

**Serious Accident Investigation
Management Evaluation Report Example
BLM Format
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**ATV Fatality
Field Office
Bureau of Land Management
Location
Date**

Picture

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**ACCIDENT INVESTIGATION MANAGEMENT EVALUATION
REPORT**

Accident: All Terrain Vehicle Rollover Fatality

Location: Field Office, Location

Date: Date

Investigation Serious Accident Investigation Team

Team Leader:

Name:

Title:

Signature

Date

Chief Investigator:

Name:

Title:

Investigation Team Members:

Name:

Title:

Technical Consultant:

Name:

Title:

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TRAINING EXAMPLE

Executive Summary

On August 2, 2004 a Seasonal Biological Technician for the Bureau of Land Management, died as a result of an All Terrain Vehicle accident.

The victim was a male (62) years of age in good physical health and had been an employee with the BLM for 5 seasons.

The victim arrived for work on the morning of (August 2, 2004). He confirmed his work plan and schedule with his supervisor. His assignment was to conduct land and health surveys in the (location area of the unit). They had previously discussed the need for an All Terrain Vehicle in order to accomplish the work and had reserved a machine and loaded it into a vehicle. The supervisor through conversations with the employee was confident that the employee had the expertise in ATV operation to accomplish the assigned task without assistance. They discussed the work to be accomplished, the travel routes, and the planned return time to the office of 1600 to 1630 hours.

The victim departed for the (work area) and no further contact was received during the day.

At approximately 1615 the supervisor noticed that the victim had not returned from the field nor had there been any communication received from him. The supervisor initiated a radio and telephone search and when no contact had been received by 1730 hours he began notifying Field Office management and enlisting personnel for a search operation. Field Office personnel were organized into 3 search teams. The County Sheriffs Office was notified and the County Search and Rescue organization put on standby.

Field Office search parties were dispatched to the planned work area and began searching at approximately 2030 hours. The victim's truck was located at 2120 hours. At 2224 hours the victim was found pinned under the ATV he had been operating. After a first aid assessment, the victim was presumed to be deceased and notification was made to the search parties and Sheriff Personnel. Two Field Office search personnel secured the accident site and remained there until the County Sheriffs Deputies arrived.

At 0200 hours on (August 3, 2004) County Sheriffs Deputies and a body recovery team arrived and assumed control of the accident scene. They conducted an investigation of the body, equipment, and area. The Sheriffs Deputies initial determination was the victim had lost control of the ATV he was operating while trying to climb a steep pitch in the road and rolled the vehicle. In the course of the events during the accident the victim became trapped under the ATV and subsequently died.

The ATV was moved from its resting location by SAR personnel and was found to have no substantial damage. It was driven out and released to BLM personnel. Field Office search personnel were debriefed and released home.

The body was recovered, prepared for transport, and released to the Deputy Coroner for a post mortem examination. The results of the post mortem showed that the victim had very few external injuries and they were limited to abrasions which would be consistent with an accident of this type. The victim was found to have neither internal injuries of consequence nor any other physical conditions that could have caused the accident. The cause of death for the victim was determined to be positional asphyxiation due to the weight of the All Terrain Vehicle pressing him down and not allowing the exchange of oxygen. No accurate time of death has been established.

TRAINING EXAMPLE

Findings

Finding 1: (Human)

The victim was conducting Land Health Surveys utilizing an All Terrain Vehicle (ATV) in the (project area) on August 02, 2004.

Finding 2: (Human)

The victim was not trained, certified or experienced to operate All Terrain Vehicles as required by BLM policy found in the Safety and Health for Field Operations Handbook 1112-2.

Finding 3: (Human)

No formal qualification process exists to ensure employees are qualified for All Terrain Vehicle operation at the Field Office.

Finding 4: (Human)

Risk Assessments were not completed for All Terrain Vehicle (ATV) operations as required by BLM Manual Handbook 1112-2.

Finding 5: (Human)

There is no formal process for the management and accountability of All Terrain Vehicles (purchasing, maintenance, repair and usage) at the Field Office

Finding 6: (Material)

The (make and model, VIN) All Terrain Vehicle, has several sensitive operational characteristics and design limitations.

1. **Operational problems with throttle response:** The throttle of this make and model ATV is very sensitive and responds quickly to the slightest touch. This causes the ATV to react immediately causing the front suspension to unload and increasing the possibility of loss of control that could result in flipping the machine over and backwards.
2. **Shift lever:** This make and model ATV utilizes an automatic transmission with the following settings: reverse, neutral, forward high, forward low. In order to shift the machine it must be brought to a complete stop, release button located on the top of the shift lever must be depressed, and the gear change made. This type of configuration requires the operator to remove the right hand from the handlebar and throttle control. Once the throttle is released the machine can begin to roll downhill, or freewheel, forcing the operator to rapidly apply the brakes and re-

engage the throttle. When riding on steep terrain changing gears also requires the rider to shift their body weight and position backward on the machine, changing the center of gravity. This may cause the operator to lose control of the ATV.

Finding 7: (Material)

Tire pressure: This vehicle had inconsistent tire pressure which deviated from the manufacturers recommend 5 PSI for each tire. Varying tire pressures were found on this ATV. The front left tire had 4 PSI, the front right had 2.5 PSI and the left rear 2.5 PSI, and the right rear had 3.5 PSI. The manufacturers recommend equal tire pressures on each axle (based on conditions and use). Unequal pressures may result in unsafe handling conditions and loss of operator control.

