compliance with AEC requirements. The items and references to the pertinent requirements are listed in Item 5 of the attached Form AEC-592.

The purpose of this letter is to give you an opportunity to advise us in writing of your position concerning these items and of any corrective steps you have taken or plan to take with respect to the items listed on the attached form and the date all corrective action was or will be completed. Your reply should be sent to us within 20 days of the date of this letter to ensure that it will receive proper attention in our further evaluation of this matter.

Should you have any question concerning this matter, you may communicate directly with this office.

Very truly yours,

ITEM # 80

Robert W. Kirkman, Director
Region I, Division of Compliance

Attachment
Form AEC-592

bcc: CO:HQ
SLR, w/back-up noted

C180

cc: R. E. Rich, Manager, Fuel Manufacturing and Development, APD
Karl R. Schendel, Licensee Administrator
w/enclosure

OFFICE ▶				COMPLIANCE		
SURNAME ▶				Hyder:cb	Cleveland	Kirkman
DATE ▶				10-29-65		

Form AEC-318 (Rev. 9-63) U. S. GOVERNMENT PRINTING OFFICE 16—62761-2

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:
DML:RDS
70-337

NOV 8 1966

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl K. Schendel
License Administrator

Gentlemen:

This refers to your application dated September 23, 1966, requesting an amendment to License No. SNM-338, to authorize the use of the FWR Seed and Blanket packages.

In order that we may continue our review of your application, please furnish additional information, considering the following comments:

1. Please furnish more adequate drawings and descriptions of the design and construction of the primary container and birdcage frame, including the details of the attachment of seam. The drawing furnished with the application is not legible and does not furnish sufficient information.

2. The evaluation of the packages against the standards of Subpart C, 10 CFR 71, should include the method of testing, and the measured results of the tests or assessment. From the vague results given, we are unable to confirm that the packaging meets the standards of Subpart C. We note that the primary container is constructed of aluminum sheeting, and may fail in the Thermal test specified in Appendix B of 10 CFR 71. Please provide an evaluation of the spacing and containment of the contents under the accident test conditions.

3. The open birdcage frame will permit the entry of a 4-inch cube, which is contrary to the requirements of Paragraph 71.35(b)(4)(iii), 10 CFR 71.

4. Please furnish a description of the chemical and physical form of the fuel elements.

From DO - Hdqrs.

C/81

ITEM # 81

5. Please furnish reactivity calculations for the contents of each package in the most reactive creditable conditions. The accuracy of the calculational method should be evaluated by checking the method against similar material in critical configurations. In Section 5.3 of your application, we note that the infinite length safe cylinder diameter was increased by a shape allowance factor to justify the primary container diameter. Only the safe mass and volume should be increased by this factor. Increasing the cylinder diameter by this factor may result in an unsafe container.

6. Provide a detailed array analysis for the normal and accident conditions of transport, considering the specific standards for Fissile Class II and III packages set forth in Sections 71.39 and 71.48, to include the requirement that the array evaluation consider optimum, or most reactive credible, interspersed hydrogenous moderation.

Upon receipt of the type of information identified above, the review of your application will be continued.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

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NMA 11 11 2e WW.22

EN:IC

1 NOV 1966

Westinghouse Electric Corporation
Atomic Power Divisions
P. O. Box 355
Pittsburgh, Pennsylvania 15230

Attention: R. E. Tschiegg

Subject: SAFEGUARDS CONTROL OF NUCLEAR MATERIAL AT THE CHESWICK SITE

Gentlemen:

In compliance with the requirements of the Atomic Energy Commission, a safeguards control review will be held at WAPD's Cheswick facility beginning November 28, 1966. This review will cover the period February 1, 1966 through November 30, 1966 and will be conducted by Messrs. W. Brown, I. Cohen and P. J. DeLorenzo.

The review will consist of a comprehensive examination of all phases of nuclear material control, including records, measurements, losses and loss mechanisms. You are requested to perform a physical inventory either prior to the survey teams' arrival or during review period. In either case, the survey team will perform independent tests to verify your inventories.

We are enclosing two copies of our "Internal Control Questionnaire." Please complete and return a copy to the survey team.

Very truly yours,

S. J. Braiden, Chief
Nuclear Materials Management
Branch

Enclosure:
Internal Control Questionnaire

cc: R. Kirkman, CO:1, NY

C/82

ITEM # 82

SEP 2 8 1966

DML:RDS
70-337

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Emil P. Schmidt
Licensing Administrator

Gentlemen:

This refers to Section 9 of your application dated September 16, 1966, requesting an amendment to License No. SNM-338 to authorize the fabrication and packaging of fuel assemblies for the NS-1A power reactor.

Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions" requires that applications for approval of packages for the transportation of fissile material contain the information described in Section 71.31 of this Part. In the case of a presently licensed package, this should be a part of a consolidated application for a superseding license, as required in Section 71.12 of this Part.

Since Section 9 of this application does not contain the information required by Part 71 for the two containers referenced, applications should be submitted in accordance with Part 71 for the two containers. Please refer to our letter dated July 26, 1966, for guidance in preparing the applications.

The remainder of your application dated September 16, 1966, is under review.

Very truly yours,

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R. S. Smith, DML

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

DML DML DML

RDSmith:esc RLLayfield DANussbaumer

9/26/66

ITEM # 83

I

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:
DRL:REL
70-337

DISTRIBUTION:
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C. Luke, ML
R. Layfield, ML
Br. RF
Div. RF

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

This refers to your application dated June 3, 1966, requesting amendment of License No. SNM-338 to authorize the use of plutonium pellets in the fabrication of fuel rods.

In order to continue the review of this application, please provide the information requested in the attachment to this letter. In Paragraph 5.1 of the application, reference is made to the Westinghouse Health Physics Manual, WAPD-HP-103, Revision V, dated May 1966. As of this date, we have not received this revision of the manual. Our comment in Item 1. of the attachment to this letter regarding the qualifications for the Supervisor of Industrial Hygiene is based on Revision IV of the Health Physics Manual dated June 1965. Also, please describe the approval procedures for revisions to the Health Physics Manual (WAPD-HP-103) and confirm that changes in the manual will not reduce the required qualifications for the Supervisor of Industrial Hygiene.

If you have any questions regarding this letter, please contact us.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

Attachment:
As stated

Rec'd 7/21/66

C104

- From DO - Hdqrs.

ITEM # 84

(4)

WESTINGHOUSE ELECTRIC CORPORATION
Cheswick, Pennsylvania

Docket 70-337

Application dated June 3, 1966

1. Subparagraph 4.2.5 - Manager of Nuclear Design and Subparagraph 4.2.6 - Industrial Hygiene Supervisor

The required qualifications of the Manager of Nuclear Design and Supervisor of Industrial Hygiene do not include experience in the solution of criticality problems. Since these positions include the major responsibility for nuclear safety analyses, it is requested that the qualifications for these positions be augmented to include the minimum requirements for training and experience in the solution of criticality problems.

2. Section 6 - General Nuclear Safety Controls

a. Considering the possible sensitivity of critical mass to rod size, please explain why it is considered unnecessary to specify the rod size used in your calculations as a condition for the use of Table 6.2.1 limits.

b. Confirmation that nuclear safety limits, not directly based on Table 6.2.1, will be established so as to fulfill a double contingency policy.

c. Confirmation that written records of criticality safety analyses and any necessary verifications will be maintained in sufficient detail and form to permit independent review and audit of the method of calculations and the results. Also, how long will such records be retained?

3. Paragraph 4.3 - Administrative Procedures

On page 18 it is implied that the Industrial Hygiene group performs audits of operations involving nuclear safety considerations; however, this is not a clearly assigned responsibility. Accordingly, please specify the group responsible for routine inspection and/or audits of operations to assure that appropriate controls are followed. Also, on page 18, and on page 25, Paragraph 6.2, Basic Nuclear Safety Criteria, it is stated that proposed revisions or changes to an operation or piece of equipment which may affect nuclear safety will be analyzed. Please specify the criteria used to determine whether or not a proposed change involves nuclear safety considerations.

4. Section 6 - Processing Description and Nuclear Safety Analysis

   a. In Paragraph 6.3, Nuclear Interaction Evaluation, you have specified separation distances for nuclear isolation of (1) 12 feet or (2) the greatest distance across an orthographic projection of either array on a plane perpendicular to a line joining their centers, whichever is greater. However, in Paragraphs 8.2, Storage, and 8.4, Unsealed Rod Storage, you have stated that, for purposes of isolation, specific arrays of special nuclear material will be separated by 12 feet. Accordingly, Paragraphs 8.2 and 8.4 should be amended to reflect the more conservative criteria specified in Paragraph 6.3 or use of the 12 foot spacing justified.

   b. In Paragraph 6.3, Pellet Processing and Unloading, (Process Step 5), and 8.6, Closure Welding, (Process Step 6), the main considerations in your use of mass controls based on dryness are the absence of water lines and strict control of plastics and other moderating materials. No apparent consideration is given to the accidental introduction of water. Accordingly, we request a more detailed description of the dry box (Process Step 5) and the weld box (Process Step 6) and your assessment of the possibility of accidental introduction of water (e.g., during firefighting).

5. Paragraph 8.4 - Unsealed Rod Storage

   Description of your provisions for controlling contamination on loaded rods after removal from the dry box.

6. Paragraph 6.3, Nuclear Interaction Evaluation

   In this paragraph, you state that interaction effects will be evaluated. Please describe and illustrate the methods of calculation to be used in evaluating interaction between processing units and in storage arrays.

7. General Information

   a. Description of the ventilation system for the general room air in the plutonium facility including provisions for preventing the dispersion of airborne radioactivity to outside areas in the event of an explosion or fire within the facility.

   b. Description of your provisions for monitoring contamination on the hands and body of personnel while working in the plutonium facility and prior to leaving the facility.

   c. Explanation of the relationship between Nuclear Engineering (pages 7 and 10) and Nuclear Design (pages 18, 19, etc.). These titles are used as though synonymous but no Nuclear Design group is shown on the organization chart, Figure 4.1.1, page 7. Also, on page 19,

reference is made to "qualified nuclear safety personnel." What are the minimum qualifications for personnel who have review and approval authority for new operations or changes to existing operations.

d. Description of the training program that is used to familiarize operators with specific control values and the importance of nuclear safety requirements.

I

Westinghouse Electric Corporation

3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

July 20, 1966

U. S. Atomic Energy Commission
Division of Materials Licensing
Washington, D. C., 20545

ATTENTION: Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch

SUBJECT: Proprietary Information - Application, Dated November 24, 1965, for Amendment of License SNM-338, Docket 70-337, for the Use of Scrap in a Uranium Recovery Facility

For Div of Compliance

Gentlemen:

In reply to your letter of 6/23/66 (DML:RLL 70-337), the Westinghouse Electric Corporation requests (pursuant to 10CFR2.790) withholding the subject document from public inspection for the following reasons:

Publication is not required in the public interest because all pertinent data on the general process and mandatory nuclear safety criteria are contained in the portion of the application which is available for public inspection. The proprietary folder contains only details of the process and the application of the nuclear safety criteria.

The process described in the subject document, which is to be withheld from public inspection, is the result of a considerable expenditure of engineering and experimental effort. The process contains details of arrangement and equipment, encompassing Westinghouse trade secrets, which are unique and which, in our opinion, will enhance the Corporation's competitive

ITEM # 85

From CO - Hdqrs.

c/85

status in processing scrap. Public disclosure of this detailed information would make these features available to any competitor without expense or effort. In addition, certain of the unique items are currently being reviewed for patentability, and publication would jeopardize such claims.

