

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Underground Coal Mine

Fatal Machinery Accident
April 21, 2006

Huff Creek No. 1
Lone Mountain Processing Inc.
Cumberland, Harlan County, Kentucky
ID No. 15-17234

Accident Investigators

Kevin D. Bruner Sr.
Coal Mine Safety and Health Inspector

Kevin Doan
Coal Mine Safety and Health Inspector

Patrick Stanfield
Coal Mine Safety and Health Inspector (Electrical)

Debbie Combs
Training Specialist (EFS)

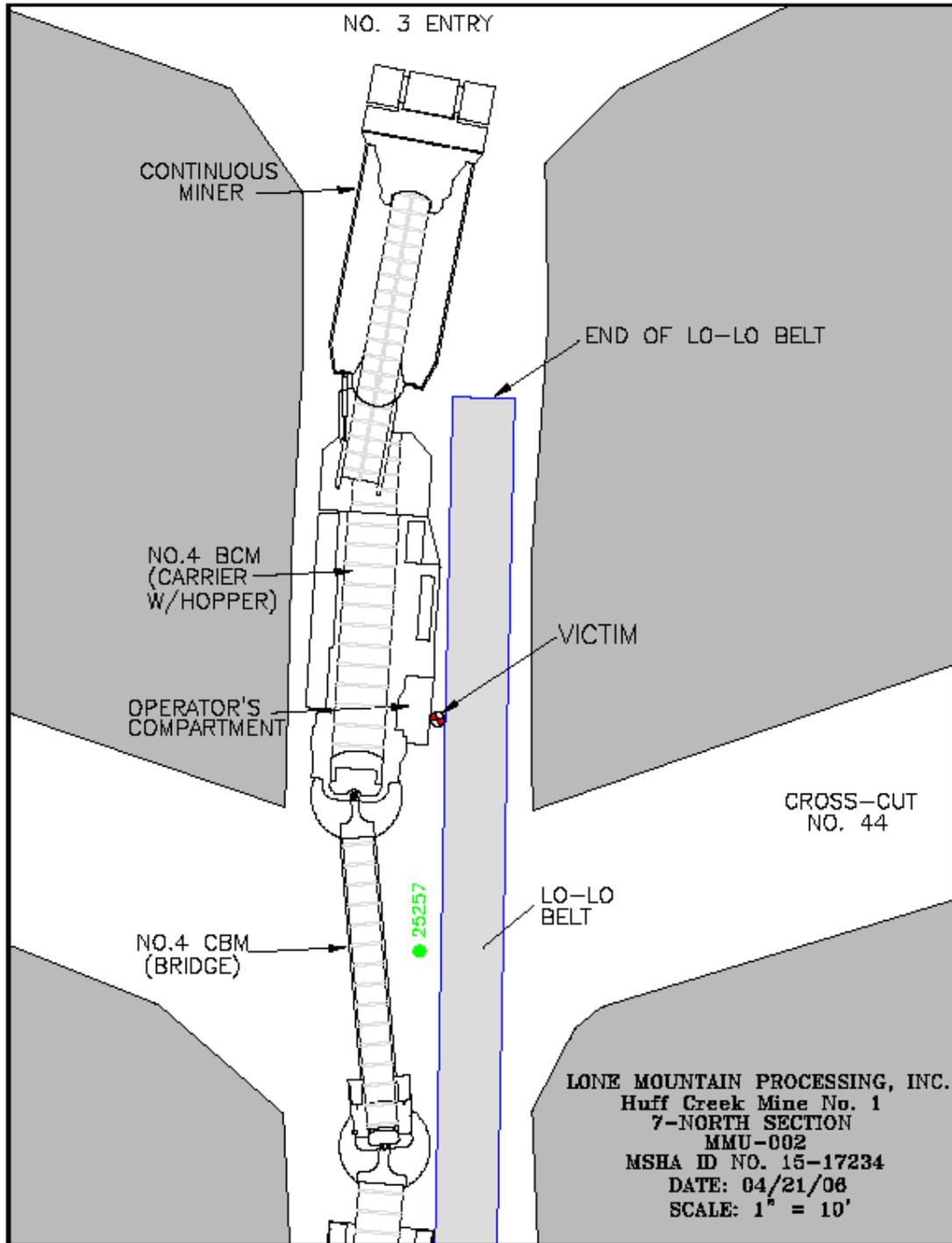
Robert Holubeck
Electrical Engineer

Originating Office
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ACCIDENT SITE
Not to Scale



OVERVIEW

At approximately 4:30 a.m. on Friday, April 21, 2006, Rick McKnight, a 45 year-old Electrician with 16 years of mining experience was found fatally injured at Lone Mountain Processing Inc.'s Huff Creek No. 1 mine. The accident occurred while McKnight was checking the hydraulic pressure on the left side tram of the No. 4 Breaker Car Module (BCM) while outside the operator's compartment. During this process, the No. 4 BCM tram control was bumped or struck by the victim, causing the machine to move, pinning him between the operator's compartment and the lo-lo conveyor belt structure.

The accident occurred because the No. 4 BCM was not deenergized or blocked from unintended motion while maintenance was being performed in an area where miners performing such work could be harmed by movement of the machinery.

GENERAL INFORMATION

Lone Mountain Processing's Huff Creek No. 1 mine is located approximately 23 miles east of Harlan, Kentucky, along the Clover Fork of the Cumberland River. The Kellioka seam is accessed by a compartmented slope at the portal area and by a belt conveyor slope located another quarter mile east at the Days Creek Stockpile area. An average of 12,000 raw tons of coal is produced daily from three units operating two shifts per day using the room and pillar method, with maintenance performed on the third shift. The mine employs 133 miners underground and two on the surface. Miners and supplies are transported using rubber-tired diesel vehicles. Coal is transported from the working place to the section loading point with continuous haulage units and then to the surface via belt conveyors.

