



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

2000-0018

1

RESPONSE TYPE  FINAL  PARTIAL

REQUESTER

Sandra Pierce

DATE

DEC 21 1999

**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 A** 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 B** 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 B** 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 \*  You will be billed by NRC for the amount listed.  None. Minimum fee threshold not met.  
 \$ 119.80  You will receive a refund for the amount listed.  Fees waived.

\* See comments for details

**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)**

The fees for processing your request are as follows:

Search: \$ 64.40  
 Review: 33.80  
 Duplication: 21.60  
**TOTAL: \$119.80**

SIGNATURE - FREEDOM OF INFORMATION ACT AND PRIVACY ACT OFFICER

Carol Ann Reed

**APPENDIX A  
RECORDS ALREADY AVAILABLE IN THE PDR**

<b><u>NO.</u></b>	<b><u>DATE</u></b>	<b><u>ACCESSION NUMBER</u></b>	<b><u>DESCRIPTION/(PAGE COUNT)</u></b>
1.	07/25/97	9707290080	Letter from B. Haertjens to NRC, submitting 30 day notification of occurrence at Parks Township site. (4 pages)
2.	07/17/97	9802020130	Letter from D Zeff to R. Bellamy regarding July 9 though July 11, 1997 inspection. (2 pages)
3.	08/14/97	9802030021	Letter from A. Randolph Blough to Daniel Young, transmitting Inspection No. 070-00364/97-002. (62 pages)
4.	09/04/97	9709090410	Letter from H. Miller to Daniel Young transmitting Notice of Violation. (7 pages)
5.	09/23/97	9710010148	Letter from A. Randolph Blough to Daniel Young, transmitting Enforcement Conference Report No. 070-00364/97-003. (6 pages)
6.	01/23/98	9802030019	Letter from J. Joyner to Daniel Young transmitting Inspection No. 070-00364/97-002. (20 pages)

**APPENDIX B  
RECORDS BEING RELEASED IN THEIR ENTIRETY**

<b>NO.</b>	<b>DATE</b>	<b>DESCRIPTION/(PAGE COUNT)</b>
1.	06/20/97	E-mail from Todd Jackson to R. Bellamy and D. Orlando, subject: Info call from B&W re: airborne releases. (1 page)
2.	07/07/97	E-mail from Todd Jackson to R. Bellamy, J. Kottan and D. Orlando, subject: Personnel Contamination at B&W Parks. (2 pages)
3.	07/08/97	Preliminary Notification of Event or Unusual Occurrence PNO-I-97-041 (2 pages)
4.	07/08/97	E-mail from Brian Smith to FCSS group, subject: B&W Event Notification. (1 page)
5.	07/14/97	Fax from M. Miller to N. Orlando, attaching minutes from the 7/1/97 meeting on contamination incident. (9 pages)
6.	07/14/97	Memo from N. Orlando to R. Nelson, subject: Contamination Event at B&W Parks Township. (1 page)
7.	07/15/97	Memo from N. Orlando to R. Nelson, subject: Additional Information on the Contamination Event at B&W Parks Township. (1 page)
8.	07/18/97	E-mail from D. Orlando to R. Nelson, subject: Contamination Event at B&W PTS. (1 page)
9.	11/28/97	E-mail from R. Bellamy to T. Jackson, subject: B & W Parks Update. (1 page)
10.	Undated	E-mail from D. Orlando to R. Nelson, subject: Update on B & W Contamination Event. (1 page)

From: Todd Jackson  
To: RRB1, TWD2.TWP7.DAO *R Bellamy, Orlando*  
Date: 6/20/97 1:15pm  
Subject: Info call from B&W re: airborne releases

I got a call today from B&W Parks (Bernie Hartjens and Ken Conway) to inform NRC of recent problems they encountered and have resolved with increased concentration of Pu-239 in stack releases from a part of building A. About April 28, 1997 was first indication of increase in stack RF9, which exhausts building air from Fab 6. Fab 6 is the portion of the building where the Pu fuel scrap recovery operation was performed, involving dissolving of scrap in acid. The room is one of the more contaminated on site. For a couple days the stack air filter showed release at 60% of the 10CFR20 appB, Table 2 limit for Pu-239 (2E-14  $\mu\text{Ci/ml}$ ). Releases back to normal by May 9 or 10 (normal has been about 30-35% of the limit). Increased again by late May, peaking at about 120% of limit. Tested filters in HVAC train and found one that failed DOP test, replaced, but did not solve problem. Work in Fab 6 had been using wall scabblers, which generates a great deal of dust and produces noticeable vibration on structures. Stopping use of the wall scabblers helped but did not solve problem.

At Station 8, and air sampler outside and near the SSE edge of the site, there was measured on one filter 100% of the 2E-14  $\mu\text{Ci/ml}$  limit corresponding to the period of max stack sampler reading. No other station had any indication of increase. Station 8 has returned to its normal reading of 5-10% of limit.

Found HVAC room air inleakage was drawing airborne contamination into the system fan downstream of the filters, thus bypassing them. Leaks were through wall where pipe and conduit had been removed during dismantlement and inadequately sealed. Plugging the holes solved the problem.

Corrective actions include issuance of a CAR (corrective action request) to plant operations by the Health & Safety Dept for poor ALARA practices and release of unfiltered effluent air, to reduce HVAC fan speed to historical operating speed (they had boosted it to increase delta P, although they stated they never exceeded manufacturer recommended operating limits), put an air sampler into the fan room to get early warning of similar problem, and inspect the room for evidence of dust intrusion. They also replied to my questions that they would be considering this experience when planning future work that could affect HVAC flows and balances, and that they had no reason to believe there had been any unmonitored releases. I found no requirement to report this situation, it was called in for info only.

