Attachment 13

CAG - FYI
Give to Doris
when you are
done with
report. Thanks
Chris

FY93-0476

ON-SITE MONITORING REPORT
FOR
Sequoyah Fuels Corporation
Gore, Sequoyah County, Oklahoma

December 30, 1992

Prepared for:

J. Chris Petersen
Deputy Project Officer
Emergency Response Branch
EPA - REGION 6

Contract Number: 68-WO-0037

ecology and environment, inc.
1999 BRYAN STREET, DALLAS, TEXAS 75201, TEL. (214) 220-0318
International Specialists in the Environment

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FY93-0476

Date: December 30, 1992

To: Pat Hammack, OSC
EPA Region 6, Emergency Response Branch

Thru: J. Chris Petersen, DPO
EPA Region 6, Emergency Response Branch

Thru: Chris Quina, TATL
Region 6, Technical Assistance Team

From: Jim Hardin
Region 6, Technical Assistance Team

Subj: Site Assessment: Sequoyah Fuels Corporation
Gore, Sequoyah County, Oklahoma
TDD#: T06-9211-028
PAN : EOK0362MA

I. INTRODUCTION

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On Tuesday, November 17, 1992, at 0850 the Sequoyah Fuels nuclear materials processing facility experienced a chemical reaction in a digestion tank where uranium yellowcake is added to nitric acid. The release was caused when nitric acid was added to a tank which was thought to be empty. The tank actually contained uranium yellowcake. Preliminary reports indicated that

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the yellowcake entered the tank through a faulty slide gate valve. The addition of nitric acid caused an exothermic reaction which released nitric acid (HNO3), nitric oxide (NO), nitrogen dioxide (NO2) and slight amounts of uranium into the atmosphere.

The reaction continued for 10 to 15 minutes, releasing an estimated 23,000 cubic feet of nitrogen dioxide, which drifted northwestward from the facility across the Illinois River. According to witnesses, the cloud continued to disperse and lift as it moved toward the City of Gore, two miles from the facility.

The release was first classified as an unusual event, the lowest of four possible emergency classifications, and therefore, not requiring off-site notification. All non-emergency response team personnel were evacuated to the South Gate Guard Building. Approximately 20 minutes later the release was up-graded to the second classification, a site area emergency and off-site notification began.

Eight SFC employees reported experiencing various symptoms following the incident which included: throat, eye and skin irritation. Dr. Anderson, who performs annual physicals for SFC, examined four employees, one of whom exhibited signs of pulmonary edema and required treatment.

At the time of the release, three men were fishing on the Illinois River when the plume enveloped the boat. The three visited their personal physicians with complaints of eye and throat irritation, headaches and nausea.

Twenty four workers at Midwestern Tree Nursery, which is located in the plume pathway, also complained of varying degrees of eye, skin and throat irritation, nausea and headaches. Some of these workers sought medical assistance from Dr. Yancy, a local physician.

During the incident, three Sequoyah Fuels employees remained in the facility control room to monitor and control the processing systems. The NO2 fumes entered the control room requiring respiratory protection, however, only two SCBAs were located in the room. The third was brought into the control room, by an unprotected worker, several minutes after the release began. According to the SFC contingency plan, the control room was required to have a separate ventilation system to prevent potentially released contaminants from entering the control room.

Radiation samples collected by SFC during the release indicated slight levels of radiation at the exhaust vent of the digestion area, however, all other on-site and off-site samplers indicated levels consistent with background readings.

The nitric acid and nitrogen dioxide levels, on-site and off-site, were measured using drager colorimetric tubes. The facility was re-entered, based on drager readings, approximately one hour after the release began. Employees were dispatched to Gore to take drager readings as the plume moved off-site. The drager colorimetric tubes indicated non-detectable limits and according to technicians, the plume had dispersed and lifted before reaching Gore.

ACTIONS TAKEN

On November 19, TAT Jim Hardin arrived in Fort Smith, Arkansas and contacted Bill Fisher and Linda Kasner with the NRC.

On November 20, Linda Kasner and Jim Hardin interviewed Dr. Anderson, who had seen five employees and one nursery worker since the incident. The five complained of throat irritation and other symptoms. Chest x-rays were taken of four of the patients; one showed signs of pulmonary edema and was treated. Dr. Anderson stated that he would see any persons that had complaints or symptoms. He said that the owner of the nursery had requested that each of his employees see Dr. Yancy, a physician not associated with the site.

After the interview, TAT met with NRC officials, Joe Callem, Bill Fisher and Mike Vasquez at the SFC facility. Areas of the investigation included: root cause of the release, release quantity, plume modeling, emergency procedures followed, air sampling and monitoring procedures, re-entry procedures, off-site notification and use of personal protective equipment.

TAT and the NRC met with the owner of Midwestern Tree Nursery to discuss the release and address his concerns. The owner expressed concerns about the health of his employees and long term effects of the exposure. He was also concerned with contamination to the trees. Joe Callem assured him that there was no residual contamination on the trees and they could be sold. The NRC informed the owner that those employees experiencing any symptoms should continue to consult their doctor.

At 1430 the NRC held an interim status report meeting with SFC, the media and the public. William Fisher, NRC Inspection Team Leader, notified SFC officials that the facility was to remain closed until certain conditions were met concerning the cause of the incident, prevention of similar incidents, incident response time and other health and safety concerns.

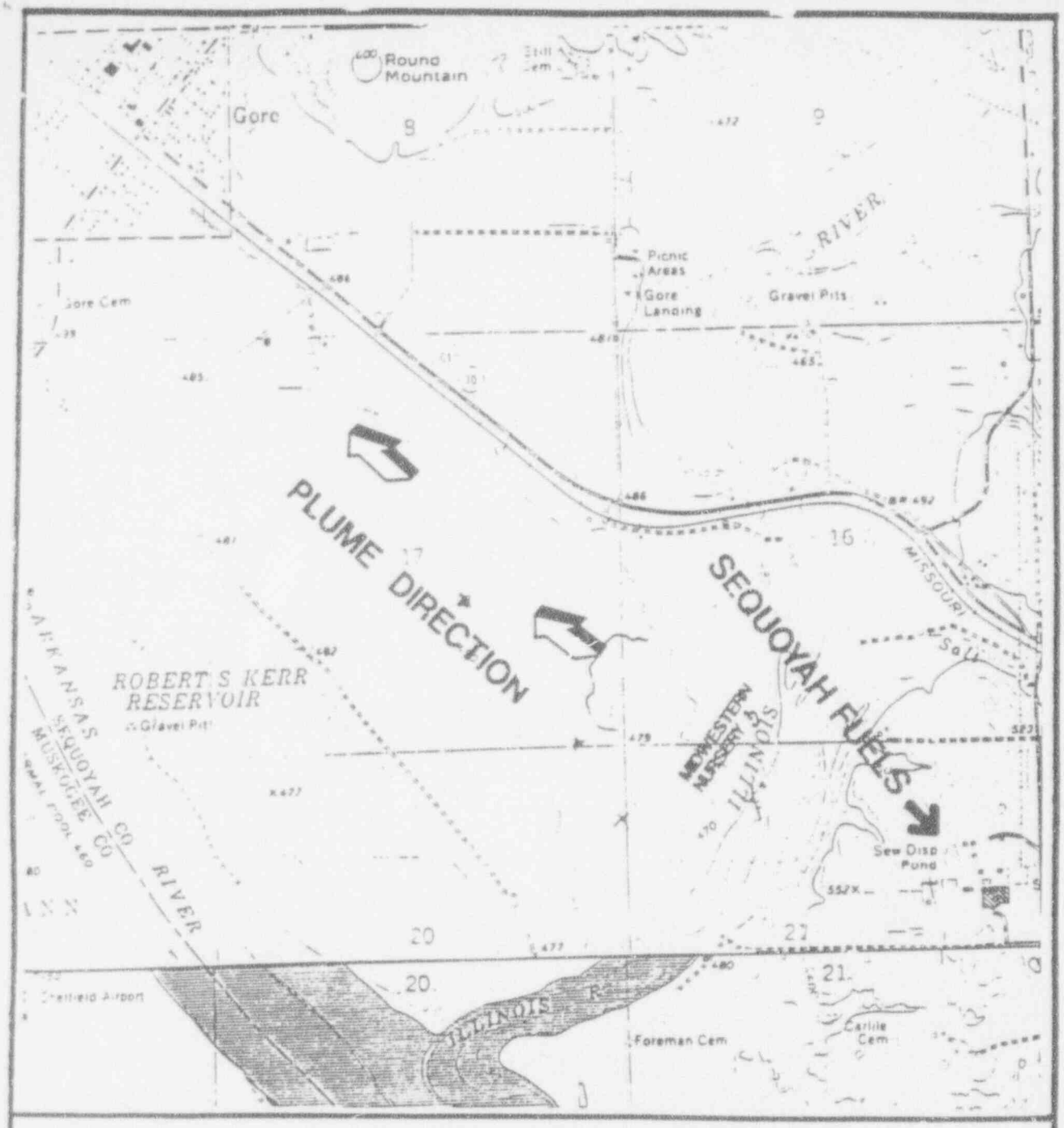
Due to NRC involvement and threat abatement, the EPA anticipates no further actions at this time.

ATTACHMENTS:

A. Site Location Map
B. Sequoyah Fuels Investigation/Corrective action summary (3 pages, draft, November 17, 1992)
C. NRC recommendations, (17 pages, draft, November 20, 1992)
D. NO2 release calculations, Sequoyah Fuels Corp. estimate
E. Newspaper articles, (11 pages)
F. Copy of Logbook #1, (pages 1-11)
G. Copy of TDD T06-9211-028

ATTACHMENT A

SITE LOCATION MAP



SCALE 1:24000

N

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 KILOMETER

Ecology and Environment, Inc. Technical Assistance Team Region VI	CERCLIS/CASE#: F93-0476	TDD#T06-9211-028
	SOURCE: Gore and Stigler NE, OK. Quad. USGS 7.5 Min, Topo. Map	

Attachment A

Site Location Map, Sequoyah Fuels Corporation
Gore, Sequoyah County, Oklahoma

ATTACHMENT B

SEQUOYAH FUELS INVESTIGATION/ CORRECTION
ACTION SUMMARY (3 PAGES, DRAFT, NOVEMBER 17, 1992)

DRAFT

INVESTIGATION/CORRECTIVE ACTION SUMMARY

NO_2 RELEASE FROM SFC FACILITY ON NOVEMBER 17, 1992

Event Summary:

An estimated 2700 pounds of NO_2 gas (worst case) was released from the # 2 Digester tank on the morning of November 17, 1992. The release resulted from the reaction of between nitric acid, which had been added to the digester by normal procedure, and about 8800 pounds that had been unknowingly added to the digester. The generation of NO_2 from the reaction progressed for approximately 20 minutes, resulting in an off-site release of NO_2.

