

Title: J. C. HAYNES COMPANY

ALLEGED UNAUTHORIZED POSSESSION OF AN AMOUNT OF AMERICIUM-241
EXCEEDING NRC LICENSE; ALLEGED UNAUTHORIZED USE OF AMERICIUM-241
IN VIOLATION OF NRC LICENSE; AND ALLEGED MATERIAL FALSE STATEMENTS
MADE TO THE NRC

Licensee:

J. C. Haynes Company
800 Hebron Road
Newark, OH 43055

Docket No. 030-05884
License No. 34-13774-01

Reported by:

Harold G. Walker
Harold G. Walker
Senior Investigator
Office of Investigations
Field Office, Region III



Case Number: 3-85-005

Report Date: August 4, 1986

Control Office: 01:RIII

Status: CLOSED

Reviewed by:

Eugene T. Pawlik
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Director
Office of Investigations
Field Office, Region III

Approved by:

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Director
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Participating Personnel:
Roy J. Caniano, Radiation Specialist, RIII



WARNING

The attached document/report has not been reviewed pursuant to
10 CFR § 2.790(a) exemptions nor has any exempt material been
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SYNOPSIS

On February 8, 1985, the NRC Regional Administrator, Region III (RIII), James G. KEPPLER, requested that an investigation be initiated into the alleged unauthorized possession of americium-241 by J. C. Haynes Company in an amount exceeding that authorized by License No. 34-13774-01, Amendment No. 08. The request for investigation further alleged that John C. HAYNES was using the americium-241 to irradiate diamonds, also in violation of said license which permitted "storage only," disallowing "use of radioactive material."

The OI investigation revealed that HAYNES was in possession of approximately 20 curies of americium-241, an amount far in excess of the 85 millicuries authorized by License No. 34-13774-01, Amendment No. 08. The investigation further revealed that HAYNES made material false statements to the NRC regarding the total amount of americium-241 that he actually possessed. This investigation also revealed that HAYNES was using the americium-241 to irradiate diamonds in violation of his license which disallowed "use of radioactive material."

The Federal Bureau of Investigations (FBI) was initially notified of this allegation on February 19, 1985. On March 26, 1985, following an extensive FBI investigation, HAYNES was arrested by agents from the Columbus, Ohio, FBI Office. Simultaneous with that arrest, a search warrant was executed at the laboratory used by the J. C. Haynes Company and from which a quantity of americium-241 was recovered. HAYNES, at the time of his arrest, identified an additional location where still another quantity of americium-241 was also recovered.

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ACCOUNTABILITY

The following portions of this Report of Investigation (Case No. 3-85-005) will not be included in the material placed in the PDR. They consist of pages 2 through 17.

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APPLICABLE REGULATIONS

Allegation 1: Alleged Unauthorized Possession of an Amount of Americium-241 Exceeding NRC License in violation of 10 CFR 30.3.

Allegation 2: Alleged Unauthorized Use of Americium-241 in violation of NRC License in violation of 10 CFR 30.3.

Allegation 3: Alleged Material False Statements Made to the NRC in violation of 10 CFR 30.3.

Chapter 16, Section 186 of the Atomic Energy Act
Chapter 47, Section 1001 of Title 18 of the U.S.C.

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DETAILS OF INVESTIGATION

Purpose of Investigation

This investigation was initiated in order to determine whether there was an unauthorized possession and use of americium-241 by John C. HAYNES in violation of License No. 34-13774-01. It was also initiated to identify any false statements allegedly made by HAYNES to the Nuclear Regulatory Commission (NRC) in regard to his possession and use of americium-241.

Background

On February 6, 1985, Region III (RIII) received information from a confidential source that J. C. Haynes Company located at 800 Hebron Road, Newark, Ohio, was in possession of approximately 15 curies of americium-241 and was using the material to irradiate diamonds. On February 7, 1985, the confidential source provided a sworn statement to the RIII staff regarding the J. C. Haynes Company.

Details

This investigation revealed that J. C. Haynes Company located at 800 Hebron Road, Newark, Ohio, under NRC Materials License No. 34-13774-01, Amendment No. 07, dated April 25, 1978, was authorized to possess a maximum amount (i.e., 25 curies) of americium-241, a radiotoxic byproduct comparable to plutonium-239 (Exhibit 1).

