KGHM AJAX MINING INC.
AFTON TAILINGS STORAGE FACILITY



REPORT ON 2014 ANNUAL INSPECTION

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VA101-246/39-1
Rev 0
October 1, 2014

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Rev	Description	Date	Approved
0	Issued in Final	October 1, 2014	KLB

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EXECUTIVE SUMMARY

KGHM Ajax Mining Inc. (KGHM) is the current owner of the historic Afton Tailings Storage Facility (TSF). The TSF is located between Highway 5 and Highway 1, approximately 5 km to the west of their junction and 12 km to the west of the City of Kamloops.

The TSF was constructed in 1976 and 1977 and was operated for twenty years by Teck Resources Ltd. (Teck), during which time the Afton, Ajax, Pothook, and Crescent deposits were mined. The facility has been under care and maintenance since the Teck mining activities were suspended in 1997. The Afton TSF includes the East and West Dams, the tailings deposit, beaches and surface water pond, the Spillway at the East Dam, the Northwest and Southwest Seepage Ponds downstream of the West Dam, and the Alkali Creek diversion structures that divert the upslope Alkali Creek drainage area around the TSF.

KGHM commissioned Knight Piésold Ltd. (KP) to complete the 2014 annual inspection of the TSF. Scott Rees, P.Eng., visited the site on June 13, 2014 and completed the inspection in the company of Ken Davis, Environmental Technician at KGHM. The inspection involved making visual observations of the various TSF components, as well as reviewing background documentation and information.

New Gold Inc. (New Gold) recently began production at the New Afton Mine, located adjacent to and east of the TSF. The New Afton Mine consists of a block-cave underground mining operation (extending southwest from the historic Afton open pit), processing facilities, and a new tailings impoundment. An important component of the 2014 inspection report is the interaction between the New Gold underground mining activities and the Afton TSF, the East Dam of which is located within the potential surface expression of the block-cave subsidence zone. This includes monitoring surface displacements for the East Dam as well as monitoring potential impacts to the New Gold mining activities, such as a potential mud rush below the surface TSF. It is not entirely clear what responsibilities KGHM and New Gold have at this time regarding the safety of the other company's personnel and infrastructure. A common theme for the 2014 TSF inspection report is that the interaction between the block-cave mining activities and the safety of the Afton TSF needs to be monitored very closely as surface displacements have already been recorded at the East Dam and Spillway channel as a result of the block-cave mining activities.

The main findings of the 2014 annual inspection are as follows:

TSF Dams

- The West Dam is classified as an 'Extreme' consequence dam, in accordance with the criteria set out by the Canadian Dam Association (CDA) "Dam Safety Guidelines" (2007). It appeared to be in good condition at the time of the site visit, with no signs of distress observed along the crest, slopes, or toe of the dam. The structure meets the stability criteria defined by the CDA for the given consequence rating, as was demonstrated in a 2011 stability assessment completed by Klohn Crippen Berger (KCB).
- The East Dam is classified as a 'High' consequence dam, per the CDA guidelines. The East Dam crest appeared to be in good condition, with no signs of distress observed on the dam crest. The East Dam is buttressed by a waste rock dump.

- There are currently no vibrating wire piezometers installed at the East and West Dams (embankments and foundations) for dam safety monitoring, however an instrumentation installation program has been planned by KGHM and will commence on October 3, 2014. Emergency trigger levels for these piezometers will be determined and this information will be added to the Emergency Response Procedure (ERP).

Spillway

- The Spillway is required to pass the Probable Maximum Flood (PMF) event with an estimated design flow of 182 m^3/s, to meet the CDA design criteria for the 'Extreme' consequence rating for the West Dam. The Spillway is located near the north end of the East Dam and it discharges towards the Afton open pit.
- After the Teck mining operations were suspended in 1997, the Spillway was constructed to pass the PMF. With New Gold's New Afton Mine now in operation, construction and other mine related activity on the New Afton Mine site are occurring, with impacts to the Spillway. Changing conditions on New Gold's site will warrant a full review and potential modifications to or a re-design of the Afton TSF Spillway, in connection with New Gold's closure planning for the New Afton Mine.
- Surface cracks were observed in the Spillway Channel, downstream of the East Dam on the New Gold property (approximately 50 to 100 m from the KGHM/New Gold property gate). These cracks were confirmed by New Gold personnel to be the result of subsidence caused by New Gold's block-cave mining operation. These cracks were not visible last year during the 2013 DSR.

Interaction between New Gold's Block-Cave Mine and the Afton TSF

- New Gold has recently implemented an extensive subsidence monitoring program which includes movement monitoring (prisms) on the East Dam, vibrating wire piezometers in the tailings deposit, and LiDAR surveys to observe surface settlements. It is understood that additional vibrating wire piezometers and slope inclinometers will be installed in 2014 at the TSF East Dam by New Gold. Only the movement monitoring data from the prisms was provided by New Gold at the time of this report.
- Recorded settlements in the East Dam are less than 0.05 m, and up to 0.7 m in the Spillway based on data provided by New Gold. The locations and data specific to each monitoring point referenced herein are presented in Appendix B.
- Formal procedures for data sharing and communication protocols between KGHM and New Gold should be established so that both parties are aware of, and regularly updated on, the information at hand and the potential risks associated with the interaction between the block-cave mine and the Afton TSF.

TSF Pond

- The tailings pond elevation was estimated to be slightly below 700 m at the time of the inspection, with an estimated pond area of 55 hectares (ha). At this level there is over 4 m of freeboard to the Spillway outlet (704.1 m).
- The pond level was estimated to be approximately 0.5 m higher than it was one year earlier during the 2013 DSR site visit. The water level increase can be attributed to the Alkali Creek inflow that was diverted to the TSF for approximately three months during construction of the Alkali Creek Diversion Channel from late March to late June, 2014.

- Although the tailings pond level is acceptable from a freeboard point of view, and a larger pond does benefit KGHM in terms of dust control efforts, lowering the pond elevation will displace water away from the East Dam, reducing the risk of water and tailings ingress to the underground mine should a subsidence crack extend into the TSF in the future. It is recommended a plan be developed between KGHM and New Gold to pump out the tailings pond or otherwise displace it away from the East Dam to mitigate this risk.

Alkali Creek Diversion Structures

- The Alkali Creek diversion structures, which include the East Diversion Dam, West Diversion Dam, and Alkali Creek Diversion Channel, route runoff from 53 km^2 of upstream catchment around the south side of the TSF.
- The West Diversion Dam, at the upstream end of the Alkali Creek Diversion Channel, was in good condition at the time of the site visit. The East Diversion Dam is located off of KGHM property and was not inspected; however there were no concerns with its condition when observed by KP in July 2013.
- The Alkali Creek Diversion Channel construction program was nearing completion at the time of the site visit. The upgraded channel has been designed and constructed with a capacity to safely pass the peak flows associated with the 1 in 200 year flood event (approximately 4.4 m^3/s).

Seepage Ponds

- The Southwest Seepage Pond Dam repairs were completed in September, 2013, and the dam was in good condition at the time of the site visit. No water was stored in the Southwest Seepage Pond at the time of the site visit.
- The Northwest Seepage Pond had an estimated 2 m of freeboard up to the dam crest and the dam appeared to be in good condition. The outlet culvert was blocked by plywood, debris, and vegetation at the time of the inspection. KGHM subsequently removed this material in September 2014, restoring the design functionality of the outlet.