Concurrent with the release, NO_2 fumes were drawn into the control room, 2nd and 3rd floor offices and the process lab, requiring evacuation of nonessential personnel. The control room personnel utilized self-contained breathing apparatus to allow them to remain in the control room and to shut the processes down and monitor the systems.

Investigation Plan and Status:

Root cause analyses were initiated for the process event and the NO_2 being drawn into the occupied areas. Draft reports have been completed for both of these issues, including the identification of recommended corrective actions. The preliminary root cause determinations are summarized below.

Process Event Root Causes:

Primary Cause - The operator failed to ensure that the slide gate valve which controls yellowcake addition to the # 2 digester was closed prior to operating the feed system. This is a violation of procedure.

Primary Cause - The operator inadvertently operated the yellowcake feed conveyor in the wrong direction for a period of time, introducing yellowcake into the # 2 digester.

Contributing Cause - The slide gate valve was not operating properly and had not been repaired.

Ventilation Root Causes:

Primary Cause - The HVAC design modification for the 3rd floor office area was not adequate to prevent drawing air from the main plant building into the air recirculation system for the 2nd and 3rd floors and the control room. This resulted in NO_2 from the release being drawn into these areas.

Primary Cause - The lab hood vent fans continued to operate after the HVAC systems were shut down, creating a significant negative pressure in the lab. Because of the labs proximity to the digester area, fumes were drawn into the lab.

Contributing Cause - The ceiling area above the 3rd floor, which serves as a return air plenum was not seal from the main plant building. In addition, this area is operated at a lower pressure than the main plant building.

Contributing Cause - The emergency procedures did not provide instructions on HVAC operation during airborne release events.

Recommended corrective actions are being developed and a corrective action plan will be prepared and submitted for concurrence prior to restarting the processes.

Preliminary Corrective Action Plan

1. Repair or clean slide gate valve - complete

2. Strengthen controls in digester procedure to prevent similar occurrences.

3. Modify system interlocks and instrument ranges to improve controls.

4. Repair deficient NOx treatment system.

5. Initiate a preventative maintenance program for slide gate valves.

6. Take appropriate personnel actions.

7. Develop and implement a formal method to evaluate the impact of inoperable equipment on continued operation. The approach being considered is to require the supervisor to make a determination to either initiate immediate repair or to establish temporary compensatory measures.

8. Assess existing inoperative or deficient systems using the above approach prior to restarting processes.

9. Modify the HVAC return air system to prevent drawing air from the main plant building - in progress.

10. Balance the HVAC systems to maintain a positive differential pressure between the occupied areas and the main plant building.

11. Modify the operating and emergency procedures to insure positive differential pressure between the occupied areas and the main plant building if the systems need to be shut down during an airborne release event.

ATTACHMENT C

NRC RECOMMENDATIONS, (17 PAGES,
DRAFT, NOVEMBER 20, 1992)

November 20, 1992 9:10 a.m.

EVENT DESCRIPTION

At 8:52 a.m., on November 17, 1992, an Unusual Event was declared due to nitrogen dioxide (NO_2) fumes being emitted from the Digestion Area and spreading to the surrounding process areas including the Control Room and the Process Laboratory. The Unusual Event was elevated to a Site Area Emergency when the determination that the plume from the NO_2 fumes was not being contained within the facility property. All personnel not on the Emergency Response Team were evacuated to the South Gate Guard Building. The Site Area Emergency was terminated the same day at 9:53 a.m.

The Digestion Area consists of three digestion vessels (tanks) and two adjustment tanks. Yellowcake (uranium ore concentrate) is mixed with nitric acid (HNO_3) and heated to "digest" the yellowcake. The resulting solution is then transferred to the adjustment tanks where it is adjusted to comply with process requirements prior to being transferred to the Solvent Extraction Process.

The presumed status of the three digestion tanks at the time of the event was that Digester #1 had a completed batch, ready to transfer to the adjustment tank; Digester #2 was filling with nitric acid with no yellowcake present; and Digester #3 had a batch that was being heated. During the event, and for a short time afterwards, it was believed that the NO_2 fumes were being produced from Digester #3 since it was the only digester with an active reaction taking place. Digester #2 was supposed to contain only nitric acid, which would not produce significant NO_2 fumes by itself. However, samples of the contents of Digesters #2 and #3 taken after the event revealed the uranium content in Digester #2 was 410 grams per liter (g/l), while the uranium content in Digester #3 was 260 g/l.

The fact that Digester #2 possessed a uranium concentration of 410 g/l indicates that the tank contained more than just nitric acid. Even if some of the solution from the previous batch (uranium concentration - 740 g/l) was left in it, it would not be enough to have elevated the uranium concentration to 410 g/l, recognizing the recent addition of nitric acid. Yellowcake must have been introduced into the digester to produce this concentration. In contrast, the uranium concentration for Digester #3 was much lower than would be expected for a 12,000 pound batch of uranium concentrate. The combined total of uranium contained in Digesters #2 and #3 equals the expected amount of uranium in a 12,000 pound batch of uranium concentrate. This evidence strongly indicates that the 12,000 pounds of yellowcake that was believed to have been fed into Digester #3 was actually fed into both Digesters #2 and #3.

The yellowcake that was fed into the Digesters is of Russian origin. This concentrate has a uranium content of about 87 %, indicating that it is primarily UO_2 and not U_3O_8. The reaction of this concentrate with nitric acid is an exothermic reaction, meaning that once the reaction is started, it will continue on its own without additional heat or energy. In Digester #2 when the nitric acid and the yellowcake were combined unknowingly, the reaction was not properly regulated, and the reaction created NO_2 that resulted in the release, which was transported via powered roof vents from the building.

Sequence of Events

0850	Announcement to evacuate the west side of main process building.
0851	Unusual Event declared and announcement for all non-essential personnel to report to the Assembly and Support Center at the South Guardhouse.
0900	Off-site assessment done by R. Adkisson on mobile phone to R. Cook.
0905	Robert Jones inspected process area, noticed plume traveling off-site, recommended plume tracking.
0909	The Sr. Shift Supervisor failed to upgrade the event to a Site Area Emergency without being prompted.
0910	L. Silverstein brought radios down from Control Room to Onsite Emergency Response Organization in the lunch room.
0910	UE upgraded to a Site Area Emergency. Off-site Environmental Assessment began air sampling at Gore.
0910	Shift personnel accounted for.

0910 Ron Adkisson went to Gore and saw only faint cloud up high. Met with the Mayor of Gore, and the Gore Police Department after briefing from Offsite Environmental response group at the sampling site. He then called the Mayor of Webbers Falls and received notification of the Site Area Emergency from police mobile phone notification.

0915 H & S Tech's Chris Watson and Robert Crutchfield to track plume offsite (air samples and drager reading taken). Negative results on tests.

0920 John Ellis arrived at Gore Mayor's office

0920 Robert Jones goes back into plant and H&S Techs proceeded with recovery samples of process area.

0925 Offsite Response Center activated by R. Cook. (Alternate Offsite Emergency Director)

0925 Robert Davis notified Sequoyah County Health Department by phone.

0926 Larry Silverstein brought additional radio's down from Control Room.

0926 Drager readings taken in lunch room indicated "Non Detectable".

0928 thru 0931 Discussion on ventilation of Control Room. Opened door leading from front of MPB to Control Room and opened panels on Control Room air handling unit.

0929 Nurse and ambulance called for at the South Guardhouse to render First Aid for inhalation victim.

0930 Sequoyah County Sheriff was notified of a Site Area Emergency at the Sequoyah Facility.

0933 Scott Munson called for Jeff Haybacker on radio, however, Jeff had been relieved by Robert Jones and he responded.

0933 Hazard Materials Emergency Response of Oklahoma was notified by the Emergency Communicators.

0935 Health Dept. called Offsite Response and had not received formal notification from Sheriff's office.

0936 Health and Safety Technicians report the Main Hallway is clear.

0937 H&S checking offices, reading room, men's change room - tested ok by Drager.

0937 NRC Emergency Operations Center was notified of a Site Area Emergency by Emergency Communicators.

0938 The Offsite Response Center made contact with Joe Sheppard in Washington.

0938 thru 0941 H&S Tech's were taking readings in Control Room, and other H&S Tech's were surveying the area.

0940 Personnel accountability at South Guardhouse was almost completed.

0940 The PA System at the Offsite Response Center was not working.

0943 Offsite Response Center receives information that digest seems to not be leaking. All things seems quiet in plant.

0945 The National Response Center was notified by the Emergency Communicators.

0945 Ron Adkisson and Pam Bennett arrived at the Offsite Response Center.

0945 The Offsite Emergency Director, contacted the Hazards Assessment Team Leader and was provided with an onsite assessment.

0946 Drager reading was taken in the Control Room and indicated non-detectable, however, responders indicated detectable by smell.

0947 Offsite Emergency Director converses with Hazards Assessment Team Leader.

0950 The PA System at the Offsite Response Center began working (turned off).

0950	R.A. Parker notified all Onsite Emergency responders to report to the Control Room.
0951	The Event was terminated.
Approx. 0952	Health and Safety Supervisor informed personnel who had exited thru routes other than change rooms to go back to change rooms and use the PCM-1B.
0952	R. Adkisson briefed Offsite Team and air samples were taken at Gore, Negative results, was informed the County Health Department was notified by the Offsite Environmental - Assessment Group.
0953	Sequoyah County Health Department received formal notification from the Sequoyah County Sheriff office.
0953	Offsite Environmental Assessment confirmed plume had dissipated. Offsite Emergency Director conferred with Onsite Emergency Communicator and Hazards Assessment primary.
0959	John Ellis assembled workers in the lunchroom to explain potentials and hazards.
1000	All Offsite boards were updated and discussed with offsite response teams.
1000	Health and Safety Technicians began changing out air samplers and continued area recovery samples.
1005	H&S began monitoring personnel at the Assemble and Support Center who had by-passed PCM while evacuating - no detectable levels.
1015	The alternate Offsite Emergency Director (Reggie Cook) contacted Ed Jones at G.A.
1015	Ron Adkisson called about outside communications.
1015	The primary Offsite Emergency Director conversed with the Sequoyah County Sheriff and the County Emergency Management Director at the Offsite Response Center.
1015	Public information received call from local citizen.

1016 Close out was issued to the Sequoyah County Sheriff's office by the Emergency Communicators.

1017 Close out to NRC Emergency Operations Center by Emergency Communicators.

1020 Began performing offsite sampling.

1022 Close out to Hazardous Materials Response Commission of Oklahoma by Emergency Communicators.

1022 Close out to the National Response Center by Emergency Communicators.

1025 Sequoyah County Health Department arrived at Offsite Response Center.

1027 John Ellis spoke with employees and informed them of the circumstances of the event.

1031 The Maintenance office and the reading room were surveyed and not released.

1104 A PA announcement was given informing employees the 1st & 2nd level Digestion full-face respiratory protection.

1114 H&S personnel began restoring Emergency Equipment and continued assessment of areas and notifying facility personnel of bioassay needs.

