

Mr. Kevin Null
Materials Licensing Branch
U. S. Nuclear Regulatory Commission, Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

January 20, 2014

Re: Information commitments related to Materials License 21-11315-02 amendment to possess activation products contained in cyclotron previously operated by Pfizer (C/N 582622), as discussed in telephone conversation on 01/15/2014

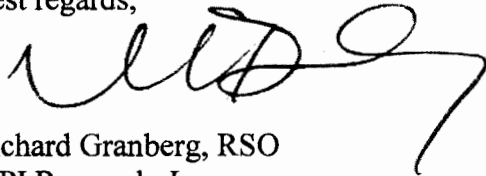
Dear Mr. Null,

Following up on our letter to you dated January 15, 2014, enclosed with this letter are radiation and contamination survey results as detailed below:

1. Results of the most recent survey for radiation levels around the self-shielded cyclotron performed by Pfizer.
2. Results of the most recent survey for removable contamination conducted on the self-shielded cyclotron performed by Pfizer.

The groups preparing the cyclotron for transport are very anxious to receive notification that we have the amendment allowing possession in hand, and I very much appreciate your efforts in accommodating our construction schedule. Please call me at 269-668-3336 ext. 2050, if there is any additional information you may need before approval of the application.

Best regards,



Richard Granberg, RSO
MPI Research, Inc.

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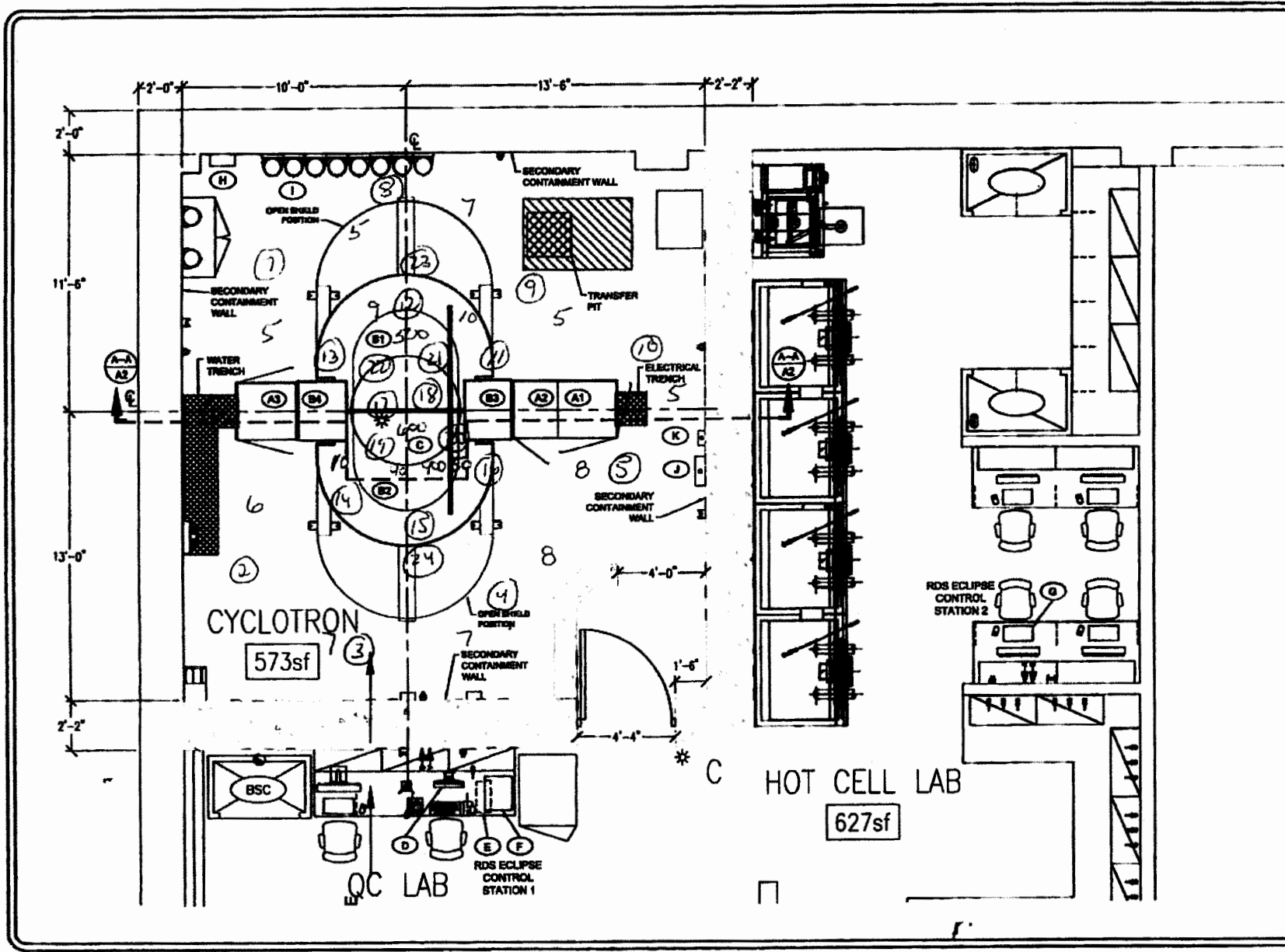
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Job Location: Pfizer Inc. Groton CT Page: 1 of 5
 Survey Purpose: Radiological Assessment Cyclotron Vault Date: 1/17/2014
 Performed By: David Durkee

