

Helicopter Services Flight Report

Aircraft 407-	Registration No. N-4277	Date JULY 11-16	Flight No. 411
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Passengers	Short Code	Flight Code	Org.	Section	
			Board ☐	Bowling Green (Hopkinsville/Glasgow)) ☐	Mayfield ☐
			ED ☐	Chattanooga ☐	Memphis (Covington) ☐
			Fossil ☐	Cleveland (Crossville/Murphy) ☐	Murfreesboro (Winchester) ☐
			Other ☐	Columbia (Centerville) ☐	Muscle Shoals ☐
			PSO ☐	Huntsville (Scottsboro, Decatur) ☐	Nashville ☐
			RSOE ☐	Jackson (Martin) ☐	Starkville (Philadelphia) ☐
			TVAN ☐	Johnson City (Morristown) ☐	Tupelo (Corinth) ☐
				Knoxville ☐	Power Distrib. ☐

Departure Time	Landings	Arrival Time	Flying Time		Service	Fuel-Gallons	Oil-Quarts
			Hours	Minutes			
10:00	Tyson				Muscle Shoals		
11:48	CKV	11:24	1	7	Knoxville	68.0	
					Nashville		
					Chattanooga		
Total Fuel (Gal.)							

		Tach In					
50-Hr. Insp. Due:	1402.0	Tach Out	1388.5		Starts/ Cycles	Landings	Rins
100-Hr. Insp. Due:	14520	Total Time This Report		Total Forward:	1213		1684
200-Hr. Insp. Due:	1502.0	Total FY Time Brought Forward	220.6	This Report:			
300-Hr. Insp. Due:	1652.0	Total FY Time to Date		Total:			

Due:			
Remarks:			
Pre/Post Safety Brief:		Preflight By (Initials):	
AD/CEB, etc.:		Pilot:	
Trend Check:			

Daily Engine Trend Check

206BIII 80% TQ/29.92-2000 ft.
 206L4 80% TQ/29.92-2000 ft.
 407I 60% TQ/29.92-1000 ft.

TQ	TOT	N1	OAT
Eng. Temp	Eng. Press	XMSN Temp	

#	Discrepancy	Sign Off
1		
2		
3		
4		
5		

Type of Flight -

Aerial Photography	AP	Ferry	FE	Test Flights	TF
Aerial Survey	AS	General Service	GS	Trans. Line Construction	TC
Air Quality	AQ	Land Reclamation	LR	Trans. Line Patrol	TL
Congressional Flight	CO	Maintenance	MF	Training (Crew)	TR
Economic Development	ED	Passenger	EX	Vector Control	VC
Emergency TLP	EF	Right of Way Inspection	RW		

TVA Operator: 256-386-2601

TVA Police: 1-800-839-0003

Nuclear Plant Security Numbers -

Browns Ferry.....Athens, AL 256-729-2219
 Oak Ridge Operations
 Radio Frequency 122.75..... Oak Ridge, TN..... 865-576-1005
 Sequoyah.....Soddy Daisy, TN 423-843-6568
 Watts BarSpring City, TN 423-365-8544

WITNESS INTERVIEW SHEET

(Type or Print, except Signatures)

Page 1 of 1 Page(s)

Interviewing Officer(s) _____

Case Number (if applicable) _____

Location of Interview TVA Hickory, Ky

Date/Time of Interview 7-11-16 1145 hrs

The helicopter came in for what appeared to be a routine landing, he was in what I thought was a good position to land, he was probably 50-75 yards off the ground when the bird all of a sudden flew sideways to the right and hit the ground on its right side.

I have read have had read to me the above statement. It is true and correct to the best of my knowledge and belief.

Name of Witness Interviewed (Printed)

Trent Pendel

Signature

[Redacted Signature]

Address of Witness

[Redacted Address]

Mayfield Ky

Date of Birth

[Redacted Date of Birth]

Phone #

[Redacted Phone Number]

Person Receiving Statement (Printed)

Signature

Person Receiving Statement (Printed)

Tpr. Brian Hill

Signature

[Redacted Signature]



AVFUEL LOCATION
Clarksville Regional Airport
KCKV

RECEIPT

Receipt No. 4940	Batch No. 1971	Merchant No. 4605	Terminal ID 10290024198	Entered By Sarah Taylor
Delivered On 07/11/2016	Destination	Tail No. N427TV	Ref No.	Entered On 07/11/2016 10:39:57
Payment Type AIR Card *****8236 Swiped			Exp Date 06/22	Auth No. 889344
AOC No		License/Reg No.		

