

MEMORANDUM FOR: E. F. Hawkins, Deputy Director  
 Uranium Recovery Field Office

FROM: A. Bill Beach, Director  
 Division of Radiation Safety & Safeguards

SUBJECT: AUGMENTED INSPECTION AT SEQUOYAH FUELS FACILITY - TEAM  
 CHARTER

You are hereby designated the leader of an Augmented Inspection Team (AIT) that is to review the discovery of water and soil at the Sequoyah Fuels Facility that was contaminated with concentrations of uranium well in excess of NRC limits. Your team, to be composed of members from Region IV and URFO, is to develop factual information concerning this situation and to brief Region IV management concerning your results.

The AIT should concentrate its efforts in the following areas:

1. Determine the extent, if any, of licensee and contractor employee exposure to uranium while digging the excavation and installing the vault. Establish a chronology of licensee actions, including preparation of the excavation, discovery of the contamination, samples taken and results, notifications to offsite authorities, and related information.
2. Establish a chronology of the history of the solvent extraction (SX) building. Identify and obtain copies of licensee documents related to: (a) process system leakage; (b) degradation, leakage, and repair of the SX building floor and sump; (c) maintenance and construction activities underground outside the SX building; and (d) radiation and contamination measurements made outside the SX building.
3. Determine whether, following the January 1986 accident, Pickard, Lowe and Garrick, Inc. evaluated and commented on aspects of the SX building related to building integrity and environmental contamination.
4. Review the licensees' environmental data and reports from 1980 (or earlier) to the present time to determine whether, in retrospect, they reveal any indication of groundwater contamination attributable to the SX building.

RIV:C:NMLS *h. #5* DD:DRSS *TPG* D:DRSS *SPK* NMSS  
 WLFisher:cd TPGwynn ABBeach *RC* RCunningham  
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*per + deliver*

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5. Determine licensee plans concerning the decontamination of the affected areas. This includes review of the licensee's plans for characterizing the extent of contamination beneath and beyond the SX building. Determine the ability of those planned actions to quantify the depth, breadth, and concentration of the below-ground contamination and whether the planned actions could worsen the situation, for example in causing the near-surface water to communicate with ground water.

The AIT is to be conducted in accordance with NRC Manual Chapter 93800, "Augmented Inspection Team Implementing Procedure." The team is to emphasize fact finding in its review of the circumstances surrounding the event. It is not the responsibility of the team to determine regulatory findings at this time. Safety concerns identified that are not directly related to the event under consideration should be reported to the regional office for appropriate action.

The AIT should arrive at the Sequoyah Fuels site the morning of August 27, 1990, and should plan to complete its investigation by August 31, 1990. A report documenting the results of the investigation should be issued within 3 weeks of the completion of your efforts. While the team is onsite, you will provide daily status briefings to Region IV management who will ensure that all other parties are kept well informed.

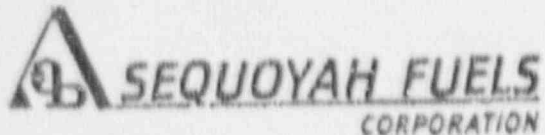
*Original Signed:*

A. B. BEACH

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

bcc:

R. Bernero, NMSS  
T. Murley, NRR  
R. Hall, RIV/URFO  
R. Martin, RIV  
A. Beach, RIV  
P. Gwynn, RIV  
W. Fisher, RIV  
R. Cunningham, NMSS  
M. Slosson, OEDO  
RIV Files  
DRSS Files



August 30, 1990

Certified Mail  
Return Receipt Requested

Mr. Robert D. Martin  
Regional Administrator  
U.S. NUCLEAR REGULATORY COMMISSION  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

RE: Commitments in Response to  
NRC Augmented Inspection Team Findings

Dear Mr. Martin:

In response to findings communicated to me by your Augmented Inspection Team (AIT) on August 29, 1990, Sequoyah Fuels Corporation (SFC) commits to the following prior to restart of the solvent extraction process:

1. SFC will provide NRC with sufficient information to assure the integrity of the floor and sump of the Solvent Extraction Building to ensure that current operations are not contributing to the inventory of licensed material beneath the building.
2. SFC will complete such actions as are necessary to adequately characterize the quantity and location of the pockets of licensed material under or around the Solvent Extraction Building.
3. SFC will identify and check all potential pathways that could contribute to migration of licensed material away from the Solvent Extraction Building.
4. SFC will properly control and maintain contaminated soil and water removed from the excavation north of the Solvent Extraction Building.