I sincerely hope that the above reasons are sufficient justification to warrant your withholding the subject document from public inspection. If there are any further questions, please write to me at the above address or telephone me collect at 412-391-2800, Extension 3449.

Very truly yours,

Karl R. Schendel
by E C Barnes

Karl R. Schendel
License Administrator

6 copies transmitted

Form AEC-591
(6/1/65)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGMENT

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORP. PITTSBURGH, PA.	REGION I AEC 970 BROADWAY ST, NEW YORK, N.Y.
3. LICENSE NUMBER(S)	**4. DATE OF INSPECTION**
SNM-338 Docket	June 1-2, 1966

5. INSPECTION FINDINGS

☒ A. No item of noncompliance was found.

☐ B. Rooms or areas were not properly posted to indicate the presence of a RADIATION AREA. 10 CFR 20.203(b) or 34.42

☐ C. Rooms or areas were not properly posted to indicate the presence of a HIGH RADIATION AREA. 10 CFR 20.203(c) (1) or 34.42

☐ D. Rooms or areas were not properly posted to indicate the presence of an AIRBORNE RADIOACTIVITY AREA. 10 CFR 20.203(d)

☐ E. Rooms or areas were not properly posted to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(e)

☐ F. Containers were not properly labeled to indicate the presence of RADIOACTIVE MATERIAL. 10 CFR 20.203(f) (1) or (f) (2)

☐ G. Storage containers were not properly labeled to show the quantity, date of measurement, or kind of radioactive material in the containers. 10 CFR 20.203(f) (4)

☐ H. A current copy of 10 CFR 20, a copy of the license, or a copy of the operating procedures was not properly posted or made available. 10 CFR 20.206(b)

☐ I. Form AEC-3 was not properly posted. 10 CFR 20.206(c)

☐ J. Records of the radiation exposure of individuals were not properly maintained. 10 CFR 20.401(a) or 34.33(b)

☐ K. Records of surveys or disposals were not properly maintained. 10 CFR 20.401(b) or 34.43(d)

☐ L. Records of receipt, transfer, disposal, export or inventory of licensed material were not properly maintained. 10 CFR 30.51, 40.61 or 70.51

☐ M. Records of leak tests were not maintained as prescribed in your license, or 10 CFR 34.25(c)

☐ N. Records of inventories were not maintained. 10 CFR 34.26

☐ O. Utilization logs were not maintained. 10 CFR 34.27

Albert F. Gaccetta
(AEC Compliance Inspector)

6. LICENSEE'S ACKNOWLEDGMENT

The AEC Compliance Inspector has explained and I understand the items of noncompliance listed above. The items of noncompliance will be corrected within the next 30 days.

(Date) (Licensee Representative — Title or Position)

C186

COPIES: ☐ LICENSEE; ☑ COMPLIANCE REGION; ☐ DIV. OF REG. & MAT. LIC. REL.; ☐ DIV. OF COMPLIANCE

ITEM # 80

Part 70 Inspection - Expanded Notes to File

By: H. W. Crocker, Inspection Specialist (Criticality)

Title: Part 70 Inspection - Expanded Notes to File
Westinghouse Electric Corporation
Pittsburgh, Pennsylvania
License No. SNM-338 (Docket No. 70-337)
Inspection Dates: June 1 - 2, 1966

Nuclear Safety Analysis

The licensee appears to provide adequate supervision and control over all SNM operations to minimize the hazard of accidental criticality.

Adequate procedures are available to perform the jobs safely and management does have an active program to provide close review of all new procedures or procedural modifications.

The entire processing areas are maintained in a neat and orderly manner. All SNM handling and storage operations appeared to be according to authorized license conditions.

ITEM # 87

C187

PART 70 INSPECTION - EXPANDED NOTES TO FILE

By: Hilbert W. Crocker, Inspection Specialist (Criticality)
Region III, Division of Compliance

Title: Part 70 Inspection - Expanded Notes to File
Westinghouse Electric Corporation
Pittsburgh, Pennsylvania
License No. SNM-338 (Docket 70-337)
Inspection Dates: June 1 - 2, 1966

Introduction

1. An announced nuclear safety inspection was conducted at the subject licensee's Cheswick facilities by H. W. Crocker, Region III, on June 1 - 2, 1966. The purpose of the inspection was to review the licensee's nuclear safety program and practices, and determine their status of compliance with the pertinent Federal Regulations. Mr. Charles Nilsen, Region I, accompanied for training purposes.

2. No items of noncompliance were observed during the inspection and a Form AEC-591, denoting this condition, was issued to the licensee.

3. The licensee is preparing one large room in the Advance Materials Section of Advanced Reactors Division for work on plutonium reactor fuels. This item is discussed in paragraph 13.

4. The licensee does not plan to start installation of the uranium scrap recovery system until DML approves their license amendment application covering this equipment. Paragraph 9 describes the status of the recovery project.

Details

Scope

5. The licensee's nuclear safety program and practices were discussed with members of the Atomic Power Division (APD) and Atomic Equipment Division (AED). The records for nuclear safety audits and emergency evacuation drills were reviewed. The entire SNM facilities were toured. Significant discussions were held with the following personnel:

APD

R. E. Bish, Manager, Manufacturing, Nuclear Fuel Division (NFD)
F. Cellier, Manager, Manufacturing Engineering, NFD
R. E. Tschiegg, Licensing Coordinator, Plant Services, APD

L. F. Cochrun, Engineer, Advanced Materials Laboratory, Advanced Reactors Division
W. E. Ray, Manager, Advanced Materials Laboratory, Advanced Reactors Division

AED

W. E. Piros, Supervisor, Industrial Health and Safety, Industrial Relations
J. S. Theilacker, Assistant Manager, Engineering (Chairman of the Site Nuclear Safety Committee)

Organization

6. Some reorganization at the upper levels of management has occurred in that Mr. D. J. Povejsil is now General Manager of the Nuclear Fuel Division, APD. Mr. Bish now reports to Mr. Povejsil, however, Bish's own group remains unchanged. The AED organization is the same as noted in the report of the last inspection (inspection of October 7 - 8, 1965).

APD - Commercial Reactor Fuel Shops

7. The process for fabrication and assembly of fuel elements for power reactors remains unchanged since the last inspection. The licensee is currently running Connecticut Yankee Reactor fuel (UO_2, 3 per cent and 3.24 per cent enriched in U-235) in the pelletizing process. Lines 1A and 1B are being used for 3 per cent material, while lines 2A and 2B are using the 3.24 per cent material. The process lines are physically separated and strict administrative controls are used to prevent mixing of enrichments. All SNM work stations are labeled with the pertinent nuclear safety limits. All SNM containers were observed to be labeled as to U-235 weight, U-235 enrichment, SNM form, and were also color coded to designate the specific enrichment.

8. The licensee is currently working on five customer fuel orders in the fuel element assembly area. These include assemblies for the following reactors: Southern California Edison, Carolinas-Virginia Test Reactor, Yankee, and SELNI Reactor in Italy. All SNM stations in the assembly were labeled with the proper nuclear safety limits.

9. It was noted that no equipment has been installed in the uranium scrap recovery area. Mr. Bish stated that they do not intend to commence purchasing or installing any equipment until DML gives full approval to the license amendments

which they submitted as the basis for this program. Mr. Bish feels that the installation would be completed about five to six months after DML approval is received. In addition, they will also make another economic analysis, based on current scrap recovery charges, before making the final decision to build the facility or continue to have their scrap recovered by other companies on a contract basis. The inspector pointed out to Mr. Bish that a pre-license inspection is generally made on such scrap plants prior to DML's issuance of license approval. Mr. Bish said that they believe it would be unwise for them to start equipment procurement, etc., until DML approval is received, but that they would certainly welcome a pre-operational visit by DML or CO for the facility.

10. Mr. Bish stated that new operating procedures are generated or modifications to the procedures are generated by engineers in the Manufacturing Engineering Department. These are then reviewed by the following persons:

    F. Cellier, Manager, Manufacturing Engineering
    J. Steinkirschner, Industrial Engineering
    P. Koppel, Superintendent of Operations, Manufacturing
    R. French, Manager, Nuclear Engineering

    The reviews are for operability, industrial safety, nuclear safety, and radiological safety. An immediate change in procedures can be authorized and approved by Mr. Cellier. For use, this must also be signed by the supervisor of operations, and nuclear safety changes are not included in this category. Mr. Cellier evaluates the overall temporary changes to assure that criticality is not affected. Also, after use of a temporary condition for one week, the change must be subjected to the more formal review and authorized as a new procedure to permit subsequent usage. Any changes that involve nuclear safety controls are always subjected to the more formal review.

Building 7 - Commercial Fuel Development

11. The fuel development area was also toured. The work here is being done by Mr. W. E. Ray's group, and currently centered on UO_2 fuel development and uranium scrap recovery. The laboratory is divided into two sections, UO_2 fuel and uranium recovery, and each section is limited to one safe mass. Current studies utilize uranium which is 14 weight per cent enriched in U-235. Four scientists and four technicians are involved in the work.

12. The inspector observed that unsafe geometry containers were being used for dissolving uranium powder for the recovery, operation and storing a trace quantity uranium solution. These items were discussed with Messrs. Cochrun, Ray, and Theilacher during the inspection, and while it is satisfactory for their current operations in which the entire recovery work is limited to one safe batch, the inspector pointed out that as development activities are increased and additional personnel are brought into the work later in the year, such administrative controls may not be suitable for the program. Mr. Ray and Mr. Theilacher indicated that while they felt the controls to be adequate for current operations, they recognize that modifications in this control aspect will be desirable as the program is expanded. In fact, Mr. Theilacher indicated that they would eliminate the use of the unsafe geometry containers now in order to provide additional safety prior to expanding the development activities. He said that Mr. Piros would provide follow up action on this improvement.

13. A large room is currently being renovated in this building to accomodate some glove boxes for plutonium fuel research and development activities. Two 40 foot glove box chains will be installed for the work. A change room, ventilation system and vault are also included in the facility. Mr. Cochrun said that the glove box line installation will be completed in July 1966 and that a license amendment application to cover this system is being sent to DML for approval.

14. The unsafe geometry sink noted to be in the laboratory during the last inspection has been removed and the unmonitored drain line has been sealed to prevent accidental entry of SNM.

AED - Naval Reactor Fuel Shops

15. Work is continuing in this area to complete the fabrication and assembly of the current orders for naval reactor fuels. Mr. Piros stated that about a year's time will be required to complete the work and that the work areas will then be taken over by the Astronuclear Division. In fact, that division is currently in the process of occupying part of Building 5 and all of Buildings 5A and 5C.

16. All SNM work stations in the fuel area were posted with the appropriate nuclear safety limits and the SNM handling and storage operations were conducted according to the authorized license conditions.

Controls

17. The records of the nuclear safety audits since the last inspection for both APD and AED were reviewed. Any deficiencies noted in the audits were corrected in a timely manner and no significant infractions were noted in the record review.

18. Site evacuation drills were held for all personnel on December 8 - 9, 1965. The drills included a thorough test of the emergency evacuation and reentry program. Mr. Piros, safety representative for the entire Cheswick site judged the drills to be highly successful.