1155 Manager, Health and Safety received telefax from the Manager of the Environmental Lab from sample location 2110 on Highway 64 West.

1200 The Environmental department issued instructions for technicians to being began soil and vegetation sampling.

1300 PA announcement made that all potentially exposed personnel should submit a urine sample (repeated at 2100 hrs 11-17-92)

Summary of Emergency Response to the Event

A detailed evaluation of the Emergency Response efforts for the November 17 release was performed. Specific observations and recommendations are presented below. In addition to these observations and recommendations, it is noted that there were specific strong points observed during the event response.

Efforts by personnel compensated for many of the problems encountered due to equipment inadequacies and inaccessibility to the Control Room.

There was a notable effort on the part of some of the Managers as a first priority to verify the location and safety of personnel in their department, and to make sure that special efforts were undertaken to ensure their safe evacuation from isolated areas within the plant.

There was also a noted effort on the part of several individuals to take actions which were not specifically called out by the Contingency Plan or CPIPs in order to verify the movement of the plume and assess any impact on the public, as well as an effort to look for additional things which needed to be done which could help in the monitoring or remediation of the event.

A critique of the emergency response was performed to assess the overall performance of the Contingency Plan during this event and the effectiveness of implementation. The results follow.

Observations and Recommendations

1. The On-site alarm was not sounded nor was the event properly classified per CPIP-11 as an Alert or properly upgraded without being prompted.

   Short Term Recommendation

   Clarify CPIP-11 for Alert on Hazardous Substance release.

   Specifically, CPIP-11, Tab 5, needs to be changed. Recommend deleting number 2. under Unusual Event and adding the following under ALERT:

   6. Nitrogen Oxides or Hydrogen Sulfide release requiring evacuation of the process area.

Long Term Recommendations

For alarm not being sounded, additional instruction to Control Room operators when to sound on-site alarm.

Evaluate benefit of Emergency Checklists for Emergency Response personnel.

2. Emissions from nitric acid had not been considered for automatic ventilation shutdown in the office areas and control room.

Short Term Recommendation:

Ventilation system should be evaluated by engineering to determine best way to isolate Control Room for future infiltration by hazardous substances.

3. Control room operators were unaware of the location of extra SCBA bottles in the Control Room. One Scott pak in the control room was only half full. A full compliment of SCBA's were not available in the control room for all personnel.

Short Term Recommendation:

In addition to number 2, establish 5 SCBAs in Control Room for personnel to use during an emergency shutdown.

Long Term Recommendation:

For permanent backup system in the Control Room, airline respirators with escape-paks should be designed into the Control Room for use by the Control Room operators during emergency shutdown of equipment.

4. When the Emergency Communicator announced evacuation to the Assemble and Support Center, he asked on the PA "Where do you want to send them".

Short Term Recommendation:

Memo from Management addressing professionalism during P.A. and radio communications.

Long Term Recommendation:

Provide performance based training for all personnel who talk over P.A. or radio regarding formality, professionalism and proper protocol.

5. The Sr. Shift supervisor failed to establish an alternate On-site Response Center, however, this is procedurally vague. Assemble and Support Centers are clearly defined but alternate On-site Response Centers are not. Drills have always been conducted from the Control Room and response personnel have been conditioned to respond to one location.

Short Term Recommendation:

Write TOP for CPIPs concerning immediate backup location for On-site Response Center - recommend Administration Building for short term until long term recommendation can be completed.

Long Term Recommendation

Review the adequacy of the emergency response facilities designated in the Contingency Plan and CPIPs. Consideration should be given to accessibility during emergency conditions as well as availability of emergency response and communication equipment. Select alternate On-site Response Center(s) and update the Contingency Plan and CPIPs to reflect the alternate sites.

Drills should be conducted from alternate locations.

6. The Sr. Shift Supervisor and the Hazards Assessment Team were not in communication during the first portion of the event - when the crucial information was required.

Long Term Recommendation:

Equipment concerns fit into long term recommendation of 5.

To ensure people follow procedures, qualification requirements for Emergency Response personnel need to re-evaluated. Possible addition of Job Performance Measures (JPMs) to qualification requirements.

7. Proceduralize the need to change batteries or procure a automatic discharge and recharge device.

Short Term Recommendation:

Place sign to inform personnel that radio batteries are required to be changed prior to use, and address in a memo to personnel involved.

Long Term Recommendation:

Either proceduralizing replacement of batteries before taking radios, or purchasing a battery conditioner which will ensure batteries are ready to go at all times.

8. Information on samples generally did not include time taken. Based on available information, action sequence and times are difficult to reestablish.

Long Term Recommendation:

Develop sample log sheets to be used by onsite and offsite Hazards Assessment Team members which include date, time, location and area sample was taken. Perhaps copies of maps for surrounding areas could be incorporated, so actual locations of samples could be marked.

9. As SCBA's were being taken to the training center to be refilled it was discovered the cascade refill system was disabled.

Short Term Recommendation:

Determine cause, establish responsibility and return to operability.

10. As employees were evacuated without passing thru PCM's - no radiological controls are required to be established at the Assemble and Support Center.

Long Term Recommendation:

Update CPIP-33 Emergency Monitoring of Personnel and CPIP-34 Emergency Evacuation to include wording for receiving radioactive contamination frisk at the Assembly and Support Center, or ensure personnel return to Changeroom after emergency has been terminated to process through the PCM-1B prior to leaving facility. Accountability should be kept for ensuring all personnel are frisked.

11. As the event progressed no identification of point source was established or actions to control the release were taken.

This problem relates to some extent to the problems with communication. There were apparently some individuals who had a good idea of where the release point was, but this information was not communicated to the Control Room Operators due to inadequate communications. A contributing problem could have been a lack of procedural guidance which would have prompted the individuals to pass this information to the Control Room or which would have prompted to Control Room Operators to have requested this information.

Short Term Recommendation:

During GET, personnel have been trained to call the Control Room to report anything out of the norm. Therefore Control Room phone numbers should be placed on all phones in the facility for quick reference during an emergency.

Long Term Recommendation:

In case On-site Response Center is at a location other than Control Room, an automatic telephone transfer switch needs to be installed so all incoming calls to the Control Room can be forwarded to the On-site Response Center.

12. Accountability of evacuated personnel was incomplete and no time was established for completion before event was terminated. Questions concerning management of system - check periodically on night shift.

Short Term Recommendation:

Either place hand scanner at South Guard House in case badge reader doesn't work, or require guards to log in personnel if badge reader doesn't work. If the latter is chosen, guards will need to call and have personnel entered into Accountability system manually.

Also a management memo re-enforcing the importance of properly logging in and out at the gate for Accountability purposes.

Long Term Recommendation:

Evaluate moving badges out of the weather.

Also proceduralize a periodic (perhaps monthly) check of the Accountability System printout on night shift to ensure only the personnel known to be at the plant are in fact on the system. This will eliminate "ghost badges" of personnel not properly logged out from staying on the system for long periods of time.

13. Off-site environmental assessment removed equipment from the on-site response equipment at the South Guardhouse to measure plume. Off-site environmental assessment equipment is located at Carlile.

Long Term Recommendation:

Assign necessary equipment to Off-site Environmental Assessment Team for immediate use.

14. Based on comments received, contract personnel do not feel the amount of emergency training provided to them is adequate.

Long Term Recommendation:

Emergency training requirements need to be re-evaluated.

Present training requirements for response team personnel should be expanded. Classroom or Table Top training should be given on a monthly basis, in-plant exercises for individual response teams need to be given on a quarterly basis, onsite exercises involving all plant personnel should be conducted annually, and full scale exercises including offsite agencies should be conducted biennially.

For general plant population, perhaps expand the GET Contingency Plan lesson to give more details on cooperation when going to the Assembly and Support Centers.

15. PA system at the Training Center was turned off and the radio and speaker in the Offsite Emergency Director's office was turned off.

Action Completed:

Personnel at the Training Center have recently been educated as to the workings of the PA system, radio and speaker at the Training Center. Training Supervisor has also been told to read CPIP- so he understands the actions necessary to activate Off-site Response Center.

16. Adequate training was not provided to the Supervisor of Training to inform him of C-Plan responsibilities.

Long Term Recommendation:

Training should be required for all new personnel with emergency response positions or duties. If the new person is to be on a specific emergency response team, he/she should not be expected to respond until training is completed and documentation is final.

17. The PA system at the DUF4 Plant did not work.

Short Term Recommendation:

Management memo stating the need for backup communications at any facility where PA system cannot be heard.

Long Term Recommendation:

A periodic test of the sound system should be conducted throughout the facility to verify that announcements are audible in all areas which may be affected by an emergency condition. Action should be taken to repair inoperable equipment or properly install equipment in areas where the announcements are not audible.

A spare PA amplifier should be maintained in the warehouse. A form of communications (radio, cellular phone, etc.) should be maintained at the DUF_4 Plant.

Also recommend expediting the Engineering Project to extend PA system service to outlying areas.

18. Lack of computer plume modeling capability limits knowledgeable decisions of classification - also computer model helps to determine immediate locations to take samples.

Long Term Recommendation:

CPIP-21 needs to be undated to include all potential chemical hazards at the facility.

If possible, also recommend purchasing a computer plume modeling capability to give quick "real time" analysis of the plume. This will help in the decision between Site Area Emergency and General Emergency on a very short time basis. Also this will aid the Hazard Assessment Teams to know where to start taking samples to verify plume information.

19. Terminated Site Area Emergency without downgrading emergency classification to Alert and checking to ensure ALL AREAS were clear. Some areas were still Restricted and H&S personnel were attempting to post when people started to wonder back in.

Short Term Recommendation:

Management memo to On-site responders and Senior Shift Supervisors explaining need to ensure all areas are ready to secure from emergency prior to terminating event.

Long Term Recommendation:

CPIP-51 should be revisited to preclude personnel from returning to affected areas or potentially contaminated areas prior to areas being "Deemed Clean". An event should not be terminated until these precautions have been taken - Evaluate need for checklist to be developed to help guide personnel in terminating an event.

20. OSHD was Officially Notified late - Need to change wording in Site Area Emergency to notify OSHD from SFC.

Long Term Recommendation:

Determine critical communications requirements and revise Contingency Plan to conduct those calls from SFC.

21. Personnel were asked by H&S technician to exit through changeroom instead of using crashgate.

Short Term Recommendation:

Management memo stating personnel should not be restricted from using emergency exits during an evacuation.

Long Term Recommendation:

Accountability and radiological surveys should be conducted at the Assembly and Support Centers - Review and revise procedures to incorporated this recommendation.

22. Need to be able to record all communications - radio and telephone

Long Term Recommendations:

CPIPs should be updated to state - All emergency response personnel should maintain accurate records of their actions and communications during an emergency

If actual recordings are necessary, a tape system can be purchased to record all phone system and radio communications.

Look into possibility of switching all incoming calls to a Crisis News Center so all calls can be recorded and answered by trained personnel.