The mine is ventilated via an exhausting fan atop a 101 foot deep shaft. This mine liberates 220,273 cubic feet of methane in 24 hours as of the last sampling and is subject to methane spot inspections under section 103(i) of the Mine Act.

The principal officers for the mine at the time of the accident were:

Thomas Baumgarth	General Manager
James E. Florczak	Vice President/Treasurer
Miriam Rogers Singer	Secretary
William H. Rose.....	Assistant Secretary

Prior to the accident, the Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection on March 30, 2006 and another were on-going at the time of the accident. The Non-Fatal Days Lost (NFDL) injury incidence rate for the mine in 2005 was 4.52 compared to a National NFDL rate of 5.18.

DESCRIPTION OF ACCIDENT

On the night of April 20, 2006, the 002 MMU 3rd shift crew arrived at the mine and prepared for their scheduled maintenance shift. At that time, McKnight, whose normal duties were to conduct maintenance on the continuous haulage system, received a work order which indicated the left tram on the No. 4 BCM was weak in pressure. At approximately 11:00 p.m., McKnight and the rest of 002 MMU 3rd shift crew entered the mine. When the crew arrived on the section, they performed various duties, primarily preparing to advance the section belt, which was scheduled to occur that shift. The 2nd shift crew completed their production shift at 12:30 a.m. on April 21, 2006, and departed the section.

The 3rd shift crew began the process of making the belt set up by advancing the section conveyor belt. The lo-lo structure was then pulled up and aligned using the continuous miner and the continuous haulage system. McKnight was asked if he wanted the equipment positioned differently for his maintenance work. McKnight walked from the No. 3 Mobile Bridge Module (MBM) to the No. 4 BCM and told the crew that it was okay where it was. Work proceeded as the crew installed belt structure, bolted roof, and performed maintenance on equipment. The crew began their lunch break in several different groups from 2:30 to 3:00 a.m.

