

**Serious Accident Investigation
Factual Report Example
BLM Format**

FOR OFFICIAL USE ONLY

**ATV Fatality
Field Office
Bureau of Land Management
Location
Date**

Picture

TRAINING EXAMPLE

ACCIDENT INVESTIGATION FACTUAL 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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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.

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Narrative

Monday July 26, 2004

Field Office Ecologist and seasonal Biological Technician (victim) discussed the need for an All Terrain Vehicle (ATV) to accomplish planned survey work. The Biological Technician was to conduct land health assessments in the (project work area). This area is located approximately 20 miles north of the Field Office and in rough and steep terrain. It was decided an ATV was required and the Biological Technician should plan to use one. A plan was made for specific sites to be visited and surveyed.

Friday July 30, 2004

The Seasonal Biological Technician (victim) came into the Field Office to reserve an ATV for the work planned on August 2, 2004. The vehicle he reserved was a (make and model). This is large, 4-wheel drive ATV with an automatic transmission and weighs approximately 600 pounds. It is owned by the Bureau of Land Management (BLM) assigned to the Wild Horse and Burro Program Manager, but is often used by other employees in the performance of their duties. The Biological Technician (victim) is reported to have inspected the vehicle to ensure it was in good working order and ready for use. He also secured his supervisors pickup truck to transport the ATV to the work area. He was instructed by his supervisor to find a helmet that fit.

No formal process exists to ensure employees are trained and qualified to operate ATV's within the Field Office Unit. There is no process or system within the unit for the management and accountability of ATV's. Risk Management is not being incorporated as required by BLM policy.

Monday August 2, 2004

At 0800 hours the Biological Technician (victim) and his supervisor discussed his plan and field work schedule for the day. They had previously determined that the Biological Technician (victim) was to conduct land health surveys in the (project area name) 20 miles north of (location). They referred to a map, planned his route and the locations he was to visit. The roughness of the terrain was discussed as a potential hazard. The supervisor determined that the victim had a helmet, field radio, and cell phone. His cell phone number was confirmed. The Biological Technician (victim) took his supervisors (GOV) pickup truck in order to transport the All Terrain Vehicle to the work area, and departed for the field. He planned to return at approximately 1600 (4 pm) to 1630 (4:30 pm) hours.

No further contact was made with the Biological Technician (victim) during the day.

At 1615 hours the Supervisor noticed that the Bio Tech (victim) had not returned to the Field Office and checked the vehicle yard for his pick up. It had not yet arrived.

Monday August 2, 2004
Continued

At 1630 hours the supervisor began a radio and telephone search but was not able to contact the employee. The supervisor then drove the length of the main street near the Field Office in an effort to verify that the employee was not fueling at one of the local gasoline stations. He proceeded home and changed clothes to prepare for a field search.

At 1730 hours the supervisor returned to the Field Office and attempted to telephone the Field Manager and the Assistant Field Manager with no success. He left voice messages for both of them. He continued to try to contact the employee by radio and phone.

At approximately 1800 hours the Field Office Natural Resource Specialist returned to the Field Office from his work site and offered to assist in organizing the search effort.

The Natural Resource Specialist contacted the Zone Fire Management Officer requesting fire personnel to help in the search.

The supervisor contacted the local 911 and spoke with the County Sheriffs Deputy on duty and reported that an employee had failed to return at the appointed time and that BLM may need Search and Rescue assistance.

The supervisor contacted the local BLM Law Enforcement Ranger and alerted him of the situation. The Ranger came to the office to assist in the effort.

At 1900 hours the Zone Fire Management Officer contacted Engine #502 Module Leader and informed him of the situation. The Engine Leader contacted 3 members of his crew and enlisted them in the search effort.

The Natural Resource Specialist had two additional resource specialists join the search team.

At 1930 hours Dispatch went into service and assisted in the search effort.

The search parties departed to the project area to begin the search.

At 2000 hours the Dispatch Center Manager came into the office on unrelated business and was notified of the situation. The Center Manager contacted the Associate Field Manager who was apprised of the situation. Center Manager provided management input until the Associate Field Manager arrived at the Field Office

At 2015 hours the Search Party arrived in the project area and established a staging area. The Zone Fire Management Officer was designated as the Incident Commander for the search effort and he organized the search personnel into 3 teams. The Incident Commander and an Emergency Medical Technician remained at the staging area providing coordination.

Monday August 2, 2004
Continued

Team 1 Conducted their search on motorcycles
Team 2 Utilized ATVs
Team 3 Utilized ATV's

The search teams were briefed on the search pattern and were instructed to focus on finding the Employees vehicle or ATV tracks in order to pinpoint his work location. Areas that were searched and cleared were to be identified by colored chemical light sticks in order to prevent them from being searched again.

At 2040 hours the County Sheriffs Deputy arrived at the staging area.

At 2100 hours after receiving a briefing from the Incident Commander on the situation the Deputy Sheriff calls and placed the County Search and Rescue (SAR) resources on standby.

At 2122 hours the employee's (victim) vehicle was found by Team 2. It was observed that the ATV had been unloaded and the employee's lunch was still in the cab of the vehicle. The Deputy Sheriff then activated the SAR.

The Incident Commander and EMT move from the staging area and to the employee (victim) truck location along with search teams 1 and 3.

At 2200 hours Search teams 2 and 3 begin to follow a set of ATV tracks leading away from where the pickup truck was found.

At 2202 hours the Incident Commander and EMT arrive at the victim's vehicle (truck) location. Concurrently Team 1 arrives and begins to search the immediate area around the vehicle.