Todd

*B/1*

From: Todd Jackson  
To: RRB1, JJK, TWD2.TWP7.DAO *R Bellomy, J Kottan, D Orlando*  
Date: 7/7/97 4:54pm  
Subject: Personnel Contamination at B&W Parks

Bernie Hartjens, Safety Mgr at B&W Parks Township plant, called and left me a message on July 3 asking that I call him back. I was out of office on Thursday and returned his call this morning. On June 26, 3 techs were performing scabbling operations in the SE corner of Fab 6, building A at the site (this is the room where acid dissolvers were used to recover scrap Pu when they made fuel). This room is the most contaminated on site. The workers were using hand scabblers, wearing double PCs (paper over cloth suits, double plastic gloves), using full-face airline respirators in continuous flow mode. When the workers exited the area they found they were contaminated, with spots of skin contamination and unexpectedly high Pu-239 activity on breathing zone (BZ) sample. The HP at the exit called for help, and eventually the workers were all found to have positive nasal smears (highest of the 3 was 24 dpm). Licensee therefore instituted two days of urine sample collection, and the samples were sent for analysis on June 30. They stated the Pu was known to be soluble in this room, and therefore decided to not collect fecal samples. The BZ sample indicated about 200 DAC-hrs exposure, or about 500 mrem, when considering a PF of 1000 (B&W's program uses 1000 instead of the 2000 permitted by 10CFR20).

Urinalysis results from their contract lab showed less than or equal to minimum detectable activity (MDA) of 0.1 pCi/l, which relates to 276 mrem for the highest CEDE to one of the individuals. The person doing the scabbling work (handling the scabblers) had the highest estimated dose, which the licensee is assigning as 600 mrem CEDE at this point. They plan to check and confirm the calculations using INDOSE code.

A 30 day report will be submitted because of the effluent concentration generated by this occurrence. On June 27 a 1-day effluent sample showed the average release concentration for 6/26-27 was  $2.5E-12$   $\mu\text{Ci/ml}$  (10CFR App B, Table 2, Col. 1 value is  $2E-14$   $\mu\text{Ci/ml}$ ), and the weekend sample covering 6/27-morning 6/30 had average  $7E-14$   $\mu\text{Ci/ml}$  (although this result still had to be decayed another 48 hrs per procedure to eliminate all background interference, and would therefore probably be corrected to about 5 or  $6E-14$   $\mu\text{Ci/ml}$ ). Current effluent concentration is around  $1E-14$   $\mu\text{Ci/ml}$ , whereas baseline before 6/26 was about  $0.6E-14$   $\mu\text{Ci/ml}$ .

I specifically asked about any criticality concerns from the material which had been discovered, and whether B&W had someone knowledgeable and experienced review the circumstances. Licensee stated they had considered criticality hazard and that the highest Pu-239 in dust concentration they had found was 1  $\mu\text{Ci/g}$ , that criticality would not be a concern with less than 200 g, and that the total quantity of material creating the contaminated area was estimated at 1 g Pu-239. [Although the area was contaminated to greater than  $2E6$  dpm/100  $\text{cm}^2$ , the high specific activity ( $6.13E-2$  Ci/g, or  $1.36E11$  dpm/g) of Pu-239 means a very small quantity of material produces a large amount of radioactivity]. The licensee believes this material concentrated in a crack in the block wall, somehow wicking from liquid on the floor at some time in the past. This process is not occurring presently (no process fluids are around), and the wall has been and is stable. They plan to not remove any more material from this wall at this time, although dust has been vacuumed up in the Fab 6 room.

Corrective actions planned by the licensee include use of engineered

*B/D*

controls (essentially vacuums) on all scabbling equipment in the future, stopping all decon work in Fab 6 pending an ALARA review of the work to be done, and plans to NOT scabble the high contamination area discovered (at this point it is expected that scabbling will not enable decon of the concrete block). This wall is expected to be handled as contaminated waste. Licensee also plans to perform more thorough characterization of rooms prior to decon, an action which probably have alerted them to the high contamination levels encountered, if it had been performed for this work. The licensee plans a 30 day report based on 10 CFR 20.2203(a)(3)(ii), although my reading of the regulation is that no report is required unless they calculate an offsite dose of at least ten times the 100 mrem limit (at site boundary, irregardless of someone being exposed). The App. B value is an annual average, not an instantaneous limit. I have discussed with Jim Kottan who also does not see a requirement to report. I will talk to Nick Orlando and the licensee tomorrow to followup on this, but want to send this email out today with the info I have in hand in case of any inquiries you may get.

Todd  
5308

CC: GCP, ARB, MCR.

7/8/97

10:51 @ Paulham -

scabbling to site to report the  
to decontaminate the site  
- don't want to see with them  
- don't want to overwhelm them with 3 people

July 8, 1997

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-I-97-041

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by Region I staff (King of Prussia, Pennsylvania) on this date.

Facility

Babcock & Wilcox  
Babcock & Wilcox  
Parks Township, Pennsylvania  
Dockets: 07000364

Licensee Emergency Classification

Notification of Unusual Event  
Alert  
Site Area Emergency  
General Emergency  
X Not Applicable

Subject: PERSONNEL CONTAMINATION

On June 26, 1997, 3 technicians at the Babcock & Wilcox Parks Township, PA, facility were decontaminating a concrete block wall in building A, in the room where acid dissolution was used to recover scrap plutonium (Pu) when fuel was manufactured at the plant. The plant is shut down and being decontaminated in anticipation of decommissioning the site. The workers were using a hand scabblers (which strips off the surface layer by hammering it), wearing double protective clothing (paper over cloth suits, double plastic gloves), using full-face airline respirators in continuous flow mode. When the workers exited the area they found they were contaminated, with spots of skin contamination and unexpectedly high Pu-239 activity on breathing zone (BZ) sample (1.51E5 times the Class W Pu-239 Derived Air Concentration, or DAC). The workers were all found to have positive nasal smears (highest of the 3 was 24 dpm). The licensee therefore instituted two days of urine sample collection, with the samples sent for analysis on June 30. The licensee decided not to collect fecal samples because the Pu-239 in this room is known to be soluble based on the process used there. The BZ sample indicated about 226 DAC-hrs exposure for the 1.5 hours of work, or about 565 mrem, when considering a respiratory protection factor of 1000 (B&W's program uses 1000 instead of the 2000 permitted by 10CFR20).

Urinalysis results from the licensee's lab showed less than or equal to minimum detectable activity (MDA) of 0.1 pCi/l, which the licensee correlates to 276 mrem for the highest CEDE (to the person holding the scabbling machine). The licensee plans to assign each person the highest calculated dose of 600 mrem CEDE, and also plans to check and confirm the calculations using the INDOSE code.

