Q. Reference: Hydro's Reply, page 17-19. Please provide documents indicating Hydro's current procedure (subsequent to the failure of Holyrood breaker B1L17 in January 2014) for protecting receiver tanks from water contamination when air blast breakers are disassembled for the application of RTV coating on breaker insulators.

A. Please see Appendix C of the August 1, 2014 report related to Air Blast Circuit Breakers for the procedure, attached as PR-PUB-NLH-210 Attachment 1.

APPENDIX C

Updated Work Methods for Maintenance on Air Blast Circuit Breakers
(Insulating Column, Interrupter Head)

Document is valid for 14 days from 07/31/2014

Standard Work Method - Approved

Work Method Number:	SWM-000318	Revision Number:	1
Created By:	Nalcor Administrator/NLHydro	Creation Date:	01/13/2010

Organizational Structure: Newfoundland & Labrador Hydro - Regulated Operations - Transmission & Rural Ops - Transmission & Rural Ops
Task Area: Stations - Breaker - Air Blast Circuit Breaker

Work Method Title: Interrupter Head (Air Blast Circuit Breaker) - Replace
Work Method Type: Procedure

1.0 Purpose:

This method to be used as a procedure for replacing the interrupter head on an Air Blast Circuit Breaker.

Following this procedure is very important when replacing interrupter head on Air Blast Breaker. Errors may result in personal injury and/or equipment damage.

2.0 Safety Summary

2.1 Safety Credo

- Take Ownership
- Get Involved
- Reach Out
- Speak Up

I always follow safety requirements and best practices.

I always take time to complete my work safely.

I always take action when I see unsafe acts or conditions.

2.2 Tailboard Safety Talk

A Tailboard Safety Talk is a vital part of job planning for hazard recognition and risk control. Tailboards must be conducted at the job site, prior to the start of all work.

2.3 Step Back 5 X 5

The Step Back 5 X 5 is a vital part of job performance for hazard recognition and risk control. Step Back 5 X 5 must be conducted during the ongoing progression of work, as situations change and/or as personnel (crew or team members) change.

3.0 Employees Involved

3.1 As part of the Internal Responsibility System (IRS), there shall be a person identified as being in charge of the work being performed. The Worker in Charge is a person designated to direct the work at one or more work sites. A worker in charge maybe a manager, foreman, supervisor, worker tradesman or other person designated by the employer. The safe performance of this work requires:

Identification of a Leadhand, at minimum

3.2 Prior to starting work, the Worker in Charge shall:

- Identify any new worker(s) in the crew and coach individually for hazard recognition, evaluation and control.
- Review the correct work method(s).
- Complete a tailboard identifying all hazards.
- Ensure that all workers are trained and have the proper PPE.

- Ensure all workers are aware of the controls in place to mitigate the hazards identified.

4.0 Employee Protection and Training Considerations

4.1 PPE

The PPE to consider to perform this work safely includes:
FR Clothing/Arc Flash Protection, Gloves - Leather Work Gloves, Head Protection - Hard Hat, High Visiblity Clothing, Safety Boots - Resistive, Safety Glasses

4.2 Skills Training:

The skill training to consider to perform this work safely includes:
Aerial Device Operation, Boom Truck Operation Training, Fall Protection Training, First Aid Training, High Voltage Switching, Rigging Training, VHF Radio Operation, Work Protection Code Training

4.3 Rules & Regulations:

The rules and regulations to consider to perform this work safely includes:
Minimum Approach Distances, Work Protection Code

4.4 Safety & Health:

The safety and health issues to consider to perform this work safely includes:
First Aid

4.5 Special Permits:

The permits to consider to perform this work safely includes:
Not Applicable

5.0 Risk Assessment Information

Please ensure you have reviewed/completed the TBRA document before performing this work method.

6.0 References

6.1 CorporateFallProtectionProgram

6.2 CorporateSafety&HealthHandbook

6.2.1 Section 4.10 Tailboard Meetings
6.2.2 Section 5.0 Personal Protective Equipment
6.2.3 Section 6.0 Tools and Equipment
6.2.4 Section 7.0 Electrical Safety
6.2.5 Section 7.11 Temporary Grounds
6.2.6 Section 8.0 Work on Overhead Structures
6.2.7 Section 10.0 Vehicles and Transportation

