



FUNCTIONAL TEST OF EMERGENCY RESPONSE PLAN FOR HIGHLAND L-L DAM

SUMMARY OF NOTES AND FINDINGS (Prepared for November 20 debrief meeting)

Date: 2012-Nov-15

Time: 9:00 – 11:10am (approximate)

Subject: Summary of notes and findings for functional test (performed November 15, 2012) of Emergency Response Plan for Highland Tailings Storage Facility. Content provided by personnel that observed/facilitated the scenario.

Locations of activity: Highland L-L Dam (Cyclone House, Highway/North Muster Area and Hillside/South Muster Area), Crisis Room (Admin Boardroom), Gatehouse, ERT Training Trailer. Crisis Management Team corresponded with Teck Corporate, but feedback from Teck Corporate has not been included here.

Scenario summary: Catastrophic dam failure of Highland L-L Dam due to piping from internal erosion. One heavy equipment operator and machine engulfed by flow of tailings and water, treated as a fatality.

Purpose: This emergency/crisis simulation was designed to test: 1) the effectiveness of the L-L Dam Evacuation Procedure and the response of HVC personnel and contractors under mandatory evacuation, 2) the response of the Emergency Response Team (ERT), 3) the response of the Crisis Management Team (CMT) and Gatehouse (GH), 4) the overall effectiveness of the updated Emergency Response Plan (ERP) for the Highland L-L Dam, and 5) how well the ERP feeds into HVC's Crisis Management Program.



Facilitators and participants with duties to respond (does not include HVC personnel and contractors):

Name	Role Title (Involvement in Test)	Location During Test
Chris Dechert	General Manager (Responder, Crisis Management Team)	Crisis Room
Chris Fleming	Supt. Tailings & Water (Observer and Facilitator)	Crisis Room
Brett Gulliver	Senior Civil Technologist (Overall Scenario Facilitator)	Cyclone House
Alyssa Schultz	Coop Student (Observer)	Cyclone House
Dave Falcon	Senior Env. Coordinator (Observer)	Crisis Room, Gatehouse, ERT Training Room
Ross Billy	Dam Construction Supervisor (Tailings & Water Mgmt. Dept. Person in Charge)	L-L Dam
Ian Haskell	Senior Design Draftsperson (Observer)	L-L Dam (with Ross Billy)
Trevor Phelps	Superintendent Safety and Loss Control (Responder, Crisis Management Team)	Crisis Room
Steve Hippisley	Senior Safety Coordinator (Facilitator)	Gatehouse
HVC Security	Security/Protective Services Personnel	Gatehouse
Gerry Wong	Senior Safety Coordinator (Facilitator)	ERT Training Trailer
John Brennan	ERT Member (Responder – ERT Incident Commander)	ERT Training Trailer
Emergency Response Team (ERT)	ERT Members (Responders)	ERT Training Trailer
Casey Bates	Consultant, OASIS/ERM (Observer)	Emergency Response Team Training Trailer
HVC Crisis Management Team (CMT)	CMT Members (Responders)	Crisis Room
Teck Corporate CMT	Teck Crisis Team Members (Responders)	Teck Corporate



Timeline of events*:

Time	Events or Actions Taken
PHASE I – Emergency Response Plan Activation Evacuation of L-L Dam	
0857	Brett Gulliver calls for Radio Silence on Ch. 7 and introduces test of Emergency Response Plan and Evacuation Procedure for the L-L Dam
0900	Cyclone House Operator(CHO), Barron McKay, calls Ross Billy (Dam Construction Supervisor and designated alternate for Chris Fleming, Tailings and Water Mgmt. Superintendent) to inform him of increased seepage coming from the toe of the L-L Dam
0902	Ross Billy announced after his investigation of dam that it is a Level 2 Emergency and that evacuation of the L-L Dam area is mandatory
0903	Ross Billy informs security of situation and announces mandatory evacuation again on Ch. 7
0909	ERT rescuers en route to muster areas at each end of dam
0916	Security acting as incident command until ERT IC arrives
0921	ERT calls security to request road closures, ERT unable to make radio contact with Spatum Pumphouse
0924	ERT assumes IC of Highway/North side muster area
0925	ERT assumes IC of Hillside/South side muster area
0931	ERT IC reports full breach of Highland L-L Dam
0936	Gerry Wong gets called on radio directly from Ross Billy who reports that a cat operator is missing
0943	Ross Billy reports that it is a yellow cat, #485, a Cantex owned machine that is missing
0945	Ross Billy announces that all personnel are accounted for at muster areas (except for missing cat operator)
0947	ERT IC requests for a helicopter to assist with search for cat operator
0950	Call for bus to be sent to Highway side muster
0952	Brett Gulliver announces that test is complete (end of Phase I)
PHASE II – Ongoing Crisis Management Activities	
0955	IC calls for crew change request
0958	Call from Teck Corporate, transferred to Crisis Management
1000	Call from media
1003	Incident Commander calls to discontinue search for missing cat operator
1007	“Face-to-face” between IC and Ambulance driver describing cat operator as unresponsive
1012	Incident Commander steps out of room (to contact coroner)
1023	Incident Commander calls for taxis to relieve ERT members, calls for guard at Calling lake road
1048	New Incident Commander (on B crew) takes over
1110	Phase II complete

*For more detailed timelines see notes provided by observers/participants in the Appendices. Minor discrepancies may exist between times listed above and the notes in the Appendices due to differences between the observers.