Corrective actions planned by the licensee include use of engineered controls (essentially vacuums) on all scabbling equipment in the future, stopping all decontamination work in the affected room pending an ALARA review of the work to be done. The licensee does not plan to further scabble the high contamination area discovered. The licensee also plans to perform more thorough characterization of rooms prior to decontamination.

Region I plans to dispatch an inspector to the site on July 9, 1997, to review licensee actions and follow-up to the personnel contamination.

B/B

*Items 1*

This information is current as of 1:00 p.m. on July 8, 1997.

Region I Public Affairs is prepared to respond to media inquiries.

The Commonwealth of Pennsylvania has been informed.

Contact: TODD JACKSON  
(610) 337-5308

JIM KOTTAN  
(610) 337-5214

**From:** Brian Smith  
**To:** fcss group  
**Date:** 7/8/97 9:37am  
**Subject:** B&W Event Notification

This is FYI as part of the IMNS regional coordination effort.

Region I reported that B&W (Parks Township, PA) notified them of 1 issue. A message was left on Todd Jackson's voice mail that described a contamination event. On 6/26/97, three techs were performing some scabbling in an area of the facility where plutonium was handled in the past. The techs were wearing double paper over cloth pc's with full face respirators. When they were leaving they area, they frisked and detected contamination. Nasal smears were positive for Pu. Two day urinalyses were taken and sent out for processing on 6/30/97. The highest estimated exposure is 276 mrem CEDE. The region is drafting a PN to be out later today. The region may send an inspector out later today. B&W believes that Pu may have concentrated in some cracks in the past and was released during the work. All work in the area has been stopped.

B/4



DATE: 7/14/1997

CONTACT: MARIE T. MILLER <sup>7/14/97</sup>  
SENIOR HEALTH PHYSICIST  
610-337-5205  
FAX: 610-337-5269

FROM: U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
475 ALLENDALE ROAD, KING OF PRUSSIA, PA 19406

MESSAGE TO: Nick Orlando, LLDP

TELECOPY NUMBER: 301 415 5399

NUMBER OF PAGES: 9

VERIFICATION NUMBER:

**REASON FOR FACSIMILE:**

REQUESTED \_\_\_\_\_

FOR INFORMATION \_\_\_\_\_

FOR ACTION'  X  (\* Informal request at this time)

Nick,

We have a commitment for a root cause, corrective action plan, SAB review and ALARA review -- are there any licensing issues that need to be addressed?

Please take a look at some of the basic info that Mark and I collected as a result of the reactive inspection at B&W, Parks Township. Based on what B&W knew before the incident and the effluent increases the days before the incident, should a Decon Plan (DP) been submitted for NRC approval. Levels were significantly higher to both workers and the public per 70.38. Was this situation included in the DP approved as part of the License Renewal? Would a DP be required for Commission approval now?

B/S



## INTERNAL CORRESPONDENCE ONLY

**B&W Nuclear Environmental Services, Inc.**  
a McDermott company

TO: Distribution

FROM: D. M. Fogel

File No. LET040.797  
or Rev.:

SUBJECT: Minutes from the 1JUL97 Meeting  
on the Fab-6, 26JUN97 Contamination Incident

DATE: 3JUL97

On July 1, 1997, a meeting was held to discuss the status of the investigation on the June 26, 1997 Fab-6 contamination incident. The following paragraphs comprise the minutes of the meeting.

### ITEMS/FACTS PRESENTED

1. Surveys have been performed by H&S in Fab-6. The results indicate that the bottom course of wall blocks (approximate length of 5 feet) in the southeast corner of Fab-6 is contaminated to greater than 1,000,000 dpm/100 cm<sup>2</sup>. The levels decrease to >100 dpm/100 cm<sup>2</sup> but < 100,000 approximately 5 feet away from the bottom course of block. The survey data has been incorporated into a color coded drawing which clearly indicates the contamination levels in the area of concern.
2. A sample of the scabble dust from the southeast corner of Fab-6 was submitted to the radiochemistry laboratory for analysis. The results indicate a concentration 6.7 µCi (Pu alpha)/gram dust. It is estimated that 60 to 70 pounds of scabble dust (approximately 5 gallons) remain on the floor of the southeast corner of Fab-6.
3. H&S performed a DOP test on the Fab-6 (RF-9) HEPA filters on July 1, 1997. The filters did pass the test.
4. The GA sample extracted from the Fab-6 Fanroom after the incident did not show any elevated radionuclide concentration. Smears taken on the Fanroom equipment did not show any increase over the previous (pre-incident) surveys.
5. Preliminary results indicate that the decon technicians each received approximately 600 mrem based on the BZ data. The *urinalysis* on the technicians should be received late on July 2nd or early on July 3rd. The dose the technicians received will be based on the *urinalysis* data.

### RECOVERY/ACTION PLAN

1. Fab-6 will be cleaned (decontaminated) to the pre-incident levels. This cleanup will be performed as soon as practical. An ALARA review of the cleanup procedure will be performed.
2. The existing rad-vac will be used to vacuum Fab-6. The equipment will be refurbished prior to initiating the work. The HEPA filter on the rad-vac will be DOP tested prior to beginning the cleanup.
3. An Engineering Release will be prepared to describe the exact methodology to be used during the recovery effort.

## Page 2 of 2

4. The rad-vac will be placed in an enclosure during use. The enclosure will be exhausted by means of a clean-air machine. The clean-air machine will exhaust to room air which will be exhausted through the RF-9 system. This provides for four separate stages of HEPA filtration. BZs will be located on the exhaust of the rad-vac and the clean air machine to monitor the radionuclide concentrations in these specific air streams.
5. Cleanup will proceed from the northern end of Fab-6 to the southern end. Fab-6 currently is divided by a plastic curtain. The northern end of Fab-6 was minimally impacted.
6. The cleanup of the scabble debris on the floor of the southeast corner will be addressed first when the southern end of Fab-6 is decontaminated. Various methods were discussed on how the cleanup of the highly contaminated scabble dust might be most effectively accomplished. This activity requires further evaluation and discussion. A special ALARA meeting will be held prior to initiating the cleanup of the scabble dust.
7. The respiratory protection needed to perform the cleanup was discussed. It was agreed that supplied air would provide the required level of protection for the cleanup work. The use of "bubble suits" was considered. The "bubble suits" may be used if the air monitoring data obtained during the cleanup so indicates.
8. No further decontamination of the lower southeast corner of Fab-6 will be performed. Following the cleanup, characterization of the wall will be done (for radwaste classification) and then the contamination will be fixed on the wall. Paint or other equivalent media will be used to ensure the contamination does not again become airborne.

