

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Underground Coal Mine

Fatal Fall of Roof Accident
October 12, 2006

No. 7 Mine
Jim Walter Resources, Inc.
Brookwood, Tuscaloosa County, Alabama
I.D. No. 01-01401

Accident Investigators

Harry Wilcox
Mine Safety and Health Inspector

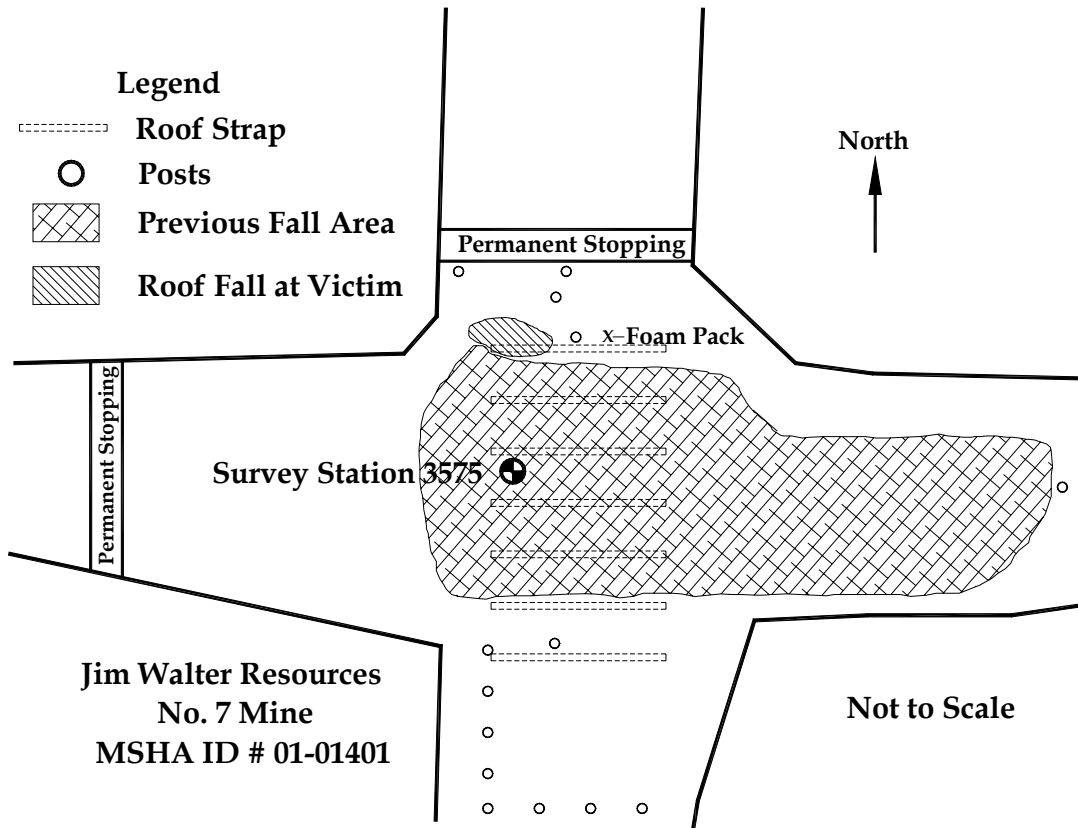
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Mine Safety and Health
Electrical Specialist

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Richard A. Gates, District Manager

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OVERVIEW



On October 12, 2006 a 56-year old Special Projects Manager, with 32 years total mining experience, was fatally injured in an underground roof fall. The rock that separated from the roof and struck the victim measured 83-inches long x 43-inches wide x 7-inches thick, and had a roof bolt through one end which failed at or near the anchorage point. The victim was checking ventilation controls in anticipation of increasing fan ventilation pressure in the area, and was in an area of the mine that had prior roof falls and deteriorating roof conditions, affecting the immediate roof and installed support.

The accident occurred because the mine operator failed to provide additional support or otherwise control these areas of unsafe roof to protect persons working or traveling in the area.

GENERAL INFORMATION

The No. 7 Mine, I.D. 01-01401, is owned and operated by Jim Walter Resources, Inc. The mine is located in Tuscaloosa County, Alabama, near Brookwood, Alabama.

