

TAILINGS POND DAM and SETTLING POND DAM BREACH EMERGENCY RESPONSE PLAN

1.0 INTRODUCTION

- 1.1 The following plan is structured to prepare Greenhills Operations to properly manage emergency incidents and to provide essential resources for the coordination of emergency response in regards to the Tailings Pond and Greenhills Settling Pond Dams in the event of a dam breach.

2.0 CRITICAL ASPECTS

- The ERP provides details of flood emergency levels.
- The ERP provides a general guideline to emergency response actions for each emergency level.
- The ERP provides detailed maps of evacuation areas and guard post locations.

3.0 EMERGENCY RESPONSE

- 3.1 Management of the Tailings Dam and all associated inspections and notifications are outlined in the OMS Manual Guidelines.

- 3.2 In the event of a condition which may cause the breach of the Main or West Tailings Dams, the Emergency Response Tables located in Appendix IV or the OMS Manual should be consulted for response, mitigation and surveillance requirements at each emergency level. Should the unlikely event of breach of the dam(s) occur, Teck Coal Greenhills Operations will take the following actions:

3.2.1 Greenhills Operations, Teck Coal Limited (Owner and Operator)

3.2.1.1 Assessment and determination of the level of emergency at the dam site

3.2.1.2 Mitigation and repair work at site of emergency

3.2.1.3 Technical Support to the municipality(s)

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Authorized Signatures					
General Manager		Superintendent Maintenance		Sr. Environmental Officer	
Superintendent Operations		Superintendent Health & Safety		Superintendent Engineering	
				Superintendent Employee Relations	
				Superintendent Processing	

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3.2.1.4 Activation of, and technical support to, the Site Incident Command Post (ICP) and site Emergency Operations Centre (EOC)

3.2.1.5 Emergency public information communications

3.2.2 Internal communication lists for flood emergencies may be found in the following locations and should be contacted as directed by the Dam Breach EPP and the Crisis Manual:

3.2.2.1 Reference the current GHO internal phone list found under S:\everyone\PHONELISTS.

3.2.2.2 Reference the current Teck Coal phone lists saved to Sharepoint.

3.2.2.3 Reference the current radio frequencies listed on procedure 1403.

3.2.2.4 Reference the current Mine Rescue contact information listed on Appendix D.

3.2.2.5 Reference the Emergency Response Manual for contact information for downstream responders.

3.2.3 The Municipal Government Act, Part 1, Section 3, requires a municipality to develop and maintain safe and viable communities. The local authorities (The Districts of Sparwood and Elkford and the City of Fernie) shall be responsible for the control and direction of the emergency response to a disaster or emergency event within their municipality. A general discussion of actions required from external emergency responding agencies and organization downstream of the dams is discussed in the Dam Breach Emergency Preparedness Plan.

3.2.4 Emergency Levels are discussed in the following sections. Also included in each section is detailed information on the internal actions at each stage.

4.0 TAILINGS POND MAIN DAM BREACH EMERGENCY RESPONSE PLAN (DAM BREACH ERP)

4.1 **Emergency Levels:** All emergency levels will be initiated through the Superintendent Engineering for appropriate classification and mitigation activities.

4.2 **Hazardous Condition:**

4.2.1 Notification of Loss Prevention and Mine Rescue Captain.

4.2.2 Activate the Incident Command (IC) system (see procedure 1574).

4.2.3 Establish an Incident Command Post (ICP) and equipment staging area as required.

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- 4.2.4 IC will place the Mine Rescue Team (MRT) on notification alert only.
- 4.2.5 All emergency communications systems will be tested (radios, cell phones).
- 4.2.6 IC will review site emergency evacuation plans (see procedure 1400).
- 4.2.7 Notify the;
 - 4.2.7.1 General Manager or Senior Manager On-Call
 - 4.2.7.2 Plant Operations – Processing Superintendent
 - 4.2.7.3 Geotechnical and Mining Senior Engineer
 - 4.2.7.4 Senior Environmental Officer
 - 4.2.7.5 Superintendent Health and Safety
 - 4.2.7.6 Consider readying the alternate route to be used in the event of site evacuation.

4.3 Potential Flood Emergency (Stage 1)-Crisis Level:

- 4.3.1 IC will be notified that an order to evacuate all site personnel and to restrict road traffic into the mine site could be given within the next 4 hours.
- 4.3.2 Check-in of all responding MRT members and other personnel will occur at the ICP or established Staging Area prior to assigning tasks.
- 4.3.3 Activate the Teck Coal Greenhills Emergency Operations Centre (EOC).
- 4.3.4 **EOC will:**
 - 4.3.4.1 Notify the downstream communities (COI) that an order to evacuate could be given within the next 4 hours. Request activation of appropriate COI ERPs.
 - 4.3.4.2 Begin notifications of local emergency responders and those government agencies crucial to getting notifications out (BC Emergency Response Management and Regional District of East Kootenay Regional Emergency Operations Centre)
 - 4.3.4.3 Follow Teck Resources Crisis Manual for Corporate notification.
 - 4.3.4.4 Consider the need to notify the Manager Community, Aboriginal and Government Affairs for public notification.