23. Need personnel to keep logs - historians.

Short Term Recommendation:

Person in charge of each response organization designate one person as historian.

Long Term Recommendation:

Evaluate need for checklist to help in activation of response organizations - including designating historians or having permanent historian positions.

24. Recommendation:

Emphasis should be placed on resolution of mechanical problems which could impact chemical or radiological releases.

Will be referred to "Work Around"- Action Plan

Conclusions

As noted above several deficiencies were identified in the Contingency Plan, Contingency Plan Implementing Procedures (CPIPs), Emergency Response Facilities and Emergency Response Equipment. While there are several deficiencies which have been identified, many of these deficiencies are related to the single issue of the inaccessibility of the Control Room during the event. These deficiencies are not considered to represent a programmatic breakdown of the Contingency Plan.

ATTACHMENT D

NOx RELEASE CALCULATIONS, SEQUOYAH ESTIMATE

The deficiencies have been categorized and a corrective action plan is being developed which address the deficiencies. The corrective action plan will address both short-term and long-term actions and identify responsibilities and schedule for completion. The short-term items are identified as those items which must be completed prior to restart of the UF_6 Conversion Plant.

Short term recommendation on Observation 17 must be completed prior to start up of the DUF_4 Reduction Plant.

19-Nov-92

NOX RELEASE CALCULATIONS

$UO_2 + 4HNO_3 \text{ --- } UO_2(NO_3)_2 + 2NO_2 + 2H_2O$

3800 LBS UO_2 @ 87 % U= 7656 LBS U

U WT. = 238 NO_2 WT = 46

7656 LBS U = 7656/238 = 32.2 LB-MOLES U

@ TWO MOLES NO_2 FOR EACH MOLE U = 32.2*2 = 64.4 LB-MOLES NO_2

64.4*46 = 2972 LBS NO_2

= 1349288 G NO_2

= 29332 GRAM MOLES

@ STD PRESSURE & TEMPERATURE 1 GRAM MOLE = 22.4 LITERS

= 657037 LITERS NO_2

= 23193 CU FT NO_2

VOLUME of SPHERE =4/3 * Pi R3

VOLUME = 4.189 * R3

R3 = 23193/4.189

R3 = 5537

R = APPROX 17.5 FT.

ATTACHMENT E

NEWSPAPER ARTICLES, (11 PAGES)

Look For The Special Thanksgiving Mini Pages Coming In SUNDAY'S TIMES

Sequoyah County TIMES

The Best Read NEWSpaper In the Big Basin Country

VOLUME 91-NUMBER 41 | USPS No. 498-840 | SALLISAW, OKLAHOMA–THURSDAY, November 19, 199[illegible] | PRICE 25¢ | 3-SECTIONS-22 PAG

Gas Fumes Under Investigation by NRC

The cause of an accidental release of nitric acid Tuesday morning at Sequoyah Fuels at Gore is under investigation by Sequoyah Fuels and a team from the Nuclear Regulatory Commission (NRC).

Pam Bennett, spokeswoman for Sequoyah Fuels, said the plant, which processes yellow cake for nuclear reactor fuel, closed voluntarily after the release and will remain closed until the investigation into the leak is completed.

"At this time," Bennett said Wednesday morning, "we still don't know what caused the release. It was possibly human error or possibly an equipment malfunction."

Bennett emphasized the accidental release caused no injuries and no radioactive contamination on or off site.

"No radioactive material was involved at all," Bennett said.

She reported the gas was released at about 8:55 a.m. Tuesday, when an Unusual Event was declared. Plant personnel declared a Site Area Emergency at 9:12 a.m., and declared the emergency over, or terminated, at 9:50 a.m.

The release occurred in the main process building, and the gas also entered the control room, forcing an evacuation of both areas. Bennett said less than 100 workers were evacuated.

Witnesses outside the plant reported a large, orange plume was being released from Sequoyah Fuels' main processing plant, and formed a cloud which drifted northwest over Gore and Webbers Falls.

Sequoyah Fuels personnel checked both towns for contamination and found none, Bennett said.

Bennett explained nitrous oxide, NOx, is used in the digestive process of yellow cake, to extract uranium from the ore.

When NOx is heated and released into the atmosphere it becomes nitrogen dioxide and nitric acid, and normally has an orange coloring, Bennett said.

Bob Bates, environmental health specialist with the Sequoyah County Health Department in Sallisaw, spent most of Tuesday testing the area around Sequoyah Fuels for contamination.

He also reported no contamination off-site.

"The plume became airborne very quickly," Bates said. "It tends to loft and stay there. That was good. It dispersed quickly."

Bates reported NOx, in concentrations, can [illegible] respiratory problems and m membrane irritation, and serious problems for thos may have chronic resp problems.

Both Bates and Sequoyah personnel tested the amount released at about .60 pa million, he reported.

"The highest reading I ha

(See FUMES back page)

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building, was about 60 parts per million," Bates reported.

Irritating symptoms begin showing up at five parts per million, Bates added.

Bates said a few sore throats and watery eyes were reported by those exposed to the gas.

"It's my understanding," Bates added, "that Sequoyah Fuels and Dr. Anderson at Gore have worked out a plan for anyone who felt they were exposed to go to Dr. Anderson for evaluation, because some people may be more susceptible to NOx than others.

"NOx," Bates explained, "is like the precursor to smog."

Bennett said the plant's emergency procedures worked properly at the plant.

"It appears the alerting system worked as it should," Bennett said, adding she and others notified the NRC, Gore and Webbers Falls city and school officials, and other emergency personnel. In addition, Sequoyah Fuels would be contacting all neighboring residents to inform them of the release.

Sequoyah County Sheriff Wade Stovall and Don Stewart, the county's emergency management director, were both at the site by 10:30 a.m.

Bates said it was not expected the release would damage any vegetation.

Joe Gilliland, NRC spokesman for the Region IV office in Arlington, Texas, was at Sequoyah Fuels Wednesday with the NRC Augmented Inspection Team (AIT).

"The four-person AIT began its inspection Wednesday morning," Gilliland said, adding NRC officials held a news conference to explain what their procedures at 1 p.m. Wednesday.

"A report of the AIT's findings will be made public in about four weeks," Gilliland said.

Bennett said it was not expected that Tuesday's accidental release of nitric acid would have an impact on a hearing slated for Thursday in Washington, D.C.

That hearing will allow Native Americans for a Clean Environment (NACE) to argue an Environmental Impact Statement should be conducted before the plant is relicensed.

Sequoyah Fuels is in the process of being relicensed, but Tuesday's accident "shouldn't have an impact on that relicensing," Bennett said.

"That it occurred was unfortunate and we'll do everything to prevent it again.

"We responded properly, and the way we should," Bennett said.

Environmentalists and are residents planned a meeting, befo Tuesday's accident, for 7 p.r Saturday at Round Mounta Church off U.S. Highway 64. Th meeting is sponsored by CURE an the Sequoyah County Cance Victims' Council.

TIMES Photo By Chuck Roberts

PAM BENNETT, spokeswoman for Sequoyah Fuels at Gore, not fies Gore and Webbers Falls city and school officials and Sequoya Fuels neighbors of an accidental chemical release Tuesday Sequoyah Fuels. Bennett said the nitric acid fumes caused r injuries at the plant or off-site, and emphsized no radioactiv materials were released. The plant, which processes uranium fo use in nuclear power fuel rods, voluntarily closed and will r mained closed until a team from the Nuclear Regulatory Commi sion completes an investigation into the release.

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Phoenix

► ENVIRONMENT

24 people may feel effects of chemical cloud, NRC says

By DONNA HALES
Phoenix Staff Writer

As many as 24 people at a tree farm near Sequoyah Fuels may have been affected by a chemical cloud release Tuesday, officials said Wednesday.

Field monitoring shows no radioactive materials were released, said Gene Cook, a public affairs officer for the Nuclear Regulatory Commission.

But anytime an NRC licensee declares an emergency, it is a significant event, he said.

Most of the people at the tree farm at the time the chemical cloud passed by had gone by the time regulators made the first check at the farm, Cook said.

People at the plant who came in contact with the chemical release also may have some health impact, he said.

"We don't know whether people have been injured," Cook said. "We just have to follow up."

At least four people at the tree farm experienced some breathing problems after the cloud was in the vicinity, he said.

NRC has a team of four inspectors at Sequoyah Fuels and could finish its investigative assessment as early as Friday, Cook said.

The team is investigating:

- Plant conditions and the sequence of events of the chemical spill.
- Cause or causes of the event.
- The evacuation of the control room and response and operation to see what was done to shut the operation down.

Cook said he understands that there is not much that can be done in such a situation but that there may have been opportunities to take steps to reduce the event.

- A review of the emergency plan — how well it was adhered to and how well it serves Sequoyah Fuels.
- Consequences of the spill, as well as maintenance and operational procedures and training on the event.

Sequoyah Fuels agreed to a plant shutdown until NRC completes its investigations and makes recommendations.

What's next

A group of environmentalists bent on decommissioning Oklahoma s only nuclear facility have called a public meeting at 7 p.m. Saturday at Round Mountain Church between Vian and Gore, off U.S. 64.

Lisa Crawford of Fenald, Ohio, will speak on how Fenald residents successfully campaigned to decommission the Department of Energy " greensalts" facility due to contamination. Sequoyah Fuels took over the " greensalts" process after the Fernald facility was closed.

Ronald Lee, vice president of the workers' union at the Fernald facility, will speak about worker safety concerns in nuclear plants.

Citizens United to Rescue the Environment and Sequoyah County Cancer Victims Council are sponsoring the public meeting.

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Problems continue to plague plant

Tulsa Tribune 1-17-92
By Clyde Weiss
Tribune Herald Washington Bureau

Part two of a two-part series

WASHINGTON — The Nuclear Regulatory Commission last August told a federal court it had allowed the troubled Sequoyah Fuels plant in Gore, Okla., to resume operations because the agency believed the company would not continue mismanagement that had contributed to a safety shutdown. But just three days later, the agency slapped a $12,500 fine on the firm for violations that occurred after the restart.

An Oklahoma Indian group, Native Americans for a Clean Environment, says the violations, and the agency's seemingly contradictory position on them, lends support to its argument that the nuclear materials facility should be closed again while new studies are conducted on its impact on the environment.

While expressing concern about the violations, the NRC contends it did not jeopardize the health and safety of workers and the violations do not justify closing the plant again.

The U.S. District Court of Appeals in Washington will hear the dispute Nov. 19.

Diane Curran, attorney for NACE, said in a court brief that violations since the plant's April 16 restart have "continued to prove significant risks to the environment."

Two of the violations, defined as "Severity Level 3" on a scale of 1-5 (1 being the most severe) resulted in a $12,500 fine.

"Although these events did not adversely affect the safety of the plant or its workers," the NRC said at the time, "the circumstances surrounding the events indicate a lack of sensitivity on the part of (Sequoyah plant) employees to the physical characteristics of uranium hexafluoride, used in the production of commercial grade fuel for nuclear power reactors."