SNM Inventory

19. As of June 1, 1966, the total SNM inventory was as follows:

AED - 300 kg U-235 (93 per cent U-235 enrichment)
APD - 251 kg U-235 (most of this is less than 5 per cent U-235 enrichment)
- 1.6 kg Pu rods (encapsulated)

Summary Discussion

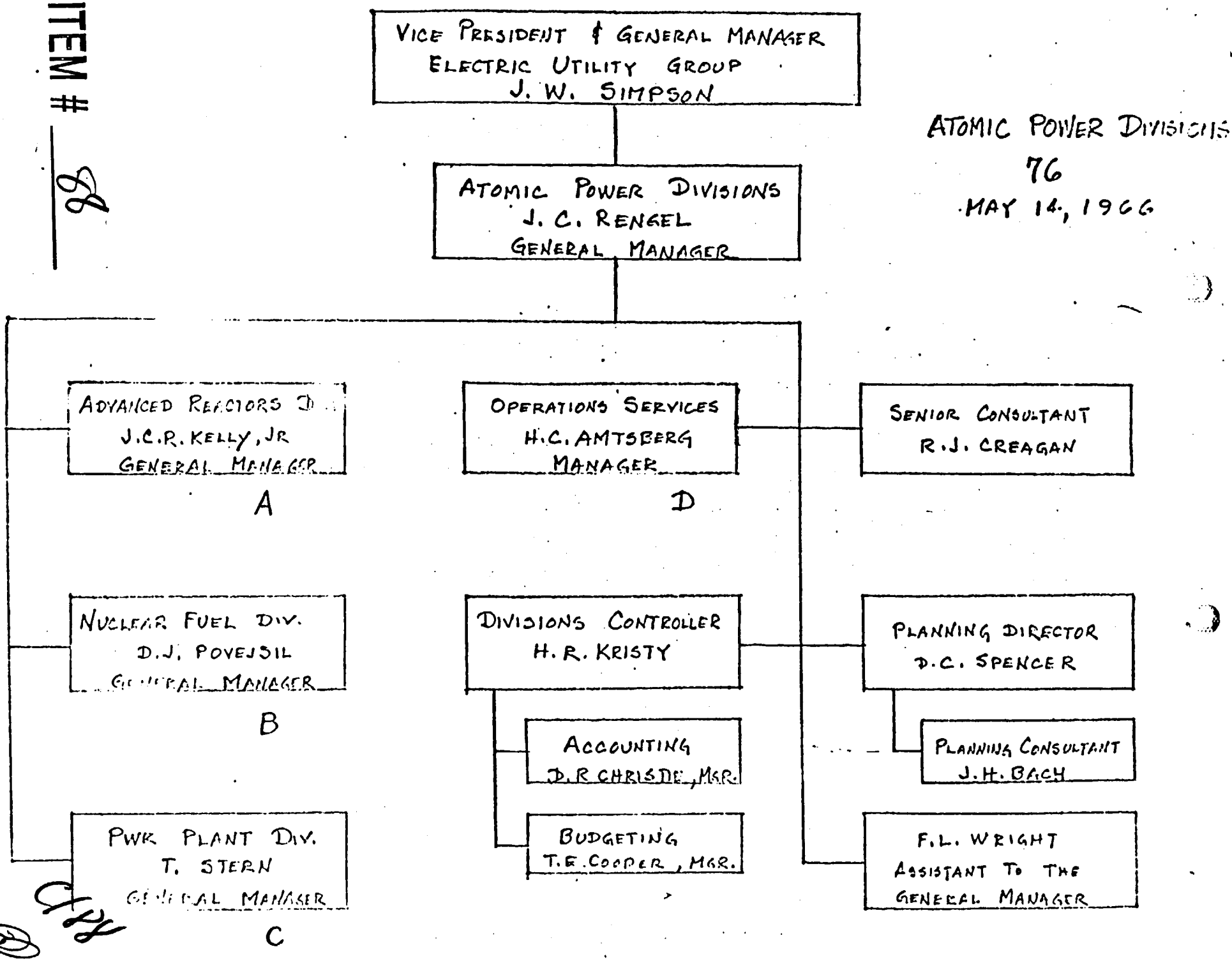
20. Summary discussions were held with Mr. Bish, Mr. Theilacher, Mr. Tschiegg, and Mr. Piros at the conclusion of the inspection. The licensee was informed that the inspection covered their nuclear safety program only and that the radiological aspects of their activities were not inspected. A Form AEC-591, indicating that no items of noncompliance were observed, was issued to the licensee.

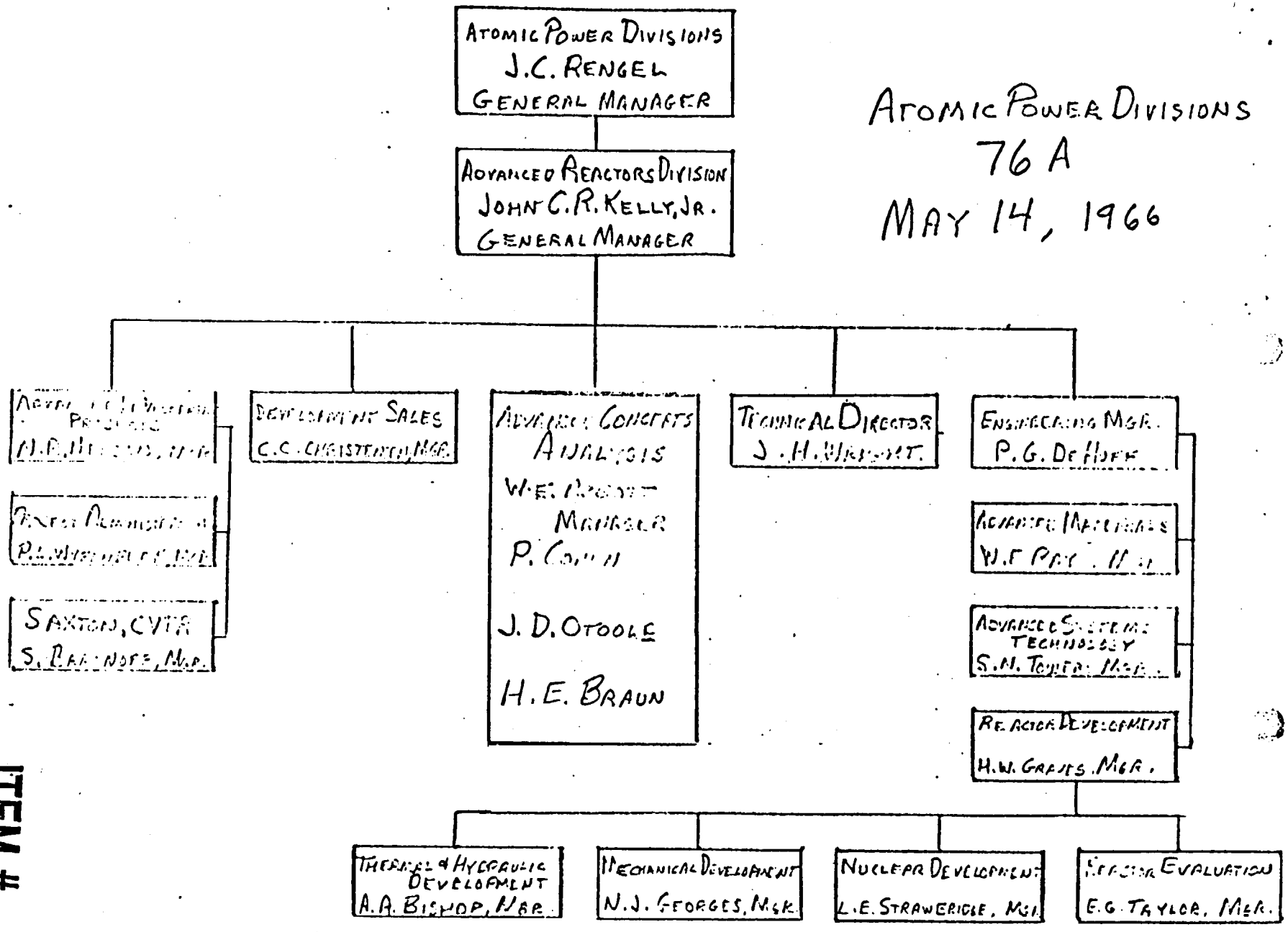
21. The licensee again explained that the use of the unsafe geometry containers in the development laboratory would be eliminated prior to expansion of the development programs.

Enclosures:
Exhibit A
Exhibit B
Exhibit C

ITEM # 22

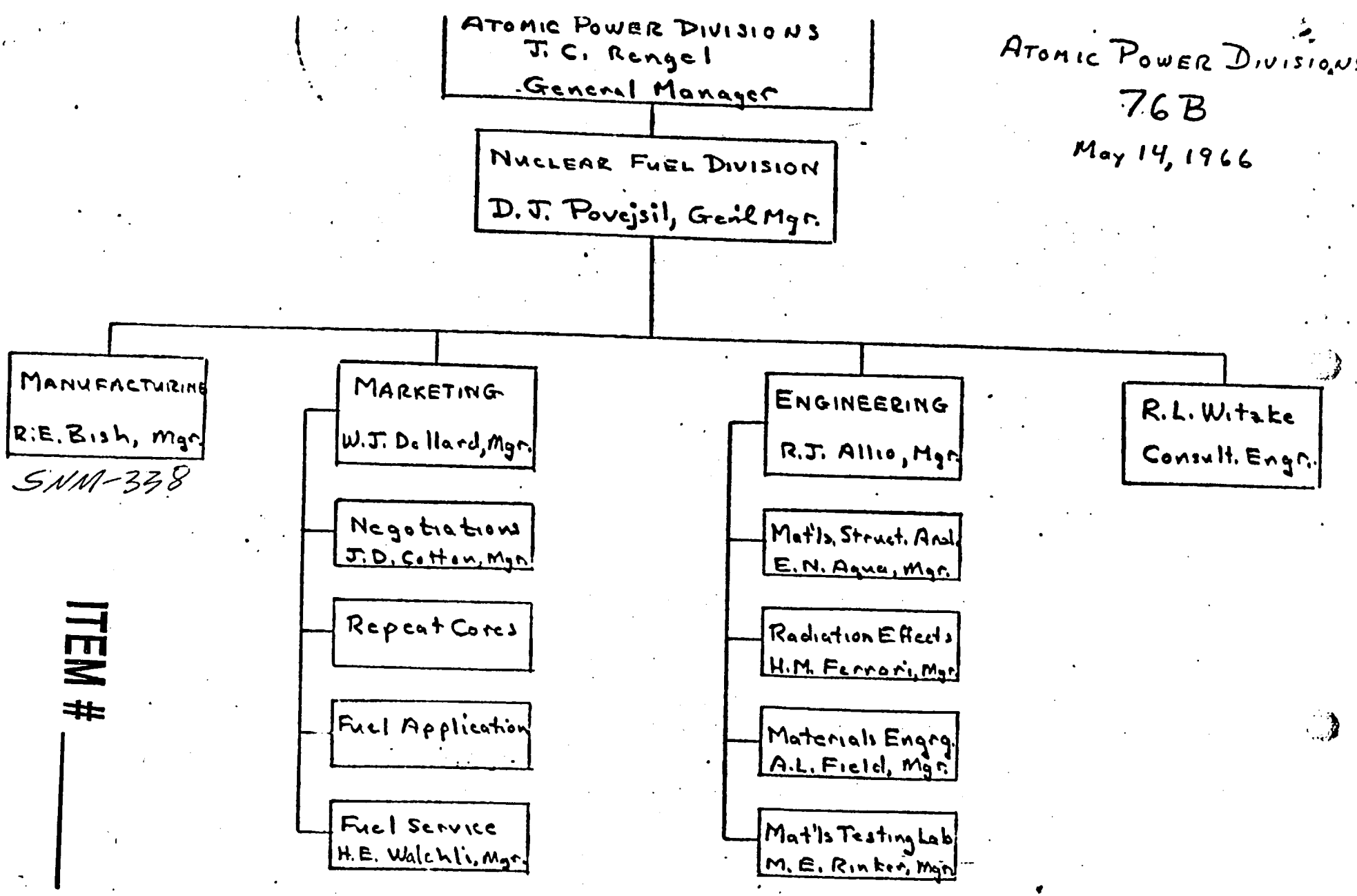
ATOMIC POWER DIVISIONS
76
MAY 14, 1966





ATOMIC POWER DIVISIONS
76 A
MAY 14, 1966

ITEM #



ATOMIC POWER DIVISIONS

76B

May 14, 1966

SNM-338

ITEM #

DML:RLL
70-337

JUN 23 1966

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl P. Schendel
License Administrator

Gentlemen:

This refers to your applications dated November 24, 1965, and March 18 and June 9, 1966, concerning the Uranium Recovery Facility.