In a letter addressed to the NRC dated October 2, 1981, and signed by HAYNES, President of J. C. Haynes Company, HAYNES addressed his plan for the decontamination and removal of contamination (americium-241) from his facility (Exhibit 2).

In a letter addressed to the NRC, Office of Inspection and Enforcement (IE) dated October 23, 1981, and signed by HAYNES, addressed the disposal of the activity (americium-241) at Nuclear Engineering Company in Morehead, Kentucky, on February 19, 1974 (Exhibit 3).

In a conversation record dated November 19, 1981, between HAYNES and John HICKEY (NRC Inspector), HAYNES is reported to have stated that he had no records, but assured HICKEY that he had disposed of about 25 curies of americium-241 in 1974 at Morehead City, Kentucky, and that only 25 microcuries remain in the original containers (Exhibit 4).

In a letter addressed to the NRC, RIII, dated April 2, 1982, and signed by HAYNES, HAYNES stated that he had limited his activities in his facility to sampling, monitoring, and maintaining the security of the stored waste (americium-241). HAYNES further stated that no activity would be performed in the facility until approved by the NRC (Exhibit 5).

On April 28, 1982, HAYNES' License No. 34-13774-01 was amended. Amendment No. 08 authorized storage only of approximately 85 millicuries of americium-241. In addition, Amendment No. 08 denied HAYNES the "use of radioactive material" (Exhibit 6).

[REDACTED]

[REDACTED] HAYNES had (at HAYNES' Jewelry Store, located at 800 Hebron Road, Newark, Ohio) displayed a device as a "prototype" motor with a jar similar to a rock tumbler, [REDACTED] used by HAYNES to process diamonds in americium-241.

HAYNES [REDACTED] had approximately 15 curies of americium-241.

[REDACTED]

[REDACTED] it was estimated that the americium-241 had been observed by the source [REDACTED]

[REDACTED]

[REDACTED] These people were Steve WHITE, the current owner of the jewelry store, and Will POWELL. [REDACTED] WHITE had transported and assisted HAYNES in his attempt to enhance the value of the diamonds [REDACTED]

[REDACTED] WHITE had aided HAYNES in avoiding detection by NRC inspectors [REDACTED] in that WHITE at one point misled NRC inspectors as to HAYNES' whereabouts. POWELL [REDACTED] is a close friend of HAYNES' and resides on a farm near Buckeye Lake, Ohio [REDACTED]

HAYNES' plans [REDACTED] were to in some manner persuade the NRC to pay for the clean up of his laboratory (the provision in Amendment No. 08 of the license specified storage only of americium-241 contaminated apparatus). At that time, HAYNES would then feel free to move his operation to Canada to take advantage of Canada's "very free and liberal nuclear policies"

[REDACTED]

[REDACTED] HAYNES may have intended to ensure that the laboratory exhibited airborne contamination in order to accelerate his request that the NRC clean up his facility [REDACTED]

On February 19, 1985, Investigator Walker met with representatives of the FBI, Columbus, Ohio, Field Office to make them aware of the potential violations within their jurisdictional responsibility.

On February 20, 1985, Eugene T. Pawlik, Director of OI:RIII, and Investigator Walker introduced the confidential source to representatives of the FBI, whereupon the source agreed to assist the FBI in the ensuing investigation.

On February 25, 1985, Pawlik, Walker, and Don SRENIAWSKI, Chief of Region III's Materials Radiation Protection Section, met with officials of the U.S. Department of Energy's (DOE) Operational and Environmental Safety Division, Argonne Laboratory, Argonne, Illinois. This meeting was initiated to coordinate assistance between DOE and the NRC in case any spills of americium-241 were to occur as a result of HAYNES' unauthorized activities.

On March 25, 1985, OI:RIII personnel and RIII staff personnel met with FBI agents at the Columbus, Ohio, Field Office to discuss and plan NRC/FBI activities for seizing the alleged significant quantities of americium-241, said to be in the unlawful possession of HAYNES of Newark, Ohio. Six NRC/FBI teams were formed to simultaneously interview various people on March 26, 1985, who may have had knowledge of the whereabouts of the americium-241.