Summary of issues for consideration that may require corrective action (duplicate and/or related findings have been grouped together):

Signage, Muster Areas and Accountability

- Proper standard signage at muster areas
- Knowledge of muster area locations by HVC personnel
 - 2 HVC electricians didn't know where muster areas were – *they had not taken the Dam Training Course!*
- Signage for entire tailings line (highway standards)
- Develop plans to divide ERT evenly between two sides of the dam
- Names? Hillside/Highway side doesn't work & ERT does not want North/South
 - Once SS Tailings line is operational → Tailings/Highway Side
- Needed at muster areas: emergency equipment, lights, delineators, road closed signs, etc.
- Better system for accountability for non-ERT HVC personnel (needs to be an HVC employee checklist)
 - Sign-in/sign-out at North & South
 - Assign one HVC foreman to keep track of personnel at L-L & Spatsum (sign-in at morning meetings or on a board in Mill Shops)
 - Plan for accountability needs to be more systematic
 - List from Security worked very well for contractors

Contractors

- Cantex gathered at meeting places before evacuating (took them AT LEAST 22 minutes to get to the muster area)
 - People in Cantex office were told to go outside and wait → start walking!
- Cantex had full accountability of their employees in only two minutes once at the muster areas
- Other contractors also had full accountability of their staff completed efficiently

Radio

- Surface Water pumphouse had no radio contact, gland water did not either
- Very difficult to monitor all 3 radio channels (7, 12, 16)
- Surface Water pumphouse had no radio contact, gland water did not either
- Repeater issues – most radios cut out around 9:20 for a few minutes
- Spatsum did not hear evacuation announcements



- Spatsum was not accounted for when evacuation was complete – miscommunication because ERT thought Spatsum was accounted for
- “Spatsum Package” from security in the future (Cell phone, keys, etc.)
- Require another base station for CH12 (already has one for CH7 and CH16)
- Require multiple base stations in truck too
- Assigned portable radios – have 1 or 2 assigned to CHO instead of individual people

Communication

- Very difficult to hear participants in Vancouver CMT room – multiple voicing making it difficult to understand the questions being asked
- Would be good for each person to identify themselves prior to speaking
- Difficult in CMT room to hear with the radios and other communication going on in the background - a separate room for conversations with the Vancouver CMT may be the solution
- Use military time in our references
- Should have shared desktop with Vancouver so that CMT could have presented a map of the Spence’s Bridge area
- International callers unable to reach CMT direct line at HVC
- Take time on radio communication
 - Wait a moment after pressing button
 - Talk slow and clearly

Emergency Contact

- Phone list for Vancouver office difficult to find in Crisis Manual
- L-L evacuation phone list was correct but HVC-wide phone list was outdated or numbers were hard to find
- Larger print

Other

- Somebody with technical knowledge should be called to the CMT to assist with equipment
- Consider doing scenario simulations during Tailings Management Workshops as a training activity
 - Include CMT in Dam Training Course or develop streamlined course for them
- Crucial to have Tailings and Water Management person with CMT to explain the technical side of dam failure

Scenario-related Issues (for consideration when planning future test scenarios)

- Consider a timeline chart on the wall or computer screen so that all had the same information/references
- Would have been useful to have ERT IC at the L-L Dam
- Protective Services personnel at each muster area were never informed to change from “observers” to “responders”

Notes/findings compiled by: Casey Bates, OASIS/ERM

APPENDIX

Notes Provided by Observers/Participants (included in order listed below)

Name	Role Title (Involvement in Test)	Location During Test
Chris Dechert	General Manager (Responder, Crisis Management Team)	Crisis Room
Brett Gulliver & Alyssa Schultz	Senior Civil Technologist (Overall Scenario Facilitator) & Coop Student (Observer)	Cyclone House
Ross Billy	Dam Construction Supervisor (Tailings & Water Mgmt. Dept. Person in Charge)	L-L Dam
Ian Haskell	Senior Design Draftsperson (Observer)	L-L Dam (with Ross Billy)
John Brennan	ERT Member (Responder – ERT Incident Commander)	ERT Training Trailer
Casey Bates	Consultant, OASIS/ERM (Observer)	Emergency Response Team Training Trailer

Casey Bates

From: Falcon Dave HVC <Dave.Falcon@teck.com>
Sent: Thursday, November 15, 2012 12:28 PM
To: Fleming Chris HVC; Casey Bates
Subject: FW: Comments from the simulation

FYI

From: Dechert Chris HVC
Sent: Thursday, November 15, 2012 12:13 PM
To: Falcon Dave HVC
Subject: Comments from the simulation

Dave;

As requested;

- Very difficult to hear participants in Vancouver CMT room – multiple voicing making it difficult to understand the questions being asked
- Would be good for each person to identify themselves prior to speaking
- It was also difficult in our CMT room to hear with the radios and other communication going on in the background - a separate room for conversations with the Vancouver CMT may be the solution
- Mark Thompson recommendation that we use military time in our references
- We should have started a timeline chart on the wall or computer screen so that all had the same information/references
- We should have had our computer shared with Vancouver so that we could have presented a map of the Spence's Bridge area
- I had difficulty in finding the phone list for Vancouver office in my manual

Overall – I thought the simulation was great.