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- 4.3.4.5 Notify Fording River Operations (FRO) and Line Creek Operations (LCO) of the potential flood emergency.
- 4.3.4.6 Consider the need for response time to isolate services.
 - 4.3.4.6.1 Gas
 - 4.3.4.6.2 Hydro
 - 4.3.4.6.3 Water
- 4.3.4.7 Verify that COI have the current inundation maps of potentially affected areas.
- 4.3.4.8 Coordinate and assume overall responsibility for the tally and accounting of all site personnel.
- 4.3.4.9 Contact external resources to provide guard posts at designated points (see Appendix A, Figures 1 through 4). Guard locations will advise and monitor all traffic only and not restrict travel at this time with the exception of the guard points north and west of Line Creek Guards at these locations will restrict travel at this time Until external resources are available MRT will set up guard posts at;
 - 4.3.4.9.1 GH1 – Plant intersection
 - 4.3.4.9.2 Plant access to CC overland beltline
 - 4.3.4.9.3 Plant access from GH1 North of Tailings Pond
 - 4.3.4.9.4 Josephine Falls parking lot on Fording Highway
 - 4.3.4.9.5 Fording River Highway intersection with Fording Road (to LCO)
 - 4.3.4.9.6 EOC will consider the immediate need to post guards at Connector Road and GHO alternate access route off GH1 and prepare to provide pilot access for FRO through Greenhills Operation (GHO) minesite (see Appendix A).
 - 4.3.4.9.7 Fording River Road North of intersection with Josephine Falls Road
 - 4.3.4.9.8 Line Creek Gatehouse
- 4.3.4.10 Contact COI to recommend sweeping the evacuation zones (helicopter or other) and establishing guard posts (see Appendix A) at;

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4.3.4.10.1 Hwy 43 intersection with Line Creek Road

4.3.4.10.2 Sulphur Springs Road South

4.4 Access Control will:

- 4.4.1 Restrict access to the mine site to essential personnel only as determined by the EOC and direct all non-essential traffic back to Elkford.
- 4.4.2 Generate a list of all personnel on site through; communications with all departments, department crew lists, access control logs and keyscan reports and communicate this report to the EOC.

4.5 Potential Flood Emergency (Stage 2):

- 4.5.1 Superintendent Engineering will communicate to the IC and the EOC to alert the entire site to be ready to evacuate in 30 minutes.
- 4.5.2 EOC will notify FRO and COI downstream including CP Rail that an order to evacuate in 30 minutes has been given and that the Fording Highway can no longer be used.
- 4.5.3 EOC, in conjunction with the COI and/or local authority, to consider the need for Teck GHO to issue flood warnings directly to the inhabitants immediately downstream of the dam.
- 4.5.4 As deemed necessary by EOC and if not already activated, establish guard posts at Connector Road and GHO alternate access route off GH1 and prepare to provide pilot access for FRO through GHO (see Appendix A). EOC will notify FRO of this option.
- 4.5.5 Guard posts will begin restricting access to the evacuation zones (see Appendix A).
- 4.5.6 Evacuation zones, in communication with guard posts, will be swept utilizing the MRT, and cleared between GH1 and the CC overland beltline to the Plant. No person will enter the evacuation zone without a radio or an avalanche transceiver being worn on their person *(there is no evidence of proven effectiveness of transceivers in debris other than snow but until proven ineffective, their use should not be discouraged)*.
- 4.5.7 Consider site need for alternate or additional Mine Rescue coverage.

4.6 Imminent Flood Emergency:

- 4.6.1 Superintendent Engineering will communicate to the EOC and IC the need to evacuate the entire mine site.

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- 4.6.2 EOC to notify COI that an order to evacuate has been given and that dam breach is imminent.

4.7 Imminent Flood Emergency – Evacuation:

- 4.7.1 IC will be responsible to conduct the evacuation (radio silence protocol will be required) utilizing road blocks to prevent any personnel from re-entering the area.
- 4.7.2 The EOC and IC will coordinate ensure that all personnel are accounted for and that transportation is provided off the mine site to the Elkford parking lot.
- 4.7.3 IC will inspect GH1 prior to the transportation of employees and determine its suitability for evacuation. If unsafe as determined by Engineering, the evacuation will occur through the alternate access route off GH1 (see Appendix A).
- 4.7.4 Once evacuation of personnel is complete, Senior Management will determine the conditions of personnel being released from duties.
- 4.7.5 Once outside the Evacuation Zone, personnel are not to re-enter unless specifically requested by the EOC or IC. Once the evacuation is complete IC will give the "ALL CLEAR" to the EOC indicating total evacuation of personnel and no further entry will be granted.
- 4.7.6 Superintendent Engineering and the General Manager will be responsible for any further action in the evacuation zone.