DESCRIPTION	UNIT PRICE USD	QTY	PRODUCT USD	TAX/DISCOUNT USD	Total USD
Jet A Fuel with FSII Additive	3.35885 /GAL	68	228.40	Sales Tax - State Exempt	228.40
Total			228.40	0.00	228.40

Customer Signature

By signing this receipt, I agree I have received and will pay for the above goods and/or services rendered.
Card payments are governed by card issuer agreement.

THANK YOU FOR YOUR BUSINESS!
Find Avfuel Worldwide at www.avfuel.com

Job Safety Analysis Worksheet

Number: HS-04 Rev.00		Job: Airborne Photography		Date: April 22, 2005	
Page 1 of 4		Supervisor: T.Herring	Plant / Facility: TPS/TOM/Helicopter SVCS		Analysis By: Terry Herring
Skills Required: Qualified air/photography crew personnel.			Reviewed By: COO Safety		Approved By: TPS/TOM CSC Committee
Required Personal Protective Equipment: Seat belts/harnesses. Optional: flight helmets, hearing protection, safety eye wear.					
Tools and Equipment Required: Helicopter, photography equipment, and supplies.					
Job Preparation: Helicopter landing/departure areas are cleared of debris that could become airborne in the rotor wash; landing/departure zones are marked and identified to all personnel; pilot performs pre-flight inspection of helicopter, including ground-air and personnel-pilot communications systems check. Aviation Services-Helicopter will be notified daily of flight details once helicopter operations begin. [TVA-SPP 18.005]					
Hazardous Materials: Jet fuel.			Special Requirements: Helicopter emergency procedures briefing for personnel.		

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1.	1. Personnel board helicopter.	1.a. Personnel trip and fall. 1.b. Personnel damage the helicopter when boarding, or interfere with flight controls or other devices.	1.a. Landing/departure zones are set away from unmovable hazards, cleared of portable hazards; air crew escorts personnel to helicopter, assists with boarding. 1.b. Air crew briefs personnel on rules of conduct, proper stowing of carry-on items, correct entry and exit (hand holds, foot placement, staying clear of anti-torque pedals and flight controls, etc.), and emergency procedures; air crew ensures that personnel seat belts/harnesses are properly secured; air crew instructs personnel that seat belts/harnesses are to be kept securely fastened at all times until the helicopter has landed and the pilot authorizes release.

1. Struck By (BS)
2. Struck Against (SA)
3. Contact By (CB)

4. Contact With (CW)
5. Caught On (CO)
6. Caught In (CI)

7. Caught Between (CBT)
8. Foot Level Fall (FLF)
9. Fall to Below (FB)

10. Overexertion (OE)
11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1.	1. Personnel board helicopter. (continued)	1.c. Personnel bring loose gear onboard.	1.c. Prior to lift off, pilot ensures that all onboard gear is properly stowed and/or secured.
		1.d. Personnel are hit with moving main rotor blade.	1.d. Air crew briefs personnel to approach the helicopter only with the approval of the pilot, from the pilot's front visual area, and with heads bent to reduce possible contact with the main rotor blade.
		1.e. Personnel walk into moving tail rotor blade.	1.e. Air crew briefs personnel to approach the helicopter only from the pilot's front visual area.
2.	2. Helicopter lifts off.	2.a. Personnel interfere with flight controls or other devices.	2.a. Air crew briefs personnel on ruled of conduct air crew ensures that seat belts/harnesses are to be kept securely fastened at all times until the helicopter has landed and the pilot authorizes release.
		2.b. Turbulence bounces helicopter, unseating personnel.	2.b. See 1.b. regarding seat belts.
		2.c. Ground personnel are struck by debris blown about by rotor wash.	2.c. Pilot lifts off only after ground personnel, if any, have moved outside the landing/departure zone.
		2.d. Photographic equipment shifts or falls.	2.d. Air crew ensures that all photographic equipment is secured to personnel's person or clothing; air crew works with personnel to minimize the amount of equipment in the personnel compartments.
		2.e. Helicopter main rotor blade strikes line, structures, or trees.	2.e. Pilot maintains a minimum 10-foot main rotor blade clearance from all lines, structures, or trees.

