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J. Johnson, AR. 35PD **DEPARTMENT OF HEALTH & ENVIRONMENT** 

BILL GRAVES, GOVERNOR Gary R. Mitchell, Secretary

KANSAS

August 20, 1998

MR RICHARD BANGART DIRECTOR OFFICE OF STATE PROGRAMS (03H20) NUCLEAR REGULATORY COMMISSION ONE WHITE FLINT NORTH 11555 ROCKVILLE PIKE 3RD FLOOR ROCKVILLE MD 20852

Dear Mr. Bangart:

Attached please find the latest reports for the investigations as requested in Recommendation 16 of our Draft IMPEP Report. Included is the following:

ID No.	Facility	Description	Status
KS-98-13	KTI	Transportation incident	Open
KS-98-12	Brooks Landfill/Line Medical	Radiation alarm response. Mo/Tc generator improperly disposed.	Closed - Turned over to licensing for escalated enforcement action
KS-98-11	KU Med Center	Overexposure of radiology employee (Feb 1997)	Closed - latest inspection confirmed adequate corrective action.
KS-98-08	Geosystems Engineering	Stolen/recovered soil moisture density gauge	Close
KS-98-06	KTI	Damaged soil moisture density gauge	Closed

Division of Environment, Bureau of Air and Radiation Radiation Control Program, Forbes Field, Bldg. 283 Topeka, Kansas 66620-0000 Printed on Recycled Paper

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(785) 296-1565 FAX (785) 296-0984

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KS-97-11	Sante Fe Railroad	Rossville Train wreck with spent Mo/Tc generators	Closed
KS-97-06	KU Med Center	P-32 incident	Closed - latest inspection confirmed adequate corrective action.

If you need any additional information regarding any of these investigations, please feel free to contact me or Tom Conley or Ron Fraass of my staff.

Sincerely Vick L. Cooper, Chief Radiation Control P

Bureau Of Air and Radiation

VLC/psw

Enclosure

## MEMORANDUM

DATE: June 30, 1998

TO: License File 18-C054-01 Investigation File KS-98-11

FROM: James Johnson, RCF

SUBJECT: Final Report on overexposure of radiology employee at KU Medical Center

re: See attached report.

I met with Ruth Schukman-Dakotas, Director Medical Center Safety Office - Radiation Safety Officer during 19 June 98 concerning the overexposure of a radiology employee at KU Medical Center during the year 1996.

After our phone conversations, meetings and upon review of the enclosed material, I recommend that the matter be closed from further investigation by this Department.

The corrective actions taken by the RSO have been reveiwed and implemented to ensure that such overexposures do not reoccur. KU considers this action closed.

No discussion follows.

NRC notified:	Yes, 2/6/97
Notification:	Licensee notified KDHE by fax & phone Jan 97. KDHE notified NRC
	by phone.
Communication:	Phone, fax and e-mail. This was adequate.
Resources:	Staff

Inspector / Investigator: James Johnson	
Supervisor RM & XRAY:	
Supervisor ER & EP: Rought 7	
jaj/irvsgte/18c05498.exp	

## MEMORANDUM

DATE: July 6, 1998

TO: Licensee File 22-B632-01 Investigation File KS-98-08

FROM: James A. Johnson, RCI

SUBJECT: Stolen / recovered soil moisture density gauge

re: Response to investigation

Discussion: See attached report. The inspection can be found in the licensees file. On 6 June 98 we received a call that a device was stolen from Geo Systems Engineering in Topeka.

On 8 June 98 an inspection and investigation was conducted by this office, to determine the root cause analysis of this event. The cause was identified as an employee not following established protocol, nor the supervisor doing any follow up auditing of the program.

The subsequent recovery of the device and the revised procedures are sufficient to help alleviate future problems. The RCP considers this investigation closed.