Instrument No. 1	Instrument No. 2	Instrument No. 3
Packard Tri-Carb #431520	Bicron MicroSievert LE #B742Z	
Efficiency: 75%	Efficiency: 100 %	
Type Rad: $\alpha/\beta/\gamma$	Type Rad: γ	
Background: See #1 below	Background: 5 - 8 $\mu\text{rem/h}$	
Cal. Due: 3/5/14	Cal. Due: 4/25/14	

Number	Time	Location	Inst. Used.	cpm	Activity (dpm/100cm ²)	Comments
1	1445	Background	1	14	N/A	
2		Floor	1	29	20	
3		Floor	1	28	19	
4		Floor	1	27	17	
5		Floor	1	22	11	
6		Floor	1	20	8	
7		Floor	1	28	19	
8		Floor	1	17	4	
9		Floor	1	14	0	
10		Floor	1	36	29	
11		Floor	1	9	0	
12		Floor	1	21	9	
13		Floor	1	19	7	
14		Floor	1	18	5	
15		Floor	1	19	7	
16		Floor	1	15	1	
17		Pit	1	16	3	
18		Pit	1	11	0	
19		Inner Core	1	22	11	
20		Inner Core	1	20	8	
21		Inner Core	1	19	7	
22		Inner Core	1	27	17	
23		Outside Unit	1	26	16	
24	↓	Outside Unit	1	26	16	
25			1			
26			1			
27			1			
28			1			
29			1			
30			1			
31			1			
32			1			
33			1			
34			1			
35			1			
36			1			
37			1			



SIEMENS medical
 810 Innovation Drive
 Knoxville, Tennessee 37932 USA
 865.214.3200

PROJECT NAME
Pfizer
 Groton, Conn

521211
 SCALE 1/4"=1'-0"
 PROJECT NUMBER
 521211
 DRAWN BY J. JOHNSON
 CHECKED BY G. SPURDIN
 DATE 08.17.07
 SHEET 3 OF 17
A1.1 02

○ = WIPE TEST LOCATION
 RADIATION READINGS IN UNITS OF $\mu\text{rem}/\text{h}$

Page 2 of 5

1/17/14

Radiation Readings Cyclotron

A radiation survey of the cyclotron vault was performed on 1/17/14.

The readings around the outside of the cyclotron ranged from 5 – 8 microrem/hour.

The readings inside the cyclotron shielding ranged from 10 – 90 microrem/hour.

The maximum reading obtained near the core was 600 microrem/hour.

Assay Definition-

Assay Description:

Background check for PM Lab (Mikey)

Assay Type: CPM

Report Name: Report1

Output Data Path: C:\Packard\Tricarb\Results\bill\bills swipes

Raw Results Path: C:\Packard\Tricarb\Results\bill\bills swipes\20140117_0832\20140117_0832.results