1. Struck By (BS)
2. Struck Against (SA)
3. Contact By (CB)

4. Contact With (CW)
5. Caught On (CO)
6. Caught In (CI)

7. Caught Between (CBT)
8. Foot Level Fall (FLF)
9. Fall to Below (FB)

10. Overexertion (OE)
11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
2.	2. Helicopter lifts off. (continued)	2.f. Helicopter is hit by bird(s) or hits bird(s), crossing lines, or antenna.	2.f. Front seat personnel work with the pilot on calling out birds flying in the area, line crossings, antenna guide wires, or other obstacles in the flight path.
3.	3. Helicopter flies to and hover/maneuvers around the photography site, returns to landing/departure site.	2.g. Helicopter crashes.	2.g. Air crew briefs personnel on emergency procedures and checks ground-air communications prior to lift off; air crew (or personnel if air crew is incapacitated) contacts local and/or TVA emergency personnel.
		3.a. Personnel interfere with flight controls or other devices.	3.a. See 2.a.
		3.b. Turbulence bounces helicopter, unseating personnel.	3.b. See 1.b. regarding seat belts.
		3.c. Photographic equipment shifts or falls.	3.c. See 2.d.
		3.d. Helicopter main rotor blade strikes line, structures, or antenna.	3.d. See 2.e.
		3.e. Helicopter is hit by bird(s) or hits bird(s), crossing line, or antenna.	3.e. See 2.f.
4.	4. Helicopter lands.	3.f. Helicopter crashes.	3.f. See 2.g.
		4.a. Ground personnel are struck by debris blown about by rotor wash.	4.a. Pilot ensures that ground personnel are outside the landing/departure zone prior to landing and that landing/departure zone is clear of hazards
		4.b. Helicopter strikes the ground with unexpected force.	4.b. See 1.b. regarding seat belts..

- 1. Struck By (BS)
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- 3. Contact By (CB)

- 4. Contact With (CW)
- 5. Caught On (CO)
- 6. Caught In (CI)

- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
4.	4. Helicopter lands. (continued)	4.c. Personnel are hit by moving rotor blades when approaching/leaving the helicopter.	4.c. Air crew instructs personnel to remain seated in the helicopter until to rotor blades come to a complete stop or until the pilot gives permission to exit to the front of the helicopter and with the head bent; ground crew stays clear of the helicopter until the pilot signals it is safe to approach, the approaches only from the front and with head bent.
5.	5. Personnel disembark.	5.a. Personnel trip and fall getting out of the helicopter.	5.a. Air crew assists personnel in disembarking; directs personnel to use hand grips and steps.
		5.b. Personnel walk into main or tail rotor blade.	5.b. See 4.c.
		5.c. Personnel trip and fall exiting the landing/departure zone.	5.c. Air crew instructs personnel to observe and avoid any hazards that cannot be removed.
6.	6. Helicopter fueling operations.	6.a. Fire or explosion caused by fuel exposure to heated surfaces or static discharge.	6.a. Qualified personnel will fuel the helicopter.
			6.b. All passengers will disembark before fueling begins.

- 1. Struck By (BS)
- 2. Struck Against (SA)
- 3. Contact By (CB)

- 4. Contact With (CW)
- 5. Caught On (CO)
- 6. Caught In (CI)

- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Job Safety Analysis Worksheet

Number: HS-13 Rev.00	Job: Routine and Emergency Transmission Line Patrols		Date: April 22, 2005
Page 1 of 5	Supervisor: T.Herring	Plant / Facility: TPS/TOM/Helicopter SVCS	Analysis By: Terry Herring
Skills Required: Qualified inspector/observer, qualified pilot.		Reviewed By: COO Safety	Approved By: TPS/TOM CSC Committee
Required Personal Protective Equipment: Seat belts/shoulder harnesses, hearing protection, work gloves, work shoes, hart hat. Optional: safety eyewear.			
Tools and Equipment Required: Helicopter, ground-air radios, pilot-inspector/observer radios, transmission system maps, other equipment as determined by job assignment.			
Job Preparation: Helicopter designated landing/departure areas are cleared of debris that could become airborne in the rotor wash; designated landing/departure zones are marked and identified to all personnel; pilot performs pre-flight inspection of helicopter, including check of onboard communications equipment (radio headsets for each person to be aboard) and ground-air communications; personnel notify Aviation Services-Helicopter of proposed schedule, including times and locations. Aviation Service-Helicopter will be notified daily of flight details once helicopter operations begin. [TVA-SPP 18.005]			
Hazardous Materials: Jet fuel.		Special Requirements: Helicopter emergency procedures briefing for all who will be aboard; route reviews and onsite pre-job planning.	