Emergency Response Procedure

- The latest version of the ERP, which includes the Operations, Maintenance, and Surveillance (OMS) procedures for the Afton TSF, is Revision 4, dated April 25, 2014.
- KGHM has initiated dam breach flood inundation mapping studies to comply with the August 18, 2014 Chief Mine Inspector's orders for tailings dams in BC. This information will be added to the ERP document.
- The ERP should be updated to include an instrumentation monitoring program and trigger levels for all dam safety instrumentation (piezometers, prisms, slope inclinometers, etc.).

Summary of Recommendations

KGHM has been proactively addressing identified deficiencies at the Afton TSF over the past year, and pending the completion of the vibrating wire piezometer installation program, and the dam breach inundation mapping this fall, the only remaining concern at the Afton TSF will be the interaction between the block-cave mine and the TSF Spillway and East Dam.

The recommendations from the 2014 annual inspection are summarized as follows:

1. Develop an action plan with New Gold demonstrating that the interaction between New Gold's block-cave mine and the Afton TSF is being fully assessed in terms of dam safety and underground mining safety, considering current and predicted future subsidence conditions as the mine advances.
2. Establish formal procedures for data sharing and communication protocols with New Gold so both parties are aware of, and regularly updated on, the information at hand and the potential risks associated with the interaction between the block-cave mine and the Afton TSF.
3. Dewater or otherwise displace the tailings pond away from the East Dam to reduce the risk of water and tailings ingress to the underground mine should a subsidence crack extend into the TSF in the future.
4. Update the ERP to include the results of the dam breach inundation mapping and the CDA classification review. Also update the ERP to include an instrumentation monitoring schedule and trigger levels for all instrumentation in the tailings dam that is relevant to dam safety (piezometers, prisms, slope inclinometers, etc.).

The CDA Dam Safety Guidelines recommend a DSR be conducted every five years for tailings dams with an 'Extreme' consequence rating. With the latest DSR completed in 2013, the date for the next DSR should be 2018. However, the action items listed above should be initiated immediately.

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Appendix A Afton TSF Construction Drawings
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1 – INTRODUCTION

1.1 GENERAL

KGHM Ajax Mining Inc. (KGHM) is the current owner of the historic Afton Tailings Storage Facility (TSF). This report summarizes the 2014 annual inspection completed by Knight Piésold Ltd. (KP) for KGHM. The report has been prepared in accordance with the Ministry of Energy and Mines (MEM) "Guidelines for Annual Dam Safety Inspection Reports", August 2013.

1.2 LOCATION

The Afton TSF is located between Highway 5 and Highway 1, approximately 5 km to the west of their junction and 12 km to the west of the City of Kamloops, as shown on Figure 1.1.

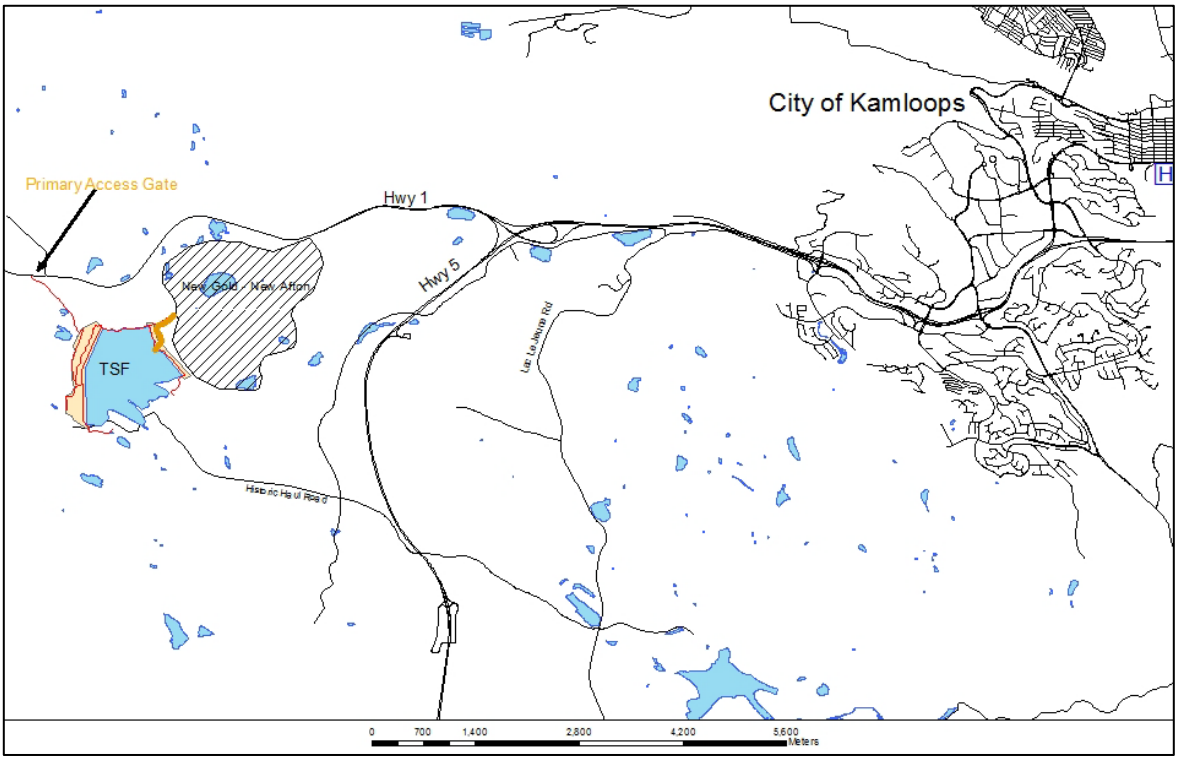


Figure 1.1 Afton TSF Location Map

1.3 FACILITY OVERVIEW

The TSF consists of the following major components:

- Two zoned earthfill/rockfill dams with engineered filters. The two dams are referred to as the West Dam and the East Dam.
- The tailings deposit, tailings beaches and the surface water pond.
- The Spillway Channel, located near the north end of the East Dam.
- Two seepage collection ponds located downstream of the West Dam, referred to as the Northwest Seepage Pond and the Southwest Seepage Pond.

- Diversion structures located at the south side of the TSF to divert Alkali Creek around the TSF. The diversion is comprised of the East Diversion Dam across Alkali Creek, the West Diversion Dam across a smaller valley, and the Alkali Creek Diversion Channel, starting at the West Diversion Dam and terminating downstream of the West Dam and upstream of Cherry Creek.

The general arrangement of the Afton TSF is shown on Figure 1.2.

Figure 1.2 Afton TSF – General Arrangement

1.4 BACKGROUND

The Afton TSF was constructed in 1976 and 1977 by Teck Resources Ltd. (Teck). Production at the Afton Mine began in 1977, and the tailings dams were progressively raised throughout the operating period to store the increasing volume of tailings and water generated from milling the Afton, Ajax, Crescent, and Pothook ore reserves. An estimated 37 million cubic metres (Mm^3) of tailings solids were deposited into the TSF between 1977 and 1997.

The facility has been under care and maintenance since the Teck mining operations closed in 1997. Ownership of the TSF was transferred to Abacus Mining Inc. (Abacus) upon its acquisition of the Ajax Project from Teck in 2002, and in 2011 KGHM acquired a controlling interest in the Ajax Project (and the Afton TSF).