6.4 EnvironmentalEmergencyResponsePlan

6.5 Environmental Standard Operating Procedures

6.5.1 TRO-ENV-SOP-11 Handling&DisposalofPCBContainingEquipment

6.6 Manufacturer's Manual

6.7 National Standard of Canada: CAN/ULC-S801-10

6.7.1 Section 4.5 Personal Protective Equipment
6.7.2 Section 10.3 Hazardous Energy Control In The Electric Utility Industry

6.8 OccupationalHealth&SafetyRegulations

6.8.1 Section 140 Fall Protection Systems

6.9 WorkProtectionCodeBook

7.0 Recommended Tools And Equipment

7.1 Radial Boom Truck

7.2 Aerial Device

7.3 Grip-all Stick

7.4 High Voltage Tester

7.5 Portable Grounds

7.6 Extension Ladder

7.7 Metric Tools

7.8 "O" Ring

7.9 Tarps to cover hole during interrupter head removal.

8.0 Work Method Procedure

8.1 Establish work protection.

8.2 Test for no voltage.

8.3 Apply portable grounds to both sides of work area, using live line techniques (rubber gloves or insulated stick).

8.4 Position vehicles for lifting. Ground any aerial device used during the job. Use live line techniques when connecting portable grounds (rubber gloves or insulated stick).

8.5 Ensure breaker is closed, remove DC and AC controls from breaker.

8.6 Close air inlet valve.

8.7 Open air drain valve.

8.8 Drain breaker of air pressure.

8.9 Check boom angle versus weight capacity chart on boom. Inspect slings to ensure they are in good condition and to verify it will support the weight of the interrupter head.

8.10 Prior to removing interrupter, ensure precipitation is not excessive that could introduce moisture into the receiver tanks. If excessive, then do not proceed to remove interrupter head until weather conditions permit.

8.11 Remove interrupter head to be replaced using proper rigging techniques.

8.12 Once interrupter head is removed and in a safe place, install cover ontop of receiver tank to prevent moisture from entering the tank. This should be in place as soon as the interrupter head is removed.

8.13 Once new interrupter is ready to install, remove protective cover. Ensure that precipitation is not excessive while removing the cover.

8.14 Install replacement interrupter head (complete with new "O" Ring).

8.15 Close air drain valve.

8.16 Open air inlet valve and check the system to ensure no leaks.

8.17 Restore DC and AC controls to breaker (if applicable).

8.18 Complete applicable testing.

8.19 Remove portable grounds, using live line techniques (rubber gloves or insulated stick).

8.20 Surrender work protection.

8.21 Perform necessary clean-up and removal of all vehicles, equipment and tools.

9.0 Approvals & Verification

Reviewers:	Gary Broderick/NLHydro, John Baker/NLHydro, Patrick O'Grady/NLHydro, Tony Walker/NLHydro	Owners:	Harold Kean/NLHydro, Rodney Champion/NLHydro, Wade Hillier/NLHydro
Primary Reviewer:	Gary Broderick/NLHydro John Baker/NLHydro Patrick O'Grady/NLHydro Tony Walker/NLHydro	Primary Owner:	Harold Kean/NLHydro Rodney Champion/NLHydro Wade Hillier/NLHydro
Submitted By:	Lisa Ledrew/NLHydro	Submitted Date:	06/10/2010
Reviewed By:	Gary Broderick/NLHydro	Reviewed Date:	07/31/2014
Verified By:	Blaine O Piercey/NLHydro	Verified Date:	07/31/2014
Approved By:	Rodney Champion/NLHydro	Approved Date:	07/31/2014

- Verified by Gary Broderick/NLHydro, John Baker/NLHydro, Keith Saunders/NLHydro, Tony Walker/NLHydro on 6/14/2010 2:11:50 PM with the following reasons: Verification transferred from previous work method in TRO Work Methods Database.
- Verified for Keith Saunders/NLHydro by John Baker/NLHydro on 9/23/2010 11:20:56 AM with the following reasons: Verification transferred from previous work method in TRO Work Methods Database
- Not Verified by Lisa Ledrew/NLHydro on 5/30/2014 1:46:43 PM with the following reasons: To make changes
- Verified for Blaine O Piercey/NLHydro by Gary Broderick/NLHydro on 7/31/2014 3:44:19 PM with the following reasons: Verified June 24th, 2014

- Not Approved by Hughie Ireland/NLHydro, Tom Sheppard/NLHydro, Wade Hillier/NLHydro on 6/30/2010 9:29:41 AM with the following reasons: Please update method to include establishing test condition after installation of head is completed. Also consider whether steps to establish work protection need to be included after you state establish work protection.
- Not Approved by Hughie Ireland/NLHydro, Tom Sheppard/NLHydro, Wade Hillier/NLHydro on 10/27/2010 9:11:57 AM with the following reasons: Step 8.9 is referring to a current transformer not a breaker interupting head. Please correct.
- Approved by Rodney Champion/NLHydro on 7/31/2014 3:53:07 PM with the following reasons: Approval to work method based on changes required to minimize risk of moisture entering the breaker receiver tanks during the work.