On March 26, 1985, at approximately 8:00 a.m., pursuant to a Federal search warrant, the FBI entered the HAYNES residence and arrested HAYNES for illegal possession and use of americium-241, and for making false statements to the NRC regarding his possession and use. At approximately 8:20 a.m., CANIANO and Walker entered the facility on Parr Road (HAYNES' laboratory) following the FBI's securing of the facility (Exhibits 8, 9).

Following his arrest, HAYNES was questioned by W. L. AXELSON, NRC Chief of Nuclear Materials Safety and Safeguards Branch, RIII. HAYNES had been advised of his "Miranda"/Constitutional rights while in the presence of FBI agents. HAYNES stated that he had been irradiating diamonds in his Parr Road building. Following his transportation to the Parr Road facility by the FBI, HAYNES directed AXELSON to two glass vials containing quantities of americium-241 (Exhibit 10).

After conferring with his attorney, HAYNES then stated that 20 to 25 curies of americium-241 were at the POWELL residence. HAYNES provided a description of the container of americium-241 located in POWELL's residence to the NRC/FBI and led investigators to the container (Exhibit 10).

HAYNES later stated that he had not disposed of the americium-241 (as he had documented by letter and in person to the NRC), and that his plan was to relocate his business (irradiating diamonds) in Canada. HAYNES commented that he knew that sooner or later he would be caught (Exhibit 10).

An April 1, 1985, letter from DOE, Miamisburg, Ohio, indicated that the four diamonds also recovered by the FBI and NRC during the execution of the search warrant exhibited americium-241 contamination well in excess of the NRC limit of 20 dpm's. Accordingly, these radioactive diamonds were unauthorized for public use (Exhibit 11).

On July 5, 1985, AXELSON reported that approximately 20 curies of americium-241 had been accounted for from the March 26, 1985, seizure (Exhibit 12).

Willfulness/Intent

Allegation 1: Alleged Unauthorized Possession of an Amount of Americium-241 Exceeding NRC License

The J. C. Haynes Company was authorized on April 28, 1982, by Amendment No. 08 to License No. 34-13774-01 to possess approximately 85 millicuries of americium-241. According to HAYNES, his purpose in possessing the americium-241 in the quantity found on March 26, 1985 (approximately 14 curies), was to irradiate diamonds and therefore, artificially inflate the value of the gems. Additionally, as stated by the confidential source, HAYNES had been seen approximately 50 times in the past two years in possession of the americium-241 at the Parr Road facility. During that time period, HAYNES' use of the americium-241 was to irradiate diamonds.

Allegation 2: Alleged Unauthorized Use of Americium-241 in Violation of NRC License

As stated in Allegation 1, HAYNES was observed by the confidential source on many occasions irradiating diamonds with the americium-241 in an effort to artificially inflate the value of the gems in direct violation of Amendment No. 08 of License No. 34-13774-01.

Allegation 3: Alleged Material False Statements Made to the NRC

HAYNES, on various occasions prior to Amendment No. 08 of License No. 34-13774-01, dated April 28, 1982, stated by letter and in person to the NRC, that he had disposed of all but approximately 85 millicuries of americium-241. This was obviously an attempt by HAYNES to mislead the NRC. The purpose of this attempt to deceive the NRC through false statements is attributable to HAYNES' desire to move his operation to Canada and maintain his supply of americium-241. This desire, according to the confidential source and later confirmed by HAYNES' own admission, was fueled by HAYNES' perception that Canada's laws governing the possession and use of radioactive byproduct material were more liberal than the laws and regulations of the United States.

Agent's Conclusions

HAYNES' actions were willful, based upon his admissions to the RIII personnel and statements attributed to HAYNES by the confidential source. In addition to HAYNES' admissions, the recovery of approximately 20 curies of americium-241 and four contaminated diamonds confirm the illegal use of the radioactive material. HAYNES' most revealing remark was his acknowledgement that he realized he would be caught sooner or later.