Regards
Chris

Chris Dechert
General Manager
Teck Highland Valley Copper
Direct Phone: 250.523.3201
eMail: Chris.Dechert@teck.com
www.teck.com

L-L Dam Evacuation Test & ERP Scenario Review (provided by Brett Gulliver and Alyssa Schultz who observed the Cyclone House Operator)

Cyclone House Operator (CHO) – Barron Mckay

- Checklist of radio/phone communication – initial contact informing of evacuation
 - HVC personnel, contractors, and time they were contacted
- Radios
 - Require another base station for CH12 (already has one for CH7 and CH16)
 - Require multiple base stations in truck too
 - Assigned portable radios – have 1 or 2 assigned to CHO instead of individual people
- Up to date phone list
 - L-L evacuation phone list was correct but HVC-wide phone list was outdated or numbers were hard to find
 - Larger print
- At first was very overwhelmed but began to gain confidence once he understood the scenario
 - Put the safety of the dam first – would not let the test impair dam safety or mine production
- Identification of threat level
 - What if Chris and/or Ross are off-site or unreachable? – goes to senior foreman
- C-cans at Muster Areas
 - Emergency equipment, lights, delineators, road closed signs, etc.

Brett Gulliver

- At Cyclone House during test, monitoring CH7, CH12, & CH16
- Roll-call communication – not properly executed
 - Needs to be more systematic
- Take time on radio communication
 - Wait a moment after pressing button
 - Talk slow and clearly

Key Points

- Accountability
 - Evacuation at 9:04 → ERT confirmed accountability at 9:45
 - ERT at muster areas did not know to “activate” at the specified time to assist roll call
 - List from Security worked very well for contractors
 - HVC personnel were unprepared concerning accountability
 - 2 HVC electricians didn’t know where muster areas were – *they had not taken the Dam Training Course!*
 - Future possibilities
 - Sign-in/sign-out at North & South

- Assign one HVC foreman to keep track of personnel at L-L & Spatsum (sign-in at morning meetings or on a board in Mill Shops)
- Radio Communication
 - Beginning statements by Brett & Ross very well done
 - Repeater issues – most radios cut out around 9:20 for a few minutes
 - Barges did not hear evacuation announcements
 - Spatsum did not hear evacuation announcements
 - Spatsum was not accounted for when evacuation was complete – miscommunication because ERT thought Spatsum was accounted for
 - “Spatsum Package” from security in the future (Cell phone, keys, etc.)
 - CH12 was not portraying well that it was only a test
 - Not an issue for emergency personnel, but if other staff were listening in
- Cantex
 - took over 20 to get to muster station
 - *this was because they drive to “safe zones” then wait to get picked up
 - Roll call was extremely fast once present
 - People in Cantex office were told to go outside and wait → start walking!
- Alarm System
 - Audible (Siren) and Visual (lights at top of dam)
 - Various signs informing public of the alarm system
 - Required for Spatsum
- Cyclone House Operator
 - Very good radio communication – “this is only a test”
 - Inconsistent description of dam break location
 - Use road/station markers in the future?
- Muster Areas
 - Plenty of room at North Side
 - Make sure contractors do not use as a storage or parking area (Cinder Mountain has equipment there currently)
 - Names? Hillside/Highway side doesn’t work & ERT does not want North/South
 - Once SS Tailings line is operational → Tailings/Highway Side
- Emergency/Crisis Management
 - Include them in Dam Training Course
 - Signage for entire tailings line (highway standards)
 - Crucial to have T&WM person with CMT to explain the technical side of dam failure

Casey Bates

From: Falcon Dave HVC <Dave.Falcon@teck.com>
Sent: Friday, November 16, 2012 4:37 PM
To: Casey Bates
Subject: Fw: LL Dam Evacuation Nov 15 2012

Dave Falcon
Sr Environmental Coordinator
Teck- Highland Valley Copper
250.523.3202
Dave.Falcon@teck.com
<http://www.teck.com>

From: Billy Ross HVC
Sent: Friday, November 16, 2012 03:31 PM
To: Fleming Chris HVC
Cc: Falcon Dave HVC
Subject: LL Dam Evacuation Nov 15 2012

Chris

Had a brief discussion with Cantex on the evacuation, they will send their documentation to you.

Some of the concerns were.

Gate at Jim Black Lake was open, Delivery truck going to construction site, sign in sheets

John received a call from Ivan Moser, [not knowing it was part of the Evacuation Procedure], was shaken from the conversation

The concern I had with Cantex is personnel at the office building was waiting for a ride, they should take a truck and proceed to the muster area.