Event notification:	6 & 8 June 98
NRC notification:	8 June 98, by fax and E-mail.
Communication:	In person visit to licensee's facilities in Topeka & Lenexa.
Resources:	Staff time

Inspector / Investigator:	James Johnson
Supervisor RM & X-RAY	Par Cho CNO
Supervisor EP & ER:	Kould SF
Comments:	
jaj/invsgte/22b632.inv(june98)	C

Kansas Department of Health and Environment Gary R. Mitchell, Secretary Division of Environment Bureau of Air and Radiation Forbes Field, Bldg. 283, Topeka, KS 66620 Phone (785) 296-1569 Fax 296-0984 RFraass@aol.com

#### MEMORANDUM

DATE	28 July 98
то	Investigation File Case Number KS-98-12
	Licensee File License Number 20-B708-01
FROM	Ronald G. Fraass, Public Health Physicist

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SUBJECT Brooks Landfill Radiation Alarm Response

Joe Pajor, City of Wichita, called the Radiation Control Office on 15 July 1998 at 1410 to report that their radiation detection system had alarmed on a truck of waste. System detected 63,500 net counts per second (ncps) above a background of 1900 counts per second (Atch 1-1 and 1-2). Our office, in prior discussions with the landfill, asked them to notify us of any vehicles that exceeded 50,000 ncps. I asked him if the landfill staff had identified the load as commercial or residential trash and if they had roughly located the location of radiation on the truck.

Mr Pajor called back at 1442 and told me that the truck belonged to BFI and had picked up industrial waste. The highest indications of radioactivity on the vehicle were near the rear of the front loading trash truck. Landfill staff directed the truck to an isolated location and the driver was sent hor te by BFI. I agreed to be at the site at 0700 on the 16<sup>th</sup> to evaluate the situation. Alarm readout was approximately 30 times background and would correspond to approximately 300 microR/hr in Kansas.

I briefed Vick Cooper on the situation and asked him to locate a multi-channel analyzer in Wichita. If there were a leaking source, swipe samples could be taken to determine the isotopes without returning samples to the State Radiation Laboratory in Topeka. One was available at a Wichita hospital. Our KDFE District Office staff person in Wichita was not available to assist in this investigation due to scheduled MQSA inspections.

Instruments taken to the site:

Ludlum model 19 MicroR meter, 120905, Calibrated:3 Feb 98 Victoreen model 450p pressurized ion chamber, 2591, Calibrated:13 Jan 98 Dosimeter Corp. of Am. model 3100 with model 360 pancake probe, Calibrated 3 Feb 98

I arrived at the landfill (Brooks Landfill, 4100 N. West St, Wichita KS, Phone: 316-722-9410) at

0700 on the 16<sup>th</sup> and briefed landfill, BFI, and County Health Department staff on the radiological safety issues and a plan to determine the source of the radiation. Attachment 2 is a list of those personnel who were part of the investigation and present for the briefing. The last two names on the list are from Line Medical and arrived after the radioactive material had been found.

I was able to detect radiation at tens of yards from the vehicle with the microR meter. At approximately 8 feet up on the passenger side of the vehicle, at the very back, the meter went off scale high (> 5000 microR/hr). I then surveyed the same area with the pressurized ion chamber (PIC) and obtained a reading of 1.9 milliR/hr. Radiation levels near the drivers area would have been much less (100 microR/hr or less for about 6 hours travel time). Vehicle front loads trash from containers automatically with no handler working directly with the trash containers.

Landfill personnel offered to prepare a plastic covered surface on which to dump portions of the waste and permit location of the source or sources. The truck was driven through the sensors again on the 16<sup>th</sup> to determine if any radioactive decay had occurred from the prior day. The reading, 63,400 ncps (Atch 1-1) indicated no appreciable decay in 20 hours. The sorting area was selected so that it would not disturb operations if clean up took several weeks. A back hoe operator was available to move the material and assist in sorting through it if necessary. Rakes and hoes were also available so that individuals could sort through the trash without direct contact.

The back of the truck was opened and about 2 linear feet of material (Atch 7-2) was pushed out so that the first of the rear material would fall onto the ground. An additional foot of material was pushed out and when it fell, the source location moved to the pile of debris. I had the truck moved approximately 50 yards away so I could scan it for residual material. None was found with the microR meter and the truck was sent to the scale sensors for final verification. The truck checked clean at 08:45 and the waste was landfilled. The crew then began looking through the waste.

All staff (Atch 7-1) handling or sorting through the trash wore rubber gloves to prevent inadvertent contamination. Several boxes with crossed-out radiation symbols were immediately noticed (Atch 7-2 and 7-3). Swipes of the boxes and maroon cylinder indicated no contamination present. Hoes and rakes were also checked and were clean. Plastic boots were available if workers had needed to walk into the trash. That was not necessary. Parts of a maroon plastic Moly-Tech generator column were found on the surface of the pile and moved to the edge. It had been removed from its maroon plastic outer container, located in the trash, and was the only source of radiation found. Readings with the PIC showed 1 n. IliR/hr at 7 feet and approximately 500 milliR/hr nearly at the surface. I notified the workers of the specific source and kept them well behind a 1 milliR/hr line. All workers' hands and feet were confirmed free of contamination. Using a gamma constant from the 1970 Radiation Health Handbook for Mo99 including Tc-99m, the source was approximately 25 milliCuries of Mo99 plus its daughter at equilibrium. Attachment 4 shows calculations by David Whitfill of this office. If the calculations are correct, this was probably a 2 Curie source on 29 June.