Distribution:

D.P. Bartoe  
T.A. Bauman  
H.D. Burkett  
D.E. Ciuca  
D.M. Connor  
K.C. Conway  
R.C. Flitton  
J.C. Galiszewski  
L.E. Galo (Project Engineering Files)  
B.L. Haertjens  
A.K. Kennedy  
L.J. Ozimek  
J.R. Polyak  
W.J. Ross  
D.K. Sgarlata  
D.R. Smith  
M.R. Straub  
G.P. Toplak  
E.W. Vigna  
D.B. Young

To: D. R. Smith

From: K. C. Conway KCC

Subj: Future Fab 6 Work 07/08/97

Further work in Fab 6 is banned, until further notice. Locks with positive H&S control over the keys will be installed on all access doors by the end of the day 07/08/97. Remediation activities have been on hold since 06/26/97.

Resumptio.. of work in Fab 6 will require the following actions to be completed:

- . A detailed procedure with engineering and process controls shall be prepared and submitted for H&S review and approval.
- . ALARA meetings with all concerned personnel shall be held to discuss the work and the work procedure. Occupational and environmental contamination control shall be the major focus of the meeting. An ALARA meeting shall be conducted for each RWP covering activities in Fab 6.
- . H&S shall require a specific RWP for area entry and survey.
- . No RWP shall cover all activities in Fab 6. Specific RWPs shall be issued for specific work areas and work activities. For example the cleanup in the southern portion of the room will require its own specific RWP.
- . A higher degree of prwork survey shall be required of suspect and highly suspect areas. A charecterization plan shall be developed. The plan shall address room contamination distribution, including depth distribution.

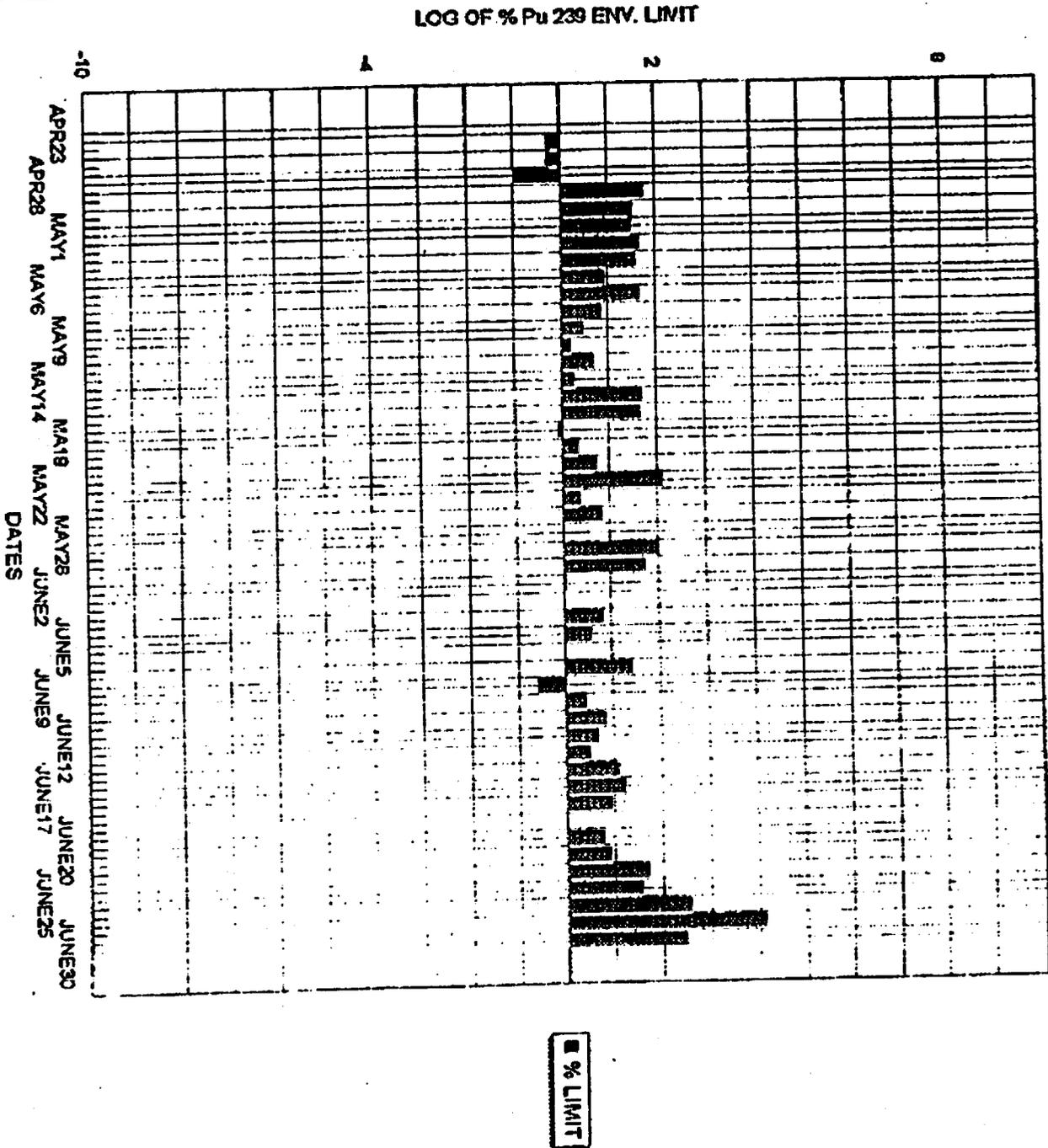
#### Discussion

Fab 6 contains activity levels that range up to several 10's of millions of dpm of alpha emitting transuranics per 100 cm<sup>2</sup>. The Pu 241 activity is 7 times the alpha activity levels. These activity levels and quantities require filtered glove boxes in operational facilities due to the risk of air contamination. The measures to control airborne contamination shall provide a very high degree of control. The material readily causes significant levels of airborne activity. Minor work in the area on 07/03/97 caused stack levels of 400% of the stack release criteria.