The mine provides employment for 491 persons and operates 7 days per week, 3-8 hour shifts per day. Coal is produced 6 days per week on all shifts. The mine produces an average of 10,000 clean tons per day. The miners are represented by the United Mine Workers of America (UMWA).

The mine operates in the Blue Creek coal seam, with an average mining height of 80 inches. The mine operates seven mechanized mining units (MMU) consisting of six continuous mining machine units and one longwall unit.

The principal officials of the mine at the time of the accident were:

Trent Thrasher.....Mine Manager
John Aldrich.....Safety Manager

A Safety and Health Inspection was completed on September 30, 2006, and another was on going at the time of the accident. The Non-Fatal Days Lost (NFDL) injury incidence rate for the mine for the previous quarter was 4.5 compared to the national NFDL rate of 4.73.

DESCRIPTION OF THE ACCIDENT

On Wednesday, October 11, 2006, at approximately 9:30 A.M., Jim Walter Resources, Inc., No. 7 Mine Special Projects Manager Jerry McKinney (victim), entered the mine to check for ventilation leakage associated with ventilation controls around the North Seals, located near the old 8 section and 7-6 fan area (Appendix B). Approximately 10 minutes prior to entering the mine, McKinney told the day shift Control Room Operator (CRO), who was also the responsible person that he was going to the old 8 section. Supervisor Gene Trammell reported to the CRO, at approximately 9:35 A.M., that he was taking McKinney into the old 8 section. The day shift CRO wrote McKinney's name and underground location on a legal pad used to track the underground location for miners whose assignments require that they move about the mine. Trammell dropped McKinney off at the old 8 section track switch, located off the main north track entry.

The day shift CRO was relieved at 5:15 P.M. by the night shift CRO. CROs normally work 12-hour shifts that overlap the standard 8-hour shifts. During shift turnover, the day shift CRO informed the night shift CRO that McKinney was still underground, and was at the old 8 section area. The day shift list referred to above was thrown away, and McKinney's name was not carried over to the night shift list.

On October 12, 2006, the day shift CRO relieved the night shift CRO at about 5:00 A.M. There was no mention, or written record of McKinney's location at this time. There had been no reported contact between McKinney and the CRO personnel since McKinney had entered the mine the day before. The last contact with McKinney was after he was dropped off at the old 8 section track switch. Three miners were traveling out of the mine when they saw, and talked with him the morning of October 12, just after midnight. According to the miners, McKinney was at the main north track, by a telephone, in the vicinity of the North Seals and the old 8 section (Appendix B).

Day shift supervisors who worked directly for McKinney noticed at about 5:45 A.M., that the victim's truck had not been moved, and his office had not changed from the previous day. The day shift CRO did not have knowledge of McKinney's location, so the night shift CRO was contacted at his house. The night shift CRO recalled, from what he remembered from the previous shift turnover, that McKinney was still underground, in the vicinity of the old 8 section and North Seals. At approximately 7:00 A.M., the mine activated its missing person protocol, and began a search. McKinney was found at approximately 8:05 A.M., pinned under a piece of roof rock (Overview Sketch).

He was transported out of the mine, and pronounced dead by the coroner at approximately 10:30 A.M. The cause of death was listed as multiple blunt force injuries.

INVESTIGATION OF THE ACCIDENT

At approximately 6:40 A.M., on October 12, 2006, the No. 7 Mine Safety Supervisor, Keith Plylar, informed the MSHA District Manager that an individual was missing, and that the mine was in the process of activating its missing person protocol. At approximately 8:30 A.M., the mine's CRO informed Mary Jo Bishop, MSHA Bessemer Field Office Supervisor, that the victim had been found. MSHA accident investigators responded, and an order pursuant to Section 103(k) of the Federal Mine Safety & Health Act of 1977 was issued to ensure the safety of the miners until an investigation could be conducted. The accident investigators made a physical examination of the accident scene, interviewed employees, and reviewed work conditions relative to the scene. MSHA conducted the investigation with the assistance of state investigators, mine management, miner's representatives, and employees (Appendix A). Thirteen people were interviewed during the investigation.