4.8 Post Breach Slide Path Search for Victims:

- 4.8.1 Although immediate catastrophic failure of the dam is highly unlikely, in the event of such failure, no MRT members will enter the evacuation zone until deemed safe and access has been cleared by the Superintendent Engineering.
- 4.8.2 Investigation of missing employees must be undertaken to determine likely areas to search. Search dogs may be required.
- 4.8.3 Engineering personnel will work with IC to determine safe access areas onto the slide path.
- 4.8.4 Engineering and Operations personnel will design, layout and construct access to the slide path.
- 4.8.5 Helicopters may be necessary to transport the MRT members onto the slide path.
- 4.8.6 Consider the use of helicopters to perform aerial search for missing persons.
- 4.8.7 No person will enter the evacuation zone without a radio or an avalanche transceiver being worn on their person *(there is no evidence of proven*

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effectiveness of transceivers in debris other than snow but until proven ineffective, their use should not be discouraged).

5.0 TAILINGS POND WEST DAM BREACH EMERGENCY RESPONSE PLAN (DAM BREACH ERP)

5.1 **Emergency Levels:** All emergency levels will be initiated through the Superintendent Engineering for appropriate classification and mitigation activities

5.2 **Hazardous Condition:**

5.2.1 Notification of Loss Prevention and Mine Rescue Captain.

5.2.2 Activate the Incident Command (IC) system (see procedure 1574).

5.2.3 Establish an Incident Command Post (ICP) and equipment staging area as required.

5.2.4 IC will place the Mine Rescue Team (MRT) on notification alert only.

5.2.5 All emergency communications systems will be tested (radios, cell phones).

5.2.6 IC will review site emergency evacuation plans (see procedure 1400).

5.2.7 Consider readying the alternate route.

5.3 **Potential Flood Emergency (Stage 1)-Crisis Level:**

5.3.1 IC will be notified that an order to restrict road traffic into the mine site and to set up evacuation zones (see Appendix B) could be given within the next 4 hours.

5.3.2 Check-in of all responding MRT members and other personnel will occur at the ICP or established Staging Area prior to assigning tasks.

5.3.3 Activate the Teck Coal Greenhills Emergency Operations Centre (EOC).

5.3.4 Consider the need to barricade the following roads in the evacuation zone (see Figure 5, Appendix B):

5.3.4.1 Upper Round Prairie Spur

5.3.4.2 Greenhills Road Upper Round Prairie Connector

5.3.4.3 Greenhills Road

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5.3.5 EOC will:

5.3.5.1 Coordinate and assume overall responsibility for the tally and accounting of all site personnel.

5.3.5.2 Contact external resources to provide guard posts at designated points (see Appendix B). Guard locations will advise and monitor all traffic only and not restrict travel at this time. Until external resources are available MRT will set up guard posts at;

5.3.5.2.1 GH1 – Plant intersection

5.3.5.2.2 GH1 – Dryer intersection

5.3.5.2.3 Wash Plant Road

5.3.5.2.4 Rejects Access Road from the Plant

5.3.5.2.5 Fording River Highway intersection with Greenhills Road

5.3.5.2.6 Fording River Highway intersection with Round Prairie Road

5.3.5.2.7 Round Prairie Road intersection with Lower Round Prairie Road

5.4 Access Control will:

5.4.1 Restrict access to the mine site to essential personnel only as determined by the EOC and direct all non-essential traffic back to Elkford.

5.4.2 Generate a list of all personnel on site through; communications with all departments, department crew lists, access control logs and keyscan reports and communicate this report to the EOC.

5.5 Potential Flood Emergency (Stage 2):

5.5.1 Superintendent Engineering will communicate to the IC and the EOC that an order to evacuate within 30 minutes has been given.

5.5.2 EOC will notify guard posts and any downstream COI, that an order to evacuate in 30 minutes has been given.

5.5.3 EOC, in conjunction with the COI and/or local authority, to consider the need for Teck GHO to issue flood warnings directly to the inhabitants immediately downstream of the dam.

5.5.4 Guard posts will begin restricting access to the evacuation zones (see Appendix B).

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- 5.5.5 Evacuation zones, in communication with guard posts, will be swept utilizing the MRT, and cleared. No person will enter the evacuation zone without a radio or an avalanche transceiver being worn on their person *(there is no evidence of proven effectiveness of transceivers in debris other than snow but until proven ineffective, their use should not be discouraged)*.
- 5.5.6 Consider site need for alternate or additional Mine Rescue coverage.
- 5.6 **Imminent Flood Emergency:**
 - 5.6.1 Superintendent Engineering will communicate to the EOC and IC that Dam breach is imminent.
 - 5.6.2 EOC to notify guard posts and any downstream COI, that an order to evacuate has been given and that dam breach is imminent.
- 5.7 **Imminent Flood Emergency – Evacuation:**
 - 5.7.1 IC will be responsible for utilizing guard points to prevent any personnel from re-entering the evacuated area.
 - 5.7.2 The EOC and IC will coordinate ensure that all personnel are accounted for.
 - 5.7.3 As determined necessary by the EOC, alternate routes including the Wash Plant Road through Site B then down Silo Road or through the Connector Road and FRO will be utilized for the evacuation of employees.
 - 5.7.4 Once outside the Evacuation Zone, personnel are not to re-enter unless specifically requested by the EOC or IC. Once the evacuation is complete IC will give the “ALL CLEAR” to the EOC indicating total evacuation of personnel and no further entry will be granted.
 - 5.7.5 Superintendent Engineering and the General Manager will be responsible for any further action in the evacuation zone.
- 5.8 **Post Breach Slide Path Search for Victims:**
 - 5.8.1 Although immediate catastrophic failure of the dam is highly unlikely, in the event of such failure, no MRT members will enter the evacuation zone until deemed safe and access has been cleared by the Superintendent Engineering.
 - 5.8.2 Investigation of missing employees must be undertaken to determine likely areas to search. Search dogs may be required.
 - 5.8.3 Engineering personnel will work with IC to determine safe access areas onto the slide path.