In January 2007, New Gold Inc. (New Gold) acquired the rights to the New Afton Copper-Gold Project from Teck, and the New Afton Mine began commercial production in July 2012 (www.newgold.com). The project area is directly to the east of the Afton TSF and consists of process plant facilities, a new TSF, and an underground block-cave mining operation that extends

from the historic Afton open pit to the southwest (www.newgold.com), towards the Afton TSF. The New Afton Mine has a projected mine life of 12 years according to the company's website.

1.5 REFERENCE DOCUMENTS

The following documents were reviewed as part of the annual inspection process:

- BGC Engineering Inc. (BGC): Dam Safety Review - East and West Dams. Afton Mine, Kamloops, BC, May 11, 2009.
- Kala Geosciences Ltd. (Kala): Updated Water Balance – Tailings Impoundment, September 14, 2010.
- Golder Associates (Golder): Annual Dam Inspection, September 1, 2011.
- Klohn Crippen Berger (KCB): Afton tailings Impoundment, Seismic Hazard and Seismic Stability Assessment, May 27, 2011.
- Golder: 2012 Review of the Teck Tailings Storage Facility, March 21, 2013.
- KP: Southwest Seepage Dam Repair, Construction Quality Assurance Report, November 21, 2013.
- KP: Environmental Management Act Permit 3904 Assessment, February 20, 2014.
- KP: Dam Safety Review, Afton Tailings Storage Facility, March 28, 2014.
- KGHM: Emergency Response Procedure – Operations, Maintenance and Surveillance, Rev 4, April 25, 2014.
- KP: Alkali Creek Diversion Channel, Construction Quality Assurance Report, July 29, 2014.

1.6 2013 DAM SAFETY REVIEW RECOMMENDATIONS

The 2013 DSR completed by KP noted the following key action items:

- The CDA hazard classification for the East Dam should be reviewed to determine if the rating and associated design criteria should be increased.
- The 2011 stability assessment completed by KCB only considered the West Dam; stability analyses for the East Dam should be conducted with an Earthquake Design Ground Motion (EDGM) corresponding to a 1 in 10,000 year return period.
- The surface monuments at the East Dam should be monitored and a response plan should be developed if any impacts to the East Dam are noticed.
- There are no piezometers in the East Dam and only two standpipe piezometers in the West Dam; additional piezometers should be installed to monitor embankment fill and foundation pore pressures at both dams, and trigger levels for the piezometers should be established.
- An instrumentation monitoring schedule should be included in the Operations, Maintenance, and Surveillance (OMS) manual.
- The plywood gate blocking the outlet culvert for the Northwest Seepage Pond Dam should be cleared of debris and vegetation so that it can be removed in short notice to release water if there is a risk of overtopping the dam.
- The Alkali Creek Diversion Channel should be upgraded to ensure surface water diversion around the TSF is effective up to a designated design storm event.
- The Emergency Response Procedure (ERP) and Operations, Maintenance, and Surveillance (OMS) manual should be kept up to date.
- An inundation map showing the potential impacted downstream areas in the event of a dam breach should be developed.

- The next DSR is scheduled for2018, in accordance with the CDA Dam Safety Guidelines.

1.7 2014 SITE INSPECTION OVERVIEW

Scott Rees, P.Eng. of KP visited the site on June 13, 2014 to conduct the annual inspection of the TSF. The inspection was completed in the company of Ken Davis, Environmental Technician at KGHM, and involved making visual observations of the major facility components as outlined in Section 1.3. The weather on the day of the inspection was mild and overcast, with some rainfall in the afternoon.

Figure 1.3 shows a panoramic view across the Afton TSF taken during the inspection.

Figure 1.3 Panoramic View of Afton TSF from the Northeast Corner

This annual inspection report is based on the observations made on site, as well as the information obtained by liaising with KGHM and New Gold personnel and through a documentation review. It reflects the best judgement of the author based on the available information at the time of the study.

2 – TSF DAMS

2.1 OVERVIEW

The tailings dams were initially constructed in 1976 and 1977 and were progressively raised using the downstream construction method during the mine operating period. The dams are comprised of an upstream till zone, filters, and a downstream rockfill zone as shown on the KCB cross section for the West Dam that was used in the 2011 stability assessment (Figure 2.1).

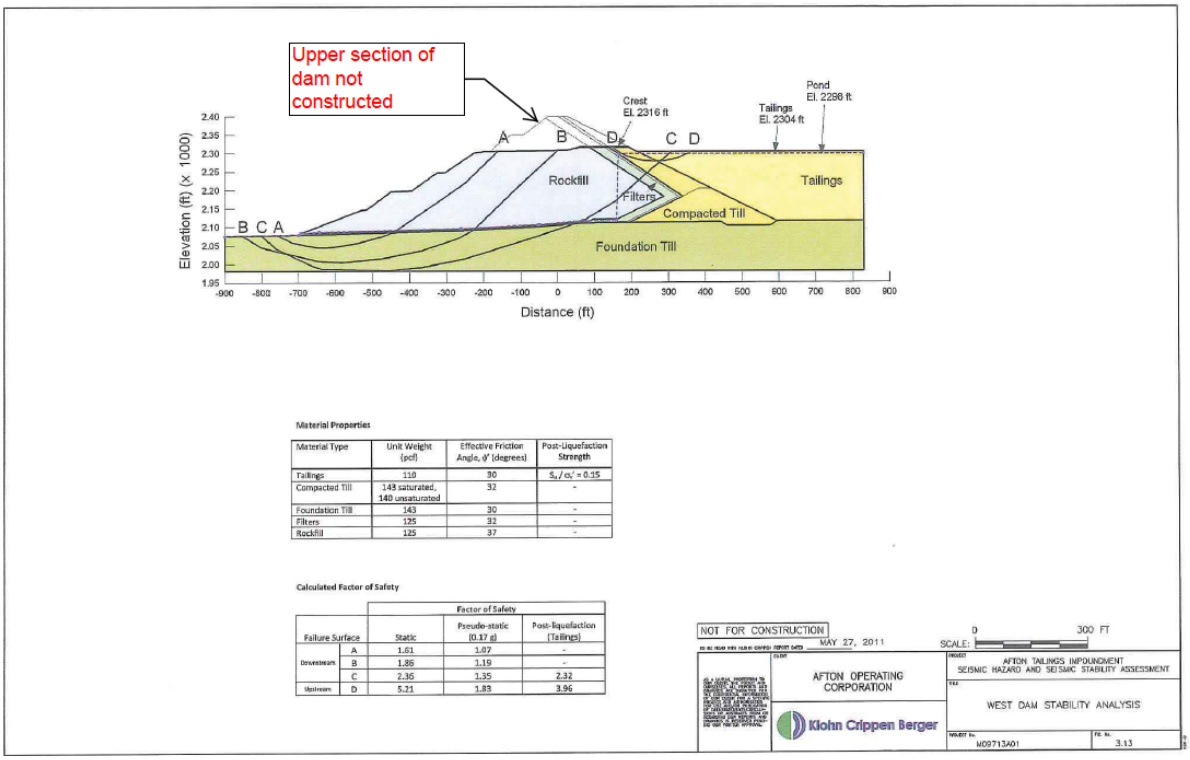


Figure 2.1 Dam Cross Section from 2011 KCB Stability Assessment

The TSF dams were constructed to an approximate final crest elevation of 706 m; the TSF was not constructed to its ultimate design elevation of 732 m due to mining operations being suspended earlier than originally planned. Construction drawings showing a plan and sections at the West and East Dams are provided in Appendix A.