DISCUSSION OF THE ACCIDENT

Roof Support

The area of the accident site was last mined in November of 1984. The primary support consisted of 96-inch mechanically anchored tensioned roof bolts with standard bearing plates, and metal straps that were installed in the normal mining/bolting cycle. The roof bolts were installed on centers that were 5-foot or less, and the entry width at the accident site measured 21-feet.

Mine Conditions and Geology

The immediate roof was composed of a "middleman" of sandy shale, approximately 3-foot thick, overlain by 12 to 18-inches of the Mary Lee coal seam, with the main roof overlying this coal seam. The roof support was designed to penetrate the middleman, the coal seam, and to anchor into the main roof.

The entries were developed in the Blue Creek coal seam that measured between 5 and 6-feet thick. The roof in the accident area had deteriorated over time, with the immediate roof falling out sometime after 2003 (Overview Sketch, Appendix C). In general, the area was characterized by deteriorated roof and installed support (broken roof bolts and roof straps) conditions. The mine operator was aware of the conditions in this area of the mine, and had installed additional supports on a selected path along entries up to the North Seals during installation of ventilation controls (permanent stoppings) for the 7-6 fan start up in 2003. In addition, the travel

way used to examine the North Seals had additional support (Appendix B).

The rock that separated from the roof measured 83-inches long x 43-inches wide x 7-inches thick, and had a roof bolt through one end that had failed at or near the anchorage point. It fell from the brow of a pre-existing fall of immediate roof that started in the crosscut at spad 3575, and extended east a distance of 62-feet. The width of the roof fall varied from 11 to 16-feet (Overview Sketch). In this area, several roof bolts had failed at the mechanical anchors, and some had broken along the shaft of the bolts. The heads of several roof bolts had also pulled through the bearing plates.

Work Activities and Practices

The area had been last mined in 1984. In 2003, a portion of the area was rehabilitated (Appendix B) for the start up of the 7-6 fan. In October of 2006, in anticipation of increasing the 7-6 fan pressure in this area, McKinney was assigned the task of evaluating the existing ventilation controls. There was an existing examiner's route, which was adequately supported, and used for travel to and from the seals (Appendix B). However, it appears that he followed the route that was established in 2003. This area had deteriorated since its establishment.

At the time of the accident, it appears that McKinney was evaluating, and possibly applying sealant to a ventilation control located just north of spad 3575 (Overview Sketch). A new foam pack was found in close proximity to the accident site, and the stopping had been sealed with the foam sealant. The foam sealant on the stopping was white in color and appeared to have been recently sprayed. He was positioned under the brow when the roof bolt failed, causing the roof rock to fall and strike him.

According to persons interviewed, McKinney had a habit of working by himself with long, irregular hours underground. He normally did not call out to the surface and report his location while he was underground.

Work History and Training

McKinney had a total of 32 years mining experience, the majority at underground operations. He had 24 years of experience in his job title and 21 years, 26 weeks experience at the No. 7 Mine. He was certified in the State of Alabama as a mine foreman and examiner. A review of his training records indicated that he had received all of his required training.

ROOT CAUSE ANALYSIS

An analysis was conducted to identify the most basic causes of the accident that were correctable through reasonable management controls. During the analysis, a root cause was identified that, if eliminated, would have either prevented the accident or mitigated its consequences.

Root Cause: The immediate mine roof and installed roof support had deteriorated over time, resulting in hazardous roof conditions in the area traveled by the victim. Adequate precautions to eliminate the hazard were not taken.

Corrective Action: The mine operator installed additional standing support in the area of the fall to make the immediate area safe for the investigation. All entrances to the accident site area were timbered off with danger signs posted to keep miners from entering the areas of unsafe roof.

CONCLUSION

The accident occurred because the miner traveled in an area where hazardous roof conditions were present due to the deterioration of the mine roof and installed roof support. The support failed at or near the anchorage, allowing a rock to fall from the brow of a prior roof fall, causing fatal injuries to the miner. Adequate precautions to support or otherwise control the mine roof were not taken.