Everything else was done in a timely manner; everyone respected the radio silence on their channel.

When personnel was asked for the location, answered promptly and moved to the muster area.

Good job by Cantex

Regards

Ross Billy
Field Construction Supervisor
Teck Highland Valley Copper Partnership
Direct Phone: +1.250.523.3502
Phone: 250.523.2443
Fax:

Notes by Ian Haskell with Ross Billy at L-L Dam

8:30am – North Muster area full of equipment. (JW Logging)

8:56 Brett Gulliver announced test will happen at 9:00am

8:58 Baron called ross to report seepage

9:00 Ross Billy announced after investigation level 2 evac to occur

9:01 Ross called security, announced evac again

9:03 cantex was called to evacuate

9:05 HVC employees did not know where South muster was

9:06 Nick E was contacted by the cyclone house

9:08 Grham, Newport and Pascho were contacted

9:10 Jason Arnold came on radio said he would stop at the LL not go to Spatsum

9:11 Cyclone house made call on chanel 16 to evac

9:13 Cyclone house called house to let him know everyone was called on radio

9:20 First arrivals @ north end

9:22 First arrivals at south end (this is assumed as overheard on channel 16 at 9:21 “we are 200m away, from the muster area”)

9:25 No answer from Dale S and Ed N headed to Spatsum

9:31 North accounted for

9:36 South accounted for

9:37 Gerry Wong called (only responeded on 12 not on 7)

9:39 Cat missing

9:42 485 Cat missing

9:43 IC Announced Spatsum was contacted, we did not hear it on any of the radio channels, can anyone confirm this

9:50 Brett ended test

Notes

1. Cantex gathered at meeting places before evacuating. Took them AT LEAST 22 minutes to get to the muster area
2. Cyclone house operator could not properly describe where the seepage was. It moved from station 1+600 to "near the middle" this caused cantex to change evac from north to south
3. Surface Water pumphouse had no radio contact, gland water did not either
4. Needs to be an HVC employee checklist
5. Very difficult to monitor all 3 radio channels (7, 12, 16)

N/S

HIGHLAND VALLEY COPPER
EMERGENCY RESPONSE TEAM - INCIDENT REPORT

MUST BE COMPLETED IMMEDIATELY AFTER INCIDENT AND SUBMITTED TO SECURITY / SAFETY

PAGE <u>1</u> OF <u>9</u>		DATE mm/dd/yy: <u>11/15/2012</u>	
TIMES		INCIDENT COMMANDER	
CALL OUT:	<u>9:04</u> am pm	NAME (print):	<u>JOHN BRENNAN</u>
ARRIVAL AT SCENE:	<u>9:24</u> am pm	RESPONDED TO:	<u>LL DAM</u>
STAND DOWN:	<u>10:20</u> am pm	PURPOSE:	<u>BREACH</u>
RETURN TO BASE:	<u>10:20</u> am pm	EMERGENCY TYPE	ERT VEHICLES at scene
		<input type="checkbox"/> Fire	<input checked="" type="checkbox"/> Rescue
		<input checked="" type="checkbox"/> First Aid	<input checked="" type="checkbox"/> CAF (P1)
		<input type="checkbox"/> Rescue	<input checked="" type="checkbox"/> Pumper P2
		<input checked="" type="checkbox"/> Spill/release	<input checked="" type="checkbox"/> Ambulance A1
		<input type="checkbox"/> Haz-mat	<input checked="" type="checkbox"/> Ambulance A2
		<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Other: <u>PICKUPS 5</u>
TIME OF INCIDENT	<u>9:03</u> am pm	DESCRIPTION OF INCIDENT:	
		<u>LL DAM BREACH</u>	
NUMBER OF PERSONS INJURED	TYPE OF EQUIPMENT INVOLVED ID NUMBER	BUILDING(S) OR AREA INVOLVED	<input checked="" type="checkbox"/> EVACUATION
<u>1</u>	<u>BULL DOZER</u> <u>485 CAT</u> <u>YELLOW</u>	<u>LL DAM</u> <u>BREACH</u>	<input type="checkbox"/> ELECTRICAL
			<input type="checkbox"/> GAS
			<input type="checkbox"/> OTHER _____
			SELF CONTAINED BREATHING APPARATUS USED
			# OF TEAMS _____
			USE SCBA TRACKING FORM.
SECTOR ASSIGNMENTS			
SAFETY	<u>SAXTON PETERS</u>	I.C. SCRIBE	<u>CHAD TOMPSON</u>
COMMUNICATIONS	<u>SECURITY</u>	SCENE SECURITY	<u>SAXTON PETERS</u>
1 ST AID	<u>AL F.</u>	TEAM REHAB.	
RESCUE	<u>SCOTT MORRISON</u>	FIRE CONTROL	<u>N/A</u>
S.C.B.A. / R.I.T.	<u>N/A</u>	EQUIP / RESOURCES	<u>RESCUE BASKET # 2166</u>
HAZ-MAT / DECON	<u>N/A</u>	TRIAGE	<u>N/A</u>
ERT PERSONNEL AT SCENE	<u>LIST ALL EXCEPT</u> <u>DALE KONOWALCHOK</u>		
TOTAL = <u>198</u> 5 E			
GATEHOUSE PSO	<u>STEVE MAYO</u>		
NON ERT PERSONNEL			
TOTAL = _____			