RTF File Name: C:\Packard\Tricarb\Results\bill\bills swipes\Report1.rtf

Assay File Name: C:\Packard\TriCarb\Assays\bills swipes.lsa

Count Conditions-

Nuclide: TRIPLE

Quench Indicator: tSIE/AEC

External Std Terminator (sec): 0.5 2s%

Pre-Count Delay (min): 0.00

Quench Set: n/a

Count Time (min): 1.00

Count Mode: Normal

Assay Count Cycles: 1

Repeat Sample Count: 1

#Vials/Sample: 1

Calculate % Reference: Off

Background Subtract: Off

Low CPM Threshold: Off

2 Sigma % Terminator: Off

Regions	LL	UL
A	0.0	18.6
B	18.6	156.0
C	0.0	2000.0

Count Corrections-

Static Controller: On

Luminescence Correction: On

Colored Samples: n/a

Heterogeneity Monitor: n/a

Coincidence Time (nsec): 18

Delay Before Burst (nsec): 75

Half Life-

Half Life Correction: Off

Regions	Half Life	Units	Reference Date	Reference Time
A				
B				
C				

Cycle 1 Results

S#	CPMA	CPMB	CPMC	MESSAGES	PID	Custom1
1	5	2	14		9	
2	13	11	29		9	
3	16	4	28		9	
4	16	6	27		9	
5	11	4	22		9	
6	11	5	20		9	
7	15	6	28		9	
8	9	6	17		9	
9	6	4	14		9	
10	23	7	36		9	
11	2	5	9		9	

12	9	8	21	9
13	10	4	19	9
14	9	4	18	9
15	11	0	19	9
16	2	9	15	9
17	2	9	16	9
18	7	1	11	9
19	14	3	22	9
20	10	7	20	9
21	7	5	19	9
22	13	11	27	9
23	15	6	26	9
24	14	7	26	9

From: Null, Kevin [<mailto:Kevin.Null@nrc.gov>]
Sent: Wednesday, January 15, 2014 2:33 PM
To: Richard Granberg
Subject: RE: Amendment Commitments C/N 582622

Ok. Thanks.

Don't worry about sending me a hard copy of your letter. The scanned/signed version is acceptable.

Kevin

From: Richard Granberg [<mailto:Richard.Granberg@mpiresearch.com>]
Sent: Wednesday, January 15, 2014 1:19 PM
To: Null, Kevin
Subject: RE: Amendment Commitments C/N 582622

Will do. I hope to get the production license application on the way in the next 2 – 3 weeks, although the actual FA instrument documents will come later (it has proven to be a lengthy process to get these in place with the bank).

From: Null, Kevin [<mailto:Kevin.Null@nrc.gov>]
Sent: Wednesday, January 15, 2014 2:05 PM
To: Richard Granberg
Subject: RE: Amendment Commitments C/N 582622

Looks good. Thanks. Please go ahead and forward me a hard copy.

By the way, what is your time table for submitting the cyclotron application??

Kevin

From: Richard Granberg [<mailto:Richard.Granberg@mpiresearch.com>]
Sent: Wednesday, January 15, 2014 12:48 PM
To: Null, Kevin
Subject: Amendment Commitments C/N 582622

Hi Kevin,

Here is the letter we discussed. If you don't see any needed wording changes, I will follow up with hard copy in the mail.

Thanks,

Dick

Richard Granberg
Sr. Safety Specialist
MPI Research, Inc
269-668-3336 Ext. 2050

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Null, Kevin

From: Richard Granberg <Richard.Granberg@mpiresearch.com>
Sent: Monday, January 20, 2014 12:19 PM
To: Null, Kevin
Subject: RE: Amendment Commitments C/N 582622
Attachments: Survey Transmittal.pdf

Kevin,

Letter with survey is attached.

Thanks,

Dick

From: Null, Kevin [<mailto:Kevin.Null@nrc.gov>]
Sent: Monday, January 20, 2014 9:09 AM
To: Richard Granberg
Subject: RE: Amendment Commitments C/N 582622

Dick,

Please draft a letter from you to me transmitting the Pfizer surveys, sign it, scan it in and email it to me so I can have an official response to our telephone conversation from last week.

Thanks!!

Kevin

From: Richard Granberg [<mailto:Richard.Granberg@mpiresearch.com>]
Sent: Friday, January 17, 2014 1:08 PM
To: Null, Kevin
Subject: RE: Amendment Commitments C/N 582622

Hi Kevin,

The survey of the cyclotron in place at Pfizer is attached. No loose contamination, and the highest radiation level they got inside the shielding was 0.6 mR/hr. Outside the shielding was less than 0.01 mR/hr – background levels. There are five pages – page one is wipe test results, page two is a summary of radiation levels, page three is a survey map, and pages four and five are the LSC report for the wipe count.

I actually expected radiation levels to be a little higher inside the shielding.

Let me know if there is any more information you need.

Thanks,

Dick