In these applications, you have requested that certain information be withheld from public inspection pursuant to Title 10, Code of Federal Regulations, Part 2, "Rules of Practice." In order to withhold such information, you should state your reasons why such information is not required in the public interest and how disclosure of such information would adversely affect the Corporation.

Very truly yours,

Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

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From DO - Hdqrs.

C189

DML DML

RLLayfield:bk DANussbaumer

6-21-66 6- -66

ITEM # 89

UNITED STATES GOVERNMENT

Memorandum

TO : R. W. Kirkman, Director
Region I

DATE: April 21, 1966

FROM : Leo Dubinski, Assistant Director for Materials
Division of Compliance

SUBJECT: ASSISTANCE IN MAKING PRELICENSING INSPECTION OF PLUTONIUM AND URANIUM SCRAP RECOVERY FACILITIES AT NUMEC AND WESTINGHOUSE RESPECTIVELY - SNM 414 DOCKET 70-364 AND SNM 338 DOCKET 70-337

This is to confirm the substance of a telephone conversation between you and R. B. Chitwood on April 19, 1966, relating to the subject matter in that H. W. Crocker would be made available from CO Region III to make the prelicensing inspection for NUMEC's production scale plutonium scrap recovery facility (SNM-414) at Leechburg, Pennsylvania and Westinghouse's proposed uranium scrap recovery facility (SNM-338) at their Cheswick site.

A subsequent discussion between R. Hageman and Mr. Chitwood confirmed that Crocker would be available for this project and will be responsible to you for the conduct of these inspections.

Materials Licensing requested the assistance of Compliance in the prelicensing inspection in accordance with L. D. Low's memorandum to Harold L.Price dated April 30, 1965.

A copy of DML's request for prelicensing inspection of the facility mentioned above is attached for your information.

Attachment:
DML's request for
prelicensing inspec. dtd Apr. 14, 1966

cc: Roy C. Hageman, Director
CO: Region III

ITEM # 90

C/90

UNITED STATES GOVERNMENT

Memorandum

TO : Leo Dubinski
Assistant Director for Materials
Division of Compliance

DATE: APR 14 1966

FROM : Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Materials Licensing

SUBJECT: PRELICENSE INSPECTIONS

DML:RDS

We have recently received two applications for license amendment which we believe involve a significant change in the licensee's operations from a criticality standpoint. Therefore, in accordance with Mr. Low's memo to Mr. H. L. Price dated April 30, 1965, we request that the Division of Compliance conduct sufficient inspections to ascertain whether equipment, organization, and procedures are in accord with the amendment application. The two firms involved are Nuclear Materials and Equipment Corporation and Westinghouse.

NUMEC is proposing a production scale plutonium scrap recovery operation. They are presently licensed for pilot plant scale recovery operations. This is covered in their application dated February 10, 1966, Docket 70-364. Since final action on NUMEC's application could be ready by April 27, the inspection should be made as soon as possible. We have discussed this with Mr. Chitwood and he is attempting to arrange a visit prior to this date.

Westinghouse is proposing an enriched uranium scrap recovery operation at their Cheswick site. This is detailed in their application dated November 24, 1965, as supplemented March 18, 1966, Docket 70-337.

6 092.1

ITEM # 91

C91

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:
DRL:RLL
70-337

MAY 13 1966

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

This refers to your applications dated February 22, 1966, and March 18, 1966, and confirms the discussions held here on April 6, 1966, between your Messrs. E. Barnes, M. Beebe, W. Geiger, and K. Schendel, and Messrs. Robert Layfield, Robert Stevenson and me.

In connection with our review of your application dated February 22, 1966, please provide the information requested in the attachment to this letter. For a more detailed description of the general types of information requested in this attachment, please refer to the draft licensing guides entitled "Nuclear Safety Considerations for a Broad Special Nuclear Materials License" and "Radiation Safety Considerations for Broad Materials License" distributed by the Commission in May 1965. We wish to point out that the information submitted in response to Item 5 of this attachment is for the purpose of permitting the Commission to determine that your facilities, equipment and methods of operation are adequate from the standpoint of nuclear and radiological safety. This information will not be incorporated into the license as a license condition although your operations will be limited generally to the types of operations and technology described. For the mutual benefit of the Westinghouse Electric Corporation and the Commission, such information should be separated to the extent possible from the conditions to be incorporated as license requirements.

In connection with our review of the application dated March 18, 1966, we need the following information:

ITEM # 92

C/92

(5)

1. It is indicated on page 28 that the maximum permissible values listed in Table 6.2.1 are subject to change in accordance with internal review procedures. As discussed in the referenced meeting, please indicate the minimum safety factors that would be incorporated in the determination of new maximum permissible values.

2. You have provided information which indicates consideration given to attenuation afforded by shielding materials in locating the monitor alarm sensor to cover the outside storage area; however, you have not made such demonstration to indicate adequate coverage of areas within the process facility. Please provide this information.

Also, as discussed in the referenced meeting, we do not believe that you have satisfactorily demonstrated the isolating effectiveness of the eight (8) inch carbon block retained between two (2) 0.5 inch thick steel plates, however, since the isolating effectiveness of this combination of materials is not necessary to appraisal of this application, we wish only to inform you that if such materials were to be used for isolation in future applications, further demonstration of their effectiveness would be necessary.

If you have any questions regarding this letter, please contact us.

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Materials Licensing

Enclosure:
Information sheet

DISTRIBUTION:
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C. Luke, DNL

WESTINGHOUSE ELECTRIC CORPORATION
ASTRONUCLEAR LABORATORY
LARGE, PENNSYLVANIA

Docket 70-927

1. Regarding experience, qualifications and responsibilities of key personnel and responsible safety groups, please provide:

   a. Additional information on personnel listed in section 5.3, "Technical Qualifications", in terms of related work experience in former positions.

   b. Minimum qualifications to be required for the following positions listed in section 5.4, "Position Responsibilities": Manager, Industrial Hygiene; Operations Managers; and Nuclear Safety Engineer.

   c. Please state the minimum qualifications for members of the Nuclear Safety Committee, how many and what categories of persons constitute a minimum committee and the required frequency for committee meetings.

2. Please provide a general description of the arrangements and objectives for training of personnel in nuclear safety and plant operating procedures including provisions for instruction prior to their working with special nuclear materials. This should also include your arrangements for continuing training and assessment of personnel capability and performance.

3. Please confirm that (1) non-licensed activities will be conducted in conformance with the license conditions; (2) activities under this license do not extend to the assembly of reactor cores; and (3) changes in manuals such as the health physics manual, nuclear safety guide or emergency procedures manuals will be reviewed by responsible persons and that no changes will be made which will degrade the requirement for written procedures, formal reviews and auditing.

4. As a part of the license conditions, please provide (1) your plans for dealing with accidental criticality or other emergencies, indicating the primary objectives and the means and capabilities for achieving these objectives; (2) general provisions for audits of nuclear and radiological safety requirements; (3) general performance standards for ventilation equipment; (4) general requirements for equipment performance and design of equipment and facilities (e.g., minimum face velocity of hoods, glove boxes, instrumentation for radiological surveys, filtration or effluent control media, room air changes, structural integrity of storage racks, etc.); (5) general requirements for

radiological surveys, and control and measurement of personnel exposure; (6) provisions for leak testing sealed sources containing plutonium; (7) considerations for relocating criticality monitoring sensors and provisions for controlling work areas where individual sensors may become inoperative; and (8) general provisions for effluent control and waste disposal.

5. More detailed description of the areas and activities to be covered by this license. Where criticality monitoring devices are required pursuant to Section 70.24, 10 CFR 70, adequacy of the location of sensors should be demonstrated. Also, where nuclear or radiological safety is a significant factor, consideration given thereto should be demonstrated.

6. Within the description of your emergency procedures, please specify the minimum frequency for practice evacuation drills and testing of emergency power supply for the criticality monitoring system.

7. In Item 4 of page 9 in [illegible], it is implied that the nuclear safety engineer may authorize assembly of an entire reactor. As discussed in the referenced meeting, please amend this application to make it clear that such authority is not extended to the nuclear safety engineer.

Form AEC-592
(4-62)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

E

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania	U. S. Atomic Energy Commission Region I, Division of Compliance 376 Hudson Street New York, New York 10014
3. LICENSE NUMBER SNM-558 (Docket No. 70-537)	4. DATE(S) OF INSPECTION October 5-8, 1965 (Reinspection)

5. The following activities under your license (identified in Item No. 3 above) appear to be in noncompliance with AEC regulations or license requirements, as indicated.

(a) No survey was conducted to evaluate the concentrations of airborne radioactive materials in the restricted area of Building 5-B during the oxidation-reduction operation on rejected pellets, so as to determine compliance with 10 CFR 20.103(a), contrary to 10 CFR 20.101(b), "Surveys".

(b) Surveys conducted to evaluate the concentrations of airborne radioactive materials released to unrestricted areas from the fuel manufacturing exhaust stack have been inadequate to determine compliance with 10 CFR 20.106(a), contrary to 10 CFR 20.201(b), "Surveys".

(c) On September 22, 1965, 112.7 kg of reject UO_2, 2.95% U-235 enrichment, was returned to Nuclear Materials and Equipment Corporation (NUMEC) at Apollo, Pennsylvania, in four shipping containers which were not authorized for use in returning material to NUMEC. This is contrary to procedures of Section 4.1, page 12, of approved amendment application dated November 13, 1964 which requires that reject SNM be returned to the supplier using the same shipping containers, methods, and limitations as those used in receipt of the materials.

ITEM # 93

C193

None

Supplementary page _____ attached.

James E. Ryder
W. H. Crocker
AEC Compliance Inspector

10/29/65
Date

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ L&R HEADQUARTERS.

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-685311

882-995

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 4 1969

DML:CEM
70-337

SNM 338

Westinghouse Electric Corporation
Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

This refers to your application dated October 20, 1969, requesting an increase in the fissile content loading and an increase in the number of packages per shipment for the Model III-B-2-W package licensed by Amendment No. 71-29 to Special Nuclear Material License No. SNM-338.