SUPPLEMENTAL INFORMATION

This investigation developed information indicating possible violations of Federal criminal law by John C. HAYNES. The safety significance of the information revealed in the investigation demanded immediate notification of the FBI. HAYNES, as of this writing, has accepted a plea agreement with the United States Attorneys' office in Columbus, Ohio. He is awaiting sentencing.

Attached are Exhibits 13 and 14, which document both the contamination and combined actions taken by the NRC and DOE to bring to a safe conclusion the unlicensed activity of HAYNES.

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STATUS OF INVESTIGATION

Evidence developed in this investigation was sufficient to warrant notification of the FBI following preliminary interviews. The recovery of the americium-241 and subsequent arrest of HAYNES marked the conclusion of this investigation. This investigation is closed.

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LIST OF EXHIBITS

1. Copy of John C. HAYNES Company Materials License dated April 25, 1978.
2. Copy of letter to the USNRC from J. C. HAYNES dated October 2, 1981.
3. Copy of letter to the USNRC from J. C. HAYNES dated October 23, 1981.
4. Copy of Page 1 of Conversation Record between J. C. HAYNES and J. HICKEY dated November 19, 1981.
5. Copy of letter to the USNRC from J. C. HAYNES dated April 2, 1982.
6. Copy of John C. HAYNES Company Materials License Amendments No. 07 and 08.

- 
8. Copy of Criminal Complaint dated March 25, 1985.
 9. Copy of Search Warrant Affidavit dated March 25, 1985.
 10. Copy of Memoranda relevant to the seizure of unauthorized quantities of americium-241 dated April 8, 1985.
 11. Copy of DOE letter to William L. AXELSON, USNRC, dated April 1, 1985.
 12. Copy of USNRC letter to FBI dated July 5, 1985.
 13. Copy of Final Report of Phase II Decontamination Report of J. C. HAYNES Site dated October 1985.
 14. Copy of USNRC NUREG-1153, "Inspection Report of Unauthorized Possession and Use of Unsealed Americium-241 and Subsequent Confiscation" dated November 1985.

CONFIDENTIALITY AGREEMENT

I have information that I wish to provide in confidence to the U.S. Nuclear Regulatory Commission (NRC). I request an express pledge of confidentiality as a condition of providing this information to the NRC. I will not provide this information voluntarily to the NRC without such confidentiality being extended to me.

It is my understanding, consistent with its legal obligations, the NRC, by agreeing to this confidentiality, will adhere to the following conditions:

(1) The NRC will not identify me by name or personal identifier in any NRC initiated document, conversation, or communication released to the public which relates directly to the information provided by me. I understand the term "public release" to encompass any distribution outside of the NRC with the exception of other public agencies which may require this information in furtherance of their responsibilities under law or public trust.

(2) The NRC will disclose my identity within the NRC only to the extent required for the conduct of NRC-related activities.

(3) During the course of the inquiry or investigation the NRC will also make every effort consistent with the investigative needs of the Commission to avoid actions which would clearly be expected to result in the disclosure of my identity to persons subsequently contacted by the NRC. At a later stage I understand that even though the NRC will make every reasonable effort to protect my identity, my identification could be compelled by orders or subpoenas issued by courts of law, hearing boards, or similar legal entities. In such cases, the basis for granting this promise of confidentiality and any other relevant facts will be communicated to the authority ordering the disclosure in an effort to maintain my confidentiality. If this effort proves unsuccessful, a representative of the NRC will attempt to inform me of any such action before disclosing my identity.

I also understand that the NRC will consider me to have waived my right to confidentiality if I take any action that may be reasonably expected to disclose my identity. I further understand that the NRC will consider me to have waived my rights to confidentiality if I provide (or have previously provided) information to any other party that contradicts the information that I provided to the NRC or if circumstances indicate that I am intentionally providing false information to the NRC.

Other Conditions: (if any) [REDACTED]

I have read and fully understand the contents of this agreement. I agree with its provisions.

2/7/85
Date

Name: [REDACTED]
Address: [REDACTED]

Agreed to on behalf of the U.S. Nuclear Regulatory Commission.