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1.	1. Pre-job briefing.	1.a. Personnel not full informed of work plan may make errors, resulting in personal injury.	1.a. The pre-job briefing shall include safety features of the helicopter and other equipment to be used. The safety zone when the helicopter is on the ground with the rotor blades turning, verbal commands to be used by on-board personnel for normal operations and emergencies, and review of flight emergency and general procedures.
2.	2. Personnel board helicopter.	2.a. Personnel trip and fall when approaching or boarding the helicopter.	2.a. Designated landing/departure zones are set away from unmovable hazards, cleared of portable hazards; pilot escorts personnel to helicopter, assists with boarding.

1. Struck By (BS)
2. Struck Against (SA)
3. Contact By (CB)

4. Contact With (CW)
5. Caught On (CO)
6. Caught In (CI)

7. Caught Between (CBT)
8. Foot Level Fall (FLF)
9. Fall to Below (FB)

10. Overexertion (OE)
11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
2.	2. Personnel board helicopter. (continued)	2.b. Personnel damage the helicopter when boarding, or interfere with flight controls or other device 2.c. Personnel bring loose gear onboard. 2.d. Personnel are hit with moving main rotor blade.	2.b. Pilot briefs personnel on rules of conduct, proper stowing of carry-on items, correct entry and exit (hand holds, foot placement, saying clear of anti-torque pedals and flight controls, etc.), and emergency procedures; pilot ensures that personnel seat belts/harnesses are properly secured; pilot instructs personnel that seat belts/harnesses are to be kept securely fastened at all times until the helicopter has landed and the pilot authorizes. 2.c. Prior to lift off, pilot ensures that all onboard gear is properly stowed and/or secured. 2.d. Pilot briefs personnel to approach the helicopter only with the approval of the pilot, from the pilot's front visual area, and with heads bent to reduce possible contact with the main rotor blade.
		2.e. Personnel walk into moving tail rotor blade.	2.e. Pilot briefs personnel to approach the helicopter only from the pilot's front visual area.
3.	3. Helicopter lifts off.	3.a. Personnel interfere with flight controls or other devices. 3.b. Turbulence bounces helicopter, unseating personnel.	3.a. Pilot briefs personnel on rules of conduct; pilot ensures that seat belts/harnesses are properly secured; pilot instructs personnel that seat belts/harnesses are to be kept securely fastened at all times until the helicopter has landed and the pilot authorizes release. 3.b. See 2.b. regarding seat belts.

- 1. Struck By (BS)
- 2. Struck Against (SA)
- 3. Contact By (CB)

- 4. Contact With (CW)
- 5. Caught On (CO)
- 6. Caught In (CI)

- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
3.	3. Helicopter lifts off. (continued)	3.c. Ground personnel are struck by debris blown about by rotor wash. 3.d. Helicopter main rotor blade strikes line, structures, or trees. 3.e. Helicopter is hit by bird(s) or hits bird(s), crossing line, or antenna. 3.f. Helicopter crashes.	3.c. Pilot lifts off only after ground personnel, if any, have moved outside the landing/departure zone. 3.d. Pilot maintains a minimum 10-foot main rotor blade clearance from all lines, structures, or trees. 3.e. Front seat personnel work with the pilot on calling out birds flying in the area, line crossings, antenna guide wires, or other obstacles in the flight path. 3.f. Pilot briefs personnel on emergency procedures and checks ground-air communications prior to lift off; pilot (or personnel if pilot is incapacitated) contacts local and/or TVA emergency personnel.
4.	4. Helicopter flies transmission lines.	4.a. Personnel interfere with flight controls or other devices.	4.a. See 3.a.
		4.b. Turbulence bounces helicopter, unseating personnel. 4.c. Helicopter main rotor blade strikes line, structures, or trees. 4.d. Helicopter is hit by bird(s) or hits bird(s), crossing line, or antenna. 4.e. Helicopter crashes.	4.b. See 2.b regarding seat belts. 4.c. See 3.d. 4.d. See 3.e. 4.e. See 3.f.
5.	5. Helicopter lands at interim touch-down site.	5.a. Helicopter encounters obstacles during descent or upon landing.	5.a. Pilot and personnel search for and choose interim touch-down site that is free from obstructions in the air or on the ground.