Work Method History:

- Work Method created by Lisa Ledrew on 5/30/2014 1:55:53 PM
- Work Method reviewed by Gary Broderick on 7/31/2014 3:43:25 PM

Task Based Risk Assessment Worksheet - Approved

Interrupter Head (Air Blast Circuit Breaker) - Replace

TBRA-000318

Organizational Structure: Newfoundland & Labrador Hydro - Regulated Operations - Transmission & Rural Ops - Transmission & Rural Ops
Task Area: Stations - Breaker - Air Blast Circuit Breaker
Task Description: Interrupter Head (Air Blast Circuit Breaker) - Replace
Revision Number: 1

		HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
Step #	Area/Task Step Description	Hazard Description	Hazard Effect	Population at Risk	Hazard Severity	Probability	Risk Rating	All Required Controls	Hazard Severity	Probability	Risk Rating
1	Possibile leaks containing PCB oil. (DLF Type Breaker)	Spills or contact.	Carcenogenic.	Workers.	5	2	10	Test if leaking. Wear PPE. Treat as containing PCB, if not leaking.	1	1	1
2	Establish work protection.	Inexperience or lack of training.	Death or serious injury from inadequate work protection.	Workers.	5	3	15	Use experienced worker trained in work protection code.	2	1	2
3	Working on breaker.	Working near energized electrical equipment.	Electrocution causing death or serious injury.	Worker.	5	4	20	Work protection (isolate & de-energize). Obtain minimum approach distance.	1	1	1
4	Working on breaker.	Working on pressurized equipment.	Death or serious injury from explosion.	Workers.	5	3	15	Establish work protection (drain air and isolate air supply).	1	1	1
5	Working on breaker.	Fall from height.	Death or serious injury.	Workers.	5	2	10	Fall protection. Inspect fall arrest equipment before use and be trained in proper use of fall arrest.	2	1	2
6	Operating aerial device.	Poor control from inexperinced operator, lack of training, & condition of equipment.	Death or serious injury.	Workers.	5	4	20	Use trained operator familiar with equipment. Perform pre-use check on equipment.	1	1	1
7	Lifting breaker components.	Drop breaker parts.	Death or serious injury.	Workers.	5	2	10	Use radial boom truck. Use experinced, trained operator. Use signal man during lifting. Make sure workers wear hard hats and keep clear during lift. Conduct pre-use inspection before lift.	1	1	1

Approvals & Verification

Reviewed By: Keith Saunders/NLHydro
Reviewed Date: 01/13/2011
Approved By: Rodney Champion/NLHydro
Approved Date: 07/31/2014

Approval History:

- Approved by Rodney Champion/NLHydro on 7/31/2014 3:55:36 PM with the following reasons:

TBRA History:

Team Lead Signature: _____ Approver Signature: _____ Date: _____

Legend:

Area/fask Description: Separate the task into individualsteps and rec:ord in sequence.
Hazard Description: Describe allhazards idernified.NOTE:Additionalhaurds may be *a*used by interaction with otherwork.
Hazard Effect: Describe the effects of ea<:h identified *ruu* n:l.
Population at Risk: Name all types of personnelat risk. Include people outside the work crew who maybe affec:ted.
Hazard Se11erity: From matrUeidentify severitywithcornrols in place for each haurd.
Probability: From matrUeidentify likelihood of occurrance withcontrols in place for each haurd.
Risk Rating: Classify risk rating from matrix for each haurd.
All RequiredControls: Describe fullyallcornrolsput in place for each haurd.