The West Dam is the larger of the two dams and is approximately 1,300 m long and 75 m in height at its highest point. The downstream rockfill zone of the West Dam was constructed to the full width associated with the ultimate design height, resulting in a wide dam crest since the ultimate dam height was not reached. The crest width is in the order of 100 m at the current crest level of 706 m.

The East Dam is approximately 860 m long and 65 m in height at its highest point. The East Dam is buttressed by a waste rock dump on the downstream side and the Spillway is located at the north end of the East Dam, to direct any outflows through the New Gold property and into the Afton open pit.

2.2 OBSERVATIONS AT THE WEST DAM

The condition of the West Dam was assessed by visual observations and by reviewing the available background documentation, including previous DSRs and inspections. The visual inspection at the West Dam was made by walking and driving along the crest, downstream toe and the abutments.

No signs of distress were identified on the West Dam and it was considered to be in good condition at the time of the site visit. The dam slopes were approximately planar and there was no evidence of cracking, bulging or slumping in the fill materials. The dam crest appeared to be relatively level with no signs of differential settlement or distress. There was no evidence of animal burrowing nor were there any visible signs of seepage through the dam. Some minor erosion paths were noticed on the downstream side of the dam however they do not impact dam safety and are not considered to be a deficiency requiring action.

A photograph of the West Dam is shown on Figure 2.2.

Figure 2.2 View Looking South along the West Dam

2.3 OBSERVATIONS AT THE EAST DAM

The condition of the East Dam was assessed by visual observations and by reviewing the available background documentation. The visual inspection at the East Dam was limited to walking and driving along the crest; due to the waste rock dump that buttresses the East Dam on the New Gold property, a more thorough surface inspection along the East Dam is not possible.

No signs of distress were identified on the tailings embankment crest. There was no evidence of cracking, bulging or slumping and it appeared to be relatively level with no signs of differential settlement or distress, and no signs of animal burrowing in the dam crest.

2.4 DAM CLASSIFICATION

The selection of appropriate design earthquake and flood events for dams in Canada is based on the dam hazard classification and recommended design values set out by the Canadian Dam Association (CDA), "Dam Safety Guidelines" (2007). The hazard classification for a dam is carried out by considering the potential consequences of a dam failure on human life, infrastructure, and the environment.

The dam hazard classifications for the East and West Dams were evaluated as part of the 2013 DSR. The classifications that are currently in place are as follows:

- West Dam: 'Extreme' Consequence, and
- East Dam: 'High' Consequence.

The West Dam is located 1.4 km upstream from a trailer park, and it is estimated that as many as 100 to 150 fatalities could occur as a result of a dam breach (BGC, 2009). The population at risk dictates an 'Extreme' dam classification and associated design parameters. This is the highest possible consequence rating, and the Inflow Design Flood (IDF) for the TSF, based on this rating, is the Probably Maximum Flood (PMF). The Earthquake Design Ground Motion (EDGM) for the West Dam is the value corresponding to a return period of 1 in 10,000 years, based on the CDA guidelines.

The East Dam is located adjacent to New Gold's New Afton Mine and currently has a 'High' consequence rating, with a corresponding EDGM of 1 in 2,500 years. It was noted in the 2013 DSR that the hazard classification for the East Dam should be reviewed and possibly increased due to the adjacent mine and the possibility that water and/or debris could reach Highway 1 in the event of a dam breach.

On August 18, 2014, the Chief Mine Inspector issued new orders for all tailings dams in BC. Under these orders it is required that a dam breach assessment and flood inundation mapping is completed by early December, 2014, for tailings dams with a 'High', 'Very High', or 'Extreme' consequence rating.

KGHM has initiated these dam breach studies and will undertake a review of the CDA classifications following completion of the inundation mapping. The results of the inundation studies and the dam classification reviews will be used to update the Emergency Response Procedure (ERP) document for the Afton TSF.

2.5 DAM STABILITY

A detailed seismic hazard and stability assessment for the TSF West Dam was completed by KCB in 2011, in response to a recommendation from the 2009 DSR that additional seismic stability analyses should be completed using higher seismic loading parameters, to be consistent with the 'Extreme' classification of the dam.

The assessment considered the embankment section shown on Figure 2.1 and used the 1 in 10,000 year peak ground acceleration (PGA) value of 0.34g and a corresponding earthquake magnitude of 7.3. The conclusions from the stability assessment were:

- The foundation soils were found to be unsusceptible to liquefaction
- The dam meets factor of safety targets for slope stability under static and seismic loading, and
- The predicted seismic deformation is within acceptable limits.

The East Dam was not analyzed at the time, due to the following reasons:

- The East Dam is thought to have similar foundation conditions to the West Dam
- The East Dam is not as high as the West Dam
- The East Dam is largely buttressed by a waste rock dump, and
- The East Dam classification ('High') is lower than that for the West Dam ('Extreme') and the corresponding EDGM value is lower.

2.6 TSF INSTRUMENTATION

There are two standpipe piezometers located at the toe of the West Dam. The piezometers were read in March 2011 and the measured water levels were used to estimate the phreatic surface for the 2011 stability assessment. These piezometers should be monitored on an ongoing basis.

Excluding the subsidence monitoring instrumentation installed in 2013 and 2014 by New Gold (discussed in Section 4), there is no other instrumentation at either the East or West Dams. A recommendation of the 2013 DSR was to install vibrating wire piezometers (VWPs) in the tailings dams to monitor pore water pressures in the dam fill and foundations.

KGHM has initiated a VWP installation program to address this recommendation. A total of 16 VWPs will be installed at the West Dam, and 8 VWPs will be installed at the East Dam. The drilling program will commence in early October, 2014. Trigger levels will be established for the piezometers and will be added to the Operations, Maintenance, and Surveillance (OMS) manual in the ERP.

3 – SPILLWAY

3.1 OVERVIEW

The Spillway is located at the north end of the East Dam, as shown on Figure 1.2. Runoff exceeding the storage capacity in the Afton TSF would pass over the Spillway, discharging down the channel and into the Afton open pit.

The majority of the Spillway is located on New Gold property. Access along the length of the Spillway was not possible during the site inspection; however, the channel was accessed at its exit point from the East Dam, and between the New Gold and KGHM property gate at the north end of the East Dam and the road crossing the spillway roughly 200 m further downstream. Access onto the New Gold property and accompaniment while on the site was provided by Emily O'Hara of New Gold.

3.2 OBSERVATIONS

The Spillway is lined with large rip rap where it exits the TSF at the East Dam, as shown on Figure 3.1. The outlet at the East Dam appeared to be in good condition and there were no visible concerns. The condition of the Spillway between the outlet at the East Dam and the KGHM/New Gold property gate is unknown, as this section was not accessed during the inspection.

Figure 3.1 Looking (East) Down the Spillway at the East Dam

Further downstream, cracks were observed in the Spillway channel, approximately 50 m to 100 m downstream from the gate separating the KGHM and New Gold properties at the East Dam. The cracks run roughly perpendicular to the Spillway and in some cases are large, visible for substantial distances across the New Gold property. These cracks were discussed with New Gold personnel and were confirmed by New Gold to be the result of subsidence caused by the block-cave mining operation. Subsidence is discussed further in Section 4.