In connection with our review of this application, we need information regarding:

1. The conditions assumed in the nuclear safety analysis, and

2. Establishment of the adequacy and applicability of the calculational method.

Sincerely,

Original Signed by
Donald A. Nussbaumer

Donald A. Nussbaumer, Chief
Source & Special Nuclear
Materials Branch
Division of Materials Licensing

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N. Doulos, DML
Branch Reading File
Division Reading File

ITEM # 94

OPTIONAL FORM NO. 10

UNITED STATES GOVERNMENT

Memorandum

TO : R. W. Kirkman, Director
Region I, Division of Compliance
New York

DATE: October 18, 1965

FROM : H. W. Crocker, Inspection Specialist (Criticality)
Region III, Division of Compliance, Chicago Herbert W. Crocker

SUBJECT: PART 70 INSPECTION - WESTINGHOUSE ELECTRIC CORPORATION
PITTSBURGH, PENNSYLVANIA
LICENSE NO. SNM-338 (DOCKET 70-337)
INSPECTION DATE: OCTOBER 7-8, 1965

Attached is my account of the inspection of the subject licensee's facilities at Cheswick, Pennsylvania, which was conducted on October 7-8, 1965.

One item of apparent noncompliance was noted in that the licensee returned reject UO_2 powders to Nuclear Materials and Equipment Corp. (NUMEC) at Apollo, Pennsylvania, in drum cages that were not authorized for their use in this shipment. Management acknowledged this condition and indicated that remedial action will be taken to prevent a recurrence of the violation. The information to include on the Region I Form AEC-592 to the licensee for this apparent item of noncompliance is attached.

The naval reactor fuel operations of the Atomic Fuel Division (AFD) have been consolidated into the Atomic Equipment Division (AED). It appears that the naval reactor fuel activities may be discontinued in about a year unless the licensee can improve their competitive position in the business.

No recent organizational changes have been made in the Atomic Power Division (APD) which handles the commercial reactor fuel fabrications. However this Division is expanding operations to include an uranium recovery plant for internally generated scrap and they plan to build a plutonium fuel element fabrication plant at Cheswick. The plutonium plans are "Company Confidential" at this time.

The licensee has a sound nuclear safety program at both the AED and APD facilities. They appear to provide thorough review of their nuclear safety evaluations before process changes or new processes are activated. Operational management provides close supervision

- continued -

ITEM # 95

95

(11)

of all SNM operations and the program includes frequent in house compliance inspections which are supported by adequate follow up corrective action where deficiencies are noted.

Enclosure:
Inspection Report (orig. & 7 cys)

PART 70 INSPECTION

BY: Hilbert W. Crocker, Inspection Specialist (Criticality), Region III, Division of Compliance — October 18, 1965

TITLE: PART 70 INSPECTION - WESTINGHOUSE ELECTRIC CORPORATION
PITTSBURGH, PENNSYLVANIA
LICENSE NO. SNM-338 (DOCKET 70-337)
INSPECTION DATE: OCTOBER 7-8, 1965

INTRODUCTION

1. An announced inspection was conducted at the subject licensee's facilities on October 7-8, 1965, by J. E. Hyder, Region I, and H. W. Crocker, Region III, Division of Compliance. The purpose of the inspection was to determine the adequacy of the licensee's nuclear and radiological safety programs and practices, and their status of compliance with conditions of license SNM-338 and the pertinent Federal Regulations.

2. This report covers the nuclear safety activities of the licensee's operations. Mr. Hyder's report will be devoted to the radiological safety aspects of the operations.

3. One apparent item of noncompliance was noted in that the licensee shipped UO_2 powder to the Nuclear Materials and Equipment Corporation (NUMEC), Apollo, Pennsylvania, in drum cages not authorized for the particular shipment. Paragraphs 21 through 23 contain the details of this situation.

4. The Naval Reactor Fuel Shop activities in the Atomic Fuel Division (AFD) have been consolidated into the Atomic Equipment Division (AED). The SNM fabrication activities in this production area are being decreased. Paragraphs 9 and 10 contain details of this organizational change.

5. The licensee's commercial reactor fuel element fabrication program in the Atomic Power Division (APD) will be expanded to include an uranium recovery plant for APD generated scrap and a plutonium fuel element fabrication facility. The plutonium fabrication plans are considered "Company Confidential" at this time.

DETAILS

Scope

6. The nuclear safety program and practices for the APD and AED facilities were discussed with Messrs. F. Cellier, W. E. Piros, and R. J. French. Mr. Piros accompanied the inspectors on the tour of the AED and APD facilities.

- continued -

ITEM # _____

7. Discussions were held with the following individuals:

F. Cellier, Manager, Manufacturing Engineering, RE&M, APD
R. E. Tschiegg, Licensing Coordinator, PS, APD
R. J. French, Manager, Nuclear Design, RE&M, APD
P. M. Sarles, General Manager, AED
W. E. Piros, Supervisor, Industrial Health & Safety, IR, AED

8. The in-plant nuclear safety audit reports for AED and APD were reviewed by the inspector. Shipping and receiving practices for SNM were also spot checked.

Organization

9. The SNM activities under license SNM-338 consist of commercial fuel element fabrication in the APD facilities and naval reactor fuel element fabrication in the AED facilities. The naval reactor fuel facilities were formerly in the Atomic Fuel Division (AFD). Organizationally the AFD component was consolidated into AED on October 1, 1965. Mr. P. M. Sarles is General Manager of AED. The naval reactor fuel facilities are assigned to P. B. Thomas, Manager of Manufacturing, AED. The revised organization pertaining to the naval fuel work is presented in Exhibit A.

10. In this reorganization, Mr. Piros continues to be responsible for the industrial health and safety at the Cheswick Site. In addition he continues to be directly responsible for the nuclear safety evaluations and inspection within AED.

11. The organization within the APD component has remained basically unchanged since the previous (April 29-30, 1965) inspection. Exhibit B contains the organization chart for the Reactor Engineering and Materials Department which has responsibility for the commercial fuel manufacturing.

AED - Naval Reactor Fuel Shops

12. The operations in this area (buildings #4, #5, #5A and #5C) have been cut back significantly since the last inspection. The Roll Bond and Fuel Filler sections of the process have been shut down and the equipment is to be decontaminated and sold. Only the fuel element fabrication, assembly, and inspection areas are in active use. It appears that these areas will continue in operation approximately one year to complete the current reactor fuel contracts. Mr. Piros indicated that the fuel shops may be shut down completely at that time and the building used for non nuclear activities. However, Mr. Sarles stated that they intend to continue reactor fuel operations if they can obtain contracts for additional work.

- continued -

13. A tour of the manufacturing area showed that all SNM processing and storage was being done according to the nuclear safety conditions of License SNM-338 and 10 CFR 70. The entire plant area was neat and orderly in appearance.

14. Mr. Piros stated that the improper storage of waste solutions in the analytical laboratory noted in the previous inspection had been corrected. He also said that his nuclear safety audits have verified that the solutions have not been improperly stored since the last inspection.

APD - Commercial Reactor Fuel Shops

15. The commercial fuel area (building #5B and #5D) was toured in the company of Mr. Piros and Mr. Cellier. The conversion of UO_2 powders to UO_2 sintered pellets is accomplished in four processing lines. Lines 1A and 1B were being used for preparing 3.35% enriched UO_2 pellets for the SENA Reactor while lines 2A and 2B were used for 3.75% enriched UO_2 pellets for SENA. A combination of administrative batch and slab geometry controls are used for nuclear safety control of these operations. The processing lines are similar except that lines 1A and 1B utilize a wet process for the pellet press feed while lines 2A and 2B use a dry process. The wet process uses a press feed of UO_2 plus 1% Carbowax and 1% polyvinyl alcohol while the dry process uses a mix of UO_2 and Sterotex binder. The dry process system is cheaper to operate and the licensee hopes to convert all lines to this process. The wet process, while more costly to operate, has added flexibility in that high density UO_2 pellets can be obtained from UO_2 powders of various particle sizes and properties. When UO_2 feed powders can be obtained within the desired specifications on a consistent basis, the need for the wet process will disappear.

16. The pellet production area is equipped with conveyors for in process storage and transfer of UO_2 powder feed containers and pellet slab trays. The equipment is laid out to provide a minimum of manual SNM handling.

17. The pellet loading of fuel tubes, welding, inspection, and fuel pin storage utilizes slab geometry for nuclear safety control. These areas are separated from the pellet production area by a wall barrier. Again, operational stations are laid out to minimize the manual handling of fuel materials.

18. The inspection tour of the commercial fuel production area revealed that all operations were being conducted within the conditions of License SNM-338 and 10 CFR 70. General housekeeping and appearance of the area was excellent.

- continued -

Building 7 - Commercial Fuel Development

19. At the time of the inspection, there was no active SNM work in progress. The internal area of the building was being remodeled to provide a better layout for the developmental activities. An improved SNM storage vault layout is included in the remodeling program. The development laboratory is capable of duplicating all plant operations on a reduced scale. At the time of the inspection all SNM was located in the storage areas.

20. It was noted that the unsafe geometry sink in the laboratory has been labeled "no uranium bearing materials in this sink". The nuclear safety control in the sink area was questioned during the previous inspection.

SNM Shipping and Receiving

21. During the September 23-24, 1965, inspection at the Nuclear Materials and Equipment Corporation (NUMEC) it was noted that APD had returned reject UO_2 powder to NUMEC in drum cages owned by Nuclear Fuel Services, Erwin, Tennessee (NFS).

22. In this shipment, APD #104, four 55-gallon size drum cages containing 112.7 kg UO_2 enriched to 2.95% in U235 were sent to NUMEC via the NUMEC truck. The drum cages were NFS cages and are designated as BE 1078. Each cage was provided with a centrally located steel pipe with flanged and bolted top. Each cage was loaded with 2 - 3½ gallon size sealed polyethylene bottles containing UO_2 powders. The shipment was made on September 22, 1965. The drum cage used for the shipment has been authorized for NFS use on UO_2 powder shipments, of this type. However, the inspector was unable to locate an authorization for APD's use of these cages for SNM shipments to NUMEC. The inspector discussed this situation with Messrs. Cellier, Piros and Ward (SNM shipping supervisor). Mr. Ward stated that he believed Mr. Bossick, Manager of Production Planning and Control, had received approval from NFS that NFS would be responsible for the shipment. Mr. Bossick, Ward's supervisor, was on vacation and not available for discussion. Mr. Cellier did some additional checking into the matter and stated that no such agreement had been made with NFS and he said that APD had erred in using the NFS drums. He stated that APD did have DML authorization to return reject material to NUMEC but in the NUMEC containers used for UO_2 shipments.

- continued -

23. The inspector pointed out to management that the use of NFS drums for return of UO_2 to NUMEC appeared to be in violation of conditions of License SNM-338, since no such authorization was included in the subject license. The licensee is only authorized to return reject SNM to a supplier in the shipping containers, methods and limitations as used in the receipt of the material as stated in section 4.1, page 12, of approved amendment application dated 11-13-64. Messrs. Cellier and Piros acknowledged that the shipment was a violation of license conditions. Mr. Cellier stated that the use of authorized shipping containers and practices would be emphasized to the employees concerned. He also said that he was sure Mr. Bish, Manager of APD, would take additional action to prevent a recurrence when he returns to the plant from a business trip on October 11, 1965.

24. During the inspection of the shipping-receiving area it was noted that the licensee had received two truck load shipments of UO_2 enriched to 3.35% in U235 from NFS. About 4640 kg of UO_2 was received in the 130 drums from NFS. Each drum contained 2 - 5 gallon sealed cans. Inside each can was a 3½ gallon polyethylene bottle containing UO_2. A centrally located sleeve was provided in each drum to house the 5 gallon sealed cans. In most drums the central sleeve was steel pipe equipped with a flanged and bolted lid seal. According to shipping personnel, about 6 of the drums contained a 16 gauge open end sheet metal tube which housed the 5 gallon sealed cans. Mr. Ward said that the open end sleeved drums are not often received from NFS. The inspector observed the opening of one drum cage which contained an open end sleeve. NFS has authorization for use of both styles of containers used in these shipments.