In addition, in the very near future, SFC will have an independent party review SFC's entire response to this situation, and a written report of this review and SFC's response to it will be made available for NRC's review.

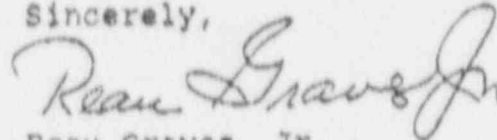
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Mr. Robert D. Martin  
August 30, 1990  
Page Two

Please be assured SFC is vigorously pursuing the other concerns brought to its attention by the AIT. Should you have any questions, please contact me at 918/489-3206.

Sincerely,



Beau Graves, Jr.  
President

RG:nv

August 30, 1990

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-90-28C

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

FACILITY: Sequoyah Fuels Corporation  
Gore, Oklahoma  
Docket: 40-08027  
License: SUB-1010

Licensee Emergency Classification:  
 Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

SUBJECT: AUGMENTED INSPECTION TEAM COMPLETES PRELIMINARY FIELD INVESTIGATIONS AT SEQUOYAH FUELS

As discussed in PNO-IV-90-28, 28A, and 28B, dated August 23, 24, and 27, 1990, respectively, Sequoyah Fuels Corporation (SFC) notified Region IV that uranium contaminated water had been discovered seeping into an excavation next to the solvent extraction building. Based on results of a preliminary inspection the Regional Administrator chartered an Augmented Inspection Team (AIT) to review the circumstances surrounding this discovery. The AIT was to develop factual information as to any exposures to uranium that may have occurred, the chronology of licensee actions related to this occurrence, the history of the solvent extraction building to determine the source of the uranium contaminated water, previous licensee or consultant reports to determine if they revealed any indication of earlier seepage attributable to the solvent extraction building, and to review the licensee's plans for decontamination and cleanup to determine their adequacy.

The AIT consisted of E. F. Hawkins, Team Leader, G. R. Konwinski, P. J. Garcia, Jr., all of Region IV's Uranium Recovery Field Office, and G. M. Vasquez of Region IV. Mr. A. Bill Beach, Director, Division of Radiation Safety and Safeguards, accompanied the AIT to provide management oversight. The AIT arrived onsite on August 27, 1990, to begin its initial fact gathering. Preliminary field investigations, consisting of inspection of the excavation, sampling of soil and water for independent verification of contamination levels, observation of preliminary borehole drilling, review of licensee records, and interviews with key licensee personnel was completed on August 29, 1990. The AIT found no evidence of groundwater contamination resulting from this event.

An exit meeting was held with SFC management, the AIT, Mr. A. Bill Beach, and Mr. John M. Montgomery, Deputy Regional Administrator, Region IV. The licensee was briefed on the information gathered to date, the additional information and reviews that NRC and SFC are to perform, and the AIT's preliminary conclusions as to the actions that need to be taken to fully address the remaining concerns.

*for*  
DD:URFO  
EHawkins/lv  
08/30/90  
*per telecon*

*DR*  
RIV:DRSS  
ABBeach  
08/30/90

*JM*  
DRA  
JMMontgomery  
08/30/90

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As a result of the investigations and the exit meeting, SFC committed to formally address the actions they would take prior to restarting the solvent extraction process. Their letter dated August 30, 1990, committed: (1) to provide documented assurance that the floor of the solvent extraction building has sufficient structural integrity to ensure that operations will not contribute further liquids to the contaminated area; (2) to complete characterization of all pockets of licensed material that may be in the subsurface under and near the solvent extraction building; (3) to identify and check all potential pathways that could allow licensed material to migrate away from the area of the solvent extraction building; and (4) to properly control and maintain contaminated soil and seepage in the vicinity of the solvent extractor building to assure that this material does not contribute to further contamination. In addition, SFC will have an independent party review SFC's response to this situation and will submit a report to NRC detailing the independent review results and SFC's response to it.