Figures 3.2 and 3.3 show the general location and size of cracks that were observed on the site visit.

Figure 3.2 Observing the Cracks in the Spillway Upstream of the Road Crossing

3.3 SPILLWAY CAPACITY

The CDA guidelines require an evaluation of the ability of tailings dams to contain or pass the Inflow Design Flood (IDF) without an uncontrolled release of the reservoir. This evaluation is made in terms of the discharge capacity of the Spillway and the attenuation capacity and freeboard in the pond.

The IDF for the TSF is the Probable Maximum Flood (PMF). If the PMF were to occur, it is assumed that all upslope diversions (the Alkali Creek diversion structures) would fail, and the runoff from the entire catchment area would flow to the TSF.

Figure 3.3 Spillway Channel Crack, June 13, 2014

The TSF has an upslope catchment area of 55.6 km^2 (KP, 2013) and 3.4 Mm^3 of normally available storage capacity, from a pond level of 699.5 m up to the spillway outlet level at 704.1 m (refer to

Section 5.1). This will be exceeded by the PMF inflow volume and the attenuation capacity of the reservoir will be small, therefore the water level in the TSF at the time when the PMF occurs will have little impact on the peak Spillway outflows.

The PMF estimates for the Afton TSF were reviewed in the 2013 DSR. The estimated value of 182 m^3/s estimated by KCB was considered to be a reasonable estimate for the PMF and Spillway sizing. The estimate has not been reviewed as part of the 2014 annual inspection.

3.4 ALIGNMENT AND HYDRAULICS

After the Teck mining operations were suspended in 1997, the Spillway was constructed to withstand the design flow based on the conditions at the time of construction. With New Gold's New Afton Mine now in operation, construction and other mine related activity on the New Afton Mine site are occurring, with observable impacts to the Spillway.

For example, New Gold has constructed a road with culverts across the Spillway, roughly 200 m downstream from the KGHM/New Gold property gate at the north end of the East Dam. This road greatly reduces the channel capacity (KP, 2013) and may impact the flow course downstream of the culverts during a flood event that exceeds the capacity of the culverts.

The changing conditions on New Gold's site will warrant a full review and potential modifications to or a re-design of the Afton TSF Spillway. This review should occur in connection with New Gold's closure planning for the New Afton Mine and should include:

- A review of the IDF based on up to date hydrology records and catchment areas.
- Consideration of New Gold's TSF, located adjacent to and upgradient of the Afton TSF, and its potential impacts on the IDF for the Afton TSF Spillway.
- A review of the final layout for the New Afton Mine and the best routing for the Spillway based on the surface conditions.
- A review of the erosion protection measures (rip rap and sizing) and the hydraulic performance of the Spillway over its entire length.
- Consideration of the actual subsidence conditions at mine closure and projected long term conditions, and their potential impacts on Spillway performance.

4 – BLOCK-CAVE MINE INTERACTION WITH THE TSF

4.1 BLOCK CAVE MINING AND SUBSIDENCE

Bulk extraction of ore from a block-cave mine often causes settlement (subsidence) within a zone of influence on ground surface above the mine. The New Afton block-cave mine extends southwest from the historic Afton open pit (www.newgold.com), in the direction of the Afton TSF. The New Afton Mine began commercial production in July 2012 and has a projected mine life of 12 years according to the company's website.

An important component of this annual inspection is the interaction between the New Gold underground mining activities and the Afton TSF, the East Dam of which is located within the potential surface expression of the block-cave subsidence zone. This includes monitoring surface displacements for the East Dam as well as monitoring potential impacts to the New Gold mining activities, such as a potential mud rush below the surface TSF. It is not entirely clear what responsibilities KGHM and New Gold have at this time regarding the safety of the other company's personnel and infrastructure. A common theme for the 2014 TSF inspection report is that the interaction between the block-cave mining activities and the safety of the Afton TSF needs to be monitored very closely as surface displacements have already been recorded at the East Dam and Spillway channel as a result of the block-cave mining activities.

The subsidence cracks that were noticed in the Spillway channel in June 2014, two years after production at the New Afton Mine began, are potentially significant. Considering the direction of mining and the mine life ahead, it is anticipated that increased subsidence cracking and settlement will occur, extending further into the area of the Spillway, East Dam, and Afton TSF as a whole as the mine advances.

Thorough assessments of the interaction between the underground mine and the Afton TSF must be completed to demonstrate that dam safety and underground mine safety are not compromised by ongoing mining activities. The assessments should consider all failure mechanisms that could occur as well as risk reduction measures that can and should be implemented.

It is understood that New Gold is completing these studies presently. New Gold has also implemented an extensive subsidence monitoring program which is discussed in the subsequent sections.

4.2 VIBRATING WIRE PIEZOMETERS

VWPs were being installed in the tailings deposit at the time of the annual inspection site visit (Figure 4.1). It is understood that a total of 25 vibrating wire piezometers were installed at different depths in 8 drillhole locations throughout the tailings deposit. The site investigation report and the results collected to date at these piezometers were not available for this report.

While the New Gold VWPs will provide good information on water pressures throughout the tailings deposit, they do not target the tailings dams; the KGHM VWP installation program discussed in Section 2.6 specifically targets the tailings dams and foundations for the purpose of dam safety monitoring.

The New Gold piezometer data should be obtained and routinely monitored by KGHM, as it will provide good information on water pressures and water levels in the tailings deposit. KGHM should

obtain the locations and depths of all New Gold piezometers, and any that may be relevant to dam safety should be added to the Operations, Maintenance, and Surveillance (OMS) manual in the ERP.

Figure 4.1 2014 New Gold Piezometer Installation Drilling Program near the West Dam

4.3 EAST DAM INSTRUMENTATION

Surface monitoring equipment was observed along the East Dam during both the 2014 annual inspection and the 2013 DSR site visit (Figure 3.2). This New Gold instrumentation currently consists of prisms along the East Dam, the waste rock dump buttressing the East Dam, and the Spillway.

A presentation of the data collected to date for the East Dam and Spillway Channel was provided by New Gold for the annual inspection, and it is included in Appendix B. The data shows vertical settlement in the East Dam of less than 0.05 m, and settlement in the Spillway channel of up to 0.7 m over the past year. The locations of the prisms and their individual settlement data can be reviewed in Appendix B. This instrumentation should be monitored closely and routinely by New Gold and KGHM going forward.

Figure 4.2 Surface Monitoring on the East Dam

4.4 ADDITIONAL MONITORING EFFORTS

It is understood that New Gold recently completed a LiDAR survey to compare current surface elevations with those from earlier surveys, to observe the subsidence settlements caused by the block-cave mine. This data was not available for the annual inspection.

It is understood that New Gold is also planning to install slope inclinometers and additional vibrating wire piezometers in the foundation of the East Dam, to further analyze subsidence. This dam safety monitoring data will be relevant to KGHM; it should be obtained and routinely monitored for dam safety.

Thorough reviews of all subsidence monitoring data and the related New Gold analyses should be completed on an ongoing basis by KGHM, to best understand the current and predicted future conditions and to confirm that the safety of the East Dam and Afton TSF as a whole is not compromised.

5 – TAILINGS POND

5.1 TSF POND GEOMETRY

The tailings beaches slope downwards towards the centre of the facility and away from the dam crests. A pond is located in the centre of the facility, with a water level that fluctuates seasonally with rainfall, snow melt, and evaporation.