The violations were of "significant regulatory concern ... because they reflect a lack of attention to the hazards involved in the operation of the (Sequoyah) plant which, under different circumstances, could have had a far more significant effect on the safety of workers and the public," the NRC said.

Ironically, on Aug. 23, just three days before hitting the company with the $12,500 fine, Justice Department attorneys representing the NRC told the U.S. District Court of Appeals for the District of Columbia that the NRC had "allowed restart only because the agency has concluded any previous mismanagement will not be repeated and that the impacts of operating (the plant) will be within acceptable limits as determined in previous environmental reviews."

See Problems, page 14A

Problems

Continued from page 1A

Some "apparent violations" that occurred since the restart "did not result in unplanned significant releases of effluent" and in any case were "outside the record of this case" and should not be considered by the court, the attorneys said.

Finally, the NRC attorneys said bluntly, the court "ought not second guess the NRC's technical judgment" in allowing the restart.

Sequoyah Fuels also defended itself, telling the court that "the mere existence of the apparent violations identified in these inspection reports does not indicate any 'significant risk.'"

But NACE contends the violations that followed restart suggest a pattern of disregard for federal safety and health regulations.

The dispute stems from an NRC order of Oct. 3, 1991, that closed the plant. The agency alleged that an environmental manager for the company gave false information or withheld information during an investigation of uranium contamination.

In March, company president James Sheppard said Sequoyah's problems were caused by two major problems. "The first was that a strong nuclear safety and regulatory compliance culture had not been instilled throughout the ... organization," he said.

The second, he said, "was that a disciplined, formal management process had not been implemented throughout the organization."

After making several personnel changes, Sequoyah Fuels persuaded NRC's staff to support a restart decision. The NRC commission agreed.

The plant began a four-stage, phased restart April 16.

On May 1, during one of the four stages, however, a rupture of a gasket in an overpressurized section of piping caused the release of uranium hexafluoride inside the plant. It caused no injuries.

Then, on June 6, a senior shift operator at the plant control room failed to recognize and respond to safety alarms, including a smoke alarm, activated by smoldering insulation on a nitrogen purge line, according to the NRC.

Although there were no injuries, the NRC said it was "most disturbing" that the incident occurred despite the company's safety training efforts.

On June 14, less than two months after its phased restart began, Sequoyah Fuels became fully operational when it began producing uranium hexafluoride.

Between April 29 and June 6, Sequoyah Fuels "did not establish and adhere to procedures for all operations and safety-related activities involving ... hazardous materials," the NRC said in its violation notice.

The company disputed the fine as "not warranted by the facts" but agreed to pay the $12,500 civil penalty anyway.

Ron Adkisson, vice president of business development for Sequoyah Fuels Corp., said in an interview that the May 1 and June 6 incidents "were pretty isolated events" that did not have "an environmental impact."

"They were procedural breakdowns that goes to procedures and training," he said. "When (the NRC is) talking about management breakdown, they're talking about (management) culture, and I think culture has since been repaired."

Adkisson said, however, that the violations after restart demonstrate "that even though we made significant changes at the plant and improved generally 99 percent of our procedures and our programs, this is one that hadn't quite had the attention it deserved, and I think the NRC ... gave us credit for jumping right on it and closing those loopholes."

NACE contends the federal agency is too lenient.

"I think (NRC officials) believe that Sequoyah Fuels is taking appropriate actions, but the record continues to show that whatever Sequoyah Fuels is doing is not adequate to assure the plant is operated safely," Curran said in an interview.

Besides the two "Severity Level 3" events, Curran pointed to several less significant "Level 4" violations also discovered after restart, including the release of uranium hexafluoride into the plant which caused the declaration of an "emergency alert condition" but resulted in no injuries or "significant" exposure to personnel.

"Even if you believe that these events are individually insignificant, you need to be concerned when you have this chronic pattern of incidents," she said.

"Each specific instance might be minor in some people's mind, but the repetitive nature (of the violations) is just killing us," said NACE director Lance Hughes in an interview. "Our official position is the place should be shut down and that they (Sequoyah Fuels) have no credibility."

But Joe Callan, director of radiation safety and safeguards for the NRC's Region 4 office in Texas, said the violations that occurred after restart don't "give us a legal basis to shut them down."

NRC officials expressed "indignation" over the violations through the fine and other measures, he said, but agency inspectors nevertheless found that the company has "been improving steadily."

"The inspection reports in their aggregate ... made the case to our satisfaction that this licensee had in fact improved management," Callan explained. He said Sequoyah Fuels officials "effectively did a management lobotomy."

Despite the violations — before and after the restart order — the Justice Department insists the court should not interfere with the NRC's decisions, even if the court disagreed with the agency's interpretation of the law.

"Unless this court were to ... take the highly unusual step of second-guessing a technical judgment by an expert agency," it told the court, NACE's petition to close the plant pending a new environmental review "must fail."

► ENVIRONMENT

Fumes escape from Sequoyah Fuels

By LINDA KAY SAKELARIS
Phoenix Staff Writer

An accidental chemical release at a uranium plant Tuesday sent an orange chemical cloud drifting across Gore and Webbers Falls, officials said.

The cloud released from Sequoyah Fuels Corp. near Gore apparently caused some scratchy throats and watery eyes but no injuries.

Dangerous nitric acid fumes escaped from equipment and the site was evacuated, said plant spokeswoman Pam Bennett. For safety, all plant employees were moved to the plant's south gate.

Sequoyah Fuels was closed in October 1991 and has since battled allegations that conditions violate safety codes of the U.S. Nuclear Regulatory Commission. The plant re-opened in May, under protest by environmentalists.

"No radioactive material was involved and it was not a danger to anyone off site. Nor were any employees injured," Bennett said.

The cloud drifted across Gore and Webbers Falls before dispersing, witnesses told The Associated Press.

"It looked like, you've seen mushroom explosions? Well, it looked like that," said Chad Miller, who was working near the plant on a tree farm. "It looked real red, like the sun."

"It was a big red, then turned orange, then yellow. It just drifted along," said Joe Swimmer, who also was working at the tree farm.

Miller complained of a raw throat, watery eyes and itchy skin. The emergency room in Sallisaw — the nearest hospital — said no one sought treatment there because of inhaling the gas.

Sequoyah Fuels sent teams to the nearby towns of Gore and Webbers Falls to take air samples, but no measurable amount of oxides were found, she said.

State health inspectors were at the plant after Tuesday's accident, and inspectors from the NRC were en route, Bennett said. Most workers returned to their jobs at 9:50 a.m., but the site of the incident is closed until an investigation is complete, Bennett said.

A four-person NRC team will inspect the facility Wednesday. Results will be released in four weeks.

Officials with the Oklahoma Health Department were on site Tuesday to evaluate the matter.

Sequoyah Fuels uses nitric acid to dissolve natural uranium, a step in processing nuclear reactor fuel.

► NRC hopes to complete/4A

► ENVIRONMENT Muskogee Phoenix 11-18-92

NRC hopes to complete Gore plant reviews in '93

By KEITH WHITE
Phoenix Washington Correspondent

WASHINGTON — Nuclear Regulatory Commission officials said Tuesday they hope to complete their environmental review of Sequoyah Fuels' uranium enrichment plant near Gore, Okla., by March 31, 1993, and its safety review by Dec. 1, 1993.

Both reviews are critical to commission action on Sequoyah Fuels' request to renew its operating license for the often-controversial plant.

Sequoyah Fuels' license technically expired Sept. 30, 1990, but a renewal was requested in late

in effect as long as a license renewal is pending.

Environmentalists and Indian groups long have fought the plant that has occasionally released radioactive material into the air and where a major spill of radioactive material occurred in 1986.

Sequoyah Fuels, a subsidiary of General Atomics, acquired the plant in 1988 from Kerr-McGee and won NRC approval earlier this year to resume production after a seven-month shutdown caused by the NRC's discovery of uranium-contaminated soil beneath the plant.

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Southwest Times Record 11-16-92

Plant protest goes to court

By Clyde Weiss
Times Record Washington Bureau

Part one of a two-part series

WASHINGTON — Seven months ago Sequoyah Fuels Corp. once again began processing uranium ore at its plant in Gore, Okla., after nearly seven months under a government shutdown for health and safety violations.

On Nov. 19, lawyers will march into federal court to fight over whether the troubled facility should have been allowed to reopen.

The U.S. District Court of Appeals for the District of Columbia will be the arena for the legal battle being pressed by the Cherokee Nation and an Oklahoma-based Indian group called Native Americans for a Clean Environment.

The Indians want the three-judge federal court to revoke the Nuclear Regulatory Commission's April 16 order permitting the plant to resume operations.

The Indians also want the court to force the NRC to conduct a study of the environmental impact of restarting the plant. They argue the plant, located about 40 miles west of Fort Smith, has yielded "astounding" levels of uranium contamination in the surrounding groundwater and soil.

If the groups win, the plant will be closed down until the NRC can complete its new study, which could take several months at least.

But the NRC contends the National Environmental Policy Act, a major environmental protection law, does not require a new impact study prior to a restart order. In any case, the agency says, such a study already is being prepared for the company's upcoming license renewal.

The agency said the environmental problems cited by the Indians already "are receiving significant attention," but do not justify closing the facility.

The outcome of the lawsuit will depend on the court's interpretation of statutes, regulations and legal precedents. Hanging in the balance, say the two groups, is the health and safety of people working at the plant and living near it, and the public's ability to force the government to be more responsive to its concerns.

At stake for the NRC is its perceived ability to enforce independent decisions. The agency's attorneys say the court should dismiss the case even if it disagreed with the NRC's understanding of the law "unless this court were to ... take the highly unusual step of second-guessing a technical judgment by an expert agency."

NACE contends federal law requires the NRC to "examine the environmental consequences of their actions before taking those actions," regardless of whether it is for relicensing or a restart.

The NRC takes a narrower view: that the law only requires a review on relicensing actions, not on restarts and other administrative moves.

The Sequoyah Fuels plant had been shut down by the NRC since Oct. 3, 1991, following an investigation that revealed a plant manager had given the agency false information regarding the presence of contamination at the site, as well as other safety concerns.

The plant, which produces uranium hexafluoride, used in the production of nuclear fuel, and depleted uranium tetrafluoride, an ingredient used to make armor piercing shells for the military, had been plagued by a series of mishaps. The worst occurred Jan. 4, 1986, when an overfilled hexafluoride tank exploded, killing a plant worker and expos-

See Plant, page 12A

Plant

Continued from page 1A

ing others to caustic fumes. The company paid a $318,000 fine.

Following the shutdown order, NACE and the Cherokee Nation petitioned the NRC to revoke the company's license. The Indians also wanted the NRC to conduct an environmental review before permitting any restart.

Both requests were denied, setting the Indians on a forced march through the federal courts for relief.