2/7/85
Date

Signature

Name: CHARLES H. WILK

Title: INVESTIGATION AND COMPLIANCE SPECIALIST

3-85-005

E4-1

Contains identity of confidential source. DO NOT DISCLOSE

Approved: [REDACTED]

EXHIBIT 7B

PAGE 1 OF 1 PAGE(S)

7 D in part [REDACTED]

CRIMINAL COMPLAINT

| | | | |
|---|--|---|--------------------------------|
| United States District Court | | DISTRICT SOUTHERN DISTRICT OF OHIO-EASTERN DIVISION | |
| UNITED STATES OF AMERICA V. JOHN C. HAYNES | | DOCKET NO. | |
| | | MAGISTRATE'S CASE NO. | |
| Complaint for violation of Title 18 42 | | United States Code § 1001 2273, in violation of 10 CFR 30.3 | |
| NAME OF JUDGE OR MAGISTRATE Mark R. Abel | | OFFICIAL TITLE U.S. Magistrate | LOCATION Columbus, Ohio |
| DATE OF OFFENSE 3/23/85 | PLACE OF OFFENSE Licking County, Ohio | ADDRESS OF ACCUSED (if known) 1268 Country Side Drive, Newark, Ohio | |
| COMPLAINANT'S STATEMENT OF FACTS CONSTITUTING THE OFFENSE OR VIOLATION: On or about 3/23/85, John C. Haynes had in his possession unauthorized quantities of Americium 241 for which he was not licensed to keep or possess pursuant to 10 CFR 30.3 and in violation of Title 42, U.S. Code, Section 2273, and John C. Haynes has been conducting unlawful activities with said Americium 241 for which he made false statements to the Nuclear Regulatory Commission (NRC) regarding the quantity he possesses. | | | |
| BASIS OF COMPLAINANT'S CHARGE AGAINST THE ACCUSED: See attached affidavit | | | |
| 3-85-005 | | EXHIBIT <u>8</u> PAGE <u>1</u> OF <u>2</u> PAGE(S) | |
| MATERIAL WITNESSES IN RELATION TO THIS CHARGE: Ohio | | [REDACTED] Special Agent, FBI, Columbus, | |
| Being duly sworn, I declare that the foregoing is true and correct to the best of my knowledge. | | SIGNATURE OF COMPLAINANT (OFFICIAL USE) C/4 | |
| Sworn to before me and subscribed in my presence, SIGNATURE OF MAGISTRATE(1) | | OFFICIAL TITLE Special Agent, FBI | |
| | | DATE 3/25/85 | |

On 8/18/70, John C. Haynes was granted a Nuclear Regulatory Commission (NRC) license, number 34-13774-01. On 4/28/82, the NRC amended the license of John C. Haynes to permit storage only with the added condition the license does not authorize the receipt of radioactive material, use of radioactive material, or decontamination or removal of radioactive material from the glove boxes, ventilation system, or the underground liquid storage tank located in Haynes's laboratory on Parr Road, Licking County, Ohio. On 2/18/85, a confidential source who related to the affiant under oath that John C. Haynes is in possession of approximately 15 curies of Americium 241 and is utilizing the substance to irradiate diamonds to enhance their value. Americium 241 is a byproduct material as defined by the Atomic Energy Act of 1954, as amended.

SEARCH WARRANT ON WRITTEN AFFIDAVIT

| | |
|---|--|
| United States Dist. ct Court UNITED STATES OF AMERICA v. JOHN C. HAYNES | DISTRICT SOUTHERN DISTRICT OF OHIO-EASTERN DIVISION |
| | DOCKET NO. _____ MAGISTRATE'S CASE NO. _____ TO: Any FBI Agent or Duly Authorized Law Enforcement Officer |

Affidavit(s) having been made before me by the below-named affiant that he/she has reason to believe that ~~(XXXXX)~~
~~personally~~ (on the premises known as) _____ the laboratory of John C. Haynes located
 at Parr Road, Licking County, Ohio, address unknown, photograph
 attached _____

in the SOUTHERN District of OHIO-EASTERN DIVISION there is now being
 concealed certain property, namely

Americium 241, irradiated gems and laboratory equipment utilized to
 process the gems and any documents pertaining to Americium 241.