At approximately 3:00 a.m., Johnny Lee, the repairman assigned to the continuous miner, hooked the welder up to the power connection located on the haulage system, where he saw McKnight at the No. 4 BCM. Lee returned to the continuous miner and began welding on the front left side of the mining machine. McKnight continued to work alone, out of sight from the remainder of the crew. At approximately 3:15 a.m., as he continued welding, Lee heard the No. 4 BCM activate.

During this time McKnight was working to diagnose the pressure problem on the No. 4 BCM left tram, which had been reported as “weak”. To check the system pressure, he loosened the mounting bolt to the communication phone and rotated it to gain access to a test port located in the operator’s compartment of the BCM, where he installed a 6000 p.s.i. pressure gage. While McKnight was working outside of the operator’s compartment, the left tram was activated, causing the BCM to pivot and pin him between the machine and lo-lo structure.

At 4:30 a.m. Lee finished welding and began rolling up the power cable for the welder when he saw that McKnight was caught between the BCM and lo-lo structure. He immediately called for help from the crew. Grills, Moyers, and Lewis, who were Mine Emergency Technicians (MET)’s, came to assist Lee. Adams, a bridge carrier operator for the day shift who had started early, moved the BCM away from McKnight so the others could provide medical assistance. McKnight was found unresponsive and a pulse could not be detected. Cardio Pulmonary Resuscitation (CPR) was started and an automatic external defibrillator (AED) was brought to the scene and connected to McKnight. The AED recommended no shock and to continue CPR. McKnight was transported to the surface via the 002 diesel personnel carrier, with continuous CPR being performed.

On the surface, CPR was continued by the MET's until the ambulance service arrived at 5:10 a.m. McKnight was then transported by ambulance to the Harlan Appalachian Regional Hospital Emergency Room, arriving at 5:55 a.m. He was pronounced dead at 6:25 a.m. The cause of death was listed as "crushing injuries of the torso and possible traumatic asphyxia.

INVESTIGATION OF THE ACCIDENT

At approximately 5:00 a.m. on Friday April 21, 2006, Gary Polly, Huff Creek No. 1 Mine Foreman notified Robert Rhea, Coal Mine Safety and Health (CMS&H) Supervisor, Harlan, Kentucky Field Office that an accident had occurred at the mine on the 002 MMU. Rhea immediately contacted the District 7 office and an accident investigation team was dispatched to the mine. Rhea then dispatched Kevin Doan, CMS&H inspector to the mine. Upon arrival, Doan issued an order pursuant to section 103(k) at 5:57 a.m. to assure the safety of persons at the site and to preserve the scene until an accident investigation could be completed and the site deemed safe. Doan then entered the mine along with company representatives and Kentucky Office of Mine Safety and Licensing (OMSL) officials to secure the scene until the investigation team could arrive.

The MSHA investigation team along, with accident investigation personnel from the OMSL, entered the mine to gather preliminary information and examine the accident scene. Measurements were taken for a scaled drawing, along with the documentation of the scene, including photographs being taken. Documents and relevant information were collected on the surface. The training program and records were reviewed. A regular inspection was conducted concurrently with the investigation to address issues that did not contribute to the accident. Formal interviews were conducted at the OMSL Harlan, Kentucky office on April 22, 2006.

DISCUSSION

Accident Location

The accident occurred on the 002 MMU in the No. 3 entry, 20 feet inby spad No.25257 located at the 44th crosscut of the 7 north panel, approximately 5 ½ miles from the portal. The mining height averaged 84 inches on the section. Entry and crosscut centers were 80 feet with crosscuts turned on 70 degree angles left and right out on the No. 3 (belt) entry. The advancing section was driving 5 entries under 450 feet of cover.

Mining Machinery

The machine which pinned the victim was a Breaker Car Module (BCM) of an Oldenburg Stamler model SCH-36 low seam continuous haulage system. This was the front carrier of a (detached type) 4-bridge carrier haulage system.