Nuclear Safety Audits

25. Mr. Piros stated that he conducts a weekly formal nuclear safety audit of the AED processing area. He maintains a written log of the audits. The inspection covers proper storage and handling of fuel materials and includes actual checks at the processing stations to determine that batch limits are not being exceeded. He indicated that most violations that are detected are corrected at the time of the audit. In cases where immediate correction is not obtained or the violation is significant, Mr. Piros then contacts upper management by letter. Mr. Piros has the authority to stop SNM operations if he determines the operation is unsafe. The inspector reviewed the audit reports and they indicate that prompt action is provided by AED Operations on corrections recommended by Mr. Piros.

- continued -

26. Mr. Cellier reviewed the nuclear safety audit functions provided within APD. Each shift supervisor checks every SNM operating station to determine that the proper limits are posted and that the station inventory is within these limits. This is done on every shift and the inspector reviewed the written records of randomly selected operational periods to verify the use of the procedures. In addition Messrs. Bish, Cellier, Koppel, and Bossick make a plant tour each Monday. This tour consists of checking the nuclear and industrial safety condition of the plant. Records are maintained of the inspections. When an item for correction is found, it is noted in the written record, and the item is again noted and recorded the following week if it has not been corrected. When deficiencies are corrected they are removed from the written record. During the audit the storage conveyors and equipment are checked for compliance with the posted limits and the running SNM inventory logs at the processing stations are reviewed to determine if the limits have been exceeded. The written records of the inspections were reviewed by the inspector and it appears that corrective follow up action is provided in cases where deficiencies are noted.

Nuclear Safety Evaluations

27. Mr. Piros stated that all new operations or changes of operation are evaluated for nuclear safety control before the operational procedures and equipment are used with SNM. For the AED operations the contractor for naval reactor fuels furnishes Mr. Piros with basic nuclear safety data. Piros rechecks these values by independent calculations and then performs the specific evaluations for the processing stations. These calculations are then reviewed by E. C. Barnes, Director of Radiation Protection, or R. J. French, Manager of Nuclear Design. A final review is made by the Nuclear Safeguards Committee before the new or revised operations are adopted for use, or submitted to DML for license authorization if required.

28. Mr. Piros said that the membership to the AED Nuclear Safety Committee is currently being revised because of the shifting of personnel in job responsibilities due to the consolidation of AFD into AED.

29. In the APD facility Mr. Cellier is responsible for initiating the nuclear safety review of new or revised process operations. Cellier contacts J. M. McGaugh, Manager of Nuclear Fuel Design, to provide the nuclear safety evaluations. Mr. P. Lacey makes the nuclear safety evaluations and these are checked by McGaugh. In addition Mr. French provides a judgment type review regarding the fundamental basis used in the calculations. Messrs. Cellier and Bish review the evaluations for compatibility with the equipment operations and the Criticality Safeguards Committee provides final review before the analysis is sent

- continued -

to E. C. Barnes for submission to DML for license action. If license action were not required, the evaluation would be adopted after final review by the committee. Mr. Lacy has been responsible for the specific nuclear safety evaluations for about two years and his qualifications were summarized in the report of the inspection of October 28-29, 1964.

Evacuation Drills

30. A complete Cheswick Site practice evacuation drill was held in June, 1965. Mr. Piros said that the evacuation was completed in an orderly manner.

31. Mr. Piros also stated that the gamma monitor-alarm systems are checked for operability with a radioactive source twice per year. No written records are kept of the tests, but Piros indicated that this will be initiated. He also indicated that the monitors are given a weekly visual check for operability (condition of indicator lights) by his technicians.

Employee Training

32. All new employees are given a one hour orientation on health physics and nuclear safety. In addition the supervisors review the nuclear safety hazards and controls for specific work areas with the employees. Additional instructions in nuclear safety are provided the employees whenever current operations are modified or new operations are introduced. Mr. Cellier said that they do not maintain written records for the instructional program.

33. Mr. Piros stated that all employees at the Cheswick Site were given reorientation information on plant emergency procedures before the plant evacuation test in June, 1965.

Inventory

34. As of September 30, 1965, the following SNM inventory was on hand:

AED 717 kg U235 (93% U235 enrichment)

APD 1.6 kg Pu rods (encapsulated)
194. kg U235 (< 5% U235 enrichment)
4.5 kg U235 (> 5% < 75% U235 enrichment)
77.9 kg U235 (> 75% U235 enrichment)

- continued -

35. Mr. Tschiegg stated that the Material Status Report, Form AEC-578, for the operational period of January 1, 1965, to June 30, 1965, was sent to the Commission on July 30, 1965.

Future Activities

36. Mr. Cellier said that design plans have been formulated for a building at the Cheswick Site to provide for fabrication of plutonium bearing fuel elements. He said they are also actively working on a license amendment for submission to DML in regard to the facility. Mr. Cellier said that their plans toward plutonium fuel element fabrication are considered "Company Confidential".

37. He also stated that the uranium scrap facility is scheduled for installation in Building 5B early in 1966. The recovery system will use solvent extraction columns for uranium purification. A preliminary sketch of the operations is attached as Exhibit C.

38. Mr. Cellier also stated that the APD Facility is scheduled for fuel element fabrication and assembly operations through 1969. Current sales efforts are being directed at the 1970-1972 period. Future projects include the following:

Contract	Start	Complete
Conn. Yankee	10/65	12/66
Zorita Core (Spain)	6/66	12/66
Yankee Core #6	11/65	8/66
SELNI Core #4	4/66	

39. The present SENA fuel order will be completed in February, 1966, and the Southern California Edison fuel will be finished in August, 1966.

Summary Discussion

40. A summary discussion was held with Messrs. Cellier and Piros at the APD Facility. The licensee management was informed of the apparent item of noncompliance in that they shipped UO_2 powders in containers which they had not received authorization for use by DML. Mr. Cellier acknowledged that this error on their part constituted a violation of license conditions and he stated that corrective measures will be taken to prevent a recurrence of the violation.

41. Mr. Cellier also said that the licensee's plans to enter the plutonium fuel element fabrication business is considered "Company Confidential" at this time.

- continued -

42. The lack of records for tests of the gamma monitor system was also discussed. Mr. Piros acknowledged that a written record of such tests is useful information and he indicated that records will be maintained for this activity.

43. Mr. Hyder presented two items of noncompliance in regard to the air sampling program. These items are discussed in Mr. Hyder's report.

44. A summary discussion was also held with Messrs. Pitzer Sarles, and Piros at the AED Facility. These persons were advised of the contents of the APD discussion. Mr. Sarles stated that he was vitally interested in deficiencies within APD as well as AED since by being the ranking Westinghouse official at Cheswick he had total site responsibility.

45. All members of management appeared to be vitally concerned with both the radiological and nuclear safety of their facilities. Management indicated that corrective action would be taken to remedy the apparent deficiencies in their programs.

Enclosures:
Exhibits A, B & C

0939

Westinghouse Electric Corporation

3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

March 29, 1968

U. S. Atomic Energy Commission
Washington, D. C. 20545

Attention: Dr. J. A. McBride, Director
Division of Materials Licensing

Dr. P. A. Morris, Director
Division of Reactor Licensing

Subject: Corporate Information for Licenses

Gentlemen:

We are submitting current information applicable to the Westinghouse Electric Corporation Licenses listed at the end of this letter. Corporate information was originally sent to you in a letter addressed to Mr. R. W. Lowenstein, Assistant Director of Regulations, dated April 3, 1964. The corporate information was subsequently updated annually. The last previous letter, dated March 21, 1967, was transmitted jointly to the addressees of this letter.

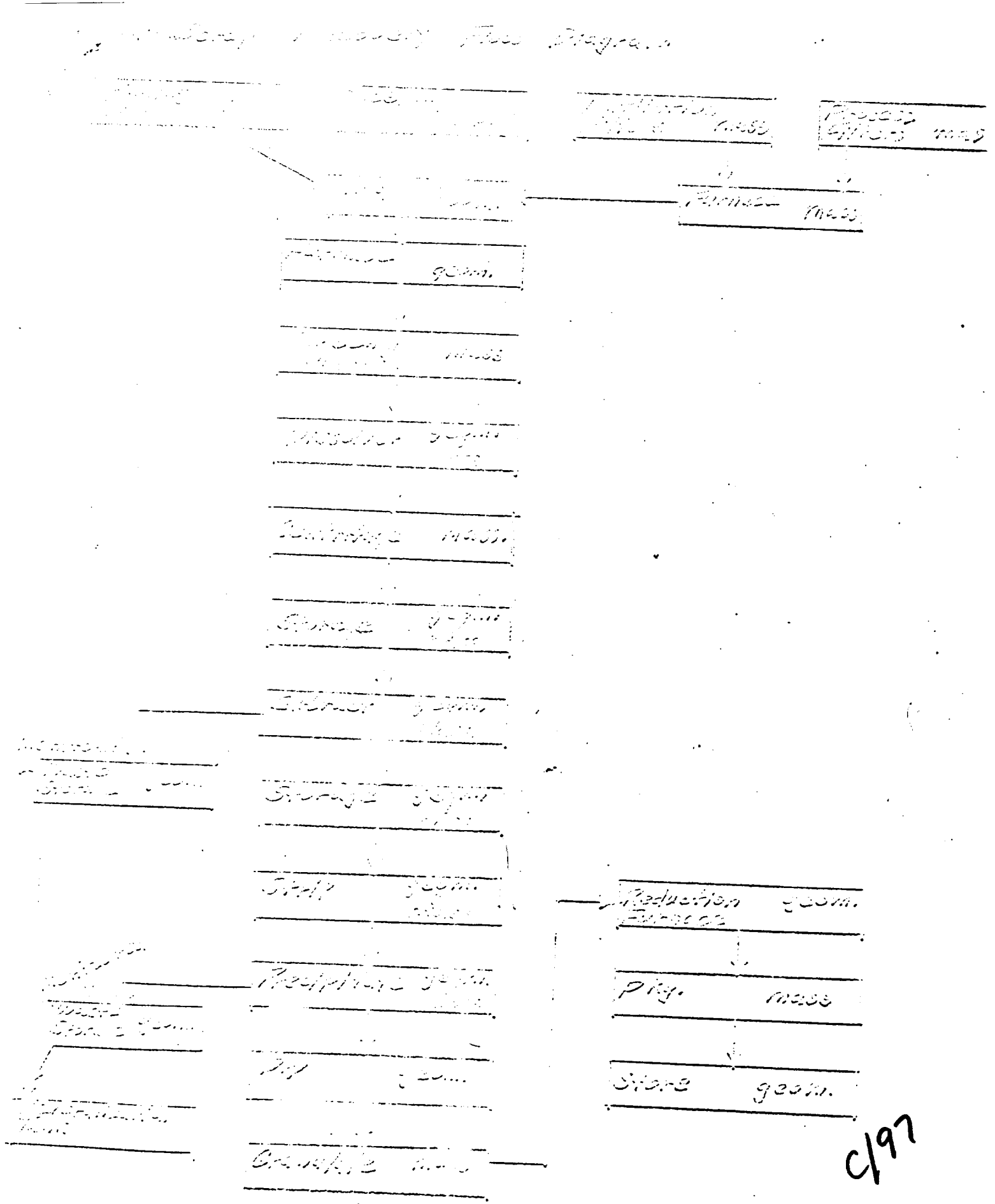
The Westinghouse Electric Corporation is incorporated in the Commonwealth of Pennsylvania, with principal offices located at 3 Gateway Center, P.O. Box 2278, Pittsburgh, Pennsylvania 15230. All of the Directors and Officers are citizens of the United States of America.