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- 5.8.4 Engineering and Operations personnel will design, layout and construct access to the slide path.
- 5.8.5 Helicopters may be necessary to transport the MRT members onto the slide path.
- 5.8.6 Consider the use of helicopters to perform aerial search for missing persons.
- 5.8.7 No person will enter the evacuation zone without a radio or an avalanche transceiver being worn on their person *(there is no evidence of proven effectiveness of transceivers in debris other than snow but until proven ineffective, their use should not be discouraged).*

6.0 SETTLING POND DAM BREACH EMERGENCY RESPONSE PLAN (DAM BREACH ERP)

- 6.1 **Emergency Levels:** All emergency levels will be initiated through the Superintendent Engineering for appropriate classification and mitigation activities.
- 6.2 **Hazardous Condition:**
 - 6.2.1 Notification of Loss Prevention and Mine Rescue Captain.
 - 6.2.2 Activate the Incident Command (IC) system (see procedure 1574).
 - 6.2.3 Establish an Incident Command Post (ICP) and equipment staging area as required.
 - 6.2.4 IC will place the Mine Rescue Team (MRT) on notification alert only.
 - 6.2.5 All emergency communications systems will be tested (radios, cell phones).
 - 6.2.6 IC will review site emergency evacuation plans (see procedure 1400).
 - 6.2.7 Consider the need to ready routes to be used in the event of site evacuation.
- 6.3 **Potential Flood Emergency (Stage 1)-Crisis Level:**
 - 6.3.1 IC will be notified that an order to restrict road traffic into the mine site and to set up evacuation zones (see Appendix D) could be given within the next 4 hours.
 - 6.3.2 Check-in of all responding MRT members and other personnel will occur at the ICP or established Staging Area prior to assigning tasks.
 - 6.3.3 Activate the Teck Coal Greenhills Emergency Operations Centre (EOC).
 - 6.3.4 **EOC will:**
 - 6.3.4.1 Notify Fording River Operations (FRO) of the potential flood emergency.

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6.3.4.2 EOC will consider the immediate need to prepare to provide pilot access for FRO through Greenhills Operation (GHO) minesite between Loadout and GH1 (see Appendix C).

6.3.4.3 Contact external resources to provide guard posts at designated points (see Figure 6, Appendix C). Guard locations will advise and monitor all traffic only and not restrict travel at this time. Until external resources are available MRT will set up guard posts at;

6.3.4.3.1 GH1 – Dryer intersection

6.3.4.3.2 Fording River Highway at Loadout South Access road.

6.3.4.3.3 Fording River Highway intersection with Greenhills Access Road

6.3.4.3.4 Dryer Access Road from GH1 east of Settling Pond

6.3.5 Access Control will:

6.3.5.1 Restrict access to the mine site to essential personnel only as determined by the EOC and direct all non-essential traffic back to Elkford.

6.3.5.2 If requested by the EOC generate a list of all personnel on site through; communications with all departments, department crew lists, access control logs and keyscan reports.

6.4 Potential Flood Emergency (Stage 2):

6.4.1 Superintendent Engineering will communicate to the IC and the EOC that an order to evacuate within 30 minutes has been given.

6.4.2 EOC will notify guard posts, that an order to evacuate in 30 minutes has been given.

6.4.3 EOC will notify FRO that an order to evacuate in 30 minutes has been given and that the Fording Highway can no longer be used.

6.4.4 EOC will consider the immediate need to provide pilot access for FRO through Greenhills Operation (GHO) minesite between Loadout and GH1 (see Appendix D).