Hazard Assessment/TBRA Worksheet

		Hazard Severity				
		Negligible injury,no absence tomwork	2 Minor injury requiring first aid treatment	3 Injury leading to a medical treatment incident	4 Involving a lost time injury	Fmliry
Probability	1 A freak occurrence of factors would be required for an incident to result.	1	2	3	4	5
	2 A rare combination of factors would be required for an incident to result.	2	4	6	8	10
	3 Could happen when additional factors are present but otherwise unlikely to occur.	3	6	9	12	15
	4 Not certain to happen but an additional factor may result in an incident.	4	8	12	16	20
	5 Almost ine\rilablethat an incident would r	5	10	15	20	25

Task Based Risk Assessment (TBRA) Worksheet

TBRA - 000318

Organizational Structure: Newfoundland & Labrador Hydro - Regulated Operations - Transmission & Rural Ops - Transmission & Rural Ops
Task Area: Stations - Breaker - Air Blast Circuit Breaker
Task Description: Interrupter Head (Air Blast Circuit Breaker) - Replace

		HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
Step #	Area/Task Step Description	Hazard Description	Hazard Effect	Population at Risk	Hazard Severity	Probability	Risk Rating	All Required Controls	Hazard Severity	Probability	Risk Rating

Team Lead Signature: _____ Approver Signature: _____ Date: _____

Document is valid for 14 days from 07/31/2014

Standard Work Method - Approved

Work Method Number:	SWM-000317	Revision Number:	2
Created By:	Keith Saunders/NLHydro	Creation Date:	05/30/2014 12:00:00 AM

Organizational Structure: Newfoundland & Labrador Hydro - Regulated Operations - Transmission & Rural Ops - Transmission & Rural Ops
Task Area: Stations - Breaker - Air Blast Circuit Breaker

Work Method Title: Insulating Column (Air Blast Circuit Breaker) - Replace
Work Method Type: Procedure

1.0 Purpose:

This method is to be used as a procedure for replacing an insulating column on an air blast breaker.

The function of an insulating column on an air blast breaker is to carry air to; and support the interrupter head.

Following this procedure when replacing an insulating column is very important. Errors may result in personal injury and/or equipment damage.

2.0 Safety Summary

2.1 Safety Credo

- Take Ownership
- Get Involved
- Reach Out
- Speak Up

I always follow safety requirements and best practices.

I always take time to complete my work safely.

I always take action when I see unsafe acts or conditions.

2.2 Tailboard Safety Talk

A Tailboard Safety Talk is a vital part of job planning for hazard recognition and risk control. Tailboards must be conducted at the job site, prior to the start of all work.

2.3 Step Back 5 X 5

The Step Back 5 X 5 is a vital part of job performance for hazard recognition and risk control. Step Back 5 X 5 must be conducted during the ongoing progression of work, as situations change and/or as personnel (crew or team members) change.

3.0 Employees Involved

3.1 As part of the Internal Responsibility System (IRS), there shall be a person identified as being in charge of the work being performed. The Worker in Charge is a person designated to direct the work at one or more work sites. A worker in charge maybe a manager, foreman, supervisor, worker tradesman or other person designated by the employer. The safe performance of this work requires:

Identification of a Leadhand, at minimum

3.2 Prior to starting work, the Worker in Charge shall:

- Identify any new worker(s) in the crew and coach individually for hazard recognition, evaluation and control.
- Review the correct work method(s).

- Complete a tailboard identifying all hazards.
- Ensure that all workers are trained and have the proper PPE.
- Ensure all workers are aware of the controls in place to mitigate the hazards identified.

4.0 Employee Protection and Training Considerations

4.1 PPE

The PPE to consider to perform this work safely includes:
Fall Protection, FR Clothing/Arc Flash Protection, Gloves - Leather Work Gloves, Head Protection - Hard Hat, High Visiblity Clothing, Safety Boots - Resistive, Safety Glasses

4.2 Skills Training:

The skill training to consider to perform this work safely includes:
Aerial Device Operation, Boom Truck Operation Training, First Aid Training, High Voltage Switching, Rigging Training, VHF Radio Operation, Work Protection Code Training

4.3 Rules & Regulations:

The rules and regulations to consider to perform this work safely includes:
Minimum Approach Distances, Work Protection Code

4.4 Safety & Health:

The safety and health issues to consider to perform this work safely includes:
First Aid

4.5 Special Permits:

The permits to consider to perform this work safely includes:
Not Applicable

5.0 Risk Assessment Information

Please ensure you have reviewed/completed the TBRA document before performing this work method.