The left tram lever was activated in reverse, causing the BCM to pivot, pinning the victim. The activation of the tram could have been caused by the intentional movement (striking or bumping) of the lever by the victim to check hydraulic pressure, or by unintentional contact with the telephone after it was loosened to allow access to the hydraulic test ports.

No defects relating to safety were found on the BCM. It was determined through interviews that the back boom of the BCM was in the raised position at the time of the accident.

The communication phone was a Gai-Tronics Femco permissible page phone. The page phone was mounted above the operator's tram control station. All but one of the bolts that attached the phone to the machine was removed at the time of the accident. The phone enclosure was turned counterclockwise toward the tram levers at approximately 45 degrees on its single mounting point.

Human Factors

There were no eye witnesses to the accident. The victim was working alone on the bridge system as he normally did, while other employees performed their normally assigned duties. There was no written or verbal company policy or procedure in place for compliance with blocking equipment from motion while maintenance was being performed prior to the accident.

Blood samples were obtained from the victim by the coroner. A toxicology analysis was conducted which showed no drugs were present in the victim at the time of the accident.

Training

The training program and records were reviewed and no deficiencies were identified that would have contributed to the accident.

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, causal factors were identified that, if eliminated, would have either prevented the accident or mitigated its consequences.

Listed below are root causes identified during the analysis and their corresponding corrective actions implemented to prevent a recurrence of the accident:

Root Cause: The mine operator did not have written procedures or policies in place to require blocking machinery against motion before performing repairs or maintenance. The victim was fatally injured when the BCM moved due the BCM not being blocked from motion. The victim's position, being located in a pinch point area, exposed him to hazardous conditions when the No. 4 BCM was started up and the left tram was engaged in reverse.

Corrective Action: The operator developed and implemented an action plan that was added to the training plan to require safety procedures to be followed when operating or performing maintenance on equipment.

CONCLUSION

The victim received fatal injuries when the left tram control lever of the BCM was contacted, causing the machine to pivot and crush the victim between the machine and the adjacent lo-lo belt structure. The accident occurred because the machine was not deenergized and blocked from unintended motion while maintenance was being performed by a miner located in a pinch point between the machine and the nearby lo-lo belt structure. The victim's position, being located in a pinch point area, exposed him to hazardous conditions when the No. 4 BCM was started up and the left tram was engaged in reverse. The mine operator did not have written procedures or policies in place to require blocking machinery against motion before performing repairs or maintenance.

Approved By:

District Manager

Date

ENFORCEMENT ACTIONS

Order No. 7559497 was issued to Lone Mountain Processing Inc. on April 21, 2006, under the provisions of Section 103(k) of the Mine Act.

This mine has experienced a fatal power haulage accident on the active 002 MMU. This order is being issued to assure the safety of any person in the coal mine until and examination or investigation is made to determine the mine is safe. Only those persons selected from company officials, state officials, the miners' representative and other persons who are deemed by MSHA to have information relative to the investigation may enter or remain in the affected area.

Citation No. 7534982 was issued to Lone Mountain Processing Inc. for a violation of 30 CFR 75.1725(c)

On April 21, 2006, maintenance was being performed on the No. 4 Breaker Car Module (BCM), located on the 002 MMU. The BCM was positioned in the No. 3 entry beside the lo-lo structure to permit scheduled maintenance. The machine was not deenergized and blocked against motion. The victim received fatal injuries when the left tram control lever of the BCM engaged, causing the BCM to pivot, crushing him against the adjacent lo-lo belt structure.

**Appendix A
Persons Participating in the Investigation**

Lone Mountain Processing Inc.

