

CONVERSATION RECORD  
(time) (date)

TIME | DATE

7/29/14

VISIT

CONFERENCE **X**

TELEPHONE **X**

INCOMING  
OUTGOING

NAME OF PERSON(S) CONTACTED OR IN CONTACT

ORGANIZATION (OFFICE, DEPT. ETC.)

TELEPHONE NO.

April Chance, Sr. Manager of Radiation Protection/Environment,  
Health and Safety, PETNET

865-218-6355

Roger Moroney, Health Physicist, PETNET

RAMON DAVILA, REGIONAL HEALTH PHYSICIST, PETNET

SUBJECT

C/N 580329 and PETNET's explanation of fluorine-18 effluent release data and NRC questions about inconsistencies between detector response and discharge increments.

SUMMARY

The above representatives of PETNET facilitated a live meeting conference call to explain the NRC's outstanding issue related to fluorine-18 effluent release. NRC has had questions related to the effluent detection system at PETNET's St. Louis location (NRC license number 41-32720-03) and the software that converts instrument readings to effluent discharge values. NRC staff has reviewed effluent release data form April 28, 2014, submitted by Ramon Davila in a June 6, 2014, e-mail, and noted inconsistencies between detector response values and discharge increment values.

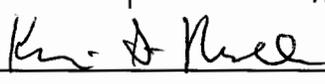
Patty Pelke, Chief, Materials Licensing Branch, and Kevin Null, Sr. Health Physicist, Materials Licensing Branch, participated on behalf of the NRC. The information presented during the meeting did not resolve the outstanding technical issues that have been discussed in the past with April Chance and Ramon Davila. In order to maintain the current production level of fluorine-18, you will need to provide the following information relative to the April 28 data you submitted:

1. Clarify the time period(s) when the effluent detection system collects effluent release data. Is effluent release evaluated on a 24 hour clock, or is it only collected when synthesis is being performed? For example, there were periods on April 28 when results were "0" and then there were short durations of time during the early morning when there were positive results.
2. For the effluent data spreadsheet that you submitted (i.e., April 28, 2014), please include the definition for each column heading, and the units. For example, please define "Raw CPS"; what it means and represents, and where it comes from. As another example, provide the definition of "Background Corrected Dose", and define the units.
3. Please explain discrepancies that appear in the spreadsheet. For example, there are disproportional results in rows 1184 and 1186. The "Raw CPS" values (which we presume to be counts seen by the detector) are essentially the same in both rows, however, the discharge increments vary by a factor of almost 2.
4. Identify the columns from the spreadsheet that are used to calculate the discharge value. If there are columns in the spreadsheet that do not factor into the calculation, please identify them and explain why they do not factor into the discharge calculation.
5. Identify any assumptions that are made, e.g., conversion factors, efficiency values, etc., which factor into the discharge calculation, but which are not part of the information that is found in the spreadsheet. Provide justification for each assumption.

- 6. Provide the formula that the software uses to derive discharge values.
- 7. Provide the methodology that is used to independently verify the results and accuracy of the detection and software systems.

PETNET representatives agreed to provide a written response to the NRC by August 7, 2014. Subsequent to NRC's review of the written response, PETNET agreed to set up another meeting during the week of August 18 to go over their response.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Kevin Null		7/31/14

ACTION TAKEN

SIGNATURE	TITLE	DATE
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