

August 7, 1992

[REDACTED]

[REDACTED]

Thank you for taking the time on August 4, 1992, to talk with me regarding the radiation hazards associated with contamination discovered at the Northeast Ohio Regional Sewer District Southerly Wastewater Treatment Plant (Southerly) and the relationship between the hazards at that facility and one of your patients. I appreciate your interest in understanding the hazards at Southerly and have enclosed some explanatory material that may be of interest to you.

The radiation hazards at Southerly originated approximately a decade ago following discharges of cobalt-60 into the Cleveland area sanitary sewerage system. We have found over the past several years that sanitary sewer discharges within our regulations can occasionally be concentrated through the treatment process to a level that is easily detected.

At Southerly, the contamination is isolated to four locations at the facility: three areas of the facility that were formerly utilized to receive fill material that are now vegetated and the sanitary ponds area where sludge ash is deposited and remains for several years to naturally dewater. These areas are not normally occupied by either the plant workers or the public.

The form of the radioactive material is small insoluble flake like particles that have been through the incineration process. External radiation levels are generally very low with one area measuring several times natural background up to approximately 0.5 millirem per hour. A rem is a unit of measure of the energy deposited in tissue by radiation. Natural background is approximately 0.01 millirem per hour. For comparison purposes, the exposure limit for workers exposed to radiation in their occupation is 3000 millirem in a calendar quarter. The external radiation levels at Southerly are not a threat to the health of workers at Southerly or the public.

The other type of hazard that may have existed at Southerly was exposure from internally deposited radioactive materials through either ingestion or inhalation. Because of the insoluble nature of the cobalt-60 at Southerly, any inadvertent ingestion that may have occurred in the past when this material was handled would have rapidly passed through the digestive system and would not have caused biological harm. Inhalation of this material is unlikely due to particle size.

Information in this record was deleted
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Act, exemptions 6
FOIA- 93-256

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To confirm the lack of internal deposition due to inhalation, Southerly identified eleven individuals who would have had the greatest contact to the radioactive sludge ash when it was handled approximately a decade ago and subjected them to bioassay. The results of these tests were negative. No internal deposition of radioactive materials was present.

The patient we discussed was not exposed to radioactive material when there was a problem with sludge currently being processed at Southerly. My staff has performed surveys of Southerly and confirmed that this event was isolated in time many years ago. Sludge processed since that time and sludge being processed at the time of our surveys was not contaminated with radioactive material. There is no reason to believe that your patient was exposed to any hazard other than those normally incident to sewage sludge.

Coincidentally, your patient appears to have been working in proximity to a flow gauge that uses a sealed shielded cesium-137 radioactive source. This source does not represent a health hazard to workers, but did exacerbate the dilemma facing your patient when he observed the "radioactive materials" label on the gauge and assumed it referred to the contents of the pipe.

I am glad that I was able to assist you in this matter. If you have any further questions, please feel free to call me at (708) 790-5612.

Original Signed by John A. Grobe

John A. Grobe, Chief
Nuclear Materials Safety Branch

Enclosure: Radiological Characterization Survey
Report for Northeast Ohio Regional Sewer
District Southerly Wastewater Treatment Plant

bcc: w/o encl

J. Justice, NMSS

RIII
[Signature]
Capano
8/5/92

RIII
[Signature]
Grobe
8/5/92

RIII
[Signature]
Norelius
8/5/92

CONVERSATION RECORD

TIME

2:00 p

DATE

9/17/72

 VISIT CONFERENCE TELEPHONE INCOMING OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

SUBJECT

ORGANIZATION (Office, dept., bureau, etc.)

TELEPHONE NO.

Co-60 Contamination at
Southern West Waste Treatment Plant

ROUTING

NAME/SYMBOL

INT

SUMMARY

Concerned over the status of the Co-60 at the South by Plant and possible release to students + personnel within the plant. Explain that material is contained well in the facility. ()

Questioned whether there was or could be a airborne contamination.

No basis in the type of material that it emits with a serious problem.

I stated the maximum exposure was 500 mR/hr (5 mR/hr) and the area a isolated spot. Temporarily this will

ACTION REQUIRED

Inform Section Chief + Provide to project manager.

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Ken Lambert

Ken Lambert

9/17/72

ACTION TAKEN

SIGNATURE

TITLE

DATE

50271-101

U.S. GPO 1990-262-081/20175

CONVERSATION RECORD

OPTIONAL FORM 271 (12-76)
DEPARTMENT OF DEFENSE

Information in this record was deleted
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Act, exemptions 6
FOIA 93-256

B/4

CONVERSATION RECORD

TIME

DATE

9/17/92

VISIT

CONFERENCE

TELEPHONE

INCOMING

OUTGOING

Location of Visit/Conference:

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ORGANIZATION (Office, dept., bureau, etc.)

TELEPHONE NO.

SUBJECT

ROUTING

NAME/SYMBOL	INT

SUMMARY

The subject 15-20 MP from a sheet X-ray

I told [redacted] that two sheets has been completed and are awaiting the...
the migration of the information...
I informed [redacted] that the Newborn and Public Library has a full document area where the public reports could be seen.

[redacted] stated that I had answered his questions and illustrated his leave

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Ken Lambert

Ken Lambert

9/17/92

ACTION TAKEN

ATURE

TITLE

DATE