CHAD TOMPSON
TRIPPS
TRAW
POW

**HIGHLAND VALLEY COPPER
EMERGENCY RESPONSE TEAM - INCIDENT REPORT**
MUST BE COMPLETED IMMEDIATELY AFTER INCIDENT AND SUBMITTED TO SECURITY / SAFETY

PAGE 2 OF 9

DATE mm / dd / yy: / /

ACTIONS TAKEN

TIME

9:20 AM

~~Block~~ Blocked off HIGHWAY + HILLSIDE ACCESS BELOW DAM

SEE NOTES

Incident Scribe Events Log attached OR See more on reverse side of page.

SCENE DIAGRAM

Note: May include incident location, hot/cold zone fire ground perimeters, hazards, command and sector areas, ERT apparatus, road access, structures, indicate North, wind direction, weather concerns, water courses / environmental concerns, haz-mat identifiers (UN #).



**INCIDENT STAND DOWN
SCENE CONTROL GIVEN TO:**

NAME: CHUCK WILKINS
DEPARTMENT:

RELIEF ERT

THIS REPORT WAS COMPLETED BY:

PRINT JOHN A.
NAME: BRENNAN

INITIALS: JB

DEBRIEFING:

SHORT - TAIL GATE
 LONG - TRAINING ROOM

REPORT ATTACHED
 NO ISSUES

CRISIS MANAGEMENT
FAN OUT INITIATED

HIGHLAND VALLEY COPPER
EMERGENCY RESPONSE TEAM

4

INCIDENT DEBRIEFING REPORT

This optional form is a supplement to ERT response report.

DATE:	Nov. 15 / 2012
INCIDENT:	LL DAM BREACH
INCIDENT COMMAND:	JOHN BRYNNAN
PAGE:	1 OF

ISSUES OR ITEMS REQUIRING IMMEDIATE ATTENTION
PROPER STANDARD SIGNAGE AND
KNOWLEDGE OF MUSTER AREAS
BETTER ACCOUNTABILITIES FOR WORKERS
+ NON-ERT.
DIVIDE THE ERT MEMBERS IF POSSIBLE SO
AS TO HAVE HALF ON ONE SIDE HALF ON
THE OTHER SIDE.

ISSUES OR ITEMS REQUIRING CONSIDERATION
A REQUEST TO THE FORMAN TO ALLOW THESE
ERT MEMBERS TO BE ALLOWED TO
TAKE A DRIVE AROUND THE MINE SITE TO
KNOW WHERE ALL THE ROADS ARE
POT NEW UP DATED MAPS ON BOARD TRUCKS

OTHER
LOOK INTO GETTING MORE REPEATER STATIONS

HL - LEVEL 2 BREACH - WATER FLOW AT BOTTOM (5)

MUSTER - ^(N) ~~HWY~~ HYWAY - FRANK POWERS
HILLSIDE - ^(S) CHAD THOMPSON

PROBLEMS - HWY SIDE CONGESTION WATCH

9:20 BACKLOG OF HWY BELOW DAM
& HILLSIDE

9:18 CONTACT WORKER BELOW DAM

9:22 ~~CALL~~ REQUEST FOR CONTACT AT
SPAZZUM

9:23 CALL BLOCK OFF OF ROADS FROM
BOTH

JAMIE CARTER - CALLING LAKE

9:20 - CHAD THOMPSON - ARRIVED AT HILLSIDE OF
DAM MUSTER AREA - CONTROL OF THAT MUSTER AREA.

9:28 AMBULANCE 2 ARRIVED HILLSIDE MUSTER AREA
- P2 - SCOTT 3 ON BOARD.
SAFETY ON HILLSIDE

SAXON SAFETY ON HWY SIDE

DIAGRAM PUBLIC ACCESS.

**HIGHLAND VALLEY COPPER
EMERGENCY RESPONSE TEAM
SCBA / ENTRY TEAM LOG (1 SHEET PER TEAM UNLESS > 2 ENTRIES)**

SCBA OFFICER NAME: _____

NOTE: Team members donning shall be BLUE TAGGED and NOT have facial hair that could interfere with mask seal.

TEAM NUMBER:		TEAM MEMBER "A" NAME:
ASSIGNMENT:	ENTRY <input type="checkbox"/> BACKUP R.I.T. <input type="checkbox"/> EXTERIOR <input type="checkbox"/> STANDBY <input type="checkbox"/>	TEAM MEMBER "B" NAME:

TASK DESCRIPTION # OF ENTRIES COMMENTS	
---	--

<u>TEAM</u>	<u>TANK VOL.</u>	<u>ON AIR TIME</u>	<u>OFF AIR TIME</u>	<u>ENTRY TIME</u>	<u>EXIT TIME</u>
MEMBER "A"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	____:____	____:____
MEMBER "B"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	COLLECT PASS KEYS! YES <input type="checkbox"/>	____:____

<u>TEAM</u>	<u>TANK VOL.</u>	<u>ON AIR TIME</u>	<u>OFF AIR TIME</u>	<u>ENTRY TIME</u>	<u>EXIT TIME</u>
MEMBER "A"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	____:____	____:____
MEMBER "B"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	COLLECT PASS KEYS! YES <input type="checkbox"/>	____:____

⑥

9:30 RESCUE ARRIVES AT HILLSIDE

9:30 MILLOPS CLEAR.