Approved by:

Richard A. Gates
District Manager

Date

ENFORCEMENT ACTIONS

§103(k) Order No. 7689669:

A fatal accident has occurred on or about 10-11-2006 at the Jim Walter Resources, Inc., No. 7 Mine. This order is issued to protect the health and safety of the miners until an investigation can be conducted.

§104(a) Citation No. 7689677: Issued to Jim Walter Resources, Inc., No. 7 Mine for violation of §75.202(a)

The operator failed to adequately support or otherwise control the roof to protect persons from hazards related to falls.

On October 12, 2006, while inspecting and working on ventilation controls, a miner received fatal injuries when a piece of roof rock fell from the brow of a prior roof fall, striking the victim on the head, back, and lower body. The mine roof in this area and adjacent entries had prior roof falls and deteriorating roof conditions from the time of its initial development in November of 1980. Additional measures were needed to protect persons working or traveling in the area from this hazard.

Appendix A

Persons Participating in the Investigation

JIM WALTER RESOURCES, INC.

Trent Thrasher, Mine Manager
Dale Byram, Manager of Safety and Training
John Aldrich, Safety Manager
Keith Plylar, Safety Supervisor

ALABAMA DEPARTMENT OF INDUSTRIAL RELATIONS MINE SAFETY AND INSPECTION

Sam Mullenix, Mine Inspector
Dale Johnson, Mine Inspector

MINE SAFETY AND HEALTH ADMINISTRATION

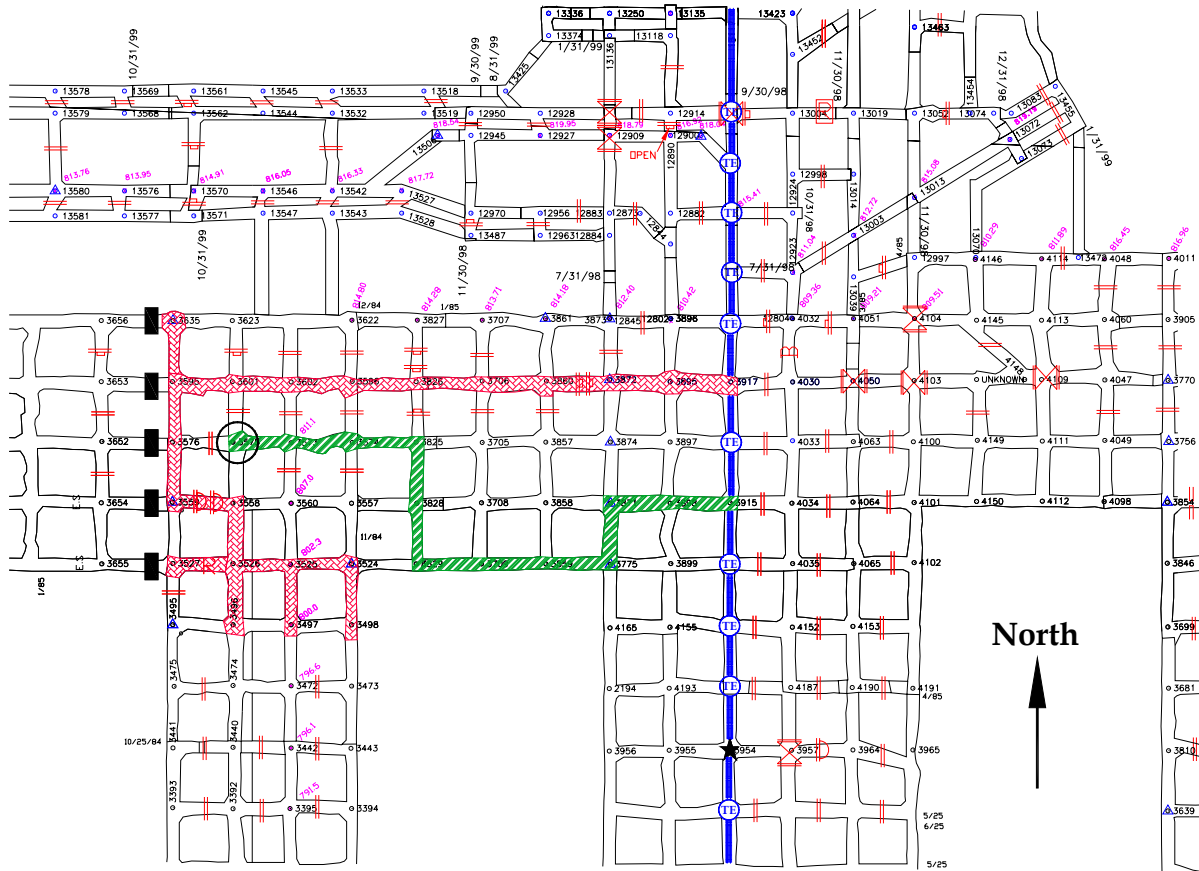
Harry Wilcox, Accident Investigation Team Leader, District 11
John Church, Coal Mine Safety and Health Electrical Specialist, District 11
Terry Langley, Supervisory Mine Safety and Health Specialist, District 11