- 1. Struck By (BS)
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- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
5.	5. Helicopter lands at interim touch-down site (continued)	5.b. Ground personnel are struck by debris blown about by rotor wash. 5.c. Helicopter strikes the ground with unexpected force. 5.d. Personnel are hit by moving rotor blades when approaching/leaving the helicopter.	5.b. Pilot ensures that ground personnel are outside the interim touch-down site prior to landing and that the interim touch-down site is free of hazards. 5.c. See 2.b. regarding seat belts. 5.d. Pilot instructs personnel to remain seated in the helicopter until the rotor blades come to a complete stop or until the pilot gives permission to exit to the front of the helicopter and with the head bent; ground crew stays clear of the helicopter until the pilot signals it is safe to approach, then approaches only from the front and with head bent.
6.	6. Helicopter lands in designated landing/departure zone.	6.a. Ground personnel are struck by debris blown about by rotor wash.	6.a. Pilot ensures s that ground personnel are outside the designated landing/departure zone prior to landing and that the designated landing/departure zone is clear of hazards.
		6.b. Helicopter strikes ground with unexpected force. 6.c. Personnel are hit by moving rotor blades when approaching/leaving the helicopter.	6.b. See 5.c. 6.c. See 5.d.
7.	7. Personnel disembark.	7.a. Personnel trip and fall getting out of the helicopter. 7.b. Personnel walk into main or tail rotor blade. 7.c. Personnel trip and fall exiting the designated landing/departure zone.	7.a. Pilot assist personnel in disembarking, directs personnel to use hand grips and steps. 7.b. See 5.d. 7.c. Pilot instructs personnel to observe and avoid any hazards that could not be removed.

- 1. Struck By (BS)
- 2. Struck Against (SA)
- 3. Contact By (CB)

- 4. Contact With (CW)
- 5. Caught On (CO)
- 6. Caught In (CI)

- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
8.	8.a Helicopter fueling operations.	8.a. Fire or explosion caused by fuel exposure to hot surface or static discharge.	8.a. Qualified personnel will fuel helicopter. 8.b. All passengers will disembark before fueling begins.

1. Struck By (BS)
2. Struck Against (SA)
3. Contact By (CB)

4. Contact With (CW)
5. Caught On (CO)
6. Caught In (CI)

7. Caught Between (CBT)
8. Foot Level Fall (FLF)
9. Fall to Below (FB)

10. Overexertion (OE)
11. Exposure (E)

2/2/2

Job Safety Analysis Worksheet

Number: HS-03 Rev.00		Job: Transporting Passengers via Helicopter		Date: April 22, 2005	
Page 1 of 4		Supervisor: T.Herring	Plant / Facility: TPS/TOM/Helicopter SVCS	Analysis By: Terry Herring	
Skills Required: Qualified air/ground crew personnel.			Reviewed By: COO Safety	Approved By: TPS/TOM CSC Committee	
Required Personal Protective Equipment: Seat belts/should harnesses. Optional: flight helmets, hearing protection, safety eyewear.					
Tools and Equipment Required: Helicopter and ground-air radios.					
Job Preparation: Helicopter landing/departure areas are cleared of debris that could become airborne in the rotor wash; landing/departure zones are marked and identified to all personnel; pilot performs pre-flight inspection of helicopter, including ground-air communications system check; pilot prepares and leaves with ground personnel an accurate passenger manifest. Aviation Services-Helicopter will be notified daily of flight details once helicopter operations begin. [TVA-SPP18.005]					
Hazardous Materials: Jet fuel.			Special Requirements: Helicopter emergency procedures briefing for personnel.		