According to a NACE court brief, the National Environmental Policy Act required an environmental impact statement before the plant reopened, or at the "very least" a less extensive environmental assessment.

If the NRC is not required to conduct such reviews "in these extraordinary circumstances, then NEPA (and other) regulations are virtually meaningless," and the public has no way to hold federal agencies accountable for their actions, wrote NACE attorney Diane Curran.

But the NRC responded that its restart decision raised no environmental questions that had not already been considered by previous reviews in 1975, 1977 and 1978.

"A requirement of a fresh environmental review would simply consume agency resources unnecessarily and possibly deter the agency from initiating enforcement in the first place," the NRC said.

Without a new environmental study, the Indians argue there is no way the NRC can know whether the company took adequate measures to protect the environment before the plant resumed operations.

Not so, responded the government. "The NRC found explicitly that restarting the facility will not create environmental hazards not already considered in previous formal environmental reviews ... In other words ... NRC was fully aware of the environmental impacts that would result."

Curran disputes that argument.

"None of the previous environmental evaluations prepared by NRC dealt with the fact that the (plant) now constitutes a de facto nuclear and chemical waste dump," she wrote. Uranium-contaminated soil and groundwater at the plant was not even discovered until late 1990, she added, "long after the NRC had prepared its prior environmental analysis."

Given those circumstances, she told the court, "The NRC's position that it may ignore NEPA altogether before allowing this highly hazardous facility to operate, flies in the face of Congress' intent that each federal agency 'take a hard look' at the environmental consequences before taking a major action."

The NRC insists it has taken such a hard look, and despite identified environmental problems, does not believe the plant should be closed pending a new environmental review.

Attorneys for Sequoyah Fuels have weighed in as well. They argue that NACE's "assertions of potential harm are highly speculative while (the company) has demonstrated that suspension of its operations has caused, and would cause, substantial economic harm to (Sequoyah Fuels), its employees, and the local community."

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Times Record
Nov. 18, 1992

Sequoyah operations shut down

By David Hamby
Times Record staff

Sequoyah Fuels has shut down all operations until a Nuclear Regulatory Commission inspection team completes its investigation into the cause of a chemical release, a facility spokeswoman said.

No one was injured in Tuesday's incident and "no off-site effects are anticipated," Sequoyah Fuels' spokeswoman Pam Bennett said.

"We're almost 100 percent sure that the problem was equipment failure," she said. However, no official cause for the incident will be determined until after the commission's inspection, she said.

About 9:15 a.m. Tuesday, a "site area emergency" was declared at the Sequoyah Fuels uranium processing plant after nitric acid fumes escaped from the main processing building, she said.

The NRC uses four classification levels to categorize incidents at nuclear facilities and site area emergency is the second highest level. A site area emergency entails danger at the site with no endangerment to off-site locations, she said.

The chemical fumes also entered the control room of the processing building where fewer than 10 employees were working at the time, she said.

The release of the nitric acid fumes lasted for about 10 minutes and "formed a plume that was carried over the town of Gore," according to a news release from the NRC's regional spokesman Joe Gilliland.

The release of the nitric acid fumes lasted for about 10 minutes and "formed a plume that was carried over the town of Gore," according to a news release from the NRC's regional spokesperson Joe Gilliland.

"There was no indication that radioactive materials were released off-site during the event," according to the NRC statement. No signs of radioactive materials were shown in preliminary air samples taken at Gore and Webbers Falls or in samples taken from roof vents in the processing building, Bennett said.

The commission has sent a four-member inspection team to "examine the circumstances of the event" and a report will be made public in about four weeks, according to the news release.

During the emergency situation, all employees were evacuated from the site until the emergency status was terminated about 40 minutes after the release.

The plant will stay open while the incident is being investigated, but the processing facilities will not be in operation, Bennett said.

Public Forum to be held at Round Mountain Church

A public forum to discuss contamination at Sequoyah Fuels and concerns about relicensing the facility will be held Saturday, November 21, 1992, 7 p.m. at the Round Mountain Church between Vian and Gore off Highway 64. Lisa Crawford of Fernald, Ohio will speak on how Fernald residents successfully campaigned to decommission the Department of engergy "greensalts" facility due to contamination. Ronald Lee, vice-president of the workers' union at the Fernald Facility is invited to attend. Sponsored by CURE and Sequoyah County Cancer Victims Counsel. For more information call: Oklahoma Toxics Campaign Board Member Kathy Carter-White 456-3235, NACE 458-4322, Jessie DeerInWater with SCCV 773-8184.

P

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Vol. VII Issue No. 4

Wednesday, November 18, 1992

16 Pages

"Unusual Event" declared at Sequoyah Fuels plant

The Sequoyah Fuels Uranium Processing Facility in Gore is shown here. The facility suffered an unusual event as some oxides of nitrates leaked into the atmosphere last Tuesday morning.

At approximately 8: 55 a.m., Tuesday, an "unusual event" was declared at the Sequoyah Fuels plant, east of Gore.

According to Sequoyah Fuels spokesperson Pam Bennett, a dark orange cloud of oxides of nitrate and possibly some nitric acid fumes escaped through the roof of the plant. Wind carried the cloud to the north west.

Plant officials dispatched an environmental team to test the atmosphere with Drager Tools. The test indicated no discernable traces as the cloud had dissapated by 9:06.

At approximately 9:12 a site area emergency was declared and the offices at the plant were evacuated. Sirens were not activated as there was no off site danger. No radiological components were involved in the accident. Mrs. Bennett indicated that there were no injuries and it had not been determined what caused the oxides to escape.

Mrs. Bennett indicated that the families within the 2 mile planning site would be notified by phone of the chain of events.

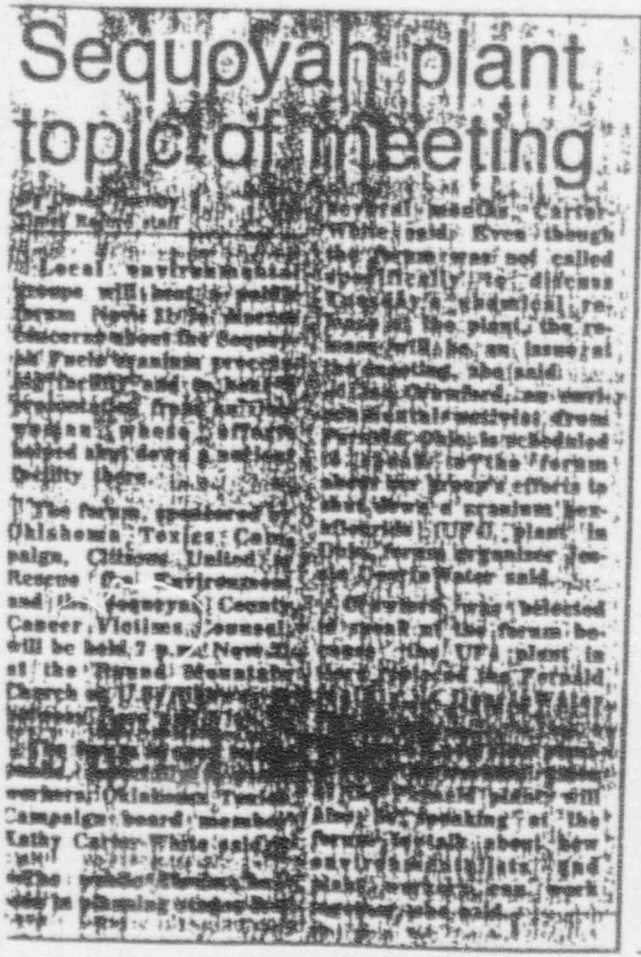
SOUTHWEST

rving:
ashian Crawford
lore-Sequoyah
an-Franklin
t-Polk
kell-Johnson

TIMES RECORD

FRIDAY
Nov. 20, 1992
35 cents

Vol. 110, No. 325 | Fort Smith, Ark. 40 pages



Sequoyah plant topic of meeting

Local environmental groups will host a public forum Monday to discuss concerns about the Sequoyah Fuels uranium processing plant near Gore, Okla. The forum, sponsored by Oklahoma Textile Campaign, Citizens United for Resource Conservation and the Sequoyah County Cancer Victims Council, will be held 7 p.m. Monday at the Round Mountain Church of Christ in Vian, Okla.

Kathy Carter-White said Even though the forum was not called specifically to discuss Tuesday's chemical release at the plant, the release will be an issue at the meeting, she said.

Carter-White said she hopes efforts to shut down a uranium hexafluoride (UF6) plant in Gore, Okla., is scheduled to speak at the forum because the UF6 plant in Gore replaced the Fernald, Ohio, plant. Also speaking at the forum will be Lois Gibbs, director of the Citizens Clearinghouse for Hazardous Waste in Falls Church, Va.

NRC may miss deadline

By Clyde Weiss
Times Record Washington Bureau

WASHINGTON — The Nuclear Regulatory Agency may not be able to meet a promised March 31 deadline to complete an environmental study of the Sequoyah Fuels uranium processing plant near Gore, a government attorney told federal judges Thursday.

Agency staffers earlier this week said they would attempt to meet the new deadline to complete the environmental study as part of the plant's scheduled relicensing application, NRC attorney Daryl Shapiro told a three judge U.S. District Court of Appeals.

But, Shapiro said, "I'm uncomfortable saying it's not going to be postponed again."

Shapiro acknowledged that continuing problems at the plant — such as a chemical release into the atmosphere on Tuesday that caused the NRC to order a temporary shutdown — could cause further delays in completing the environmental assessment.

Diane Curran, attorney for an Oklahoma-based Indian group called Native Americans for a Clean Environment, cited this week's shutdown as evidence the Sequoyah Fuels facility should be closed altogether until the NRC can complete the environmental review.

> This week's accident 'may again delay the (environmental) analysis.'
> — Diane Curran

The Indian group sought Thursday's hearing to press its arguments that the Gore plant poses environmental dangers and should be closed. There was no indication when the court would make a decision in the case.

Each time a problem occurs at the plant, Curran complained, the NRC backs off its commitment to complete the environmental review, which has been pending since the company filed for a new license in August 1990.

Curran argued the NRC was required by federal law to conduct a review before it allowed the plant to reopen April 16, seven months after it was shut down because of concerns that management and employees were not following federal health and safety guidelines.

The NRC contends the law only requires the agency to perform the review in connection with relicensing, not as part of an administrative order that led to the shutdown and re-start.

Curran was skeptical that even the March 1993 deadline for the environmental review can be met. This week's accident "may again delay the (environmental) analysis," Curran told the court.

The judges, however, questioned whether a ruling for the Indian group would make any difference.

"Suppose Shapiro (the NRC attorney) does deliver on his non-commitment" of a March 31 deadline, said Judge Patricia Wald. "That gives you effectively what you're seeking from us."

"That's true," Curran acknowledged. "It's the 'if' that bothers me."