9:31 - FULL BLOWN - DAM - CRISIS MANAGEMENT PUT IN PLACE.

9:33 ACCOUNTABILITIES TAKEN.

9:39 - SPOTTING FOR MISSING DOZER OP.

9:40 ACCOUNTABILITIES OF ALL PERSONNEL

9:41 - R. BILLY CONFIRMS 1 CAT OPERATOR ~~IS~~ MISSING.

9:44 485 CAT - YELLOW.

9:46 A-2 SUGGESTS HELI. I.C. SUGGESTS TO SECURITY HELI

9:47 NO CONFIRMATIONS OF CAT SPOTTING

~~9:49 - BILL CALLS ABOUT CAT.~~

9:50 LOAD BUSES w/ PEOPLE

9:50 - LIGHTING PLANTS TO BE SET UP.

9:51 - TAKING CARE OF PEOPLE FROM MUSTER AREAS TO TRAINING TRAILER & ACCOUNTABILITIES.

9:54 I.C. CALL FOR SHIFT CHANGE

9:55 RESCUE FIRED UP LIGHTING PLANTS.

9:56 REHABS SUPPLIED FOR THOSE ON SITE.

10:00 - AMBULANCE REQUIRES FACE TO FACE ASAP.

**HIGHLAND VALLEY COPPER
EMERGENCY RESPONSE TEAM
SCBA / ENTRY TEAM LOG (1 SHEET PER TEAM UNLESS > 2 ENTRIES)**

SCBA OFFICER NAME: _____

NOTE: Team members donning shall be BLUE TAGGED and NOT have facial hair that could interfere with mask seal.

TEAM NUMBER:		TEAM MEMBER "A" NAME:
ASSIGNMENT:	ENTRY <input type="checkbox"/> BACKUP R.I.T. <input type="checkbox"/> EXTERIOR <input type="checkbox"/> STANDBY <input type="checkbox"/>	TEAM MEMBER "B" NAME:

TASK DESCRIPTION # OF ENTRIES COMMENTS	
---	--

TEAM	TANK VOL.	ON AIR TIME	OFF AIR TIME	ENTRY TIME	EXIT TIME
MEMBER "A"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	____:____	____:____
MEMBER "B"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	COLLECT PASS KEYS! YES <input type="checkbox"/>	____:____

TEAM	TANK VOL.	ON AIR TIME	OFF AIR TIME	ENTRY TIME	EXIT TIME
MEMBER "A"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	____:____	____:____
MEMBER "B"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	COLLECT PASS KEYS! YES <input type="checkbox"/>	____:____

10:01 AL - ^{AMB. #1} ASKED TO PHONE SECURITY ON SAT. ⑦
PHONE

10:04 - DISCONTINUED SEARCH FOR CAT
OPERATOR.

10:05 - SECURITY ADVISED OF CAT OP.

10:07 ^{AMB. 1} - FACE TO FACE W/I.C.

10:09 - REQUEST FROM T. PHELPS FOR CALL
33765

10:10 - SECURING SCENE

10:11 - JOHN DOE CONFIRMED CANTER CAT OP.

10:12 - ASKED 'ROSS BILLY' ABOUT CRISIS MANAGEMENT

10:15 - SCENES SECURE

10:20 - SCENE SECURE MEN HEAD IN BACK
TO TRAINING TRAILER

10:21 - JOHN BROWN - RELEASED TO GO AND
TO CALL HOME.

10:22 - LIST TO SECURITY OF ALL STATION ON O.T.

10:24 - AL. PG. OUT OF SECONDARY CREW FOR
RESCUE RELIEF.

10:37 - ACCOUNTABILITIES OF WHOSE LEFT.

10:44 - T. PHELPS.

10:48: HAND OVER TO NEW I.C. ON B-CREW

11:01 IC HANDED OF TO CHUCK WILKENS B CREW

11:10 AL CREWS HEADED BACK

11:10 ~~RESCUE~~ RESCUE RELIEFED BY B-CREW

**HIGHLAND VALLEY COPPER
EMERGENCY RESPONSE TEAM
SCBA / ENTRY TEAM LOG (1 SHEET PER TEAM UNLESS > 2 ENTRIES)**

SCBA OFFICER NAME: _____

NOTE: Team members donning shall be BLUE TAGGED and NOT have facial hair that could interfere with mask seal.