CC: D.E.Ciuca, J. R. Polyak, B. L. Haertjens, D. M. Fogel, D. W. Zeff, J. C. Galiszewski, D. M. Connor, C. R. Ferguson

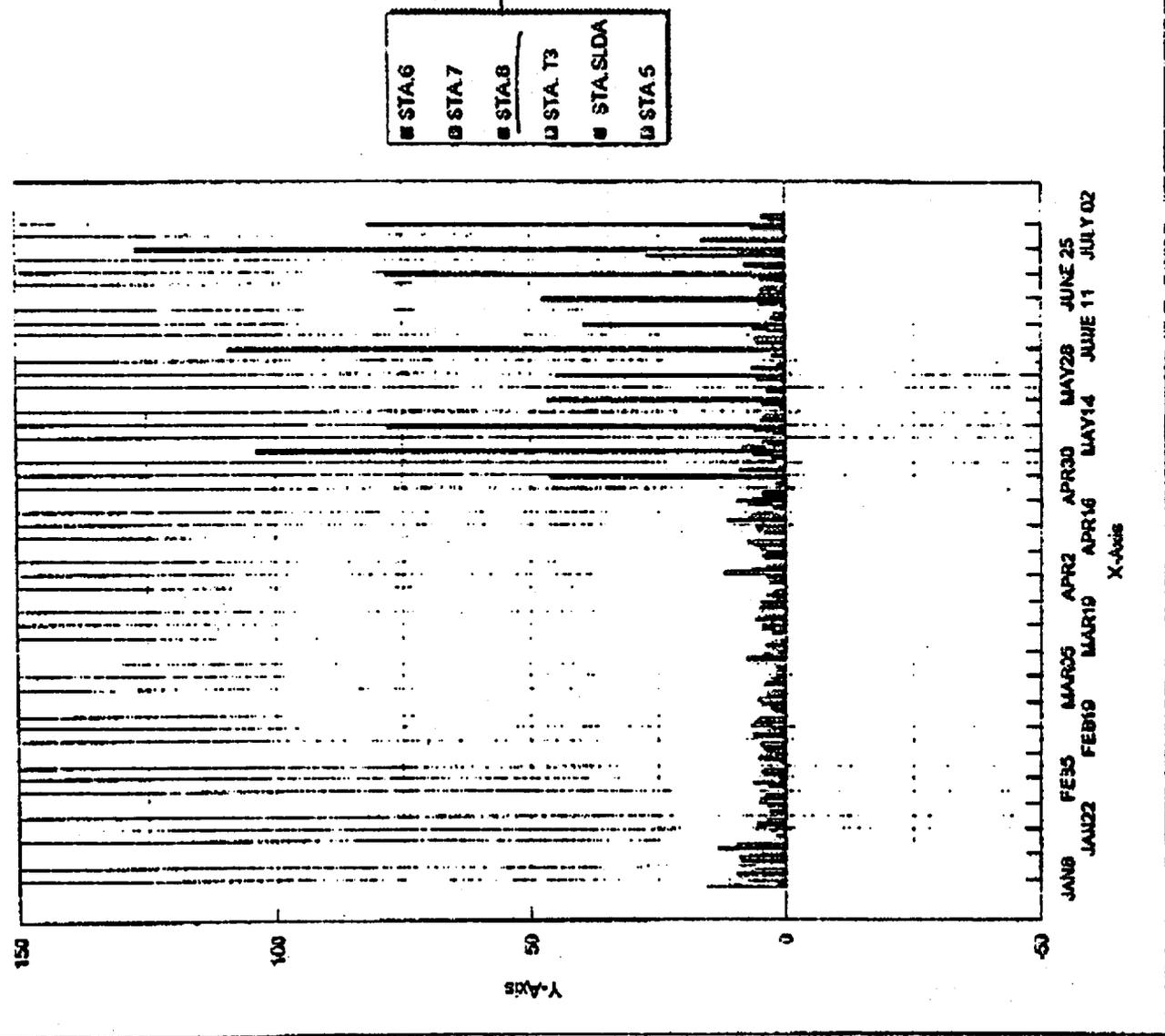
# RF9 STACK RESULTS

LOG OF % Pu 239 LIMIT



2E-14-1997  
Pg. 239

# 1997 Parks Env. Stations



ENVIRO-CARE SAMPLING PROGRAM - RADIOLOGICAL DATA SUMMARY  
 ENVIRO-CARE WASTE STREAM ID: 0541-08 (PAF)  
 BUILDING A

Data Analysis by B&W NESI Nuclear Environmental Laboratory.