Curran said she wanted some certainty that the NRC would not continually postpone the environmental work while allowing the plant to operate. But the judges did not appear to believe they could force the NRC to meet a deadline.

"Suppose you prevail," and the court orders an environmental assessment, Judge D.H. Ginsburg told Curran. "I'm not sure why anything would be changed."

Noting the NRC promised to complete its environmental report "as soon as possible," Ginsburg noted, "It's hard to see how anything we did would make any difference" because the same people who are now working on the license renewal also would be assigned to do the requested environmental assessment.

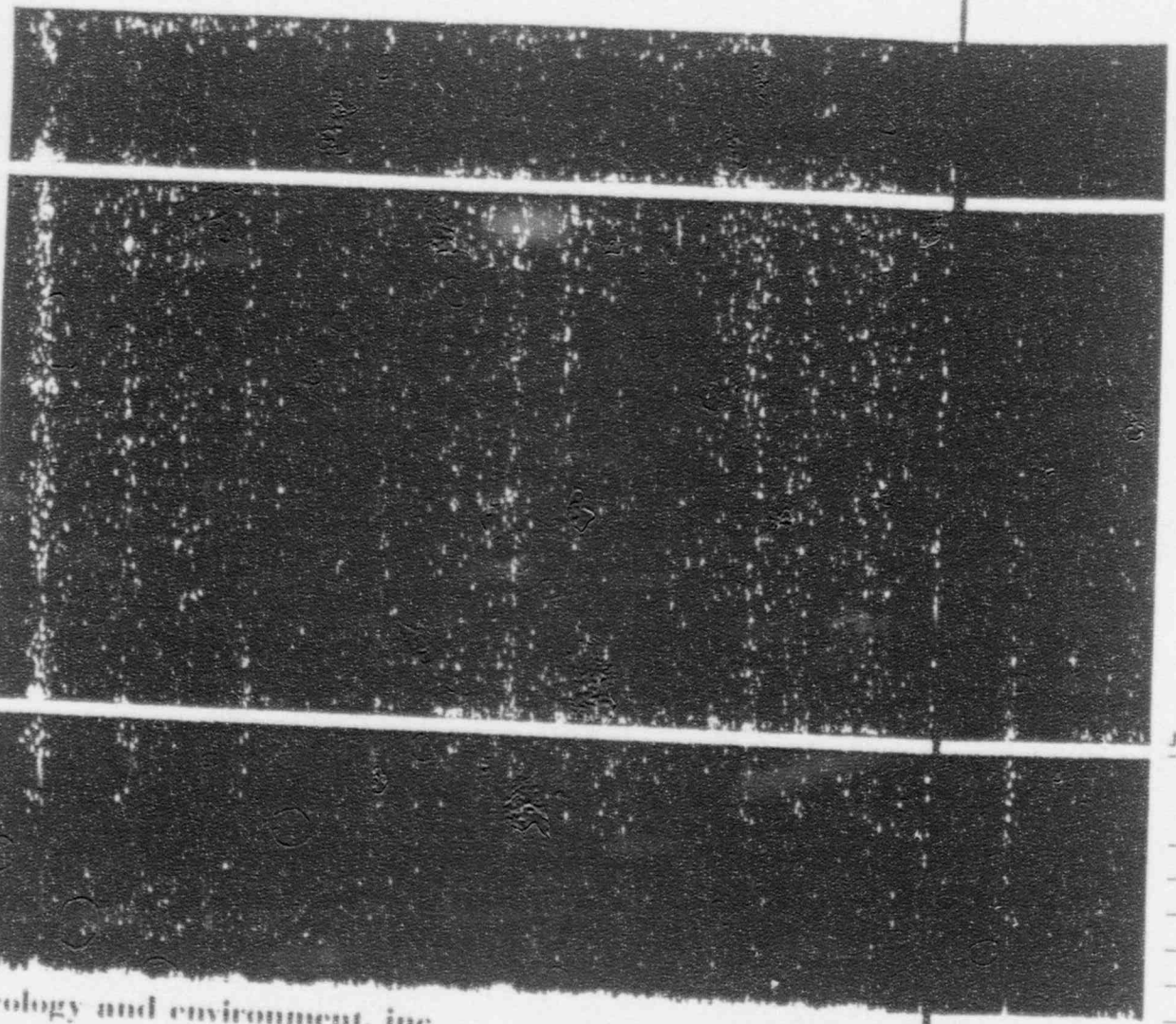
Curran explained that closing the plant would allow more of NRC's staff to work on the environmental assessment, instead of devoting their time to problems that keep cropping up while the plant is on-line.

This week's accident "demonstrates there's a continuing risk" as long as the plant remains open, Curran said.

Sequoyah Fuels attorney Mike Healy also appeared before the court to defend its operations, but Judge Laurence Silberman challenged him, asking, "You would not say the plant has an exemplary record?"

ATTACHMENT F

COPY OF LOGBOOK #1, (PAGES 1-13)



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SEQUOIAH FUELS

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GORE / SEQUOYAH COUNTY / OKLAHOMA

City/State _____

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PAN EOK036ZMA

SSID _____

Start / Finish Date 11/17/92 / 11/20/92

Book 1 of 1

E & E Emergency Response Center: (716) 684 8940
E & E Corporate Center: (716) 684 8060
MEDTOX Hotline: (501) 370 8263
E & E Safety Director (Home): (716) 655 1260

TOG 1211-028 THUR, 11-19-92

1310 CALLED OSC PAT HAMMACK.
SITUATION PER PAT: SEQUOYAH FUELS, GORE, OK, PRODUCER OF URANIUM HEXAFLOURIDE HAD A NITRIC ACID (FUMING) ER CONVERTING TO NITROGEN DIOXIDE (NO_2). CLOUD RELEASE. SEVERAL PERSONS OFF-SITE HAVE BEEN AFFECTED HE WANTS ME TO CONTACT BILL FISHER OR MIKE VASQUEZ WITH DOE NUCLEAR REGULATORY COMMISSION AT 415-486-[illegible] TO MEET WITH THEM EITHER TODAY OR TOMORROW.

1340 CONTACTED BILL FISHER, NRC (@ SEQUOYA.

EVENT FOR FISHER: ON TUESDAY, 11-17-92 AT SEQUOYAH FUELS HAD A CHEMICAL REACTION IN A DIGESTING TANK WHERE URANIUM TETRAFLUORIDE IS MIXED TO NITRIC ACID. WHAT NORMALLY HAPPENS WHEN THE CAKE HAS BEEN IN A DRY TANK AND NITRIC ACID WAS ADDED. THIS MAKES A EXOTHERMIC REACTION WHERE NITROGEN OXIDE (NO), NITROGEN DIOXIDE (NO_2) & NITRIC ACID FUMING) ACID IN GAS FORM ENTER THE ATMOSPHERE. THE RELEASE OCCURRED FOR 30 MINUTES OR LESS. THE CLOUD (GAS) TRAVELED SOUTH ACROSS THE ARKANSAS RIVER WHICH IS APPROXIMATELY 200 FT FROM THE FACILITY. IT THEN TRAVELED TO THE FAR BANK AND ACCROSS A TREE NURSERY (FARM) WHICH BORDERS THE RIVER. IT THEN TRAVELED TOWARDS THE CITY OF GORE, OK. AWAY, BUT WAS LIFTED & DISPERSED BY THE TIME IT REACHED THE CITY.

TOG 1211-028 THUR, 11-19-92

- ON THE RIVER WERE 3 MEN FISHING IN A BOAT AND SAID THE CLOUD ENFOLDED THEM. ONE FISHERMAN IS MR BENNET, A RETIRED TEACHER, SAID HE EXPERIENCED COUGHING & EYE IRRITATION ALONG WITH THE 2 OTHER MEN. HE SAYS HE WAS HAD A HEADACHE SINCE THE INCIDENT HAD NAUSEA & VOMITED ON THE EVENING OF THE EXPOSURE. HE & ONE OR BOTH OF THE OTHERS HAVE SEEN THEIR PERSONAL DOCTORS.
- AT MIDWESTERN NURSERY (AMERICAN NURSERY PRODUCTS) 29 PEOPLE WERE IN THE NURSERY SOME COMPLAINED OF EYE IRRITATION, NAUSEA [illegible] SKIN IRRITATION. OWNER IS SAYING SOME ALLEGED ALSO HAVE BLISTERS IN MOUTH SOME STILL HAD SYMTOMS AS OF THURSDAY AM.

1420 BILL FISHER WOULD LIKE FOR ME TO FLY IN ON THE 1710 FLIGHT TO FT SMITH TO MEET AT THE SHERATON AT 1900. HE WANT ME TO INTERVIEW TO PERSONS EXPOSED. I NOTIFIED THAT I AM NOT QUALIFIED TO MAKE DIAGNOSTIC INTERVIEWS BUT COULD INTERVIEW FOR INFORMATION.

1435 NOTIFIED CURTIS FRANKLIN & CHRIS QUINN OF NRC'S REQUEST WE CALLED PAT HAMMACK AND HE HAD ALREADY NOTIFIED THE NRC OF THE EPA'S CAPABILITIES.

1530 AFTER GATHERING NEEDED DATA THAT HARRISON DEPARTS FOR DFW AIRPORT

TC6 4211-028 THUR, 11-19-92

1800 TAT HARDIN ARRIVES AT SHERATON HOTEL FOR MEETING WITH NRC

1945 HAVE REPEATEDLY TRIED TO LOCATE AND CONTACT THE NRC FOR THE MEETING. HAVE LEFT MESSAGE AT EACH ROOM TO CALL BEFORE DEPARTING IN THE MORNING.

2100 RETURN TO ROOM TO READ TOXICOLOGICAL & CHEMICAL DATA ON RELEASE CHEMICALS.

2110 ALL FISHER CALLS WANT ME TO CALL LINDA RAINER IN THE SHERATON AND GO WITH HER IN THE MORNING TO INTERVIEW DR ANDERSON, THE SEQUOYAH FUELS COMPANY DOCTOR, AT THE SALISAW HOSPITAL.

2115 CALL LINDA RAINER TO TELL HER I AM OFF

TC6 4211-028 FRI, 11-20-92

0620 TAT HARDIN TO LOBBY TO CHECK OUT & MEET LINDA RAINER. LINDA FURTHER INFORMS ME THAT APPROX 100 LBS OF YELLOW CAKE WAS IN THE TANK BUT SAID 3 PLANT EMPLOYEES DID REMAIN IN THE CONTROL ROOM TO MAKE A CONTROLLED SHUTDOWN OF THE PROCESS.

- PLANT EMPLOYEES DID TAKE SOME HNO3, & UO_2 READINGS WITH DRAGER TUBES. (IN & OUTSIDE & OFFSITE. WILL GET RESULTS FROM SEQUOYAH LATER)
- THE PLUME LEFT THE DIGESTION TANK AREA RATHER QUICKLY AS IT IS WELL VENTILATED
- THERE IS SOME DISCREPANCY BETWEEN SEQUOYAH OFFICIALS WHO SAY PLUME ROSE RATHER QUICKLY AT THE 1ST FAN PERSONNEL WHO SAY IT WAS LOWER.