A followup inspection is planned to further review licensee actions and the need for remediation, and to address potential enforcement issues.

On August 30, 1990, the AIT briefed a member of Representative Synar's staff concerning these results.

The state of Oklahoma will be informed.

The licensee has issued a press release. NRC has responded to media inquiries.

This information has been confirmed with a licensee representative.

CONTACT: E. F. Hawkins, 776-2805

DISTRIBUTION:

OWFN				NMBB	NL	MAIL: DCS (Orig. IE34)
Chmn. Carr	CA	NMSS	AEOD	RES		DOT (Transp. Only)
Comm. Roberts	OGC	NRR	IRM			
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Comm. Curtiss	PA	OE		INPO	Regions & HQ)	
Comm. Remick	EDO			PDR		
ACRS			L-St	NSAC		
			PDR	RRI		
			EW-W	NRC OPS Ctr		
			ASLAP	Licensee (Reactor)		

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-90-28B

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

FACILITY: Sequoyah Fuels Corporation  
Gore, Oklahoma  
Docket: 40-08027  
License: SUB-1010

Licensee Emergency Classification:  
 Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

SUBJECT: AUGMENTED INSPECTION TEAM DISPATCHED TO SEQUOYAH FUELS

As discussed in PNO-IV-90-28 and A, dated August 23 and 24, 1990, respectively, Sequoyah Fuels Corporation notified Region IV that uranium contaminated water has been discovered seeping into an excavation near the solvent extraction building. The concentration of uranium in the seepage ranged up to 8 grams per liter, about 35,000 times the licensees environmental action level for uranium in water.

Based on the results of preliminary information obtained from a Region IV inspector dispatched to the site on August 23, 1990, the Regional Administrator has chartered an Augmented Inspection Team (AIT) to review the circumstances surrounding this contamination event and to inform NRC management concerning the factual information it obtains.

The AIT will be led by Mr. E. F. Hawkins of Region IV's Uranium Recovery Field Office and should arrive at the site on the morning of August 27, 1990. Mr. A. Bill Beach, Director of Radiation Safety and Safeguards, will accompany the team and provide management oversight of the AIT response. The AIT is planned to complete its initial fact gathering at the site on August 31, 1990, with a report to be issued within 30 days of that date.

Representative Mike Synar of Oklahoma, in a letter addressed to Chairman Carr dated August 24, 1990, requested an NRC investigation of this situation. He held a press conference in Tulsa, OK on August 24, 1990, to express his concern regarding the potential for ground water contamination at the facility. Region IV has briefed Representative Synar's staff and plans to keep them informed, through the Office of Congressional Affairs, as the AIT progresses. Region IV informed the Environmental Protection Agency Office in Dallas, TX of this situation on August 24, 1990.

The state of Oklahoma is aware of the event.

The licensee has issued a press release. NRC has responded to media inquiries.

This information has been confirmed with a licensee representative.

CONTACT: T. P. Gwynn, 728-8182.

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OWFN

Chmn. Carr	CA
Comm. Rogers	OGC
Comm. Curtiss	GPA
Comm. Remick	PA
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DATE: DCS (Orig. 1234)  
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(5520: 8/27/90 @ 9:15  
Regions & HQ)

XEROX:  
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D/DRP	(2)
SC/DRP	(5)
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D/DRSS	(3)
SC/DRSS	(4)
URFO	(1)
RIV File	(1)

RA	(1)
RA Sct'y	(1)
PAO	(1)
RSLO	(1)
SAO	(1)
EO	(1)
DRMA	(1)



This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

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 Gore, Oklahoma  
 Docket: 40-08027  
 License: SUB-1010

Licensee Emergency Classification:  
 Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

SUBJECT: SEQUOYAH FUELS CONTAMINATED WATER SEEPAGE UPDATE

This is an update to PNO-IV-90-28 dated August 23, 1990. On August 22, 1990, Sequoyah Fuels Corporation notified Region IV that uranium contaminated water had been discovered seeping into an excavation near the solvent extraction building. The soil had been excavated around two hexane tanks in preparation for enclosing the tanks in a concrete vault. The floor and walls of the vault had been installed, and the seepage was discovered in the soil to the south and west sides of the recently constructed vault. The licensee has backfilled the excavation to stabilize the newly constructed tank vault walls. The concentration of uranium in the seepage ranged up to 8 grams per liter, about 35,000 times the licensee's 225 microgram per liter environmental action level for uranium in water.