ISOTOPE	CONCRETE   CHEM Lab/170		CONCRETE		PAPER/PAS		METALLICS		AVG	% of Total Activity	CONCRETE*		Units
	Hot Cell/AT282	PR3806	PR3806	PR3833	Feb 1-8	PR3806	Feb 1-8	PR3806			Feb 6 Bmt	PR3833	
Americium-241	05.P0019-001	05.P0020-001	05.P0028-001	05.P1444-001	08.P1485-001	4.37E-01	3.90E+01	2.43E+02	8.88E+03	2.30E+03	2.30E+03	2.30E+03	PC/g
Cobalt-60	1.16E+01	9.61E+00	3.68E+00	2.96E+00	5.99E-01	5.60E+00	2.10E-01	2.50E-01	3.63E+02	3.63E+02	3.63E+02	3.63E+02	PC/g
Cesium-137	4.35E+01	1.81E+00	2.70E-01	1.14E+00	1.74E-01	9.39E+00	1.00E-01	2.20E-01	5.63E+02	5.63E+02	5.63E+02	5.63E+02	PC/g
Uranium-234	3.23E+00	2.29E+00	4.84E-01	1.04E+00	2.22E+00	1.89E+00	1.89E+00	8.80E-01	3.30E+08	3.70E+04	3.70E+04	3.70E+04	PC/g
Uranium-235	1.47E-01	1.04E-01	2.20E-02	4.79E-02	1.01E-01	8.43E-02	8.43E-02	4.00E-02	1.50E-01	7.70E+02	7.70E+02	7.70E+02	PC/g
Uranium-238	4.70E-01	1.10E+00	2.30E-01	4.67E-01	9.12E-01	6.49E-01	6.49E-01	4.80E-01	2.63E+00	2.86E+04	2.86E+04	2.86E+04	PC/g
Plutonium-238	3.17E+00	1.01E+01	4.88E+01	8.70E-01	1.45E-01	1.26E+01	1.26E+01	8.07E+01	1.69E+03	1.00E+03	1.00E+03	1.00E+03	PC/g
Plutonium-239	1.85E+01	5.87E+01	2.84E+02	5.06E+00	8.44E-01	7.34E+01	7.34E+01	4.69E+02	9.84E+03	1.00E+03	1.00E+03	1.00E+03	PC/g
Plutonium-240	9.17E+00	2.92E+01	1.41E+02	2.52E+00	4.20E-01	3.65E+01	3.65E+01	2.30E+02	4.89E+03	1.00E+03	1.00E+03	1.00E+03	PC/g
Plutonium-241	2.63E+02	8.57E+02	4.15E+03	7.39E+01	1.23E+01	1.07E+03	1.07E+03	6.85E+03	1.44E+05	3.50E+03	3.50E+03	3.50E+03	PC/g
Plutonium-242	2.87E-03	9.12E-03	4.41E-02	7.86E-04	1.31E-04	1.14E-02	1.14E-02	7.29E-02	1.53E+00	1.00E+03	1.00E+03	1.00E+03	PC/g
TRU (alpha)	4.03E+01	1.28E+02	6.20E+02	1.11E+01	1.84E+00	1.60E+02	1.60E+02	1.03E+03	2.15E+04	2.15E+04	2.15E+04	2.15E+04	PC/g
Plutonium (alpha)	3.08E+01	9.78E+01	4.73E+02	8.44E+00	1.41E+00	1.22E+02	1.22E+02	7.82E+02	1.64E+04	1.64E+04	1.64E+04	1.64E+04	PC/g
Total Uranium	3.88E+00	3.49E+00	7.96E-01	1.56E+00	3.24E+00	2.55E+00	2.55E+00	1.40E+00	6.08E+00	6.08E+00	6.08E+00	6.08E+00	PC/g
<b>Totals</b>	<b>368.61</b>	<b>1000.61</b>	<b>4771.32</b>	<b>80.01</b>	<b>18.14</b>	<b>1249.74</b>	<b>100.00</b>	<b>7680.81</b>	<b>165081.63</b>				

from core sample  
of SE corner

NOTE:  
 Isotopes in BOLD included in "Totals".  
 \* Samples not included in Enviro-care waste profile 0541-03.

File ENV\_PAFR.WK4

ATTACHMENT 4

FABGPAFR.WK3

02/24/97

DKS  
Fiberglass  
TS

The following table will be filled out when performing in-process surveys with the A100 and B100 meters.

F.08

Date:	2-5-97
Name:	Rushmore & Veckhart
Room:	Fib # 6 upstairs
Surface (Wall, Floor, or Ceiling):	Floor
Meter Number:	576 4/19/97
Background gross alpha:	NA
Background gross beta:	NA
Correction Factor of Alpha Meter:	NA
Correction Factor of Beta Meter:	NA