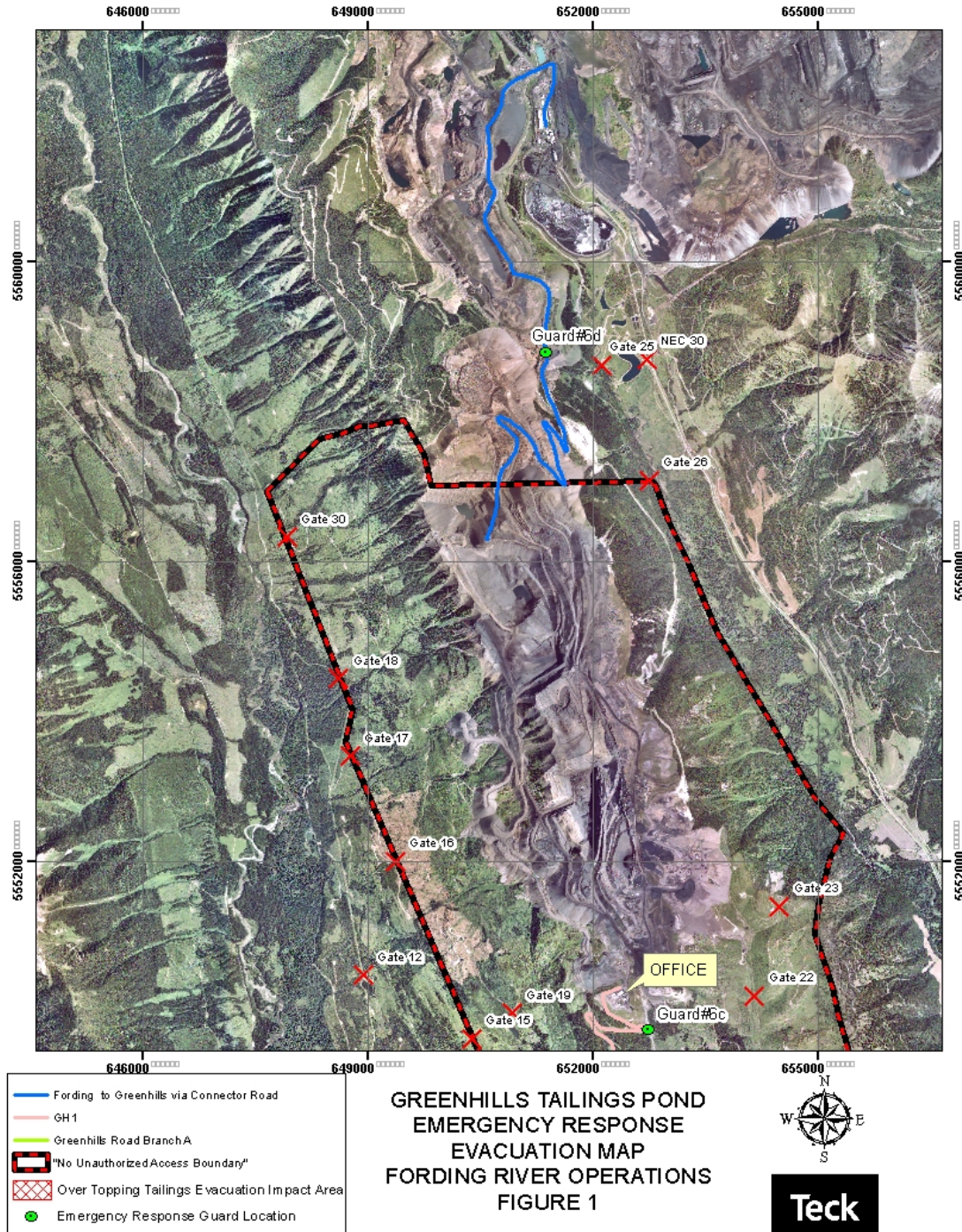
6.4.5 Guard posts will begin restricting access to the evacuation zones (see Appendix D).