Address labels on boxes and shipping papers (Atch 5) indicated the various source containers had been delivered to Line Medical, 810 East Murdock, Wichita KS. BFI staff confirmed that Line Medical waste was collected by this truck as the first pickup on Wednesday morning (Atch 6-3) The waste container was to have been picked up on Tuesday but was missed due to road construction. I contacted Vick Cooper and relayed the information on the source to him. He contacted Line Medical, a Kansas licensee, and asked them to send a representative to the landfill. John Martin from Line Medical (Atch 7-4) arrived at the scene and confirmed that the source was a disassembled MolyTech generator. There were no marks on the generator to indicate ownership. The only markings on the outer cylinder were 4.3-033 and Mallinckrodt indicated that showed it was originally a 4.3 Curie generator and was the 33 rd made on the day it was produced. Mallinckrodt routinely decays these generators and then ships them to arrive at the user as 2 Curie generators.

John agreed that the generator was probably theirs and called for his office for someone to bring out some shielding so that the generator could be returned to Line Medical. Christie Ridler arrived with shielding and John placed the source in it (Atch 7-5). External radiation levels were 460 microR/nr at the highest point near the trunk and 65 microR/hr at the drivers seat. I provided them DOT-E 11406 KS-KS-98-01 (Atch 3) and they left for Line Medical at 1059.

Less than one hour elapsed from the time the truck moved from the scale to go to the off-load site until the source had been located and identified. Estimated maximum exposure to one of the landfill staff who raked the source out of the pile and stood 4 feet away for 6 minutes while looking for other possible radioactive material containers: 300 micro rem.

License actions because of this lost source have been turned over to the materials unit. I consider this investigation at Brooks landfill to be closed. Refer to the Line Medical license file for any enforcement actions taken as a result of this lost source.

#### Post Event Evaluation

NRC Notified? \_\_\_\_\_Not Required; X Yes on 16 July at 1345 Notification: Brooks Landfill notified our office within about two hours of the alarm trip and we were able to respond to the site by the next morning.

Communication: Cell phones were effectively used to work with the Topeka office from the landfill. All contact with Line Medical and the NRC was made by the Topeka office of the Radiation Control Program.

Resources: An additional staff member from KDHE would have been useful but not essential. Had the source not been identifiable visually, a multi-channel analyzer would have been essential. Unless the source was leaking, the MCA would have to have been portable.

Ronald G. Fraass

Supervisor ER&EP

Tom Conley

Supervisor RM& XRay

# Case# KS-97-011

Kansas Department of Health and Environment Gary R. Mitchell, Secretary Division of Environment Bureau of Air and Radiation Forbes Field, Bldg. 283, Topeka, KS 66620 Phone (785) 296-1569 Fax 296-0984 RFraass@aol.com

### MEMORANDUM

DATE 12 May 1998

TO Investigation File

FROM Ronald G. Fraass, Public Health Physicist

SUBJECT Rossville Train Wreck--2 July 1997-Final Report

**SUMMARY:** At about 0215 on 2 July 1997, a westbound Union Pacific train exited a siding and ran into the cars of a high speed eastbound Union Pacific train. The wreck derailed 19 freight cars and two locomotives. A fire ensued that destroyed much of the cargo on the derailed cars. Many of the cars were carrying highway truck trailers with their cargo. Eighteen spent Mo99-Tc99m radioisotope generators were on one of the truck trailers. Investigation by KDHE staff found remains of some of the generator's lead shields and confirmed presence of low levels of Tc99m. Highest detected radiation levels were less than 4000 microR/hr on contact with debris. Material was not detectable at one meter without a microR meter. No external risk to workers existed. Maximum quantities present on the day of the accident were not a hazard to the general public.

CURRENT STATUS: NTSB preliminary reports (Tabs A and B) were made available in late August 1997, but final reports are still not available. Contact with James Henderson, NTSB, in March indicated that the final report will be available soon. Additional information and clarifications were provided on 3 March (Atch 12). The final reports were provided March 26 (Atch 13) and 20 April (Atch 14). With no apparent new information, this investigation file will be closed effective this date.