UNITED MINE WORKERS OF AMERICA

Thomas Wilson, International Representative
Dwight Cagle, President, Safety Committee, Local 2397
Bradley Berryhill, Safety Committee, Local 2397

Appendix B

North Mains General Overview

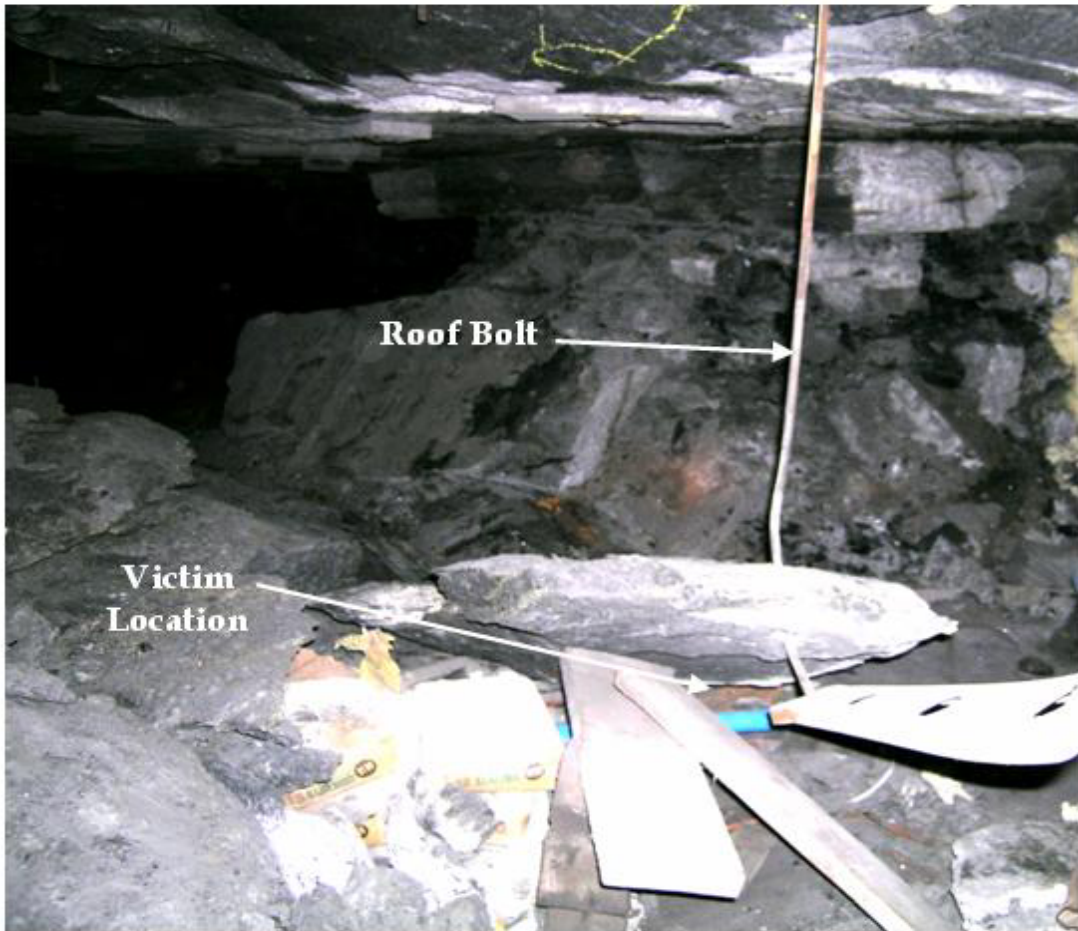


-  Green (angle hatched) path re-supported during 2003 for 7-6 fan start up project.
-  Red (cross hatched) path traveled by the examiner on a weekly basis to check evaluation points and seals. Red path traveled by miners who hand carried wood posts to re-support the evaluation point area in July of 2006.
-  Blue (solid line marked TE) line indicates the location of the main track entry.

