

JAN 31 1990

In Reply Refer To:
License: 35-00313-03
Docket: 30-05897/89-01

Phillips Petroleum Company
Phillips Research Center
ATTN: Charles F. Cook
Vice President, Research
and Development
Bartlesville, Oklahoma 74004

Gentlemen:

This acknowledges receipt of your letter dated January 2, 1990, in response to our letter and attached Notice of Violation dated December 5, 1989. We have reviewed your reply and find that additional information is needed.

During our review, we noted that you have not fully responded to those items specified on page 3 of the Notice of Violation. Your response to this letter should address those specific items noted below. You should provide your response to this office within 10 days of your receipt of this letter.

Item 1:

Although your response indicates that you have taken adequate corrective action for this specific occurrence, it does not indicate that you have identified the reason that this violation occurred. Your identification of the underlying cause that resulted in receipt and possession of unauthorized material is a prerequisite to your developing procedures that will prevent future recurrence of similar violations. Your response should identify your conclusion as to why the violation occurred and procedures that you will implement to prevent further violations.

Items 2.a., 2.b., and 3.b.:

Your response indicates that you have implemented procedures or taken steps to correct the violations observed during the inspection. However, your response does not indicate that you have determined the reasons why these violations occurred. It is imperative that you adequately assess the root cause of a violation before you develop procedures that you believe will prevent its recurrence. Your response should identify the reason why you believe each of these violations occurred.

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LLKasner:ch
/ /

C:NMIS *okc*
CLCain
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WRS
ABBeach
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IE-07

*Previously Concurred

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Item 2.c.:

Your response does not address the problem of using survey instruments that have exceeded acceptable limits of calibration, nor does it address the reason why these instruments had not been calibrated. Therefore, your response should include the reason why survey instruments had not been calibrated within the required interval as well as how you propose to prevent the use of survey instruments that do not operate within acceptable limits.

Item 3.a.:

Your response should indicate how you propose to prevent similar problems from occurring at a future date.

Should you have any questions regarding this matter please contact Linda L. Kasner at (817) 860-8100.

Sincerely,

Original Signed By:

A. B. BEACH

A. Bill Beach, Director
Division of Radiation Safety
and Safeguards

cc:
Oklahoma Radiation Control Program Director

bcc w/copy of licensee letter:
DMB - Original (IE-07)
RDMartin
ABBeach
LAYandell
GJackson, OC/LFMB (MS 4503)
CLCain
WLFisher
LLKasner
NMIS
MIS System
RIV Files (2)
RSTS Operator

PHILLIPS PETROLEUM COMPANY

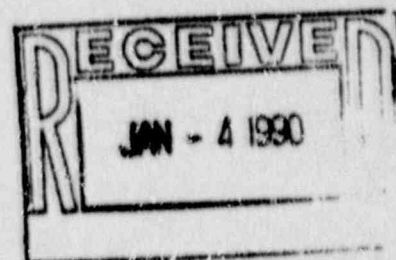
BARTLESVILLE, OKLAHOMA 74004
918 661-7707

C. F. COOK
Vice President
Research and Development

January 2, 1990

Re: Docket: 30-05897/89-01
License No.: 35-00313-03

United States Nuclear Regulatory Commission
Attn: A. Bill Beach
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011



Dear Mr. Beach:

In reply to your letter dated December 6, 1989, of the findings of your inspector during an unannounced radiation safety inspection, the following is our reply pursuant to the provisions of 10 CFR 2.201.

Item 1: License Condition 7.B. authorizes the possession of sealed sources. License Condition 6.B. authorizes the possession of such sources containing any byproduct material with Atomic Numbers 4 through 83.

Contrary to the above, on February 6, 1986, the licensee had received a 30-millicurie plutonium-238 sealed source (Amersham Model PPC, Serial No. B350), a material they were not authorized to possess. The source was transferred from another license held by Phillips Petroleum Company in Bartlesville, Oklahoma. The source was still in the licensee's possession during an inspection conducted on November 2 and 3, 1989.

Response: The Amersham Model PPC, Serial No. B350 metal analyzer has been shipped for disposal through Texas Nuclear. The source should be disposed of and proper paperwork concerning its receipt and disposal will be completed by January 15, 1990.

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Item 2a: Item 6 of the application describes the institutional training program. Specifically, this includes general instruction to personnel biannually including interaction of radiation, ALARA, biological effects of radiation, safety measures, waste management, personnel monitoring, record keeping, NRC regulations, and updates.

Contrary to the above, during the period from October 1987 through October 1989, the licensee had conducted only one training session, on October 28, 1988, and had not met the required biannual interval.

Response: A training program has been conducted on December 7, 1989 by Dr. B. Ahluwalia, Department of Radiological Sciences, University of Oklahoma, on areas as outlined in the license. This training will be done as outlined in our license biannually. In addition, monthly safety meetings are conducted by Supervisors to discuss any safety or health issues that the personnel may have.