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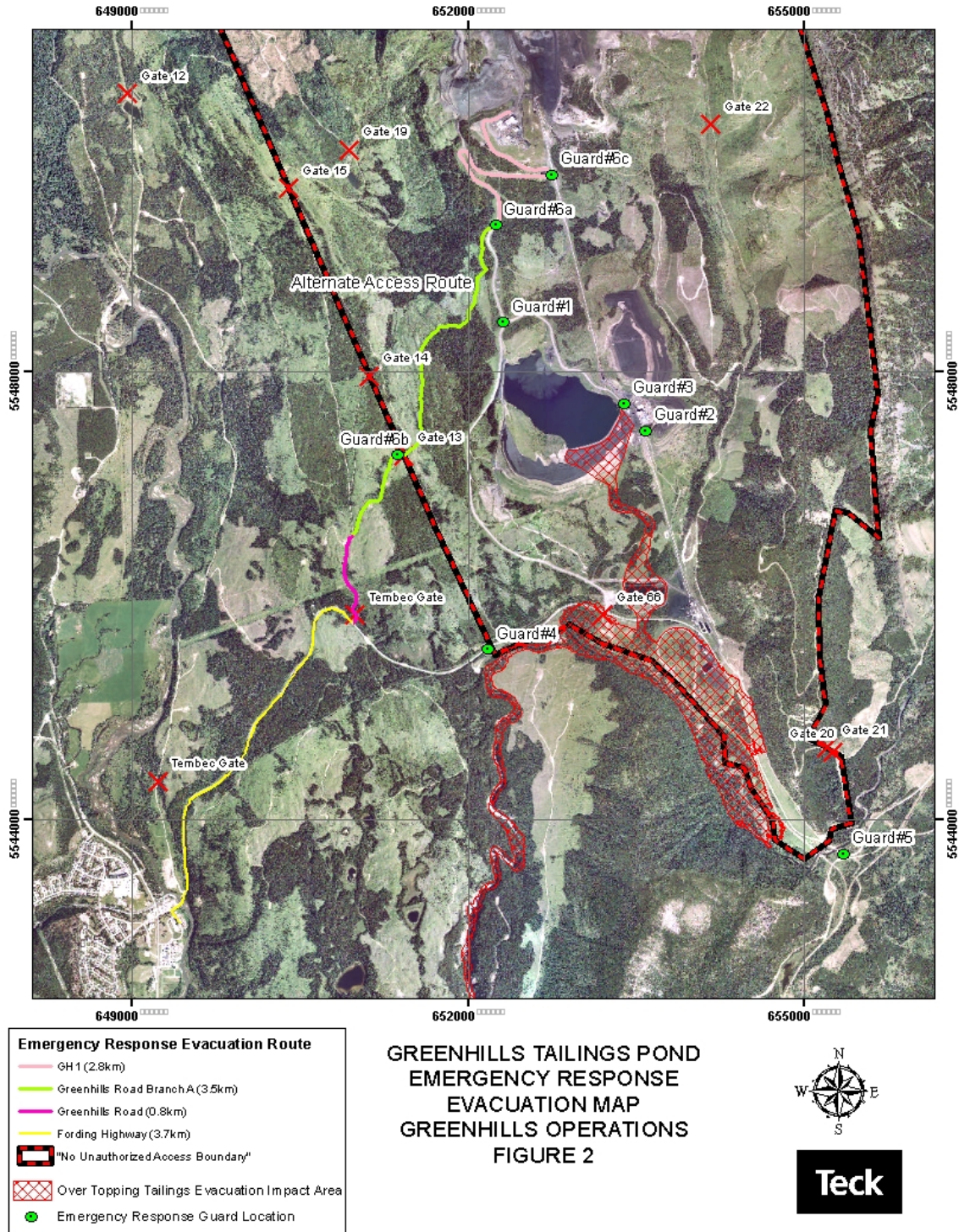
- 6.4.6 Evacuation zones, in communication with guard posts, will be swept utilizing the MRT, and cleared. No person will enter the evacuation zone without a radio. Consider the need to utilize signage or guard posts to restrict access immediately south of the Dryer Road in the vicinity of the Settling Pond.
- 6.4.7 Consider site need for alternate or additional Mine Rescue coverage.
- 6.5 **Imminent Flood Emergency:**
 - 6.5.1 Superintendent Engineering will communicate to the EOC and IC that Dam breach is imminent.
 - 6.5.2 EOC to notify guard posts, that an order to evacuate has been given and that dam breach is imminent.
- 6.6 **Imminent Flood Emergency – Evacuation:**
 - 6.6.1 IC will be responsible for utilizing guard points to prevent any personnel from re-entering the evacuated area.
 - 6.6.2 The EOC and IC will coordinate ensure that all personnel are accounted for.
 - 6.6.3 Once outside the Evacuation Zone, personnel are not to re-enter unless specifically requested by the EOC or IC. Once the evacuation is complete IC will give the "ALL CLEAR" to the EOC indicating total evacuation of personnel and no further entry will be granted.
 - 6.6.4 Superintendent Engineering and the General Manager will be responsible for any further action in the evacuation zone.