Westinghouse is a publicly held corporation whose stock is traded on principal securities exchanges. It is not owned, nor is there (to the best of our knowledge) an appreciable ownership of Westinghouse stock, by an alien, foreign corporation or foreign government. No individual is known, from the records of the Corporation, to own one percent or more of its capital stock.

Westinghouse has entered into Lease Agreement No. 245 with the U. S. Atomic Energy Commission.

c/96

ITEM # 96



c197

ITEM # 97

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DML:RLL
70-337

OCT 1 8 1965

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. Karl R. Schendel
License Administrator

Gentlemen:

As requested in your letter dated August 18, 1965, enclosed are six (6) copies of the superseded page 3 of your application dated August 17, 1965.

Very truly yours,

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials
Branch
Division of Materials Licensing

DISTRIBUTION:
Doc. Rm. Suppl.
Br. & Div. rfs
Compliance (2) HQRs
Enclosure:
As stated above

98

ITEM # 98

From CO - Hdqrs.

I

Westinghouse Electric Corporation

3 Gateway Center
Box 2278, Pittsburgh 30, Pa

August 18, 1965

U. S. Atomic Energy Commission
Division of Materials Licensing
Washington, D.C., 20545

Attention: Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
For Div. of Compliance

Subject: Replaced page for "Amendment of SNM-338, Docket 70-337, For Shipment of Scrap Containing Uranium Fully Enriched in the Isotope U-235," dated August 17, 1965

Gentlemen:

Enclosed you will find six copies of a new page 3 that replaces the page 3 sent to you on August 17, 1965, in the subject application. Would you insert these copies of the new page in the subject amendment application and return the old page (6 copies) to us.

Very truly yours,

C. P. Skillern
License Administrator

Attachment: New page 3
6 copies transmitted

ITEM # 99

C/99

From CO - Hdqrs.

Westinghouse Electric Corporation

3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

October 14, 1965

U. S. Atomic Energy Commission
Division of Materials Licensing
Washington, D. C., 20545

Attention: Mr. Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch

Reference: DML-RLL 70-337

Gentlemen: For Div of Compliance

Westinghouse hereby requests amendment of License SNM-338, Docket 70-337, to extend the expiration date as follows:

4. May 31, 1966

All other conditions of the license will remain the same.

If you have any questions, please write to me at the above address or telephone collect, 412-391-2800, Extension 3449.

Very truly yours,

Karl R Schendel

Karl R. Schendel
License Administrator

6 copies transmitted

ITEM # 100

From CO - Hdqrs.

3415

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

IN REPLY REFER TO:
DML:RLL
70-337

APR 7 1965

Westinghouse Electric Corporation
3 Gateway Center
Box 2278
Pittsburgh, Pennsylvania 15230

Attention: Mr. G. F. Shilkret
License Administrator

Gentlemen:

This refers to your application dated March 8, 1965, requesting amendment of Special Nuclear Material License No. SNM-33B to authorize the fabrication of NFSA Rods and Assemblies.

The basic criteria for nuclear safety of fuel assembly storage are (1) 12 inches edge-to-edge spacing between assemblies to assure isolation under fully-flooded conditions and (2) subcriticality of single, water-moderated and reflected assemblies. However, you have not provided any information concerning the possibility of neutron interaction between partially moderated assemblies. This condition might result from wetting of the assembly arrays by a fire sprinkler system. Accordingly, please submit a nuclear safety analysis for fuel assembly storage taking the above comments into consideration.

On page 12 of this application, regarding the safe slab thicknesses for UO_2 powders, it is stated that the limits will be 5.7 inches (3.75 w/o U-235), 6.1 inches (3.35 w/o U-235) and 6.5 inches (2.95 w/o U-235). It is further stated that these limits are within the permissible limit for 6 w/o (U-235) uranium powder as shown in K-1019, Rev. 5, Table XIII. In reviewing this table, we determine a thickness of 4.5 inches which is less than any of the above quoted safe slab thicknesses. Please clarify.

Very truly yours,

DISTRIBUTION:
Doc. Rm.
Br. & Div. rfs
Compliance (2) RQMs
Suppl.
C. Luke, ML
R. Layfield, ML

Donald A. Nussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Materials Licensing

c/101

ITEM # 101 From CO - Hdqrs.

70-337
Sec Div of Compliance

CAROLINAS VIRGINIA NUCLEAR POWER ASSOCIATES, INC.
PARR, SOUTH CAROLINA 29066

T. BABB
ANAGER

AREA CODE 803
PHONE NO. 345-2287

October 8, 1965

United States Atomic Energy Commission
Division of Materials Licensing
St. Elmo and Norfolk Avenues
Bethesda, Maryland

Attention: Mr. D. A. Nussbaumer, Chief
SS Nuclear Branch

Gentlemen:

Subject: Request for Allocation

The Carolinas Virginia Nuclear Power Associates, Incorporated, License No. DFR-8 ZDA, requests an allocation for the following quantities of special nuclear material in the form of UF_6 under SNM Lease No. 201:

U (kg)	U-235 (kg)	Enrichment (%)
2240	44.8	2.0

These SS materials will be used in the fabrication of replacement fuel assemblies for the CVTR, Parr, South Carolina. Under the terms of contract AT(30-1)-2289 the use charges will be waived. Westinghouse will fabricate the special assemblies at Cheswick, Pennsylvania, under the terms and conditions of License No. SNM-338, Docket 70-337.

We would like to schedule the UF_6 withdrawal for November 1, 1965; therefore expeditious processing of this request will be greatly appreciated.

Very truly yours,

H. T. Babb
Manager, CVNPA

HTB/msh

CC: Mr. H. J. McAlduff - Oak Ridge Operations Office
Materials Licensing Officer

ITEM # 102 c/102

50-144

CAROLINAS VIRGINIA NUCLEAR POWER ASSOCIATES, INC.
PARR, SOUTH CAROLINA 29066

H. T. BABB
MANAGER

AREA CODE 803
PHONE NO. 345-2257

May 21, 1965

For Dir of Compliance

Ernst 6/4
Pilone
166

U. S. Atomic Energy Commission
Division of Materials Licensing
St. Elmo and Norfolk Avenues
Bethesda, Maryland

Attention: Mr. D. A. Nussbaumer, Chief

Request for Allocation

Dear Mr. Nussbaumer:

The Carolinas Virginia Nuclear Power Associates, Inc. requests an allocation for the following quantities of special nuclear material:

U (kg)	U-235 (kg)	Enrichment (%)
57.6	2.19	3.8
33.0	1.55	4.7

These SS materials will be used in the fabrication of special fuel assemblies for the CVTR, Parr, South Carolina, under Contract AT(30-1)-2289. Westinghouse will fabricate the special assemblies at Cheswick, Pennsylvania, under the terms and conditions of License No. SNM-338, Docket 70-337.

Since the UF_6 withdrawal is scheduled for June 15, 1965, the expeditious processing of this request will be greatly appreciated.

It was the recommendation of Mr. Seebeck of SROO to procure the materials under the lease rather than stations basis so that all material in the reactor will be on lease basis.

Very truly yours,

H T Babb

H. T. Babb
Manager, CVNPA

HTB/msh
CCs: Messrs. H. J. McAlduff - CROO
L. T. Palmer - SROO
R. G. McGrath - WASHD

clp3

ITEM # 103

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DOCKET NO. 70-43, -48, -337, -5
70-698, -761, -793 + -8
50-22, -34 + -87
40-3413, -4739, + -972

Westinghouse Electric Corporation
3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

Charles H. Weaver
Group Vice President
Atomic, Defense & Space Group

For Div of Compliance

September 7, 1965

FYI Holsan
for Cleveland
sd

Mr. Harold L. Price
Director of Regulation
U.S. Atomic Energy Commission
Washington, D.C., 20545

Dear Mr. Price:

Reference: Control No. 1129 (3/2/64)
Letter C. H. Weaver to R. W. Lowenstein

Effective September 15, 1965, the signature of Mr. Karl R. Schendel or, as an alternate, Mr. E. C. Barnes, is authorized on Westinghouse license applications, amendment requests, or related correspondence. Mr. Schendel has been appointed License Administrator, replacing Mr. C. P. Skillern. He will report to Mr. E. C. Barnes, Director of Radiation Protection. Their address continues to be Westinghouse Electric Corporation, P. O. Box 2278, Pittsburgh, Pennsylvania, 15230.

There will be no change in the procedures outlined in my letter of March 2, 1964. On the attached page is a list of the current licenses involved.

Very truly yours,

Charles H. Weaver

Attachment: List of Licenses

30 copies transmitted

c104

ITEM # 104

Control No. 1129

September 7, 1965

LICENSES ADMINISTERED UNDER
CONTROL NO. 1129

Atomic Power Division	SNM-38, 576, 738, 783, 785, 770; CX-6, 11; 37-497-9; 37-9442-3; SMB-152; TR-2
Atomic Fuel Division and Atomic Power Division	SNM-338; SMB-355
Atomic Equipment Division	37-5809-1; 37-5809-2
Research Laboratories	37-497-2; 37-497-6; 37-497-10; SNM-47, 697; SMB-550
East Pittsburgh Divisions	37-497-13
Astronuclear Laboratory	37-5809-3; 37-9442-1; 37-9442-2
Semi-Conductor Division	37-7934-1

MAY 19 1965

Westinghouse Electric Corporation
Pittsburgh, Pennsylvania [illegible]

Attention: Mr. [illegible], Manager
Administrative Services Dept., [illegible]

Gentlemen:

This letter relates to the discussion Mr. [illegible] of our Region III office in Oak Brook, Illinois held with Mr. [illegible] and Mr. [illegible] following the inspection conducted on April 29-30, 1965 of the criticality control aspects of the activities authorized under AEC Special Nuclear Material License SNM-[illegible].

As noted during the discussion, it appears that certain of your activities were not conducted in full compliance with AEC requirements. The item and reference to the pertinent requirement are listed in item [illegible] of the attached form AEC-592.

It is noted that the overdue Material Status Report was filed on March 12, 1965 and that additional action was taken prior to the inspection by initiation of a new record keeping system intended to preclude recurrence of a similar deficiency in the future. No further correspondence is requested regarding this matter.

Should you have any questions concerning this matter, you may communicate directly with this office.

Sincerely yours,

Robert W. Kirkman, Director
Region I

ITEM # 105

Enclosure:
AEC-592

OFFICE ▶	cc: [illegible], License Administrator - w/enclosure				
SURNAME ▶	bcc: [illegible]		Source & Special Nuclear Materials Branch	Cleveland	Kirkman
DATE ▶			Criticality Branch	5-19-65	

Form AEC-318 (Rev. 9-53) Enforcement Branch U.S. GOVERNMENT PRINTING OFFICE 16-62761-3

Form AEC-592
(6-63)

UNITED STATES ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE

IA

1. LICENSEE	2. REGIONAL OFFICE
WESTINGHOUSE ELECTRIC CORPORATION Pittsburgh, Pennsylvania	Region 1, Division of Compliance 376 Hudson Street New York, New York 10014
3. LICENSE NUMBER	**4. DATE(S) OF INSPECTION**
[illegible] (Docket No. [illegible])	April 29-30, 1965 (Reinspection)

5. The following activities under your license (identified in Item No. 3 above) appear to be in noncompliance with AEC regulations or license requirements, as indicated.