Item 2b: Item 20 of the application specifies that the RSO will conduct semiannual audits of each authorized user in the program. These audits are to include posting of required signs and notices; waste disposal containers; use of gloves; storage area; receipt, utilization and disposal records; inventory; and surveys.

Contrary to the above, the inspector determined that the licensee had conducted one such audit in December 1988, but had not performed program audits at the required semiannual intervals during the period from October 1987 through October 1989.

Response: The RSO will insure that the semiannual audits are conducted of each authorized user and has taken steps to actively involve the Radioisotope Committee members in these audits. The audits will be done on a minimum of semiannual. The RSO completed a review of the program on December 18, 1989.

Item 2c: Item 12 of the application specifies that survey instruments will be calibrated annually and following repair. This item further specifies that instruments will be considered properly calibrated when readings are within 10 percent of the known value for each point checked. Instruments reading within 20 percent may be used only if accompanied by a calibration chart attached to the instrument.

Contrary to the above, the inspector determined that the licensee's 13 survey instruments had been calibrated in December 1987 and not again until March or April 1989, a period exceeding the required annual interval. Additionally, two of these instruments were 25-30 percent off the acceptable calibration reading and one instrument was 40-50 percent off the acceptable value. The licensee had used these instruments during this period to perform routine radiation surveys.

Response: Steps have been taken to insure that communications between the RSO and individuals responsible for insuring calibration of instruments are completed on a timely basis. In addition, members of the Radioisotope Safety Committee have to report biannually on safety audits completed within their areas of assigned responsibility. Including in these audits are proper calibration of instruments.

Item 3a: Item 8 of the application specifies that all radioactive waste material will be held for decay or storage in an area identified as Building 88-H.

Contrary to the above, during October 1989 the licensee had moved the radioactive waste storage area from the designated location at Building 88-H to Building 85-E.

Response: Materials were moved from Building 88-H to 85-E to accommodate remodeling in 88-H. All necessary surveys and decontamination activities were accomplished before access by workers was allowed. On December 5, 1989, the Licensee applied for a change in the license noting the change in location of the waste storage area.

Item 3b: Item 14 of the application specifies that radiation surveys will be routinely performed and that records of survey date, location, and surveyors will be maintained. Item 15 of the application specifies that surveys of the waste storage area will be performed monthly.

Contrary to the above, the inspector determined that surveys of the licensee's waste storage area had been conducted at the required monthly interval but that records of such surveys had not been maintained as required.

United States Nuclear Regulatory Commission
Page Four

Response: Proper files are maintained and instructions have been issued for surveys of the licensee waste storage area at the required monthly interval.

C. F. Cook

C. F. Cook

CFC:rjm

DEC - 6 1989

In Reply Refer To:
License: 35-00313-03
Docket: 30-05897/89-01

Phillips Petroleum Company
Phillips Research Center
ATTN: Charles F. Cook
Vice President, Research
and Development
Bartlesville, Oklahoma 74004

Gentlemen:

This refers to the routine, unannounced radiation safety inspection conducted by Ms. L. L. Kasner of this office on November 2 and 3, 1989, of the activities authorized by NRC Byproduct Material License 35-00313-03, and to the discussion of our findings held by the inspector with members of your staff at the conclusion of the inspection.

This inspection consisted of a review of a broad materials license authorizing possession and use of any byproduct material with Atomic Numbers 1 through 83, sealed sources containing byproduct material with Atomic Numbers 4 through 83, hydrogen-3 sources, americium-242 sealed sources, and a specific quantity of natural uranium.

The inspection included an examination of the activities conducted under the license as they relate to radiation safety and to compliance with the Commission's rules and regulations and the conditions of the license. The inspection consisted of selective examinations of procedures and representative records, interviews of personnel, independent measurements, and observations by the inspector. The inspector met with several members of your staff including the Radiation Safety Officer (RSO), his assistant, selected members of the Radiation Safety Committee (RSC), and some of the researchers authorized to conduct activities under the license.

During this inspection, certain of your activities were found not to be conducted in full compliance with NRC requirements. Consequently, you are required to respond to this matter in writing, in accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Your response should be based on the specifics contained in the Notice of Violation enclosed with this letter.

The inspector observed that generally, procedures governing the authorization of individual users and projects; and byproduct material receipt, use, and

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C:NMIS ^{RLC}
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ID: DASS
VABeach
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disposal appeared to be satisfactory and conducted in accordance with the conditions of the license. However, she noted that some training, audits, and records had not been performed or maintained as required.

Specifically, this inspection identified the failure of the RSO or RSC to recognize that material was possessed that was not authorized by the license. The RSO discussed with the inspector the intent to return the 30-millicurie plutonium-238 sealed source to the manufacturer. At that time the RSO was informed that alternatively, the license may be amended to request authorization to possess and use this source.

The inspector also identified failure to conduct program audits as described in the license. We believe that had program audits been conducted of the scope and depth described in your procedures, rather than relying on individual users to monitor their activities, some of the violations referenced herein could have been identified and corrected prior to the NRC inspection. We wish to emphasize that NRC expects licensees to conduct program audits that adequately identify and correct safety issues or items of noncompliance.