0655 DEPART FOR HOSPITAL TO MEET WITH DR. ANDERSON

0730 ARRIVE AT HOSPITAL

TU6-9211-02B FRI, 11-20-92

0710 MEETING WITH DR ANDERSON, SEQUOYAH'S DOCTOR (NOT A SEQUOYAH EMPLOYEE)
- HE HAS BEEN DOING SEQUOYAH'S MEDICAL WORK FOR PAST 5 YEARS.
- HE SAID 4 SEQUOYAH EMPLOYEES SO FAR:
  - DAN HOWARD: HAS IRRITATION OF THROAT & COUGHING HE WAS XRAYED NO SIGNS OF PULMONARY EDEMA.
  - JOHN SAWYER- MAY HAVE SLIGHT EDEMA. A RADIOLOGIST IS LOOKING AT XRAYS TODAY. HE WAS ADMINISTERED STEROID & A BRONCHIAL INHALATOR. HE WAS IN THE CONFERENCE ROOM DURING RELEASE
  - LLOYD MCCARDY- SLIGHT THROAT IRRITATION NO X RAY TAKEN
  - MRS SAWYERS HAS AN X-RAY TAKEN NO SIGNS OF EDEMA
- DR ANDERSON HAS ALSO SEEN ONE NURSERY WORKER HE DOESN'T HAVE HIS NAME. HE HAD THROAT IRRITATION AND SOME COUGHING WHICH THE PATIENT SAID HAD INCREASED BY THE SECOND DAY HE WAS XRAYED WITH NO SIGNS OF EDEMA.
- ANDERSON WAS ONLY SEEING THESE EMPLOYEES & OFFSITE PERSONS THAT COMPLAINED OF SYMPTOMS SINCE THERE ARE TOO SEQUOYAH EMPLOYEES
- LINDA BRUNER IS THE SEQUOYAH ON STAFF NURSE WHO HAS SEEN SOME OTHER EMPLOYEES LINDA BRUNER REQUESTED DR ANDERSON NOTIFY HER IF ANY NEW PERSONS HE SEES.

TU6-9211-02B FRI, 11-20-92

- ALL NURSERY WORKERS WERE REQUESTED BY THE OWNER (ACCORDING TO DR ANDERSON) TO SEE DR YANCY, AN INDEPENDENT DOCTOR.
- DR ANDERSON CALLED DR YANCY EARLY THUR AM TO SHARE INFORMATION, BUT HAS NOT TALKED TO HIM SINCE HE HAS SEEN THE NURSERY WORKERS.
- LINDA BRUNER ASKED DR ANDERSON IF HE KNEW ANYTHING ABOUT A NURSERY WORKER, RICK WILLIAMS, WHO WAS ALLEGEDLY TURNED AWAY FROM THE SULLIVAN EMERGENCY ROOM AFTER AN EMPLOYEE CALLED SEQUOYAH FUELS DR ANDERSON DID NOT KNOW OF INCIDENT BUT WILL CHECK INTO IT.
- DR ANDERSON HAS NOT HAD ANY CONTACT WITH THE STATE OR COUNTY HEALTH DEPARTMENT.

0830 TAT & NRC DEPART SULLIVAN HOSPITAL FOR THE SEQUOYAH FUELS FACILITY.

TUG-9211-028 FRI, 11-20-92

0900 TAT HARDIN & NRC FASNER ARRIVE AT SEQUOYAH TURN. WATER CONTAIN FILM, SIGN IN & RECEIVE DOSIMETER BADGE.

0920 MEET WITH NRC PERSONNEL BILL FISHER, JOE CALLAN, LINDA WATKINS & MIKE VASQUEZ

0930 TAMMY DEPARTS TO MEET WITH ENGINEER. (CONT. CONTROL ROOM PRESSURE (CCAK)

PLANT HAS BEEN RECORDED TO STAY IN THE CONTROL ROOM DURING THE INCIDENT TO PREPARE FOR A CONTROLLED SHUT-DOWN OF THE REACTOR. THE ROOM IS SUPPOSED TO BE SEALED, BUT THERE IS CONSTANT AIR FLOW FROM THE CONTROL BUILDING VENTILATION SYSTEM. THIS DOES NOT COMPROMISE THE INTEGRITY OF THE SEALS. THE PERSONNEL IN THE ROOM (2 - (HRS)) DONNED SCBAS SHORTLY AFTER THE RELEASE. ALL EXCEPT THE EXPOSED WORKERS WAS CARRYING SCBA EQUIPMENT TO THE CONTROL ROOM WHILE NOT WEARING RESPIRATORY PROTECTION.

FOR TAT HARDIN REVIEWED EMERGENCY PLAN & IMPLEMENTING PROCEDURES.

(1) NO MENTION IN PLAN OF POSSIBLE NITRIC OR NOx RELEASE. MOSTLY RADIATION RELEASE & HF GAS.

(2) CONTROL ROOM IS TO BE SEALED BUT VENTILATED.

(3) RECENT PROCEDURES AS OUTLINED IN SECTION 7.1 OF PLAN EXIST APPARENTLY AND ARE BEING DEVELOPED.

(4) [illegible] PLANT [illegible] IS [illegible] INCIDENT [illegible]

TUG-9211-028 FRI, 11-20-92

LEVEL - TIME OF UNUSUAL EVENT WHICH REQUIRED NO EVACUATION. APPROX 10 MIN LATER NO. SITE ALERT WAS ISSUED WHICH REQUIRED A PLANT EVACUATION BUT STILL NO OFFSITE WARNINGS (SIRENS). APPARENTLY SITE IS UNDER A 2 MILE RADIUS AND EVACUATED.

1020 DEPUTY DIVISION DIRECTOR, PETER 4 NRC ON THE PHONE (JOHNS JANSEN) REQUESTING NAMES OF QUALIFIED PERSONS TO SERVE AS AN NRC CONTRACTOR TO INVESTIGATE. (B-17-BGD-B-119)

1025 CONTACTED CURTIS FRANKLIN WHO WILL DISCUSS THIS WITH PAT HAMMICK.

1040 CONTACTED PAT HAMMICK TO GET LIST OF EVENTS & NOTIFY HIM OF NRC TENNESSEE PRESS INTERIM STATUS REPORT MEETING WHICH IS TO OCCUR THIS AFTERNOON AT 1430.

1050 TALKED TO MIKE VASQUEZ, NRC ABOUT AIR SAMPLING AND MONITORING.

1100 MIKE VASQUEZ AND TAT HARDIN TO CONTROL ROOM TO DISCUSS RELEASE WITH CONTROL ROOM OPERATORS

DEPARTMENT MANAGER DISCUSSED 40 GALLONS OF FLUID WAS FOUND IN FLOOR SUMP. THE FLUID WAS RECYCLED

ALSO RADIATION SAMPLERS AT ROOF SHOWED SLIGHT LEVELS OF RADIATION ACCORDING TO THE MANAGER

1155 TAT AND NRC MEMBERS JOE CALLAN TO MEET WITH [illegible]

TALK TO [illegible]

TLG-9211-018 FRIDAY, 11-20-92

1130 MEETING WITH MISSISSIPPI NURSERY OWNER CONCERNED WITH WORKER HEALTH. NRC: THEY SHOULD CONTINUE TO SEE PHYSICIAN. OWNER: WHAT ABOUT RESIDUE IN PLANTS AND TREES? NRC: THERE SHOULD BE NO RESIDUE ON TREES, OK TO SELL

1310 RETURN TO SEQUOYAH FUELS.

1310 CALLED OSC TO NOTIFY OF MEETING AT 1430 BETWEEN NRC - SEQUOYAH AND PUBLIC. HE CONCURRED WITH NRC RECOMMENDATION - TO HAVE SEQUOYAH ADDRESS PROBLEMS BEFORE RESTARTING FACILITY

1420 TAT AND NRC TO PUBLIC MEETING AT A LOCAL SCHOOL

ATTENDANCE: NRC, SENIOR SEQUOYAH REPRESENTATIVES, HEALTH DEPARTMENT. FISHER (ALLEM, NRC):

1. CAUSE OF INCIDENT FAULTY SLIDE GATE, OPERATOR ERROR
2. MISC RECOMMENDATIONS SEE NRC DRAFT EVENT DESCRIPTION

1510 MEETING OVER. RETURN TO FORT SMITH TO CATCH FLIGHT HOME

TLG-9211-026 FRIDAY, 11-20-92

ATTACHMENT G

COPY OF TDD T06-9211-028

1A. Cost Center: ZT2061

1B. Account No.: E2K0362MA

TAT ZONE II CONTRACT
CONTRACT NO. 68-WO-0037
TECHNICAL DIRECTION DOCUMENT (TDD)
ECOLOGY AND ENVIRONMENT, INC.

2. No.: T06-9211-028
F93-0476
Amendment

3A. Priority: [X] High [ ] Medium [ ] Low

4A. Estimate of Total Hours: 50
Total Costs: $5000

5A. EPA Site Name: N/A

7. CERCLIS ID: N/A

5B. SSID No.: N/A

5C. City / County / State: Grand Junction / CO

8A. Completion Date: 01/01/93

3B. Key EPA Contact Name: Hamada

Phone: 655-2073

4B. Overtime Approved: [X] Yes [ ] No

6. Source of Funds: [X] CERCLA [ ] OPA [ ] UST [ ] CERP [ ] Other

8B. Reference Info: [ ] Yes [ ] Attached [X] No [ ] Pick-up

9. Type of Activity:

OPA
- [ ] SPCC
- [ ] On-Scene Monitoring
- [ ] Spill Clean-up Funded

CERCLA
- [ ] Site Assessment
- [ ] Removal Funded
- [ ] Removal PRP (AO/CO)
- [X] On-Site Monitoring

AS SPECIFIED ABOVE
- [ ] Special Project
- [ ] Analytical Project
- [ ] Corp. Special Project
- [ ] Preparedness
- [ ] UST
- [ ] FEMA
- [ ] Quality Assurance
- [ ] Training
- [ ] Program Management
- [ ] Technical Assistance
- [ ] Information Management

10. General Task Description: INVESTIGATE Nitric Acid Release.

11. Desired Report Form:
- [ ] Formal Report
- [X] Letter Report
- [ ] Formal Briefing
- [ ] Other (Specify)

Specific Elements:

1) Assist Nuclear Regulatory Commission in investigation of Release.

2) Brief DOE

13. Interim Deadlines:

12/19/92

14. Authorizing DPO: Henry Thompson
Signature

15. Date: 11/19/92

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
TATL Signature

17. Date: 11/27/92

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Sheet 3 Green — ZPM Copy
Sheet 4 Canary — PO Copy
Sheet 5 Pink — CO Copy
Sheet 6 Goldenrod — DPO Original (Unassigned by TATL)

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