KGHM provided 0.5 m topography that was generated from a LiDAR survey flown in the spring of 2013, covering the Afton TSF and surrounding areas. The topography was used to estimate the storage capacity within the TSF and to confirm the elevations of the dam crests and the Spillway.

The as-built drawings for the tailings dams (Appendix A) and the 0.5 m topography are consistent in showing the dam crests to be at approximately 706 m. The Kala water balance report indicates that the Spillway was constructed with an invert elevation of 704.1 m and this also appears to be consistent with the 0.5 m topography. The lowest contour within the TSF area was 699.5 m, implying that the tailings pond was between 699.0 m and 699.5 m at the time of the LiDAR survey. The ponded volume and bathymetry of the pond below the 699.5 m contour is not known, however based on estimated beach slopes the pond is expected to be quite shallow. A storage volume of less than 0.5 Mm^3 below the 699.5 m contour is expected.

The surface area corresponding to the 699.5 m contour is approximately 40 ha (equivalent to a 630 m x 630 m square). A depth-area-capacity relationship developed for the tailings beach area between 699.5 m and the Spillway Channel invert shows that, in addition to the water below the 699.5 m contour, roughly 3.4 Mm^3 of water storage is available, and the full pond would cover an area of 100 ha. There is approximately 1.9 m of freeboard from the base of the Spillway Channel to the East Dam crest, provided that the survey data is accurate and no changes have occurred that impact the TSF and embankment elevations.

5.2 POND CONDITION

The tailings pond has not historically had a staff gauge or other precise means of determining the water level (the VWPs installed in the tailings deposit should now provide that means). The 2013 DSR estimated a pond water level of 699.5 m and was based on the 2013 LiDAR topography. The pond in the summer of 2013 is thought to have been between 699.0 m and 699.5 m.

The pond at the time of the 2014 annual inspection is shown on Figure 5.1. To determine the pond level, on-site KP personnel took a series of GPS readings at various points along the water's edge between June 11th and 17th, and these points were plotted onto the 0.5 m topography. All of the points fell between 699.5 m and 700.0 m and were generally closer to the 700.0 m contour.

The 0.5 m rise in the tailings pond in the year between the 2013 DSR and the 2014 annual inspection can be attributed to the Alkali Creek Diversion Channel construction program. For approximately 3 months (late March until late June, 2014), the diversion channel flow was diverted from the West Diversion Dam into the TSF to facilitate construction downstream, as shown on Figure 5.2. The depth-area-capacity curve for the TSF surface shows a storage capacity of approximately 245,000 m^3 between the 699.5 m and the 700.0 m contours, and this volume aligns very well with the estimated flow rates in the diversion for the three months during construction. The Alkali Creek Diversion Channel is discussed further in Section 7.

Figure 5.1 View of the TSF Pond from the West Diversion Dam

The tailings pond is at a normal level and has over 4 m of freeboard up to the Spillway Channel outlet. Although this is acceptable from a freeboard point of view, and a larger pond does benefit KGHM in terms of dust control efforts, lowering the pond will displace water away from the East Dam and will reduce the risk of water and tailings ingress to the underground mine should a crack extend into the TSF in the future. For this reason it is recommended that the pond be pumped out or otherwise displaced away from the East Dam.

5.3 WATER BALANCE

In 1997, water levels in the surface water pond were reported to range between 702.6 m and 704.0 m (Kala, 2010). Based on the 1997 water balance it was estimated that a 'dry' closure would naturally occur, with depletion of the pond occurring over a period of seven years (Kala, 1997) as evaporation losses would exceed runoff from rainfall and snow melt.

Pond levels decreased as predicted in the water balance. Based on a review of the available information, the TSF is probably in a seasonal equilibrium at or near the recent pond levels of 699.0 m to 699.5 m.

The only recorded occurrences of unusual water level changes are as follows:

- In 2011, New Gold pumped water out of the Afton open pit into the Afton TSF to facilitate underground mine development.
- In 2012, New Gold pumped water out of the Afton TSF and into their new tailings impoundment for start-up.

- In the spring of 2014, Alkali Creek was diverted into the TSF during construction of the Alkali Creek Diversion Channel as described in Section 7.4.

Figure 5.2 Diversion of Alkali Creek into the TSF

5.4 WATER QUALITY

Water quality sampling at the Afton TSF has been ongoing since mine closure in 1997. KGHM currently holds Ministry of Environment Permit 3904 under the provisions of the *Environmental Management Act,* which requires annual water quality sampling and data reporting. A total of five stream sites (two on Cherry Creek, one on Alkali Creek, and two on Peterson Creek) are monitored biannually, and sampling in the Afton TSF supernatant pond and the Northwest Seepage Pond are monitored annually. The latest water quality report is referenced in Section 1.5.

6 – WEST DAM SEEPAGE PONDS

6.1 OVERVIEW

Two seepage control ponds are located downstream of the West Dam: the Northwest Seepage Pond, located across the old Alkali Creek channel, and the Southwest Seepage Pond, located on a small tributary valley to Cherry Creek. The position of the ponds is shown on Figure 1.2.

6.2 SOUTHWEST SEEPAGE POND

The Southwest Seepage Pond Dam is shown on Figure 6.1. The pond has a very small upstream catchment area and primarily collects surface runoff from the downstream face of the West Dam and a small area on the south abutment. The impounded area upstream of the dam is typically dry, as was the case during the site visit.

A breach of the Alkali Creek Diversion Channel upstream during a storm in May 2011 led to the Southwest Seepage Pond being filled and subsequently overtopped. A portion of the impounding embankment was eroded during this event. KGHM repaired the dam in September, 2013; the quality assurance report is referenced in Section 1.5. The Southwest Seepage Pond Dam is in good condition.

Figure 6.1 Southwest Seepage Pond

6.3 NORTHWEST SEEPAGE POND

The Northwest Seepage Pond is shown on Figure 6.2. Unlike the Southwest Seepage Pond, the Northwest Seepage Pond retains water throughout the year. The pond is formed by a small dam at the west end of the pond that has an outlet culvert near the south abutment.

The Northwest Seepage Pond had an estimated freeboard of 2 m up to the dam crest and the dam appeared to be in good condition during the site visit. At the time of the visit, the outlet culvert was blocked by plywood, debris, and vegetation.

In September 2014, KGHM personnel removed the material that was blocking the outlet culvert to restore its intended function and capacity. It is recommended that this outlet remains permanently unblocked in the future.

Figure 6.2 Northwest Seepage Pond Dam, Looking South

7 – DIVERSION STRUCTURES

7.1 OVERVIEW

The Alkali Creek diversion structures upstream of the Afton TSF divert a catchment area of 53 km^2 around the south side of the facility and into the valley downstream of the Southwest Seepage Pond that flows into Cherry Creek a short distance further downstream (KP, 2013). The Alkali Creek diversion structures are comprised of the following:

- The East Diversion Dam, located on Alkali Creek outside of the KGHM property, diverts Alkali Creek through a small lake and into the slough behind the West Diversion Dam.
- The West Diversion Dam, located across a small valley that would otherwise flow to the TSF.
- The Alkali Creek Diversion Channel, a 1,030 m long channel carrying flows from the West Diversion Dam to the stilling basin at the channel outlet, downstream of the Southwest Seepage Pond.

The general arrangement of the West Diversion Dam and the Alkali Creek Diversion Channel, in relation to the Afton TSF, is shown on Figure 7.1.