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1.	1. Personnel board helicopter.	1.a. Personnel trip and fall when approaching or boarding the helicopter. 1.b. Personnel damage the helicopter when boarding, or interfere with flight controls or other devices.	1.a. Landing/departure zones are set away from unmovable hazards, cleared of portable hazards; air crew escorts personnel to helicopter, assists with boarding. 1.b. Air crew briefs personnel on rules of conduct, proper stowing of carry-on items, correct entry and exit (hand holds, foot placement, sting clear of anti-torque pedals and flight controls, etc.), and emergency procedures; air crew ensures that personnel seat belts/harnesses are properly secured; air crew instructs personnel that seat belts/harnesses are to be kept securely fastened at all times until the helicopter has landed and the pilot authorizes release.

1. Struck By (BS)
2. Struck Against (SA)
3. Contact By (CB)

4. Contact With (CW)
5. Caught On (CO)
6. Caught In (CI)

7. Caught Between (CBT)
8. Foot Level Fall (FLF)
9. Fall to Below (FB)

10. Overexertion (OE)
11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
1.	1. Personnel board helicopter. (continued)	1.c. Personnel bring loose gear onboard. 1.d. Personnel are hit with moving main rotor blade. 1.e. Personnel walk into moving tail rotor blade.	1.c. Prior to lift off, pilot ensures that all onboard gear is properly stowed and/or secured. 1.d. Air crew briefs personnel to approach the helicopter only with the approval of the pilot, from the pilot's front visual area, and with heads bent to reduce possible contact with the main rotor blade. 1.e. Air crew briefs personnel to approach the helicopter only from the pilot's front visual area.
2.	2. Helicopter lifts off.	2.a. Personnel interfere with flight controls or other devices.	2.a. Air crew briefs personnel on rules of conduct; air crew ensures that seat belts/harnesses are properly secured; air crew instructs personnel that seat belts/harnesses are to be kept securely fastened at all times until the helicopter has landed and the pilot authorizes release.
		2.b. Turbulence bounces helicopter, unseating personnel. 2.c. Ground personnel are struck by debris blown about by rotor. 2.d. Helicopter main rotor blade strikes line, structures, or trees. 2.e. Helicopter is hit by bird(s) or hits bird(s), crossing line, or antenna.	2.b. See 1.b. regarding seat belts. 2.c. Pilot lifts off only after ground personnel, if any have moved outside the landing/departure zone. 2.d. Pilot maintains a minimum 10-foot main rotor blade clearance from all lines, structures, or trees. 2.e. Front seat personnel work with pilot on calling out birds flying in the area, line crossings, antenna guide wires, or other obstacles in the flight path.

- 1. Struck By (BS)
- 2. Struck Against (SA)
- 3. Contact By (CB)

- 4. Contact With (CW)
- 5. Caught On (CO)
- 6. Caught In (CI)

- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
2.	2. Helicopter lifts off. (continued)	2.f. Helicopter crashes.	2.f. Air crew briefs personnel on emergency procedures and checks ground-air communications prior to lift off ; air crew (or personnel if air crew is incapacitated) contacts local and/or TVA emergency personnel.
3.	3. Helicopter flies to landing site.	3.a. Personnel interfere with flight controls or other devices.	3.a. See 2.a.
		3.b. Turbulence bounces helicopter, unseating personnel.	3.b. See 1.b. regarding seat belts.
		3.c. Helicopter main rotor blade strikes line, structures, or antenna.	3.c. See 2.d.
		3.d. Helicopter is hit by bird(s) or hits bird(s), crossing line, or antenna.	3.d. See 2.e.
4.	4. Helicopter lands.	3.e. Helicopter crashes.	3.e. See 2.f.
		4.a. Ground personnel are struck by debris blown about by rotor wash.	4.a. Pilot ensures that ground personnel are outside the landing/departure zone prior to landing and that landing/departure zone is clear of hazard.
		4.b. Helicopter strikes the ground with unexpected force	4.b. See 1.b. regarding seat belts.
		4.c. Personnel are hit by moving rotor blades when approaching/leaving the helicopter..	4.c. Air crew instructs personnel to remain seated in the helicopter until the rotor blades come to a complete stop or until the pilot gives permission to exit to the front of the helicopter and with the head bent; ground crew stays clear of the helicopter until the pilot signals it is safe to approach, then approaches only from the front and with head bent.
5.	5. Personnel disembark.	5.a. Personnel trip and fall getting out of the helicopter.	5.a. Air crew assists personnel in disembarking; directs personnel to use hand grips and steps.