The star indicates last observed location of victim; the circle is where the victim was found.

Appendix C

Photograph of accident site



Appendix D

Accident Investigation Data - Victim Information

U.S. Department of Labor
Mine Safety and Health Administration



Event Number: 4 2 9 8 3 4 4

Victim Information: 1

1. Name of Injured/Ill Employee: Jerald E. McKinney		2. Sex M	3. Victim's Age 56	4. Last Four Digits of SSN:	5. Degree of Injury: 01 Fatal												
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: 10/12/2006 b. Time: 0:30			7. Date and Time Started: a. Date: 10/11/2006 b. Time: 6:00														
8. Regular Job Title: 049 Special Projects Manager		9. Work Activity when Injured: 098 Examination		10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>													
11. Experience a. This Work Activity:		Years	Weeks	Days	b. Regular Job Title:	Years	Weeks	Days	c. This Mine:	Years	Weeks	Days	d. Total Mining:	Years	Weeks	Days	
		24	4	0		24	4	0		21	26	0		32	0	0	
12. What Directly Inflicted Injury or Illness? 121 Roof Fall			13. Nature of Injury or Illness: 170 Multiple blunt force														
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner: Annual: Task:																	
15. Company of Employment: (If different from production operator) Operator						Independent Contractor ID: (if applicable)											
16. On-site Emergency Medical Treatment: Not Applicable: First-Aid: <input checked="" type="checkbox"/> CPR: EMT: Medical Professional: None:																	
17. Part 50 Document Control Number: (form 7000-1)						18. Union Affiliation of Victim:											

Victim Information:

1. Name of Injured/Ill Employee:		2. Sex	3. Victim's Age	4. Last Four Digits of SSN:	5. Degree of Injury:												
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:			7. Date and Time Started														
8. Regular Job Title:		9. Work Activity when Injured:		10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>													
11. Experience: a. This Work Activity:		Years	Weeks	Days	b. Regular Job Title:	Years	Weeks	Days	c. This Mine:	Years	Weeks	Days	d. Total Mining:	Years	Weeks	Days	
12. What Directly Inflicted Injury or Illness?			13. Nature of Injury or Illness:														
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner: Annual: Task:																	
15. Company of Employment: (If different from production operator)						Independent Contractor ID: (if applicable)											
16. On-site Emergency Medical Treatment: Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:																	
17. Part 50 Document Control Number: (form 7000-1)						18. Union Affiliation of Victim:											

Victim Information:

1. Name of Injured/Ill Employee:		2. Sex	3. Victim's Age	4. Last Four Digits of SSN:	5. Degree of Injury:												
6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:			7. Date and Time Started:														
8. Regular Job Title:		9. Work Activity when Injured:		10. Was this work activity part of regular job? Yes <input type="checkbox"/> No <input type="checkbox"/>													
11. Experience: a. This Work Activity:		Years	Weeks	Days	b. Regular Job Title:	Years	Weeks	Days	c. This Mine:	Years	Weeks	Days	d. Total Mining:	Years	Weeks	Days	
12. What Directly Inflicted Injury or Illness?			13. Nature of Injury or Illness:														
14. Training Deficiencies: Hazard: New/Newly-Employed Experienced Miner: Annual: Task:																	
15. Company of Employment: (If different from production operator)						Independent Contractor ID: (if applicable)											
16. On-site Emergency Medical Treatment: Not Applicable: First-Aid: CPR: EMT: Medical Professional: None:																	
17. Part 50 Document Control Number: (form 7000-1)						18. Union Affiliation of Victim:											