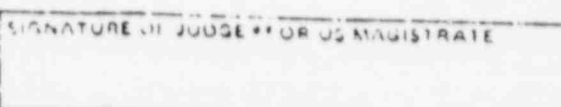
3-85-005

EXHIBIT 9
 PAGE 1 OF 3 PAGE(S)

and as I am satisfied that there is probable cause to believe that the property so described is being concealed on the
 person or premises above-described and the grounds for application for issuance of the search warrant exist as
 stated in the supporting affidavit(s),

YOU ARE HEREBY COMMANDED to search on or before ten days
 (not to exceed 10 days) the person or place named above for the property specified, serving this warrant and making
 the search (in the daytime — 5:00 A.M. to 10:00 P.M.) ~~(ANYTIME IN THE DAY OR NIGHT)~~ and if the property be found
 there to seize it, leaving a copy of this warrant and receipt for the property taken, and prepare a written inventory of
 the property seized and promptly return this warrant to Mark R. Abel, U.S. Magistrate

as required by law. U.S. Judge or Magistrate

| | | |
|--|--|-----------------------------|
| NAME OF AFFIANT  | SIGNATURE OF JUDGE *OR US MAGISTRATE  | DATE/TIME ISSUED 3/23/85 |
|--|--|-----------------------------|

*If a search is to be authorized at any time in the day or night, the United States Federal Rules of Criminal Procedure Rule 41(c), show reasonable
 cause therefor

**United States Judge or Magistrate *Mark R. Abel*

On 2/18/85, a confidential source advised representatives of the Nuclear Regulatory Commission (NRC), Region 3, Chicago, Illinois, that John C. Haynes was in possession of approximately 15 curies of Americium 241, which he was using in his laboratory located on Parr Road, Licking County, Ohio. Haynes, for approximately the last year, has been utilizing the Americium 241 to alter the color of diamonds to enhance their value.

Americium 241 is a byproduct material as defined by the Atomic Energy Act of 1954, as amended.

Americium 241 is a byproduct material as defined pursuant to the Atomic Energy Act of 1954, as amended, and that no person shall manufacture, produce, transfer, receive, acquire, own, or possess the byproduct material without being duly licensed by the NRC of the U.S.

On 8/18/70, John C. Haynes was granted a NRC materials license, number 34-13774-01, to possess three sealed sources of 300 millicuries each of Americium 241. On 5/18/71, John C. Haynes's license was amended to allow possession of 7 curies of Americium 241 in any form. On 11/1/71, John C. Haynes's license was amended to allow possession of 25 curies of Americium 241 in any form. On 4/25/78, John C. Haynes's license was renewed by NRC. On 3/28/80, John C. Haynes informed the NRC that he had disposed of 18 curies of Americium 241 and all that remained in his laboratory was residue and contamination which was estimated to be approximately 2 curies. On 4/28/82, the NRC amended the license of John C. Haynes to permit storage only with the added condition the license does not authorize the receipt of radioactive material, use of radioactive material, or decontamination or removal of radioactive material from the glove boxes, ventilation system, or the underground liquid storage tank located in Haynes's laboratory on Parr Road, Licking County, Ohio.

On 3/23/85, a confidential source overheard a conversation in which John C. Haynes stated that there were a couple of curies of Americium 241 in the hot cell located in his laboratory on Parr Road, Licking County, Ohio, irradiating an uncut four or five carat rough diamond.

On 3/24/85, a confidential source overheard a conversation in which John C. Haynes stated that he had an additional quantity of Americium 241 stored with an unnamed individual at an undisclosed location and in the event of his death or demise that his wife, Jane, and his friend, William Powell, were aware of the identity of the individual who was storing the Americium 241 and would insure that these elements would be turned over to the NRC for disposal.

Sealed

On 3/24/85, a confidential source overheard a conversation in which John C. Haynes stated that he had taken four diamonds one of which was the four or five carat rough diamond to an individual whose identity is known to the FBI for removal of all surface Americium 241 contamination. The rough cut diamond had a surface count of 14,776 counts per minute which is indicative of radioactive contamination.

Sealed