At 2224 hours Team 3 radios the Incident Commander and relays that they have found the victim and it was the "worst case scenario". The location was given and it was requested only experienced riders be allowed into the area.

Search Team 2 arrives and positively identifies the victim.

The victim was found at the bottom of a steep slope and was pinned face down; beneath the ATV he had been operating. The ATV was balanced on its right side across the victim's upper back. A field first aid assessment found the victim to be unresponsive and assumed deceased. This information was relayed back to the Incident Commander.

The County Search and Rescue personnel were notified of the location and departed for the accident site.

Monday August 2, 2004
Continued

At 2230 hours the Incident Commander notified the Field Manager of the fatality. She instructed the Incident Commander notify the Associate Field Manager.

At 2240 hours the Incident Commander instructed a member from search team 2 and 3 to return to the pickup truck location in order to lead sheriff personnel to the accident scene.

The remaining search team 2 and 3 members remained at the accident site to ensure security of the area.

At 2300 hours the Field Manager notified the State Director of the fatality.

At 2400 hours the Associate Field Manager, Center Manager and Field Office Ecologist proceed to the victim's home and personally notified the victim's wife of the fatality.

Tuesday August 3, 2004

At 0130 hours the County Search and Rescue personnel arrived at the pickup truck site and were led to the accident site.

0200 hours the County Deputy Sheriff, as well as, SAR personnel arrived at the accident scene and assumed command of the site.

At 0215 hours BLM search team personnel returned to the pickup truck location.

At 0215 hours the Deputy Sheriff conducted a visual investigation and documented the scene with photographs.

The victim was lying on his stomach at the bottom of a steep section of road. His head was pointing downhill on the left side of the road and was roughly at a 45 degree angle to the slope.

The victim was wearing appropriate personal protective equipment (PPE) except for gloves and eye protection.

The victim was wearing a back pack.

A handheld radio was in the vicinity of the body.

The only outward appearances of traumatic injuries were abrasions, some blood around the mouth and nose, and a possible laceration on his left wrist.

Tuesday August 3, 2004
Continued

Returning the ATV to an upright position was easily accomplished by SAR personnel and did not disturb the position of the victim's body in the process. An inspection of the ATV did not show any severe damage. The left hand grip had dirt embedded in it while the right hand grip was clean, the gear shift lever was found to be between Forward High and Forward Low, the rear cargo rack was broken, and the vehicle body showed some abrasions.

At 0315 hours the victim's body was transported from the accident scene by County Sheriffs Deputies using a recovery trailer and ATV. The body was released to the Investigator/Deputy Coroner.

The victim's ATV was operable and driven from the accident site by the Deputy Sheriff.

The accident evidence was loaded for transport as well as ATV equipment used during the search. All BLM search personnel departed for their home bases.

At 0415 BLM personnel arrived at Field Office and attended a short debriefing prior to departing for home.

At 0800 hours a meeting was conducted to inform Field Office personnel of the accident and death of their fellow employee.

A Type 3 Incident Management Organization was formed to manage and facilitate the anticipated needs of the investigation.

A Critical Incident Stress Debriefing team was ordered and the Occupational Safety and Health Administration (OSHA) were notified.

At 1200 hours a Bureau of Land Management Serious Accident Investigation Team (SAIT) was activated.

At 1330 hours an Occupational Safety and Health Administration (OSHA) inspector arrived and requested a site visit to the accident area. Helicopter transportation was arranged and the Center Manager accompanied him to the site.

Wednesday, August 4, 2004

At 0800 hours the Serious Accident Investigation Team began its investigation of the accident.

Investigation Process

The fatality was reported to the national office of August 03, 2004 and a BLM Serious Accident Investigation Team (SAIT) was mobilized. The team consisted of a:

- Team Leader
- Chief Investigator
- Safety Advisor
- ATV Technical Specialist (Contract)

The team convened at the BLM Field Office on August 03, 2004. The team in briefed with the Field Office Manager and staff on the morning of August 04, 2004 and the process of collecting evidence and information related to the fatality.

The process of information evidence gathering consisted of:

- Evaluating all human, material, and environmental factors that may have contributed to this fatality.
- Visiting the area where the accident occurred.
- Establishing the pattern of actions of the victim and the chronology of the accident.
- Reviewing operational guidelines, policies and position descriptions.
- Gathering written statements of personnel which were involved in the search and rescue process.
- Interviewing supervisors, coworkers, law enforcement personnel, who were associated with the victim or with the search and rescue operations.

There were no eye witnesses to the actual event and the investigation focused on actions occurring during the search, rescue, and recovery effort. Focus was also given to operational policies, procedures, and direction associated with ATV operation at the Field Office. These included duties, training, and expectations associated with day to day actions.

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 or Job Hazard Analyses 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. At 2300 hours the Field Manager notified the State Director of the fatality. At 2400 hours the Associate Field Manager, Center Manager and Field Office Ecologist went to the victim's home and notified his wife of the fatality.

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.

Maps, Illustrations, and Photographs

[No Maps, Illustrations, or Photographs are included in this Factual Report Format Example]

Note:

Only include maps, pictures and factual information necessary to provide an understanding of the accident sequence. Any other remaining data should be placed in the Accident Investigation Case File.

TRAINING EXAMPLE

APPENDIX

[No Appendices are included in this Factual Report Format Example]

Note:

Only include appendices necessary to provide an understanding of the accident, e.g. equipment analysis.

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