6.0 References

6.1 CorporateFallProtectionProgram

6.2 CorporateSafety&HealthHandbook

6.2.1 Section 4.10 Tailboard Meetings
6.2.2 Section 5.0 Personal Protective Equipment
6.2.3 Section 6.0 Tools and Equipment
6.2.4 Section 7.0 Electrical Safety
6.2.5 Section 7.11 Temporary Grounds
6.2.6 Section 8.0 Work on Overhead Structures
6.2.7 Section 10.0 Vehicles and Transportation

6.4 EnvironmentalEmergencyResponsePlan

6.5 Environmental Standard Operating Procedures

6.5.1 TRO-ENV-SOP-11 Handling&DisposalofPCBContainingEquipment

6.6 Manufacturer's Manual

6.7 National Standard of Canada: CAN/ULC-S801-10

6.7.1 Section 4.5 Personal Protective Equipment
6.7.2 Section 10.3 Hazardous Energy Control In The Electric Utility Industry

6.8 OccupationalHealth&SafetyRegulations

6.8.1 Section 140 Fall Protection Systems

6.9 WorkProtectionCodeBook

7.0 Recommended Tools And Equipment

7.1 Radial Boom Truck

7.2 Aerial Device

7.3 Metric Tool Box

7.4 Grip-All Stick

7.5 Portable Grounds

7.6 High Voltage Tester

7.7 5 kV Insulation Tester (If required)

7.8 Extension Ladder

7.9 Lifting Slings

7.10 Motion Analyzer (If required)

7.11 Tarps to cover holes, while interrupters are removed.

8.0 Work Method Procedure

8.1 Establish work protection.

8.2 Test for no voltage.

8.3 Apply portable grounds to both sides of work area, using live line techniques (rubber gloves or insulated stick).

8.4 Ground any aerial device used during the job. Use live line techniques when connecting portable grounds (rubber gloves or insulated stick).

8.5 Close breaker. Breaker will fall close with no air.

8.6 Remove DC and AC controls from breaker.

8.7 Close air inlet valve.

8.8 Open air drain valve.

8.9 Drain breaker of air pressure.

8.10 Prior to removing interrupter ensure precipitation is not excessive that could introduce moisture into the receiver tanks. If excessive, then do not proceed.

8.11 Remove interrupter head from the column.

8.12 Once interrupter head is removed and there will be a substantial amount of time to remove the column, then cover the top of column to prevent moisture from entering the receiver tank.

8.13 Remove column.

8.14 Once column is removed and there will be a substantial amount of time between removal and installation, cover the receiver tank hole with cover to prevent moisture from entering receiver tank.

8.15 Once column and/or interrupter are ready to be replaced, remove the cover (only if there is no excessive precipitation).

8.16 Install replacement column.

8.17 Re-install interrupter on the new column.

8.18 Torque all bolts to manufacturer's specifications.

8.19 Close air drain valve.

8.20 Open air inlet valve, check to ensure no leaks.

8.21 Restore AC and DC controls (If applicable).

8.22 Operate breaker to test for air leaks.

Note: No air in heads unless breaker open.

8.23 Complete timing testing on breaker.

8.24 Remove portable grounds, using live line techniques (rubber gloves or insulated stick).

8.25 Surrender work protection.

8.26 Perform necessary clean-up and removal of all vehicles, equipment and tools.

9.0 Approvals & Verification

Reviewers:	Gary Broderick/NLHydro, John Baker/NLHydro, Patrick O'Grady/NLHydro, Tony Walker/NLHydro	Owners:	Harold Kean/NLHydro, Rodney Champion/NLHydro, Wade Hillier/NLHydro
Primary Reviewer:	Gary Broderick/NLHydro John Baker/NLHydro Patrick O'Grady/NLHydro Tony Walker/NLHydro	Primary Owner:	Harold Kean/NLHydro Rodney Champion/NLHydro Wade Hillier/NLHydro
Reviewed By:	Gary Broderick/NLHydro	Reviewed Date:	07/31/2014
Verified By:	Blaine O Piercey/NLHydro	Verified Date:	07/31/2014
Approved By:	Rodney Champion/NLHydro	Approved Date:	07/31/2014

- Verified for Blaine O Piercey/NLHydro by Gary Broderick/NLHydro on 7/31/2014 3:42:34 PM with the following reasons: Verified June 24th, 2014
- Approved by Rodney Champion/NLHydro on 7/31/2014 3:50:38 PM with the following reasons: Approval to work method based on changes required to minimize risk of moisture entering the breaker receiver tanks during the work.