TEAM NUMBER:		TEAM MEMBER "A" NAME:
ASSIGNMENT:	ENTRY <input type="checkbox"/> BACKUP R.I.T. <input type="checkbox"/> EXTERIOR <input type="checkbox"/> STANDBY <input type="checkbox"/>	TEAM MEMBER "B" NAME:

TASK DESCRIPTION # OF ENTRIES COMMENTS	
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<u>TEAM</u>	<u>TANK VOL.</u>	<u>ON AIR TIME</u>	<u>OFF AIR TIME</u>	<u>ENTRY TIME</u>	<u>EXIT TIME</u>
MEMBER "A"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	____:____	____:____
MEMBER "B"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	COLLECT PASS KEYS! YES <input type="checkbox"/>	____:____

<u>TEAM</u>	<u>TANK VOL.</u>	<u>ON AIR TIME</u>	<u>OFF AIR TIME</u>	<u>ENTRY TIME</u>	<u>EXIT TIME</u>
MEMBER "A"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	____:____	____:____
MEMBER "B"	$\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ Full 30 <input type="checkbox"/> 60 <input type="checkbox"/>	____:____	____:____	COLLECT PASS KEYS! YES <input type="checkbox"/>	____:____

NOTES PREPARED BY PJO AL FRANCZAK

(8)

AMBULANCE ONE

NOVEMBER 15TH/12
ERT SCENARIO

9:04 AMBULANCE ONE ENROUTE HWY SIDES (SINGLE)
HWY NORTH
HILLSIDE SOUTH

9:21- NOTIFIED SECURITY THAT THERE IS NO RADIO
RECEPTION AT SPATSUM - THUS NO ONE IS ANSWERING
PHONE - ~~THE~~ SUGGEST SENDING SOMEONE TO
EVACUATE - PASSENGER.

9:23 - 23 @ MURKIN AREA HWY SIDES

9:29 - I/C ADVISES FELL BLOWN BUREAU - ADVISE
CRISIS MANAGEMENT - EVALUATE ALL LOWER
AREA ASAP.

9:43 - AMBULANCE 1 ASKED TO CONFIRM SPATSUM
WAS EVACUATED.

9:58 - NOTIFIED INCIDENT COMMAND THAT A BODY
WAS LOCATED ALONG RAMP FELL DOWN.
UNABLE TO

0:03 NOTIFIED SECURITY VIA SAT PHONE OF A BODY LOCATED

0:06 - I/C NOTIFIED - THAT SECURITY WAS NOTIFIED

0:09 - I/C ADVISES WE CAN NOT MAKE A RECOVERY NOTIFIED
SECURITY VIA SAT PHONE

③

~~09:00 LEVEL TWO EIAE PROCEEDURE~~

~~ROSS BILLY - LL DAM LEVEL 2 EMERG EIAE~~

~~NORTH & SOUTH AREA ASSISTANCE~~

~~09:02 - INITIAL PAGE SENT DANG~~

09:12? - APPROX ASSISTED E/C USING SAT PHONE
TO CONTACT TREDAL PHELPS

09:13 - REQUEST FROM E/C IF JOHN BROWN
WAS A MEMBER EAS TEAM. I CONFIRMED
JOHN BROWN WAS NOT. I ALSO PASSED ON
TO E/C WHO ADVISED PHELPS.

09:15 - JERNEY WARB CONFIRMS THAT JOHN BROWN
WAS IN FACT A MEMBER OF EAS TEAM.

09:17 - I PHONED PHELPS TO ADVISE BROWN CONFIRMED
EAS MEMBER & BEING RELEASED.

Pumper 2

Frank Tourand
Peter Lapointe
Scott Ludwig

(10)

9:08	P2	EnRoute	3	onboard
9:10	Request	location		placement
9:12	Hillside	placement		
9:30	Arrival	Hillside	Muster	Area
0:14	Flag	off	area	
:15	Called	down	leaving	scene

33765 C. MGMT. | 07 3320

65-017 JEFF #371
65-12

9:03 = Level 91 Not Billy

North 9:04. PAGE out.

John Beard - North
Ramon Powers.

CITAS 710MPGW
AL. AMB. #1. NORTH
Pumpkin II +3
CAF HWY

3 Personnel
@ SPAT/STW
NO PROBLEMS OR RADIO
CONTACT -
Someone in North

HILLSIDE SOUTH: narrow ~~FF~~ +4
AMB. II. +2. HILLS
P.2 - SOUTHSIDE
JAMIE CARTER 43 HWY
BARNYL MOORE. SOUTH



~~9:10~~

9:14 NO IC @ 74

9:20 Request. Blockage of CAUL-6 LAKE ROAD.
JAMIE CARTER. Blocking Hwy

9:22 Request.

9:23 AMB. II - Req. Block ~~etc~~ BOTH SIDES
HH RAM.

9:25 - Hwy side
~~North side~~

FULL BREACH - Lower Gate
CLOSED AND MAIN

1:30 PHONE RCMP - CRISIS ACKNOWLEDGE

EVACUATE - DOWNSTREAM

937 call REWARD.26 MISSING CAT OPERATOR
IC AND CRISIS MGMT. NOTIFIED

943 missing CAT # 405 - CONTEX OWNERS,

~~0945~~ ~~B.~~

0947 I.B IC Req Helicopter.

0950 Call Pit for Bus Hwy side muster
Area.

0951 IC Sabley Tram Trailer for people to
warm up

0954 B. Gulliver stand down # ch 7

0955 IC crew change request people switched
out only few @ a time. Call Ferman
to organize.

0958 Larry Pin. Tech office transfer to
Crisis Mgmt. @ 160-16846655

0958 Meal Requested

1000

Media. Chris Stannell 604-699-4368
or Call us Back @

1005

Digcontm search for cut opp

1008

Chad. Thompson Request ~~for~~ Cyclone House
Clear.