\* floor was scabbled  
CONCRETE  
PRINT REMOVED

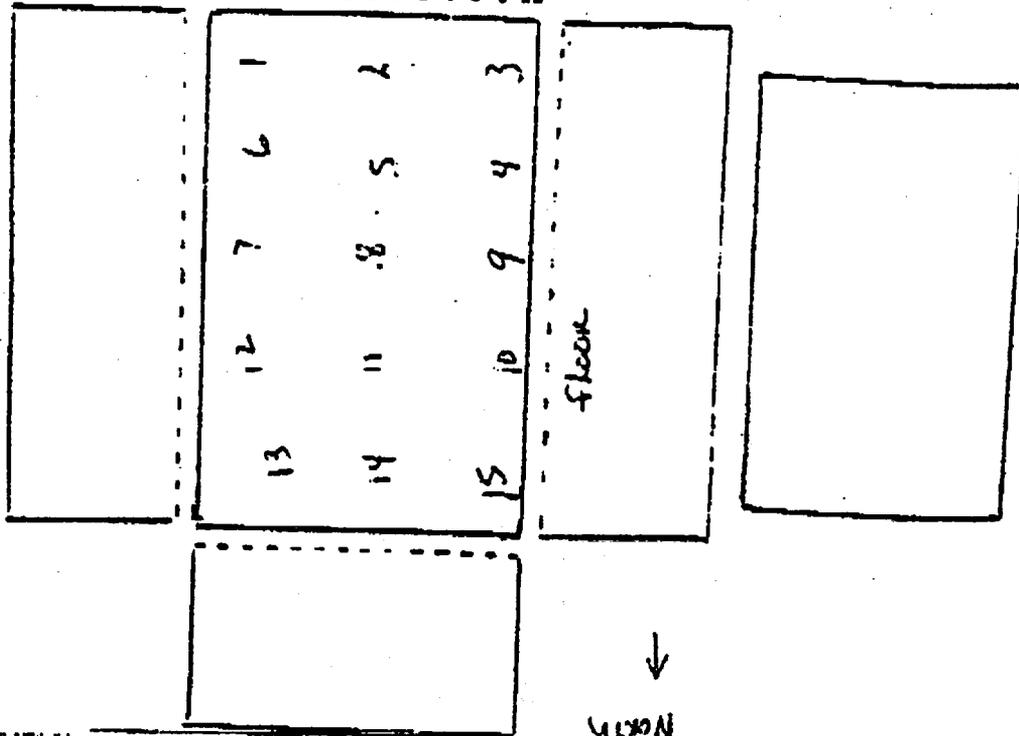
61E 337 5269

Survey occasion number	Type of Survey, Fitted or Removable:			
	Gross Alpha (dpm/100cm <sup>2</sup> ) f. x 60	Gross Beta (dpm/100cm <sup>2</sup> ) f. x 60	Net Alpha (dpm/100 cm <sup>2</sup> ) RE minus b/c	Net Beta (dpm/100 cm <sup>2</sup> ) RE minus b/c
	163,900	76,300	1,047	± 263
	12,250	6,460	67	± 263
	5,440	3,410	189	± 263
	6,730	7,200	105	± 263
	4,580	2,600	33	± 263
	80,000	23,900	873	± 263
	7,800	45,600	51	± 263
	3,870	15,850	51	± 263
	2,510	17,240	98	± 263
	1,659	12,910	117	± 263
	15,79	6,550	15	± 263
	1,137	2,810	6	± 263
	976	3,860	12	± 263
	2,060	2,300	12	± 263
	14,69	2,011	18	± 263
			2969	
			69661	
			4-15-97	

USNRC 1 KDF PD

14:52

JUL-14-1997



Date: 2-5-97

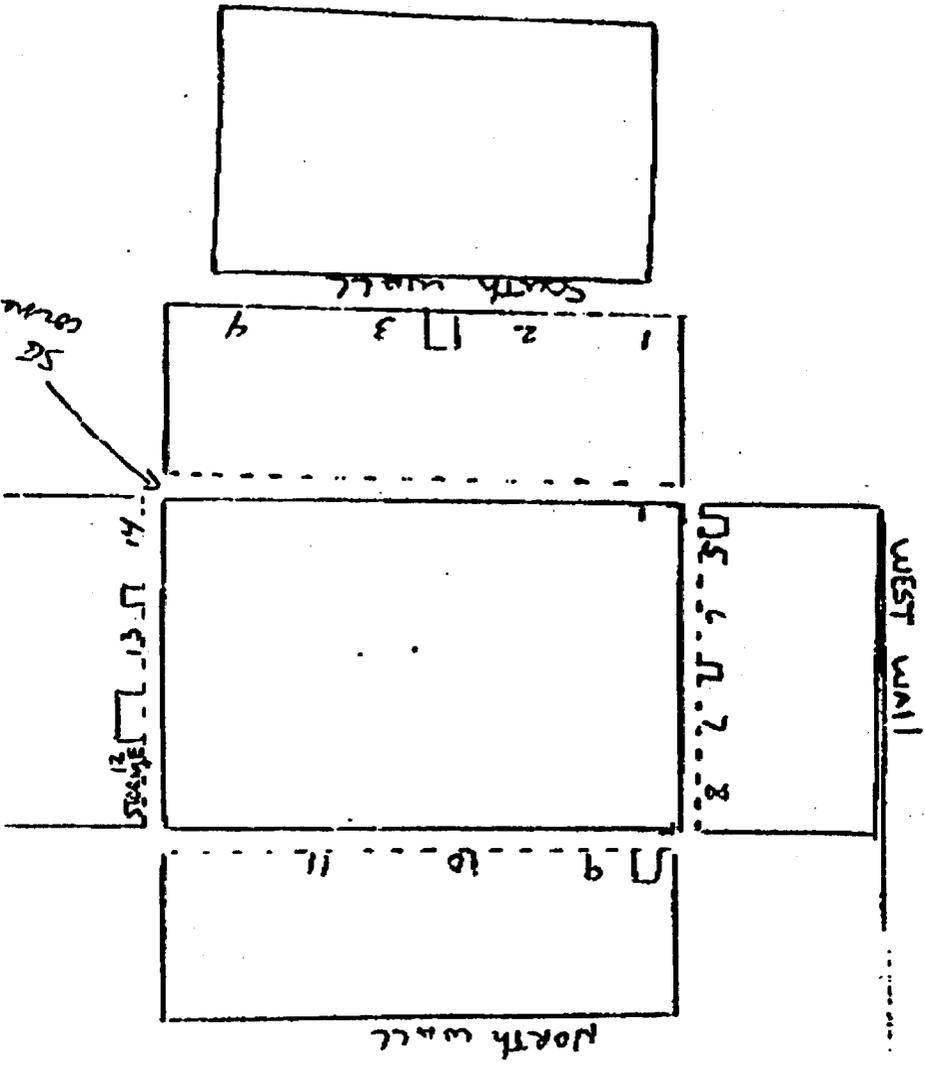
The following table will be filled out when performing in-process surveys with the A100 and B100 meters.

Date:	2-5-97
Name:	2 Lockhart Substation
Room:	FAB # 7 upstairs
Surface (Wall, Floor, or Ceiling):	walls
Meter Number:	526 7/19/97
Background gross alpha:	n/a
Background gross beta:	n/a
Correction Factor of Alpha:	n/a
Correction Factor of Beta:	n/a

Survey Number	Gross Alpha (dpm/100cm <sup>2</sup> )	Gross Beta (dpm/100cm <sup>2</sup> )	Net Alpha (dpm/100cm <sup>2</sup> )	Net Beta (dpm/100cm <sup>2</sup> )	Type of Survey, Fixed or Removable:
1	4568	5560	183	7263	Removable
2	897	28100	6	7263	Removable
3	510	12410	21	7263	Removable
4	727	6720	5	7263	Removable
5	834	4260	45	7263	Removable
6	689	9980	9	7263	Removable
7	457	7080	9	7263	Removable
8	531	650	5	7263	Removable
9	320	1213	5	7263	Removable
10	463	1676	9	7263	Removable
11	119	1458	15	7263	Removable
12	986	8610	9	7263	Removable
13	1241	2664	5	7263	Removable
14	82664	1297000	5004	2628	Removable
			2929		
			69661		
			41577		

JUL-14-1997 14:52 USNRC 1 KOP PA 610 337 5285 P.09

Date: 2-5-97



\* walls were scabbled paint removed  
 CONCRETE

DATE/TIME: July 14, 1997 3:30 pm  
NOTE TO: Robert A. Nelson, Acting Chief  
LLW and Decommissioning Projects Branch  
FROM: Nick Orlando, Project Manager  
LLW and Decommissioning Projects Branch  
SUBJECT: CONTAMINATION EVENT AT B&W PARKS TOWNSHIP

The attached information was forwarded to me via facsimile from NRC Region I today 7/14/97 at appx 3:00 pm. I am concerned about the possible off-site doses due to the release of licensed material from the facility (note tabbed page which indicates that Pu-241 levels up to 400% of the NRC allowable release levels were seen during the event). I will discuss the issue with Region I either today or tomorrow and get back to you.