**RADIOACTIVE MATERIAL INVOLVED:** 18 Mo-99/Tc-99m spent generators being returned to Mallinckrodt from Madigan Army Medical Center in Tacoma Washington and the University of Washington Medical Center. All generators were lead shielded rather than depleted uranium(phone message from Rex Ayers, Mallinckrodt, 9 July, 1997, Atch 8). The generators originally contained 3.0 Curies of material and had calibration dates from 3/14/97 to 5/30/97. See attachment 7 for detailed information. Copies of the Generator Return Program bills of lading are included in attachment 7 but are not legible. Mallinckrodt provided data on activity as of July 2 at 8 AM indicated a total of 0.913 millicuries of radioactive material remaining in the 18 generators. That activity was primarily contained in the four generators that

had the latest calibration dates. If the inserts from the four most active generators could have been collected the exposure at 1 meter with no shielding would have been approximately 160 microR/hr (Atch 12). This level would have posed no risk to workers or the public.

NOTIFICATION: News media informed us as we traveled to work of a train accident north of Topeka. Mallinckrodt Medical left a phone message on the office answering machine about a train accident and their offer to help (Atc<sup>1</sup> 3). Larry Parks conveyed this information to the duty officer at the Kansas Division of Emergency Management (KDEM) and to our program director Vick Cooper. The KDEM Duty Officer ca'led back to our office at 0812 with additional information about the train accident near Ressville, Kansas, just northwest of Topeka (Maps at Atch 1). They were concerned about potential bromine chloride and radioisotopes. At 0925 the Union Pacific notified us that there were unknown quantities of medial isotopes. Our program director dispatched Bart Lago and Ivan Schmidt to the scene at 0955 to determine the status of the potential radioactive material. Our office was also contacted by the National Response Center and bob Dye (EPA region VII). We indicated a need to see the manifest. Further contact with KDEM resulted in a copy of the train manifest showing 10 packages of radioactive material on the train cars that were on fire. The manifest indicated: 10 packages containing 625 pounds of radioactive material, class 7, UN2982, with radiation yellow II labels (Atch 2). We assumed at that point that the weight given included shielding material. Phone calls to Mallinckrodt failed to determine content of the shipment, but did yield information on typical radioisotope generators(Atch 3A). After determining that Shawnee County emergency management (see report at attachment 11) and the Silver Lake Fire Department were managing the scene, Diane Greep, Dave Whitfill, and I were dispatched to the scene.

ACTIVITIES: My team met with Ivan and Bart to determine the current situation. We also identified ourselves to the Incident Commander and offered our services. Technical experts from the Union Pacific, Radian International, US Department of Transportation, and National Transportation Safety Board were on scene (Atch 4). After being provided a copy of the Roadway Express truck manifest (Atch 5), we were able to determine that there were supposed to be 18 packages of Mo-99 with minimum Curie content. If this data was correct, the only remaining potential problem was whether the generators were shielded with depleted uranium instead of lead. Fire fighters were still extinguishing the last of the active fires at about 2 PM.

Numerous train cars and their contents were completely destroyed by the fire. As debris and pieces of train rolling stock were removed from the area of the wreck, our staff surveyed them for possible radioactive contamination. UP personnel and technical experts expected the car that had been carrying the Roadway Express trailer containing the radioisotope generators was in the middle of the debris. There were no visible remains of a trailer. At about 1940, using a microR meter, our staff finally located a small area of radioactive ash and debris on the remains of a UP rail car. The car had been designed to haul semi-trailers, but was missing its wheels, part of its structure to attach trailers, and was severely warped. Damage to the car was so bad that its serial number could not be determined. The radioactive material read approximately 4500 microR/hr at a centimeter using a Ludlum Model 19 calibrated to Cesium. Staff surveyed for removable contamination on shoes and other parts of the car and found none. A sample of the ash was brought back for identification (See Atch 9 and 10). No other areas of radioactivity above

background were found at the scene that day or later (July 3, 4,7, 11). Area background was 10-15 microR/hr.

The radioactive material was in an area about 4 feet in diameter and consisted of ash over a dull grey metal (later confirmed to be lead instead of uranium). Contact readings with a thin window GM tube did not indicate any appreciable alpha or beta radiation. A probable "core" from one of the generators was located in the debris on the same car on 11 July and confirmed to contain Tc-99m.