The inspector also reviewed the actions you had taken with respect to the violations observed during our previous inspection conducted on October 12, 1987. She verified that the corrective actions for these violations had been implemented as stated in your reply dated November 30, 1987.

The response directed by this letter and the accompanying Notice is not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

Should you have any questions concerning this letter, we will be pleased to discuss them with you.

Sincerely,

Original Signed By:

A. B. BEACH

A. Bill Beach, Director
Division of Radiation Safety
and Safeguards

Enclosure:
Appendix - Notice of Violation

cc:
Oklahoma Radiation Control Program Director

bcc: (see next page)

bcc:

DMB - Original (IE-07)

RD Martin

AB Beach

LAYandell

LShea, RM/ALF (AR-2015)

*CLCain

*RJEverett

*L.Kasner

*MIS

*MIS System

*RIV Files (2)

*RSTS Operator

*RZHall, URFO

*W/766

APPENDIX

NOTICE OF VIOLATION

Phillips Petroleum Company
Phillips Research Center
Bartlesville, Oklahoma

Docket: 30-05897/89-01
License: 35-00313-03

During an NRC inspection conducted on November 2 and 3, 1989, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1989) (Enforcement Policy), the violations are listed below:

1. License Condition 7.B. authorizes the possession of sealed sources. License Condition 6.B. authorizes the possession of such sources containing any byproduct material with Atomic Numbers 4 through 83.

Contrary to the above, on February 6, 1986, the licensee had received a 30-millicurie plutonium-238 sealed source (Amersham Model PPC, Serial No. B350), a material they were not authorized to possess. The source was transferred from another license held by Phillips Petroleum Company in Bartlesville, Oklahoma. The source was still in the licensee's possession during an inspection conducted on November 2 and 3, 1989.

This is a Severity Level IV violation. (Supplement VI)

2. License Condition 17 requires that licensed material shall be possessed and used in accordance with statements, representations, and procedures contained in an application dated September 4, 1987, and letter dated October 24, 1987. Portions of these documents describe the licensee's training program, internal audit program, and survey instrument calibration standards.

- a. Item 6 of the application describes the institutional training program. Specifically, this includes general instruction to personnel biannually including interaction of radiation, ALARA, biological effects of radiation, safety measures, waste management, personnel monitoring, record keeping, NRC regulations, and updates.

Contrary to the above, during the period from October 1987 through October 1989, the licensee had conducted only one training session, on October 28, 1988, and had not met the required biannual interval.

- b. Item 20 of the application specifies that the RSO will conduct semiannual audits of each authorized user in the program. These audits are to include posting of required signs and notices; waste disposal containers; use of gloves; storage area; receipt, utilization and disposal records; inventory; and surveys.

Contrary to the above, the inspector determined that the licensee had conducted one such audit in December 1988, but had not performed program audits at the required semiannual intervals during the period from October 1987 through October 1989.

- c. Item 12 of the application specifies that survey instruments will be calibrated annually and following repair. This item further specifies that instruments will be considered properly calibrated when readings are within 10 percent of the known value for each point checked. Instruments reading within 20 percent may be used only if accompanied by a calibration chart attached to the instrument.

Contrary to the above, the inspector determined that the licensee's 13 survey instruments had been calibrated in December 1987 and not again until March or April 1989, a period exceeding the required annual interval. Additionally, two of these instruments were 25-30 percent off the acceptable calibration reading and one instrument was 40-50 percent off the acceptable value. The licensee had used these instruments during this period to perform routine radiation surveys.

This is a Severity Level IV problem. (Supplement VI)

3. License Condition 17 requires that licensed materials shall be possessed and used in accordance with statements, representations, and procedures contained in an application dated September 4, 1987, and letter dated October 24, 1987. Sections of these documents describe the licensee's waste management program including waste storage area and required radiation surveys and records.

- a. Item 8 of the application specifies that all radioactive waste material will be held for decay or storage in an area identified as Building 88-H.

Contrary to the above, during October 1989 the licensee had moved the radioactive waste storage area from the designated location at Building 88-H to Building 85-E.

- b. Item 14 of the application specifies that radiation surveys will be routinely performed and that records of survey date, location, and surveyors will be maintained. Item 15 of the application specifies that surveys of the waste storage area will be performed monthly.

Contrary to the above, the inspector determined that surveys of the licensee's waste storage area had been conducted at the required monthly interval but that records of such surveys had not been maintained as required.

This is a Severity Level IV problem. (Supplement VI)

Pursuant to the provisions of 10 CFR 2.201, Phillips Petroleum Company is hereby required to submit to this office, within 30 days of the date of the letter transmitting this Notice, a written statement or explanation in reply, including for each violation: (1) the reason for the violation if admitted, (2) the corrective steps which have been taken and the results achieved, (3) the corrective steps which will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending the response time.

Dated at Arlington, Texas,
this 6th day of December 1989