Finding 8: (Environmental)

The accident site was located on a single track trail on a steep incline of 50% slope. The trail was uneven with both loose and stable rocks throughout.

Finding 9: (Environmental)

Tire tread evidence at the site indicated that the victim was attempting to navigate over two large embedded rocks in the trail when the accident occurred.

Finding 10: (Human)

Loss of control of the All Terrain Vehicle, culminated in a rollover and the entrapment of the employee beneath the vehicle. The ATV came to rest on top of the employee's upper torso in such a way that it resulted in positional asphyxiation.

Finding 11: (Human)

On Monday August 2, 2004 at 1730 hours the Field Office initiated a field search for the missing employee (victim). At 2122 hours the employee's (victim's) vehicle was found. At 2224 hours a search team found the victim. They conducted a field first aid assessment and determined the victim to be unresponsive and assumed deceased

Finding 12: (Human)

On Tuesday August 3, 2004 at 0200 hours the County Deputy Sheriff and Search and Rescue personnel arrived at the accident site and assumed command. At 0315 hours the victim's body was transported from the accident scene and was released to the Investigator/Deputy Coroner.

Causes

Cause 1: Loss of control of vehicle.

The loss of control of the (make and model) All Terrain Vehicle culminated in a roll over and entrapment of the employee beneath the vehicle. The weight and position of the vehicle across the upper torso of the employee resulted in positional asphyxiation.

Cause 2: Training.

The employee was not trained or certified to operate All Terrain Vehicles as required by BLM policy found in the *Safety and Health for Field Operations Handbook 1112-2*.

The victim had not received any documented training, certification, on the operation of ATVs.

Cause 3: Qualification Process.

No formal process exists to ensure employees are qualified for operation of All Terrain Vehicles (ATVs) in the Field Office Unit.

The Field Office Unit has no records of training and certification for ATV operations. No training records for any employee were reviewed by the investigation team. The requirement for training and certification for operating an ATV is known to managers, supervisors, and employees. However, training is not regularly provided nor is there accountability to ensure it is completed and documented. While some training is being provided by individual programs it is still not being documented.

Cause 4: Risk Assessments.

Risk Assessments were not completed for the Field Office Unit All Terrain Vehicle (ATV) operations as required by *BLM Manual Handbook 1112-2*.

There were no Risk Assessments done or available for the SAIT to review.

Cause 5: Equipment.

The operational characteristics of the (make and model) All Terrain Vehicle combined with employee inexperience made traversing rocks on the steep grade difficult.

Cause 6: Equipment

Tire pressure: This vehicle had inconsistent tire pressure which deviated from the manufacturers recommend 5 PSI for each tire. Unequal pressures may result in unsafe handling conditions and loss of operator control.

Cause 7: Terrain.

The accident site was located on a single track trail on a steep incline of approximately 50% slope. The stretch of trail at the accident scene was about 8 feet wide and 100 feet in length. The trail is uneven with both loose and stable rocks throughout. Tire tread evidence and other evidence at the site indicated that the victim was attempting to navigate over two large embedded rocks in the trail when the accident occurred.

TRAINING EXAMPLE

Recommendations

Recommendation 1:

The Field Office Manager should immediately suspend all ATV operations on the unit until certification/licensing training is provided as required by BLM policy and documented.

Recommendation 2:

The Field Manager should immediately remove this (make and model) ATV from service. And notify all employees of its removal from service

Recommendation 3:

The BLM National Safety Office shall issue a Bureau wide Safety Alert for the ATV Model and Year and state that it be removed from service.

Recommendation 4:

The Field Office Manager shall prepare written direction to all employees authorizing All Terrain Vehicle use only to “trained and certified employees”.

Recommendation 5:

The Field Office Manager shall develop a unit All Terrain Vehicle Operations Plan which includes direction on but not limited to the following:

- Training
- Licensing/Certification Currency Standards (must include all employees)
- Risk Assessments for ATV related operations
- ATV inspections and maintenance
- Required Personal Protective Equipment
- Loading, transporting, unloading, storage
- ATV performance capabilities and limitations
- Proficiency Exercises that are targeted for the unit terrain and conditions under which the employees will be operating.
- Assigning a responsible individual to manage the units ATV equipment.

Other Findings:

The investigation team identified one item that was determined not to be causal or contributing to this accident but needs management attention to prevent potential future accidents.

Other Finding: Supervisory Control

The lack of a Risk Assessment coupled with the lack of employee training, creates potential flaws in the safety system of the Field Office Unit. During the investigative process, the SAIT determined that the lack of supervisory controls (employee safety training, completion of Risk Assessments, etc.) extends to various program areas in the Field Office Unit. OSHA 29 CFR 1960.9 and BLM Manual 1112.04.E establish standards and policy for the safety related responsibilities of managers and supervisors. These responsibilities include identifying and mitigating hazards, providing training, direction, equipment, controls, safe work practices, enforcement of safety and health requirements, and a safe work environment.

Recommendation:

The Field Office Manager must ensure that formal classroom “Safety for Supervisors” training, or something similar, be provided for all Field Office personnel as appropriate. Managers and supervisors must be given the information and tools they need to properly perform their duties. This training is mandatory for supervisors (Executive Order 12196) and the Field Office Manager shall ensure that all supervisors attend.

Enclosures

(Information used to support the recommendations that were not included in the Factual Report)

TRAINING EXAMPLE