10:20

IC SUTER OT LHM TO BE DROPPED OF

10:24

P/OUT. - WOPPS STAFF - SIM - FOR MANN
OF RESCUE.

10:34

Crown + RCMP TO GATE HOUSE
ESORT TO SITE.

BSW WATCH - RA MEDIA - GRANDTA
CONTACT MARK TREE BORG.

CBC FILM CREW ENROUTE.

IC ADVISED TO REDIRECT MEDIA TO SECURITY,

11:10

IC BRANNAN. STANDDB DOWN.

B. CREW - CHUCK WICKIANS - NEW IC.

ALL STANDDB DOWN

Teck

E.R.T. ATTENDANCE SHEET

DATE: Nov. / 15 / 2012
(MM/DD/YY)

SHIFT GROUP: C

NAME (PRINT)	P.R. #	SHIFT	DEPARTMENT CODE
1. W W. A. BRENNAN	53231	C	220
2. Claude Richard	55165	R	210
3. Frank Power	54394	C	210
4. B. Mikkelsen	30053	C	210
5. Z. WILKINSON	55739	C	110
6. JEFF WALKER	55331	C	110
7. Barry Batt	55714	C	110
8. Chad Lindsay	55350	J	230.
9. SAYON PEREZ	55203	C	110.
10. JAMIE CARTER	54838	J	230
11. CHAD THOMPSON	55084	I	230
12. JEFF WEIKUM	37479	Casual	700
13. PATRICK TRAYLOR	30042	N	700
14. AL FRANCIK	30041	CASUAL	700
15. Scott Ludwig	55862	C	120
16. FRANK TAVANIS	55770	C	120
17. SCOTTY MORRISON	55486	R	120
18. Paul Cowell	55378	R	120
19. Konowalchuk	54732	C	210
20. Pete Lapointe	55116	R	120
21.			
22.			
23.			
24.			

Notes from Casey Bates of OASIS/ERM - observed Emergency Response Team in Training Trailer

Notes from Eric Traynor and Jeff Weikum of Protective Services, stationed at L-L Dam Muster Areas:

- Channel 12 reception clear, Channel 7 problematic (could not reach people on radio that were below the dam)
- Need more signage to muster areas
- 0910: first person arrived at Hillside muster area
- 0930: everybody made it to the muster areas
- Approximately 12 vehicles in Hillside muster area at 0946
- 0859 to 0922 vehicles arrived at Highway muster area
 - 7 vehicles total and 1 excavator
- Highway muster area partially blocked by machinery, Hillside muster partially blocked by pipes
- Cantex had roll call complete in about 2 minutes once at muster area
- It took protective services approximately 12 minutes to travel to L-L turnoff on Highway
- People were calm overall, and wanted to know who the IC was

Overall recommendations:

- Clear out muster areas and keep them clear
- Need more signage to muster areas
- Need to improve awareness among HVC employees of where muster locations are and how to get there

Comments from Gerry Wong:

- Lots of confusion about names of muster areas: North Side vs. Highway Side, South Side vs. Hillside
- Common name for each muster area is needed
- Need to develop site maps to keep in each ERT vehicle

Other comments:

- Communication was never made with personnel at Spatsum during the test
- Cell phones do work out at Spatsum and should be considered in future
- Evacuation lights and audible sirens would be useful at Spatsum and L-L Dam
- Repeater needs to be seriously considered
- Need clearer direction from security of which ERT trucks go in which direction

ERT-related Issues and Needs (from open discussion between ERT members after IC provided summary of the event)

- ERT needs specific list of access roads to be blocked off and this list should be included on the L-L Dam Evacuation Maps

- ERT members need to perform a tour of L-L Dam, muster areas and access roads
- Request handout of muster areas and access roads site-wide (place map in each truck)
- Better method of accountability needs to be defined for HVC personnel
- ERT requests feedback on performance during this scenario from CMT

Comments from Dale of ERT who happened to be out at the L-L Dam during the scenario

- It was confusing to not have the sand-cats stop working and evacuate
- The emergency shutoff button in the Cyclone House was not tested
 - Consider including use of shutoff button in OMS Manual/Evacuation Procedure
- Cyclone House Operator requests that there is a checklist-type form with room to record the time that each group on the call-out list was contacted
- Need equipment stationed near road entrances to place barriers in the event that there are limited personnel onsite (nights and weekends)
 - Chris Fleming's response is that there are gates that can be closed
- Some confusion among HVC personnel of where the Southside/Hillside muster area is
- Rob Gray and John from Cantex had full accountability of their employees in only two minutes once at the muster areas