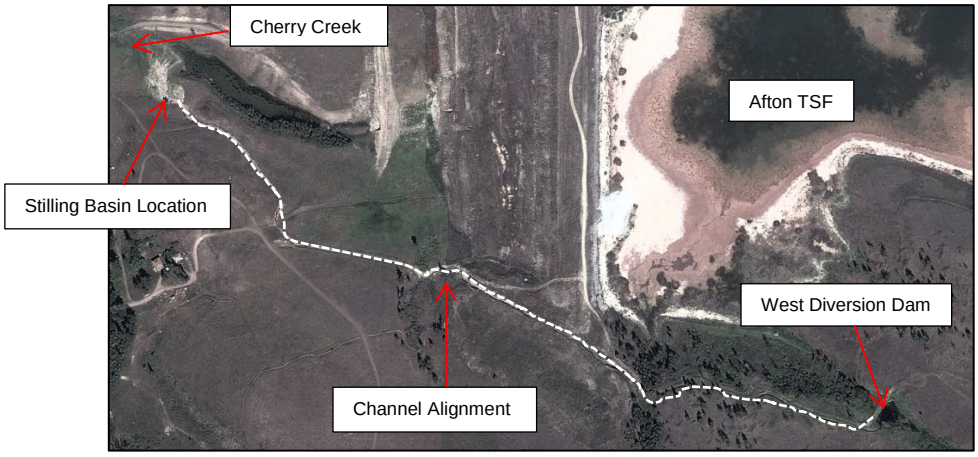


Figure 7.1 Overview Plan of the Alkali Creek Diversion

7.2 EAST DIVERSION DAM

The East Diversion Dam is located across Alkali Creek and it is not on KGHM property. This structure was not accessed during the annual inspection and its condition at the time of the site visit is not known. However, it was visited in 2013 at which time there were no obvious issues with the structure.

The East Diversion Dam is at a drainage divide between Alkali Creek and the valley on which the West Diversion Dam is located. A review of the topography indicates that water diverted out of the East Diversion Dam flows to the West Diversion Dam constrained by topography, and there is no risk of a channel breach between the two structures, provided the dam itself is not breached (at Alkali Creek).

7.3 WEST DIVERSION DAM

The West Diversion Dam is located across a small valley that feeds to the TSF, as shown on Figure 7.1. It diverts water inflows from the East Diversion Dam as well as its own natural catchment area into the Alkali Creek Diversion Channel. The structure forms a marshy slough in the impounded area upstream.

The West Diversion Dam appeared to be in good condition at the time of the site visit and there were no signs of distress in the dam. On site personnel confirmed that the West Diversion Dam was not altered or otherwise impacted during the construction works for the Alkali Creek Diversion Channel. It was noted, however, that the outlet elevation for the channel is now lower than it has been historically, and this will result in a lower equilibrium water level in the slough.

A photograph of the West Diversion Dam taken during the annual inspection is shown on Figure 7.2.

Figure 7.2 West Diversion Dam at the Start of the Alkali Creek Diversion Channel

7.4 ALKALI CREEK DIVERSION CHANNEL

KGHM undertook a major construction upgrade project for the Alkali Creek Diversion Channel in the spring of 2014. The channel, which was previously eroded with over-steepened side slopes in some areas, had sloughed and breached in the past. In May 2011, a channel failure resulted in an uncontrolled inflow to the Southwest Seepage Pond and subsequent dam erosion, as described in Section 6.2.

KGHM retained KP to complete the engineering aspects for the upgrade. This included a detailed hydrologic review, detailed design, and construction supervision.

The construction program was nearing completion at the time of the site visit, and was completed approximately two weeks later in late June, 2014. The channel has been designed and constructed to safely pass inflows up to 4.4 m^3/s, the estimated 1 in 200 year flood event. The construction quality assurance report is referenced in Section 1.5, and a photograph taken during the site visit is shown on Figure 7.3.

Figure 7.3 View Looking Downstream Along the Alkali Creek Diversion Channel

8 – COMMUNICATIONS AND SAFETY

8.1 COMMUNICATION PROTOCOLS

Formal procedures for data sharing and communication protocols between KGHM and New Gold should be established so that both parties are aware of, and are regularly updated on, the information at hand and the potential risks associated with the block-cave mining operation. New Gold has implemented an extensive instrumentation monitoring program, and it is fundamental that this data is continuously monitored and shared with KGHM (as the owner of the TSF). The integration of data collected by New Gold into KGHM's OMS will improve the data record and emergency response for the facility.

It is recommended that an action plan be developed to demonstrate that the interaction between the block-cave mine and the Afton TSF is being fully assessed in terms of both dam safety and underground mining safety, considering all risks and potential failure mechanisms. The action plan can be developed as a collaborative effort between KGHM and New Gold and it should consider both current and projected conditions that may occur as the block-cave mine advances.

8.2 EMERGENCY RESPONSE PROCEDURE

The latest version of the Emergency Response Procedure (ERP) document, which includes Operations, Maintenance and Surveillance (OMS), was provided to KP for the annual inspection (KGHM – Emergency Response Procedure – Operations, Maintenance and Surveillance, Rev 4, April 25, 2014). The document includes the following:

- Plan distribution and revision control
- Emergency contact information, including a response support contact list
- An Emergency Response Procedure (ERP)
- General Facility information
- OMS
- Hazard analysis of operation
- Conditions and responses, and
- Emergency stand down and follow-up procedures.

The following additional information should be included in the document:

- Trigger levels for the vibrating wire piezometers being installed by KGHM (Section 2.6) and any of the New Gold subsidence monitoring data that is relevant to dam safety (Section 4) should be added to the ERP.
- An instrumentation monitoring schedule for the instrumentation noted above should be included (piezometers, prisms, slope inclinometers, etc).
- Flood inundation mapping showing the impacted area from a dam breach, as per the Chief Mine Inspector's Orders of August 18, 2014.

9 – CONCLUSIONS AND RECOMMENDATIONS

A summary of the 2014 annual inspection findings is as follows:

- The construction works at the Alkali Creek Diversion Channel and the Southwest Seepage Pond Dam have been completed successfully in the past year, and these facilities are now in good condition.
- Site wide water management is effective, and water management facilities are in good condition.
- The outlet culvert at the Northwest Seepage Pond was blocked by plywood, debris, and vegetation at the time of the inspection, however it has subsequently been unblocked by KGHM and it will now function as per its design objective.
- The West Dam appears to be in good condition, with no visible signs of distress. The East Dam crest appears to be in good condition, with no visible signs of distress.
- KGHM has initiated dam breach flood inundation mapping studies for the East and West Dams, to comply with the August 18, 2014 Chief Mine Inspector's orders for tailings dams in BC.
- There are currently no vibrating wire piezometers installed at the East and West Dams (embankments and foundations) for dam safety monitoring, however a program has been planned by KGHM and will commence on October 3, 2014. Emergency trigger levels for these piezometers will be determined and this information will be added to the ERP.
- Subsidence as a result of the New Gold underground block-cave mining operation is occurring in the area of the Spillway channel and the East Dam. At present, the recorded settlements in the East Dam are less than 0.05 m, and up to 0.7 m in the Spillway.
- It is very important that the interaction between the Afton TSF and the block-cave mine are fully assessed in terms of dam safety and underground mining safety, considering current and predicted future subsidence conditions as the New Gold underground mine advances. An action plan must be developed with New Gold to demonstrate that thorough assessments are being completed and that the risks are appropriately managed.
- The tailings pond is at a normal level and has over 4 m of freeboard up to the Spillway outlet. Although this is acceptable from a freeboard point of view, and a larger pond does benefit KGHM in terms of dust control efforts, lowering the pond level will displace water away from the East Dam and will reduce the risk of water and tailings ingress to the underground mine should a crack extend into the TSF in the future. It is recommended that the pond be pumped out or otherwise displaced away from the East Dam.
- The Spillway was designed and constructed for the PMF event based on the conditions at the Afton TSF after the Teck mining operations were suspended. The Spillway routing and hydraulic design should be evaluated and possibly redesigned as part of the New Gold closure planning based on the final site conditions at the New Afton Mine.
- Formal procedures for data sharing and communication protocols with New Gold should be established so that both parties are aware of, and regularly updated on, the information at hand and the potential risks associated with the interaction between the block-cave mine and the Afton TSF.
- The ERP should be updated to include the results of the dam breach inundation mapping that is currently being completed. Additionally, an instrumentation monitoring program and trigger levels for all dam safety instrumentation (piezometers, prisms, slope inclinometers, etc.) should be included.