Material Status Report Form AEC-575 was not submitted to the Commission by January 31, 1965 for the six months period ending December 31, 1964, contrary to the requirements of 10 CFR 70.53, "Material Status Reports".

Form for ITEM # 106

Supplementary page None attached.

H. H. Troyer
AEC Compliance Inspector

5/29/65
Date

106

ORIGINAL: LICENSEE. COPIES: ☐ CO REGION ☐ CO HEADQUARTERS ☐ L&R HEADQUARTERS.

U.S. GOVERNMENT PRINTING OFFICE: 1969—O-[illegible]

882-995

PART 70 INSPECTION

BY: Hilbert W. Crocker, Inspection Specialist (Criticality)
Division of Compliance

DATE: May 14, 1965 ~~April 29, 1965~~ 1965

TITLE: PART 70 INSPECTION, WESTINGHOUSE ELECTRIC CORPORATION, PITTSBURGH, PENNSYLVANIA - LICENSE NO. SNM-338 (DOCKET NO. 70-337)
INSPECTION DATE: April 29-30, 1965

INTRODUCTION

1. An announced inspection was made of the subject licensee's facilities at Cheswick, Pennsylvania on April 29-30, 1965 by H. W. Crocker, Region III, Division of Compliance. The purpose of the inspection was to determine the adequacy of the licensee's nuclear safety program and to ascertain their status of compliance to the 10 CFR 70 Regulations and conditions of License No. SNM-338.

2. One item of apparent noncompliance was noted in that the licensee failed to submit the required Material Status Report, Form AEC-578 covering operations ending December 31, 1964 within the authorized 30-day period as required by 10 CFR 70.53. The form was subsequently submitted and corrective measures were adopted by the licensee to prevent a recurrence of the violation prior to the nuclear safety inspection. A Form AEC-592 has been issued in regards to this apparent item of noncompliance which is described in paragraph 23.

3. Use of an unsafe geometry sink in the Research and Development Laboratory was also questioned. The sink is not normally used for SNM activities but management recognized the desirability of improving the nuclear safety control on the vessel since enriched uranium is handled in the laboratory. See paragraph 11 for details.

4. In the course of the inspection of the facilities, it was noted that the licensee had received a shipment of UO_2 from Nuclear Fuel Services at Erwin, Tennessee. Thirteen of the sixty-seven 55-gallon drums containing UO_2, 4.08% enriched, were equipped with undersized (½ inch diameter) bolts and nuts on the barrel closure ring. The ICC regulations state that this type 55-gallon drum is to be provided with a 5/8 inch diameter bolt and lock nut. Paragraph 12 contains details of this condition.

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5. The licensee plans to install a new scrap recovery line at Cheswick by the end of 1965 and will build a pilot plant for irradiated fuel reprocessing studies at Waltz Mill, Pennsylvania by the middle of 1966.

6. The Atomic Fuel Division Shop (WAFD) was also toured during the inspection. This area is under Pittsburgh Navy Reactor Office (PNRO) for health and safety review. However, the responsibility for health and safety review is in the process of being transferred to the Director of Regulation. In the Analytical Chemistry Laboratory of WAFD two items were noted: (a) two five-inch diameter poly bottles of waste solution were stored in contact with 6 empty bottles and none of the bottles were identified as to SNM content, and (b) solid waste in 2-liter poly bottles stored on a cart was not identified as to SNM content. These items have been referred to Mr. William Reese, Chief of Safety Branch, PNRO. See paragraphs 16 and 17 for details of these conditions.

DETAILS

Scope

7. The plant nuclear safety programs and SNM handling practices were discussed with Messrs. Bish and Piros. Messrs. Bish and Tschiegg accompanied the inspector on the tour of WAPD facilities while Mr. Piros was present during the WAFD tour

8. Primary personnel contacts consisted of the following:

R. E. Bish, Mgr. Fuel Mfg. and Development, WAPD
P. J. Koppel, Superintendent, FMD, WAPD
R. Brown, Supervisor, Dev. Lab., FMD, WAPD
W. R. Castonguay, Mgr. Plant Services, WAPD
R. E. Tschiegg, Licensing Coordinator, PS, WAPD
R. G. Pitzer, Mgr. Marketing, WAFD
W. E. Piros, Supervisor Ind. Hygiene, WAFD
H. K. Lambersky, Supervisor Anal. Lab., WAFD

Organization

9. There has not been any recent changes in organization within the Westinghouse Atomic Power Division (WAPD) or the Westinghouse Atomic Fuel Division (WAFD). The WAPD facilities have been licensed for several years and the transfer of health and safety review of the WAFD facilities to the Regulatory Program will bring these activities under license. In fact the WAFD is now licensed for one specific fuel core job.

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Process

10. The additions to the low enriched fuel fabrication and assembly areas have been completed since the last inspection (October 28-29, 1964). The licensee is currently converting UO_2 powders to sintered pellets for several fuel orders. Process line 1A is processing Southern California Edison fuel (3.4 w/o enriched in U-235), line 1B is processing Consolidated Edison fuel (4.08 w/o enriched in U-235) and lines 2A and 2B are used for Consolidated Edison fuel (3.26 w/o enriched in U-235). The processing lines are segregated to prevent mixing of enrichments. In addition, all jars of UO_2 powder feed materials are identified as to enrichment and are color coded for each enrichment.

11. The process development area in Building 7 is currently used for highly enriched uranium fuel studies. A large open sink of unsafe geometry (~20" x 20" x 24") is located in the processing area. The inspector questioned the use of it and discussed the associated hazard potential related to possible sink usage with Messrs. Bish and Brown. They said that SNM is not normally handled in the sink but acknowledged that the nuclear safety control on the vessel is worthy of review. Mr. Bish said they would improve the safety control on the sink - probably by the installation of a cover to eliminate its use when handling SNM.

12. At the fuel receiving area of Building 5B it was noted that the licensee had received a shipment of UO_2 from Nuclear Fuel Services (NFS) of Erwin, Tennessee. Inspection of the 55-gallon drum cages in this shipment revealed that 13 of the 67 drums were fitted with an undersized bolt and nut assembly (½ inch diameter) on the drum closure ring. The ICC regulations state that a 5/8 inch diameter bolt and lock nut are to be fitted to the closure ring. This type of deviation from ICC regulations by NFS has been noted on several other occasions and NFS personnel were contacted in regards to these past occurrences. The following data identifies the current shipment of material from NFS:

Material: UO_2, 4.08 w/o enriched in U-235
NFS Order No.: SO #3197 - lot #3 and lot #4
Shipper Invoice No.: #1624
Customer Order No.: 54-CH-45524
Date Shipped: 4-23-65
Date Received: 4-26-65
Net Wt. UO_2: 2454. kg
Drums Shipped: 67

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13. The low enriched fuel fabrication and assembly business at WAPD is expected to continue at a high production output through 1966 based on current orders on hand. In addition, fuel scrap recovery operations should be active early in 1966. The pilot plant for initial irradiated fuel recovery studies is expected to be activated by the middle of 1966. The pilot plant will be located at Waltz Mill, Pennsylvania.

14. Mr. Piros accompanied the inspector on the tour of the Navy Reactor Fuel Shop which is operated by WAFD. WAFD has been granted a licensed authorization for fabrication of one high enriched uranium fuel core. This work has not yet commenced. The authorization for the job was granted on March 1, 1965 by DML and was based on license application submissions dated February 9, 24 and 25, 1965.

15. Many of the operations in the Navy Reactor Fuel Shop are classified, therefore, individual operations in this area are not described in this report.

16. During the tour of the WAFD processing areas it was noted that two 5-inch diameter poly bottles containing Analytical Chemistry Laboratory waste solution were stored in contact with 6 empty 5-inch diameter poly bottles. The bottles were in an upright position in a close packed array which was maintained by a wall chain. None of the bottles were properly identified as to their contents, and it was difficult to visually establish which bottles were full or empty. Mr. Lambersky stated that the bottles contained less than 100 g U-235 total based on laboratory sample analysis. This situation was discussed with Messrs. Piros and Lambersky. They agreed that the integrity of 5-inch diameter geometry should not be compromized in storage of SNM and that all bottles should be properly identified as to SNM content. It is recognized that the hazard potential in this laboratory is low due to the limited amounts of SNM that are handled. Mr. Piros and Mr. Lambersky stated that the situation would be corrected immediately by providing adequate bottle content identification and proper spacing between bottles. The empty bottles are being removed from the laboratory area.

17. Two 2-liter poly bottles of solid waste materials were observed on a storage cart. One bottle of waste was labelled as containing 292 g U-235. The second bottle had a number 523 written on it. Upon being questioned as to the identity of the second bottle, Mr. Lambersky stated that this bottle of waste did not contain SNM. He said that the bottle would be identified as to its contents. He further stated that a control of 350 g U-235 has been established for the cart.

Mr. Piros said that the deficiency in bottle identification and control would be corrected.

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18. Except for the lack of identification on items discussed in paragraphs 16 and 17, all other SNM containers observed at both the WAPD and WAFD facilities were properly identified. In addition, all SNM processing stations were prominently posted with prescribed SNM operation limits and operating procedures.

19. Since the WAFD Chemistry Laboratory is still under RNRO for health and safety review, the inspector, on return to his office related the information in paragraphs 16 and 17 to Mr. William Reese, Chief of Safety Branch, PNRO by telephone on May 5, 1965. Mr. Reese stated that he would follow-up the corrective action taken by WAFD on these items.

Inventory

20. At the time of the inspection the licensee possessed the following SNM inventory:

WAPD	567. kg U-235
	559. g Pu
WAFD	834. kg U-235

Control

21. During November, 1964 each area of the Cheswick site conducted separate emergency evacuations. In January, 1965 an entire site emergency evacuation was conducted. Mr. Piros, who has safety responsibility for the Cheswick site, stated that he felt the evacuations were successful. In the January evacuation it was noted that the alarms in the Atomic Equipment Division (WAED) facilities (no SNM activities are conducted at WAED, but the facility is located next to WAPD and WAFD) are not of the same sound as the other plant evacuation alarms. Mr. Piros said that the WAED alarms are being replaced with alarms identical to those in WAFD and WAPD.

22. Weekly formal plant audits are conducted at WAPD and WAFD for general and nuclear safety. Records are maintained for the audits in which safety infractions are noted. The inspector reviewed the tabulation of audits.

23. A review of the Material Status Report (AEC-578) for SNM-338 showed that the report for operations conducted from July 1, 1964 to December 31, 1964 was not submitted to the Commission until March 12, 1965. This appears to be in noncompliance with 10 CFR 70.53 in that the report should

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have been filed with the Commission within 30 days after the end of the report period, December 31, 1964, rather than on March 12, 1965. Mr. Castonguay and Mr. Tschiegg stated that the delay was due to the changeover from hand calculated data to IBM calculated data. They also said that the IBM system is now in effect and that this correction in their procedures should eliminate any recurrance of this delay in reporting. The inspector reviewed some of the IBM generated data associated with the SNM accountability work.

Summary Discussion

24. Summary discussion were held with Messrs. Tschiegg, Bish and Castonguay and Messrs. Piros and Pitzer at the conclusion of the inspection.

25. The licensee was informed of the apparent item of noncompliance relating to the untimely submission of the Form AEC-578 to the Commission for the operational period ending December 31, 1964.

26. Licensee personnel appeared to fully recognize the nuclear safety control problems associated with the unsafe geometry sink at Building 7, and the storage of waste solutions and solids at the WAFD Chemistry Laboratory. At the conclusion of discussion of these items, management again emphasized that immediate corrective action would be taken in each case to insure that adequate nuclear safety control is maintained.