B/6

DATE/TIME: July 15, 1997 9:20am  
NOTE TO: Robert A. Nelson, Acting Chief  
LLW and Decommissioning Projects Branch  
FROM: Nick Orlando, Project Manager *NO*  
LLW and Decommissioning Projects Branch  
SUBJECT: ADDITIONAL INFORMATION ON THE CONTAMINATION EVENT AT B&W  
PARKS TOWNSHIP

At appx 9:15 am today I spoke to Mark Roberts about the results of the RI reactive inspection at the subject facility. Based on the RI inspection several preliminary conclusions were reached by the inspectors. They are:

1. It appears that the doses to the workers was less than originally predicted and are now predicted to be around 200 mrem. B&W still needs to verify the breathing zone dose calculations with the urinalysis data.
2. Controls are in place to prevent additional worker exposures or releases to the environment. Work is banned in the Fab 6 room and B&W has committed to performing several actions before allowing any work to be done in the room.
3. The potential doses to the public from the release through the stack is unclear. B&W is analyzing the data for the effluent releases and will be submitting the info to RI. When this info is in NRC can run COMPLY to determine the potential doses to the public. Note that the current license commits B&W to the Part 20 limits for air releases and the Constraint rule requires lower releases.

RI still owes B&W a formal exit interview. Mark and Marie Miller did an informal exit on Friday. Marie and Mark will get together later this week to discuss their findings and brief RI management. I will contact them at that time to keep abreast of the issue.

My principal concern is that we determine the potential doses to the public as soon as possible. I don't have a handle on whether there is a health and safety issue with the releases, as I have not done any calculations (still awaiting data on the material released up the stack). I don't have any reason to believe that public dose limit has been exceeded, but I want to be sure.

*B/7*

From: Dominick Orlando  
To: ran Robert A. Nelson  
Date: 7/18/97 9:26am  
Subject: COTAMINATION EVENT AT B&W PTS

From RI this am

The formal exit interview will occur by phone on Monday 7/21/97. I have requested that I be allowed to listen in (no participation)

3 potential violations may be cited (I don't know the regulatory citation for each one)

1. Failure to do surveys and evaluate airborne contamination levels
2. Failure to use engineering controls and
3. Failure to follow the license's decommissioning plan (Ch 7 of the existing license) and failure to evaluate the operation against ALARA requirements

B&W is supposed to send data on stack releases to RI today. Until we see this info we can't say for certain what the offsite dose was.

An Escalated Enforcement Panel may be convened. Mark Roberts was not sure if the vio would warrant EE but that's for the panel to decide.

B/8

**From:** Todd Jackson  
**To:** RRB1 R Bellamy  
**Date:** 11/28/97 10:39am  
**Subject:** B&W Parks update

Dan Young and Berne Haertjens called with current status at Parks. Regarding the drums sent to Envirocare with free standing liquid (FSL), Envirocare has required B&W to address root cause, corretive action, and to identify the independent QA/QC oversight that B&W will use to prevent recurrence. The report is required before Envirocare will accept any additional shipments from B&W Parks. Of the 6 drums, 3 were processed by Envirocare and 3 will be returned to B&W Parks. B&W wanted them returned because they do not believe the Envirocare sample/analysis results showing low pH (therefore forcing haz mat classification). Also to be returned is a marinelli beaker containing nitric acid, which was found on top of a drum in the c-van "overpack" shipping container from B&W.

B&W is now packaging materials with 100x the amount of "speedy dry" absorbent material to better assure no FSL during shipment. They are planning to continue shipping throughout the winter, and currently have 6 or 7 c-vans on site.

Fab 6 work: No work has been done in Fab 6 since the June event. They have been working on a recovery plan. They do not plan to send us a copy, but instead plan to send a letter stating the plan is available at the site ( While this strikes me as unusual, it seems moot since we plan to be on site 12/8). They have applied to DEP for an air pollution permit exception to enable them to replace the Fab 6 area HVAC system "in-kind". No work can proceed in fab 6 until the HVAC system is replaced. In early December there will be a readiness review by B&W corporate, to review plans for remote dust pickup in fab 6 and other revised work procedures. Also now have commitment tracking system in place, with the current status of commitments (especially those made to NRC following the event) available to review.

Work is also on hold in areas adjacent to fab 6 pending the readiness review. On the rest of the site, the schedule is drawing out and cost estimates increasing because of the work stoppage. Other personnel on the project have been involved in rebaselining the project status and estimates. They are looking at perhaps changing the approach to decon in the rest of buildings A and B, to reduce the amount of resource-intensive decon and shipping more material instead to Envirocare. Berne also said safety improvements have been implemented on site.

Building C final survey expected to be submitted to HQ in the next couple weeks. They are lining up contractor for building demolition pending NRC approval of the final survey report.

Todd

CC: CZG, TWD2.TWP7.DAO

B/9

**From:** Dominick Orlando  
**To:** ran Robert A. Nelson  
**Subject:** UPDATE ON B&W CONTAMINATION EVENT

Nelson

I got an voice-mail from Marie Miller today regarding the status of the RI evaluation of the contamination event at B&W/PTS

Per Marie, the RI dose assessment for the 3 workers is 228 mrem whole body. No info on potential offsite doses was included in her message to me. I have left a message with Mark Roberts asking for more info on potential off-site doses.

RI will hold an enforcement panel on 8/5/97. The potential violations are still the ones I summarized to you on 7/18/97 (i.e., failure to do surveys and evaluate airborne contamination levels, failure to use engineering controls, and failure to follow the DP and do an ALARA evaluation).

More info as it comes in

DAO

B/10