A more complete train consist was made available on 3 July (Atch 6). To confirm our assumption that we had found some of the debris from the radioisotope generators, a sample of the metal was collected on brought to the Kansas Department of Health and Environment laboratory for analysis. Results are in attachment 9 and showed the expected presence of Tc-99m.

FIRST RESPONDERS AND COUNTY ACTIVITIES: Gary Middleton, Director of Shawnee County Department of Emergency Management served as the primary incident commander. He provided as information on their activities in attachment 11. Fire, Police, Highway Patrol, National Guard, and Red Cross personnel assisted at the accident scene. The county made the decision to evacuate the residents of Rossville for several hours due to the potential for hazardous chemical fumes from some of the cargo on the two trains. Radiation was never an issue in the evacuation decision. Also, local press were not alarmed by the presence of radioactive material because the nature of the spent generators was explained to them by incident public affairs personnel.

**INTERACTION WITH NTSB:** Vick Cooper and Ron Fraass worked with the NTSB in preparing the initial report of the incident. Mr Fraass was assigned to the Hazardous Materials Group and assisted in the preparation of their 3 July field notes. He also provided a set of scene photos to the NTSB. A copy of this report minus NTSB material will be provided to the NTSB.

#### Post Event Evaluation:

NOTIFICATION: Notification was timely, but not accurate. Information from the scene was initially significantly wrong (635 pounds of radioactive material). Agencies assumed that others had the same information available. Mallinckrodt was assumed to be the shipper rather than the eventual recipient of the generators. The generators were presumed by Mallinckrodt to be depleted uranium. The number of generators was wrong (10 versus 18). It was unknown whether or not the generators were fresh or spent. None of this misinformation was serious or caused undue alarm because KDHE staff are familiar with radioactive material transport and worked around the misinformation to determine the correct information.

COMMUNICATION: Communication was available using cell phones and radios at the scene. Staff were brought in from the field to respond to the incident using cell phone and pager technology. RESOURCES: KDHE resources were adequate to deal with the radiological nature of the accident. Contact was made with other technical personnel available from the railroad, Mallinckrodt, Radian International, USDOT, and others in order to share information. Instrumentation and laboratory resources were adequate to locate, measure, and identify the radioactive material.

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Ronald Fraass, Supervisor Environmental Radiation and Emergency Preparedness

Tom Conley, Supervisor C X-Ray and Materials

### MEMORANDUM

DATE: July 7, 1998

Case No: KS-98-06

Licensee File

22-B659-01 KS-98-06

FROM: James A. Johnson, RCI

SUBJECT: KTI - Destroyed Soil Moisture Density Gauge Investigation on 11 April 98

re: see attached file & findings

Discussion:

TO:

The investigation was conducted on 11 April 1998. Based on the results of the investigation, KTI was found to be in noncompliance with Kansas Radiation Protection Regulations and license conditions:

Contrary to KRPR 28-35-211 (d): KTI's radiation program was found insufficient to comply with the requirements of this regulation; Contrary to KRPR 28-35-217a: KTI failed to monitor occupational exposure to any adult likely to receive, in one year from sources external to the body, a dose in excess of 10 percent of the limits in K.A.R. 28-35-212a; Contrary to license condition 11 of the Kansas Radioactive Materials License 22-B659-01: KTI failed to follow its own company procedures for assignment of authorized users as stated in the license applications dated 2 Oct 96 and 12 Feb 91; Contrary to license condition 18 of the Kansas Radioactive Materials License 22-B659-01: KTI failed to follow its own company procedures for assignment of authorized users as provide the set of the kansas Radioactive Materials License 22-B659-01: KTI failed to follow its own company procedures for assignment of authorized users as stated in the license applications dated 2 Oct 96 and 12 Feb 91; Contrary to license condition 18 of the Kansas Radioactive Materials License 22-B659-01: KTI failed to follow its own company procedures for monitoring personnel exposures as stated in the license applications dated 2 Oct 96 and 12 Feb 91.

Since the licensee has an Agreement States and NRC license, they were notified of the event for possible actions on their part. The NRC assigned Tom Young and Goeff Wright of Region III to handle the investigation. Region III visited licensee on 22 June 98, the RCP was in attendance. A summary of the discussion is attached. As of this note, Region III is still investigating this matter for possible license, wrongdoing and reciprocity violations.

The NRC is aware of our actions, citations and correspondence with the license and has received a copy of all actions regarding this matter.