Work Method History:

- Work Method created by Keith Saunders on 5/30/2014 2:03:42 PM
- Work Method reviewed by Gary Broderick on 7/31/2014 3:41:29 PM

Task Based Risk Assessment Worksheet - Approved

Insulating Column (Air Blast Circuit Breaker) - Replace

TBRA-000317

Organizational Structure: Newfoundland & Labrador Hydro - Regulated Operations - Transmission & Rural Ops - Transmission & Rural Ops
Task Area: Stations - Breaker - Air Blast Circuit Breaker
Task Description: Insulating Column (Air Blast Circuit Breaker) - Replace
Revision Number: 1

		HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
Step #	Area/Task Step Description	Hazard Description	Hazard Effect	Population at Risk	Hazard Severity	Probability	Risk Rating	All Required Controls	Hazard Severity	Probability	Risk Rating
1	Possibile leaks containing PCB oil. (DLF Type Breaker)	Spills or contact.	Carcenogenic.	Workers.	5	2	10	Test if leaking. Wear PPE. Treat as containing PCB, if not leaking.	1	1	1
2	Establish work protection.	Inexperience or lack of training.	Death or serious injury from inadequate work protection.	Workers.	5	3	15	Use experienced worker trained in work protection code.	2	1	2
3	Working on breaker.	Working near energized electrical equipment.	Electrocution causing death or serious injury.	Worker.	5	4	20	Work protection (isolate & de-energize). Observe minimum approach distance.	1	1	1
4	Working on breaker.	Working on pressurized equipment.	Death or serious injury from explosion.	Workers.	5	3	15	Establish work protection (drain air and isolate air supply).	1	1	1
5	Working on breaker.	Fall from height.	Death or serious injury.	Workers.	5	2	10	Use fall protection. Inspect fall arrest equipment before use and be trained in proper use of fall arrest.	2	1	2
6	Operating aerial device.	Poor control from inexperinced operator, lack of training, & condition of equipment.	Death or serious injury.	Workers.	5	4	20	Use trained operator familiar with equipment. Perform pre-use check on equipment.	1	1	1
7	Lifting breaker components.	Drop breaker parts.	Death or serious injury.	Workers.	5	2	10	Use radial boom truck. Use experinced, trained operator. Use signal man during lifting. Make sure workers wear hard hats and keep clear during lift. Conduct pre-use inspection before lift.	1	1	1

Approvals & Verification

Reviewed By: Keith Saunders/NLHydro
Reviewed Date: 01/13/2011
Approved By: Rodney Champion/NLHydro
Approved Date: 07/31/2014

Approval History:

- Approved by Rodney Champion/NLHydro on 7/31/2014 3:57:38 PM with the following reasons:

TBRA History:

Team Lead Signature: _____ Approver Signature: _____ Date: _____

Legend:

Area/fask Description: Separate the task into individualsteps and rec:ord in sequence.
Hazard Description: Describe allhazards idernified.NOTE:Additionalhaurds may be aused by interaction with otherwork.
Hazard Effect: Describe the effects of ea<:h identified ruu n:l.
Population at Risk: Name all types of personnelat risk. Include people outside the work crew who maybe affec:ted.
Hazard Se11erity: From matrUeidentify severitywith cornrols in place for each haurd.
Probability: From matrUeidentify likelihood of occurrance with controls in place for each haurd.
Risk Rating: Classify risk rating from matrix for each haurd.
All RequiredControls: Describe fullyallcornrolsput in place for each haurd.

Hazard Assessment/TBRA Worksheet

		Hazard Severity				
		Negligible injury,no absence tomwork	2 Minor injury requiring first aid treatment	3 Injury leading to a medical treatment incident	4 Involving a lost time injury	Fmliry
Probability	1 A freak occurrence of factors would be required for an incident to result.	1	2	3	4	5
	2 A rare combination of factors would be required for an incident to result.	2	4	6	8	10
	3 Could happen when additional factors are present but otherwise unlikely to occur.	3	6	9	12	15
	4 Not certain to happen but an additional factor may result in an incident.	4	8	12	16	20
	5 Almost ine\rilablethat an incident would r	5	10	15	20	25

Task Based Risk Assessment (TBRA) Worksheet

TBRA - 000317

Organizational Structure: Newfoundland & Labrador Hydro - Regulated Operations - Transmission & Rural Ops - Transmission & Rural Ops
Task Area: Stations - Breaker - Air Blast Circuit Breaker
Task Description: Insulating Column (Air Blast Circuit Breaker) - Replace

		HAZARD			INITIAL RISK			CONTROLS	RESIDUAL RISK		
Step #	Area/Task Step Description	Hazard Description	Hazard Effect	Population at Risk	Hazard Severity	Probability	Risk Rating	All Required Controls	Hazard Severity	Probability	Risk Rating

Team Lead Signature: _____ Approver Signature: _____ Date: _____