- 1. Struck By (BS)
- 2. Struck Against (SA)
- 3. Contact By (CB)

- 4. Contact With (CW)
- 5. Caught On (CO)
- 6. Caught In (CI)

- 7. Caught Between (CBT)
- 8. Foot Level Fall (FLF)
- 9. Fall to Below (FB)

- 10. Overexertion (OE)
- 11. Exposure (E)

Number	Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedures
5.	5. Personnel disembark. (continued)	5.b. Personnel walk into main or tail rotor blade.	5.b. See 4.c.
		5.c. Personnel trip and fall exiting the landing/departure zone.	5.c. Air crew instructs personnel to observe and avoid any hazards that cannot be removed.
6.	6. Helicopter fueling operations.	6.a. Fire or explosion caused by fuel exposure to hot surface or static discharge.	6.a. Qualified and trained personnel will fuel the helicopter.
			6.b. All passengers will disembark before fueling begins.

1. Struck By (BS)
2. Struck Against (SA)
3. Contact By (CB)

4. Contact With (CW)
5. Caught On (CO)
6. Caught In (CI)

7. Caught Between (CBT)
8. Foot Level Fall (FLF)
9. Fall to Below (FB)

10. Overexertion (OE)
11. Exposure (E)

TVA Operational and Emergency Safety Brief



Approaching/Leaving the Aircraft

- Approach or leave the aircraft only after the pilot signals it is safe to do so
- Approach or depart from the front of the aircraft (avoid the tail rotor)
- Be mindful of slopes that may put you closer than normal to the rotor blades
- Respect the position of the blades (wind could deflect them downward)
- Be sure that loose articles are secure in your grasp as you approach or leave
- When loading cargo, long objects should be carried horizontally to avoid interferences with the rotors

Smoking

- No Smoking in the Aircraft
- No Smoking within 50 feet of the aircraft

Seat Belts and Shoulder Harnesses

- Seat belts and shoulder harnesses must be fastened at all times aboard the aircraft (a crew member will demonstrate the proper way to fasten and wear)
- Upon landing and preparing to leave the aircraft, seat belts and shoulder harnesses may be unfastened only when the Pilot signals it is safe to do so.

General Heliport Safety

- No passengers on board when fueling aircraft
- Clear bystanders from the helicopter during takeoffs and landings

Doors

- A crew member should demonstrate how to open and close doors for use both as normal and emergency exits
- Equipment - whether attached or detached to the aircraft - must be contained entirely with the aircraft for the doors to close completely
- Close doors gently; slamming is not necessary and could damage the aircraft
- Ensure that, when the door is closed, the handle is flush with the aircraft

TVA Operational and Emergency Safety Brief



Location and Operation of Emergency Equipment

- Fire Extinguisher(s) (a crew member will demonstrate how to use)
- First Aid Kit
- Cellular Phone Operation
- Survival Kit
- Emergency Locator Transmitter

Use of Life Vests (when applicable)

- Do not inflate inside the aircraft
- Wear during extended over-water operations
- A crew member will demonstrate how to operate prior to missions requiring use

In-Flight Safety Procedures

- The front floor and control areas must be kept clear of loose objects
- Keep hands and feet away from controls
- Advise Pilot while in flight of any potential hazards (e.g. transmission lines etc.)
- Make line crossing and obstruction call-outs MANDATORY
- Do not distract the Pilot during takeoff, landing or during radio communications with flight controllers (Exception: pointing out potential hazards)
- Review patrol conduct to include terminology and procedures for mandatory call-outs and emergency communications.

Examples of these may be:

⇒ Crossing Ahead	⇒ Wire	⇒ Stop	⇒ Up
⇒ Down	⇒ Go Back	⇒ Slow	⇒ Higher

Emergency Landing Procedures

- Assume Emergency Position
- If Pilots should become incapacitated:
 - Move fuel switch to "OFF" position
 - Move battery switch to "OFF" position
 - Disconnect the battery terminals