KTI replied to the violations on 6 July 98. The corrective measures, procedures and

statements outlined in KTI's reply have been reviewed and we have no comments or questions at this time. The RCP will review these items at the next inspection. We consider this investigation to be closed.

Event notification: Licensee notified KDHE (Vic Cooper) by phone on 11 April 98. RCP responded around 10:00 am on 11 April 98. 21 May 98 by Tom Conley.

NRC notification: Co.amunication: Resources:

Phone, fax, e-mail, in person visits to licensee, accident site. Staff time, Ludlum model 2401-P survey meter, SS&D of Troxler model 3400 series gauges to calculate possible doses to workers.

Inspector / Investigator: James Johnson

949, 7 Supervisor RM&XRAY Supervisor EP & ER: Roundel jaj/invsgt98/22b65998.mem(july98)

Kansas Department of Health and Environment Gary R. Mitchell, Secretary Division of Environment Bureau of Air and Radiation Forbes Field, Bldg. 283, Topeka, KS 66620

#### MEMORANDUM

DATE:30 July 1998TOInvestigation FileFROMBart LagoSUBJECTTransportation IncidentCASE NUMBERKS-98-13 [Interim Report]REFERENCE CASE NUMBERKS-98-06

On 29 July 1998, Linda Howell of NRC Region IV contacted this office. A damaged Troxler gauge was shipped to Troxler from KTI [Kansas Radioactive Materials License Number 22-B659-01 and NRC License Number 24-25827-01]. Upon arrival at Troxler, it was found that the source was no longer in the shielded position and was lying in the bottom of the transport case. [Reported dose rates were between 200-300 mR/hr contact].

On 30 July 1998, the author investigated this incident at KTI's Merriam, Kansas location. Otto J. Kruger, vice-president and RSO for KTI, was interviewed. Mr. Kruger contacted Troxler on 19 June 1998. He did not speak with the Troxler RSO [Steve Brown] or got a Returned Goods Authorization [RGA] number. He spoke with "Chuck" [Last name unknown] in Service and "Jobin Gray in Sales. Mr. Kruger did inform them that the gauge was damaged. He also obtained the disposal cost that was based on the acquisition of a new gauge. Mr. Kruger faxed this information on 9 July 1998 and the gauge was shipped through FedEx on 17 July 1998. [SEE ATTACHED]

Mr. Kruger packaged the gauge for transport. The inspector had him reenact how the gauge was shipped. He visually verified that the remnant of the source rod was in the stored and locked position. They did not survey the gauge to verify that the source was in place as the company does not possess a survey meter. The T.I for the shipping document was based on generic Troxler information. Also, they took no measures to insure that the source would not move out of the shielded position. Mr. Kruger believed that the source could not leave the gauge. The survey conducted at the time of the origional incident [See Case Number KS-98-06] were consistent with a source being in the shielded position.

A conference call with myself, Tom Conley and Vick Cooper present relayed the above information to Linda Howell on 30 July 1998.

The following corrective actions are being recommended:

- Mr. Kruger contact FedEx to find out which employees may have come into prolonged 1 contact with the gauge. A health physics consultant for KTI will perform the dose estimates.
- KTI purchase a survey meter. 2
- KTI amend their operating and emergency procedures to prevent a reoccurrence of the 3. events.

There has

Bart Lago: Radiation Control Inspector

Date 3100 78

## MEMORANDUM

KS-97-06

DATE: June 30, 1998

TO

License File 18-C054-01 Investigation File THE REAL PROPERTY.

James Johnson, RCI FROM:

SUBJECT: Final Report P-32 Incident at KU Medical Center

See attached report. re:

I met with Ruth Schukman-Dakotas, Director Medical Center Safety Office - Radiation Safety Officer during 7/8 May 97 concerning the overexposure reading on a research employee (Yan Li & Fei Kaiyin) TLD badge for the fourth guarter 1996. KU considers this investigation closed at this time.

After thorough review of our phone calls, faxes and meetings and upon review of the enclosed materials, I recommend that the matter be closed from further investigation by this Department (RCP).

No discussion follows.

NRC notified:	Yes, 2/6/97, by NEMEDS, phone & fax (VLC).
Notification:	Licensee notified KDHE by fax & phone 2/6/97. KDHE notified NRC by phone & NEMEDS.
Communication:	Phone, fax and e-mail. This was adequate.
Resources:	Staff
Inspector / Investi	gator: James Johnson
Supervisor RM &	XRAY Way The
Supervisor EP & I	ER: han Frank

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