<u>Name</u>	<u>Title</u>
Tom Baumgarth	General Manager
David Webb	General Mine Foreman
Gary Polly	Mine Foreman
Steve Hyde	Electrician
Ronnie Biggerstaff	Manager of Safety
Melanie Kilpatrick	Attorney for Lone Mountain
Jim Vicini	Manager of Safety

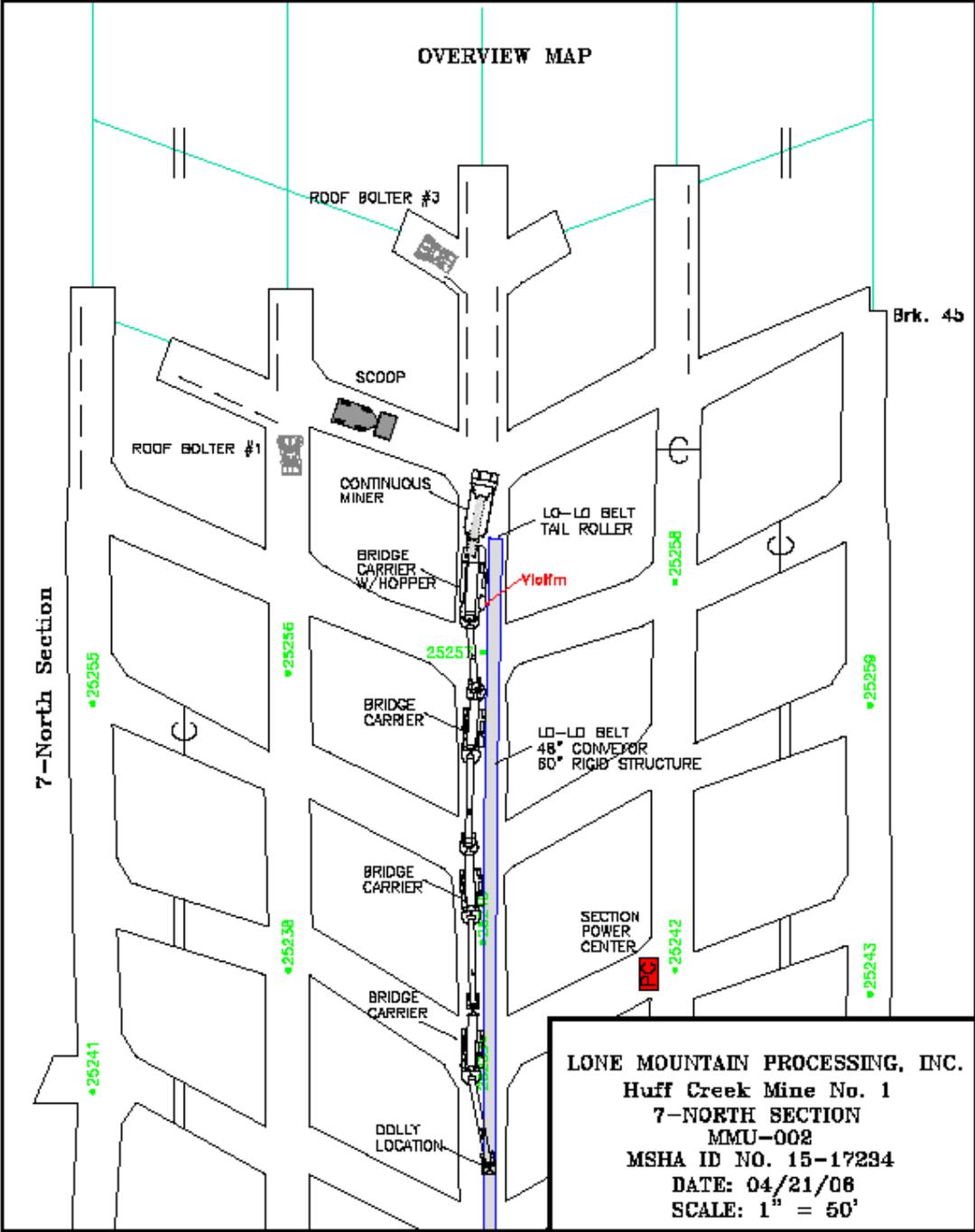
Kentucky Office of Mine Safety and Licensing