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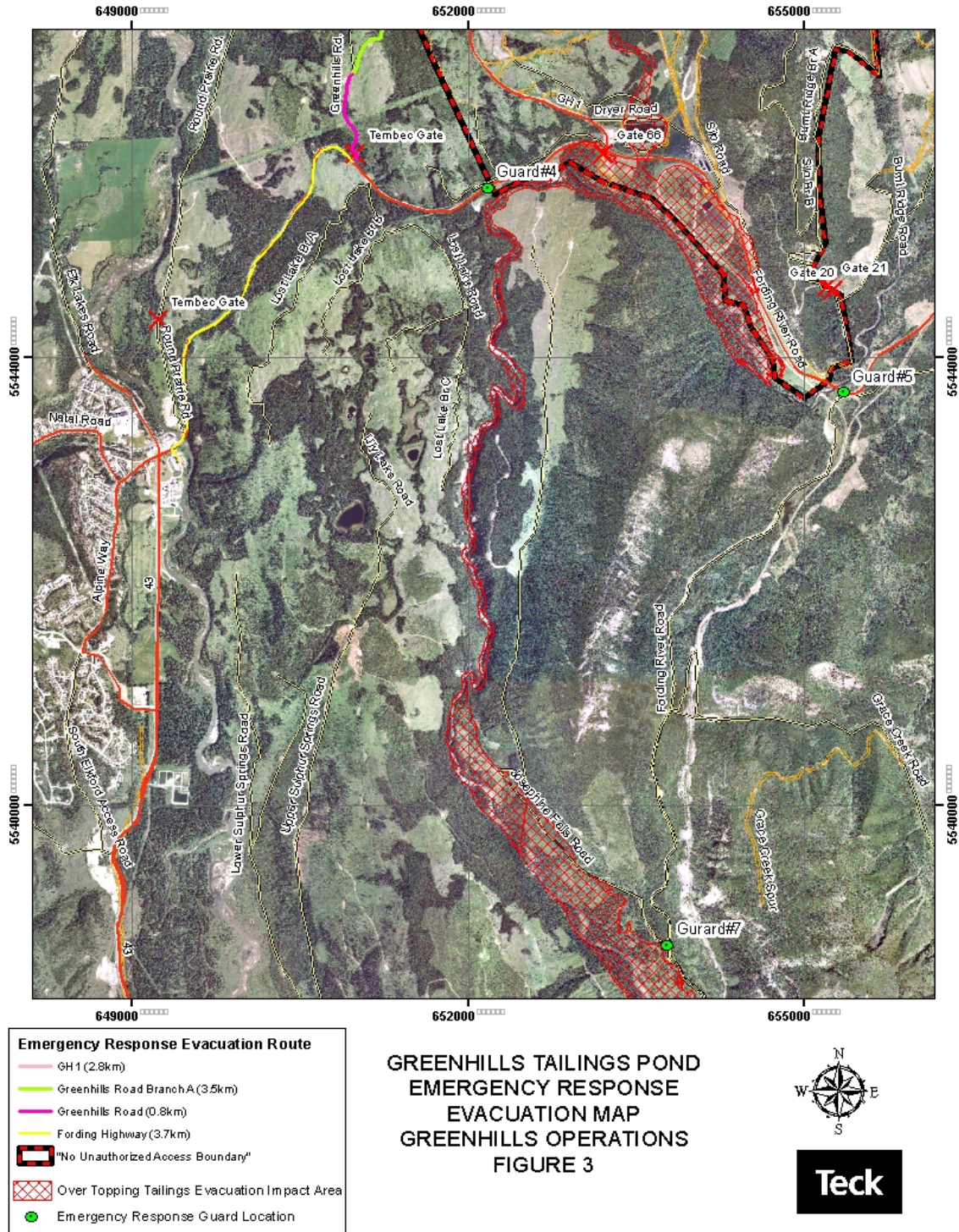
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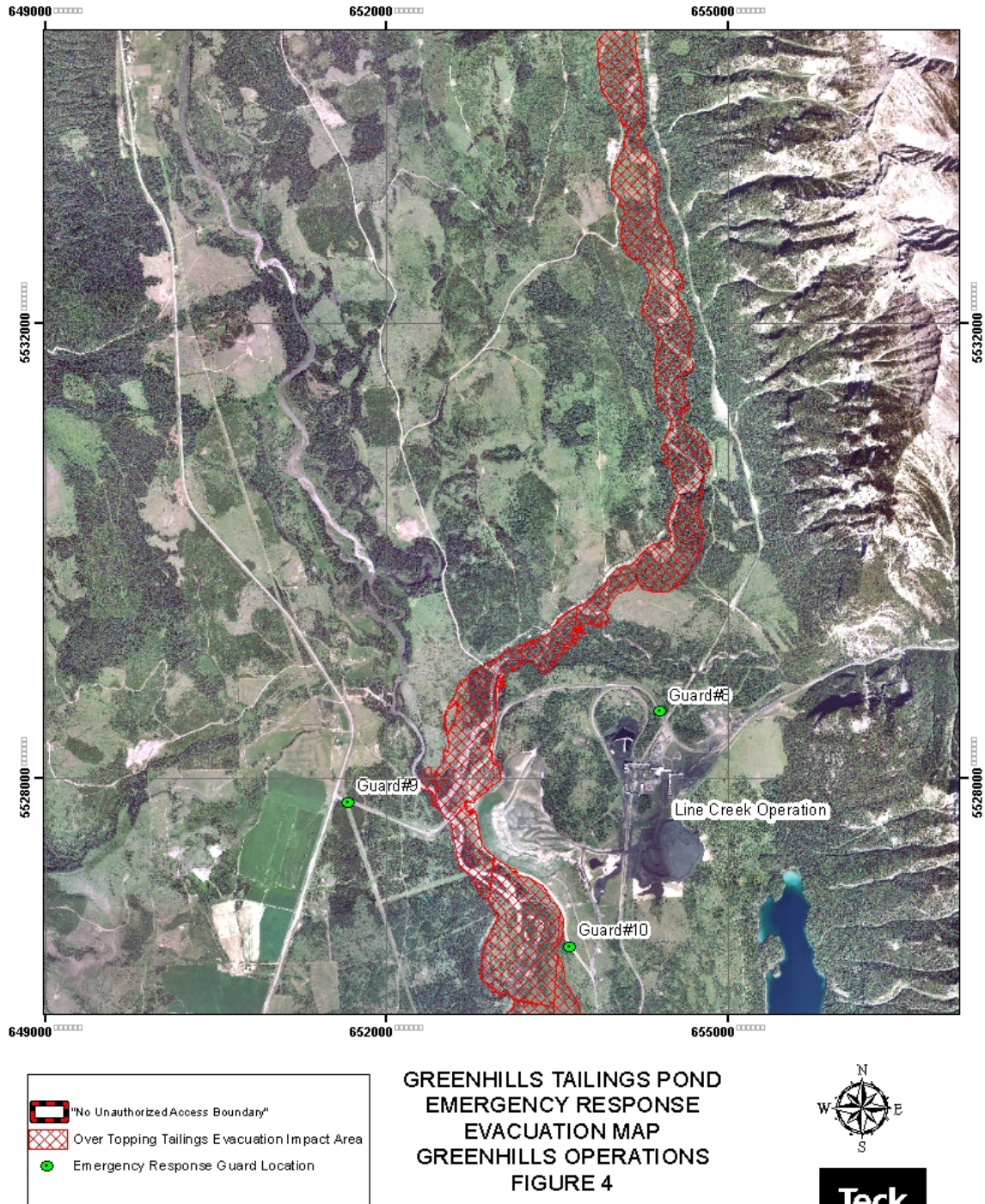
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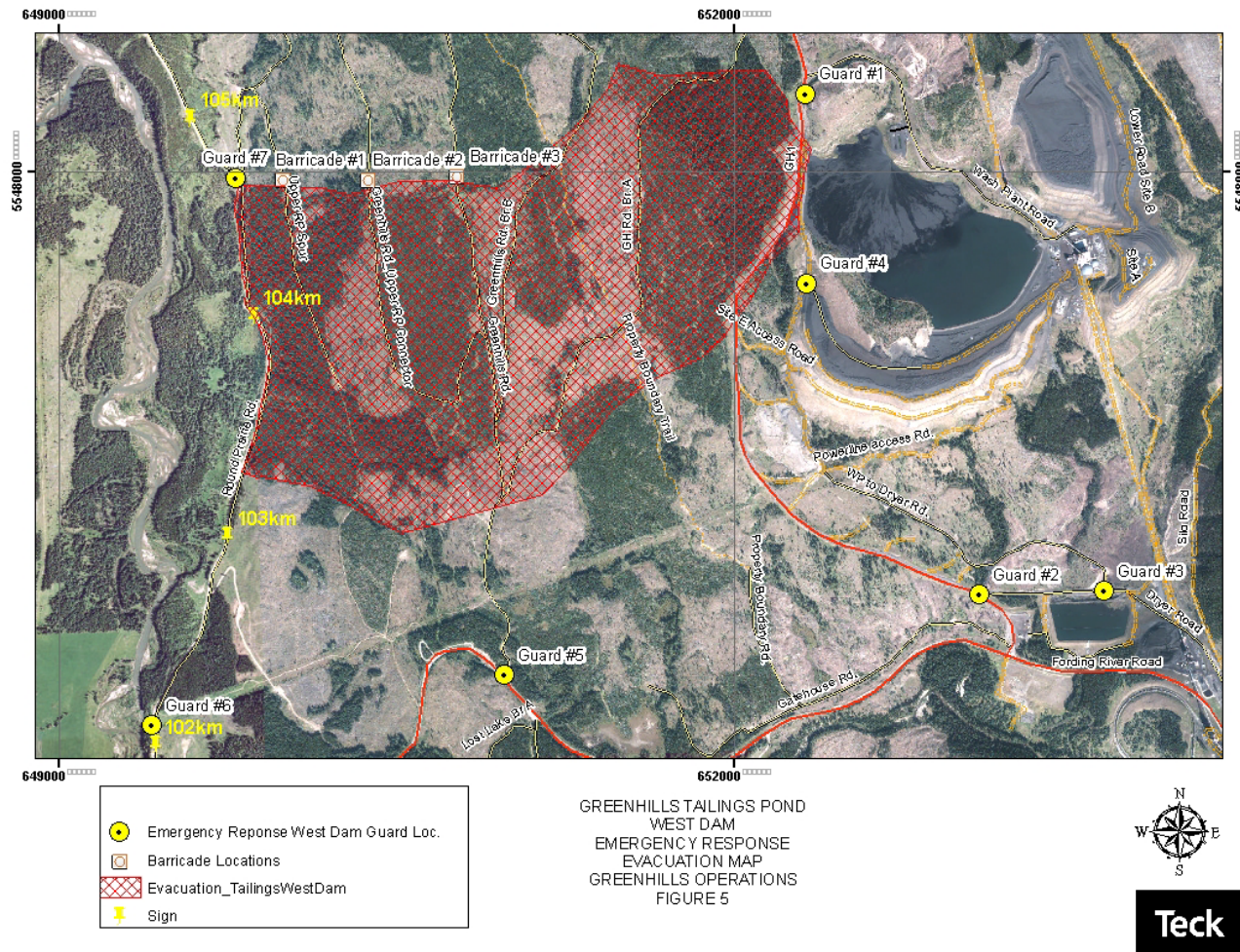


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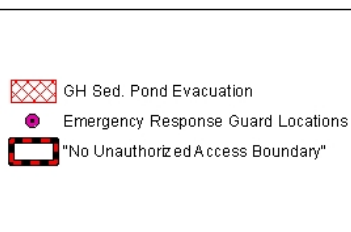
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Appendix B:



TAILINGS POND DAM and SETTLING POND DAM BREACH EMERGENCY RESPONSE PLAN

Appendix C:



GREENHILLS SEDIMENTATION POND
EMERGENCY RESPONSE
EVACUATION MAP
GREENHILLS OPERATIONS
FIGURE 6