The licensee believes that the uranium might have leaked through the solvent extraction building floor several years ago, before the floor of that building was repaired in 1984. The licensee plans to bore holes into the soil around the solvent extraction building in an effort to define the extent of the soil contamination. A Region IV inspector is on site, and Region IV/Uranium Recovery Field Office inspectors will observe the boring activities, expected to begin on August 27, 1990. At this time there is no indication that the seepage has been a hazard to workers or to the public.

The state of Oklahoma is aware of the event.

The licensee has issued a press release. NRC has responded to media inquiries.

This information has been confirmed with a licensee representative.

CONTACT: W. L. Fisher, 728-8215.

DISTRIBUTION:

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Comm. Remick	PA	OE		INPO	Regions & HQ)
ACRS	EDO			PDR	
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			PDR	P&I	
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RIV: DRSS  
 AB: cd  
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RA: Martin  
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*Adulace*

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**Congress of the United States**  
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ENVIRONMENT, ENERGY, AND NATURAL RESOURCES  
SUBCOMMITTEE  
OF THE  
COMMITTEE ON GOVERNMENT OPERATIONS  
RAYBURN HOUSE OFFICE BUILDING, ROOM 5-271-5-C  
WASHINGTON, DC 20515

August 24, 1990

The Honorable Kenneth M. Carr  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Chairman:

I was informed yesterday afternoon by the staff of the U.S. Nuclear Regulatory Commission (NRC) of new environmental problems at the Sequoyah Fuels Corporation nuclear fuel plant in Gore, Oklahoma.

According to information provided by NRC and Sequoyah Fuels, groundwater at the site has been contaminated by high levels of uranium from processing facilities. According to the preliminary notification issued by NRC Region IV, the contamination levels are 35,000 times higher than applicable environmental action level.

As you know, this is not the first time that a question has occurred concerning the possible impact on public health and safety from this facility. The announcement yesterday of groundwater contamination has renewed my concern and the concern of a number of my constituents over the possible consequences of releases of radioactive materials from this plant. As a result of this most recent announcement, I have received a number of inquiries by constituents in the Gore area who, once again, are faced with uncertainty as to the risk to their health and safety from this facility.

Given the high-level of uranium found from an entirely unexpected source -- the groundwater at the Sequoyah Fuels site, it is imperative that the extent of this contamination be determined as well as whether this contamination has spread off site. Although Sequoyah Fuels indicates that it believes that these releases took place before 1984, it is also imperative that the source of this contamination be determined and necessary corrective actions taken.

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EDO --- 005778

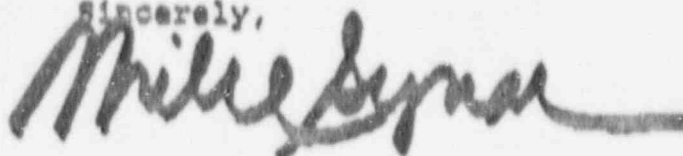
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Consequently, I am requesting that the NRC conduct a detailed investigation of the extent and cause of the uranium contamination of the groundwater at the site. As part of this investigation, I am also requesting that NRC determine whether the environmental monitoring system in place at the site is adequate to detect the presence and migration of contaminated groundwater and whether contaminated groundwater has migrated off site or is likely to do so.

I appreciate the effort made by the NRC staff to inform me of the events at Sequoyah Fuels in such a timely manner and want to commend them for their professionalism and assistance in obtaining additional information concerning this situation. Please continue to keep me informed of all relevant regulatory activities by the NRC related to the Sequoyah Fuels plant.

If you or your staff have any questions concerning these requests, please contact me directly or David Berick of the Subcommittee staff at 202-225-6427.

Sincerely,

A handwritten signature in cursive script that reads "Mike Synar". The signature is written in dark ink and is positioned below the word "Sincerely,".

MIKE SYNAR  
Chairman