<u>Name</u>	<u>Title</u>
Ronald Hughes -----	OMSL/Director of Investigations
Ronnie Hampton -----	OMSL/Supervisor Harlan District
Greg Goins -----	OMSL/Accident Investigator
Charles Kurk -----	OMSL/Accident Investigator
Sherrill Fouts -----	Electrical Inspector
Patrick Turner -----	OMSL Inspector

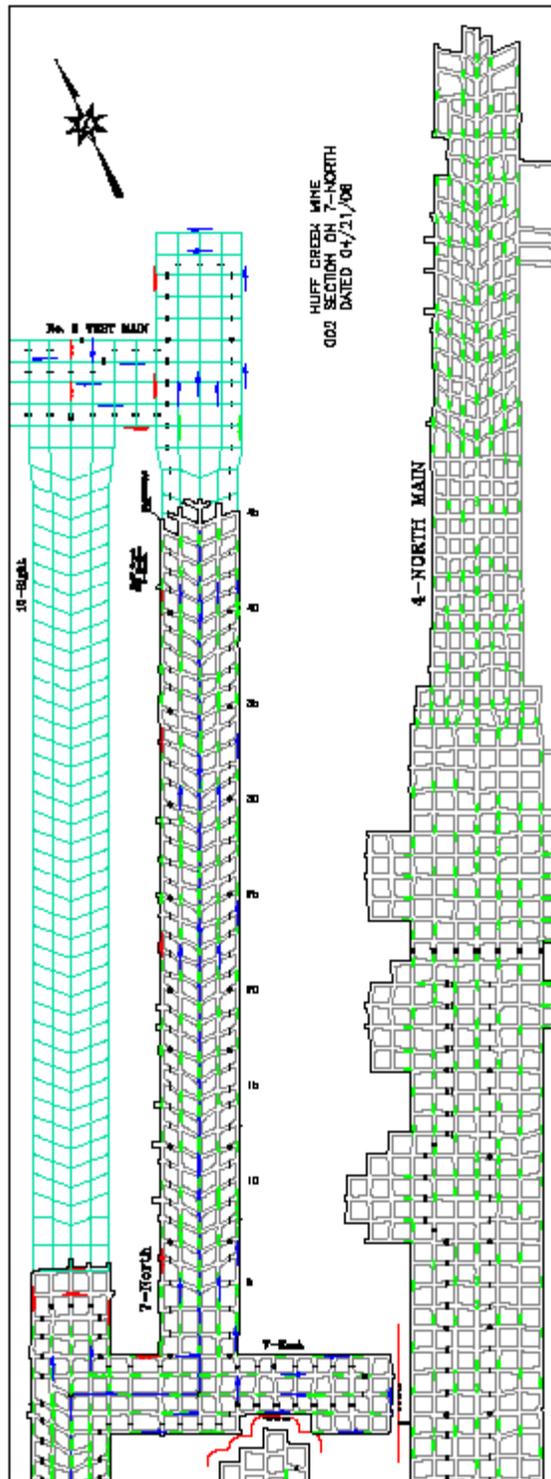
Mine Safety and Health Administration

<u>Name</u>	<u>Title</u>
Jim Langley -----	CMS&H Inspector/Supervisor
Kevin Bruner Sr. ----	CMS&H Inspector/Accident Investigator
Kevin Doan -----	CMS&H Inspector/Accident Investigator
Debbie Combs -----	Training Specialist
Patrick Stanfield -----	CMS&H Electrical Specialist
Robert Holubeck -----	Electrical Engineer
Neil Morholt -----	Attorney/Office of the Solicitor

**Appendix B
Enlarged view of accident site**



Appendix C 002 Section on 7-North



Appendix D

Photo of accident site