- The CDA Dam Safety Guidelines recommend that a DSR be conducted every five years for tailings dams with an 'Extreme' consequence rating. With the latest DSR completed in 2013, the date for the next DSR should be 2018. However, the action items identified in this report should be initiated immediately.

KGHM has been proactively addressing identified deficiencies at the Afton TSF over the past year and pending the completion of the vibrating wire piezometer installation program and the dam breach inundation mapping this fall, the only remaining concern at the Afton TSF will be the interaction between the block-cave mine and the TSF Spillway and East Dam.

10 – DECLARATION

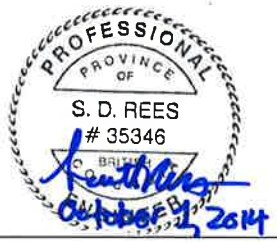
In preparation of this report, I, Scott Rees, hereby certify that:

1. This report was prepared by me on behalf of Knight Piésold Ltd. for KGHM Ajax Mining Inc.
2. I was a Consulting Engineer with Knight Piésold Ltd. at the time of the inspection and compilation of this report.
3. I am a graduate of the University of British Columbia, with a B.A. Sc. in Civil Engineering (2007).
4. I am a Professional Engineer registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
5. I have practiced my profession as a civil engineer continuously since 2007.
6. I have experience in geotechnical design, site investigation programs and construction and I am qualified to prepare this report.
7. Reliance on the information provided by other experienced professionals who were not supervised by me was required. This information is considered to be reliable on the basis of the respective qualifications and reputations of the aforementioned individuals and based on my own reviews.
8. I have no interest in the company KGHM Ajax Mining Inc. nor do I intend to obtain any.
9. I consent to the filing of this technical report, VA101-246/39-1, entitled "Report on 2014 Annual Inspection", and to the written disclosure of the technical report, extracts, and summaries being filed according to National Instrument 43-101.

Scott Rees, P.Eng.
Project Engineer

11 – CERTIFICATION

This report was prepared, reviewed and approved by the undersigned.



Prepared: _____

Scott Rees, P.Eng.
Project Engineer

Reviewed: _____

Les. J. Galbraith, P.Eng.
Specialist Geotechnical Engineer

Approved: _____

Ken Brouwer, P.Eng.
President

APPENDIX A

AFTON TSF CONSTRUCTION DRAWINGS

(Pages A-1 to A-6)

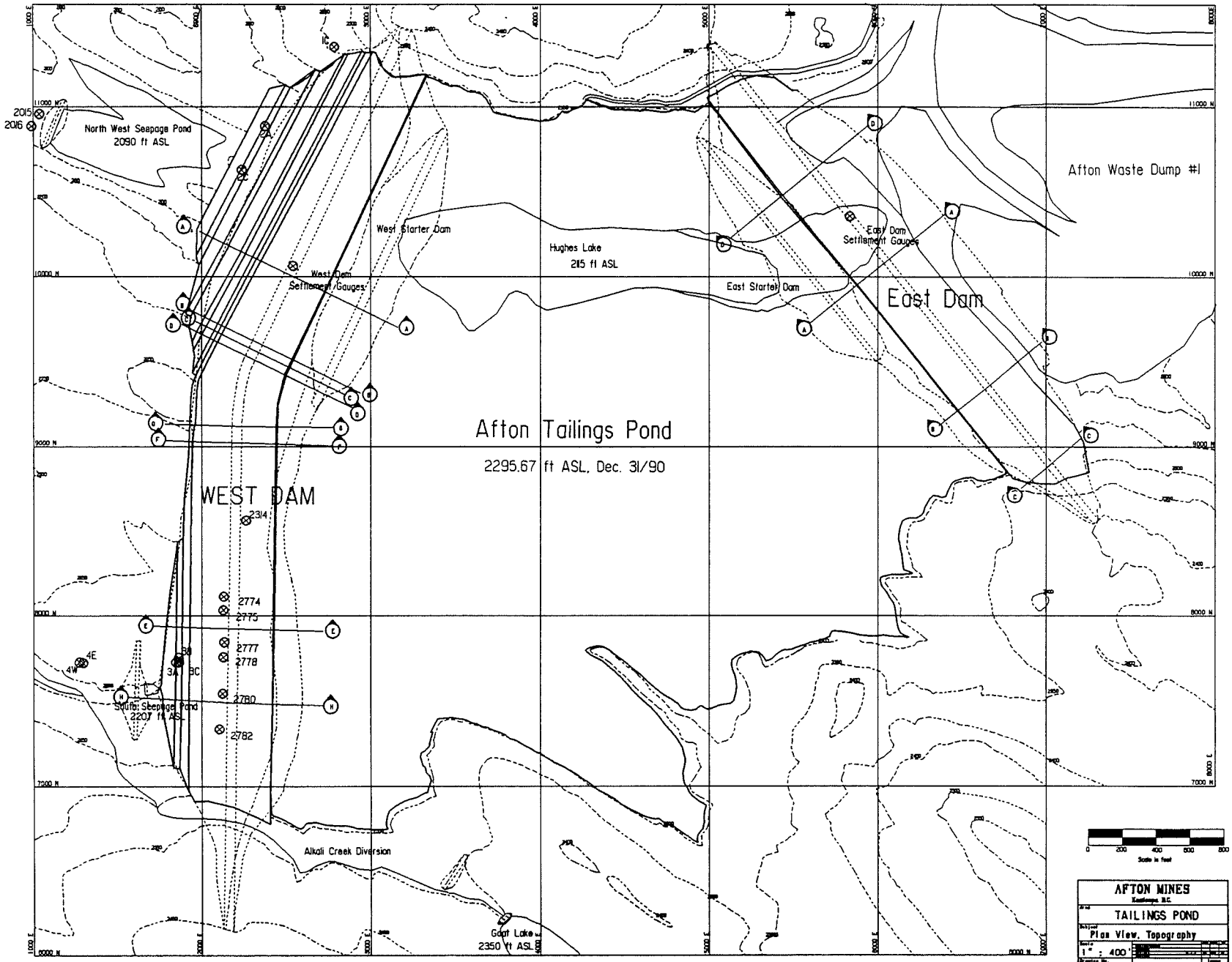
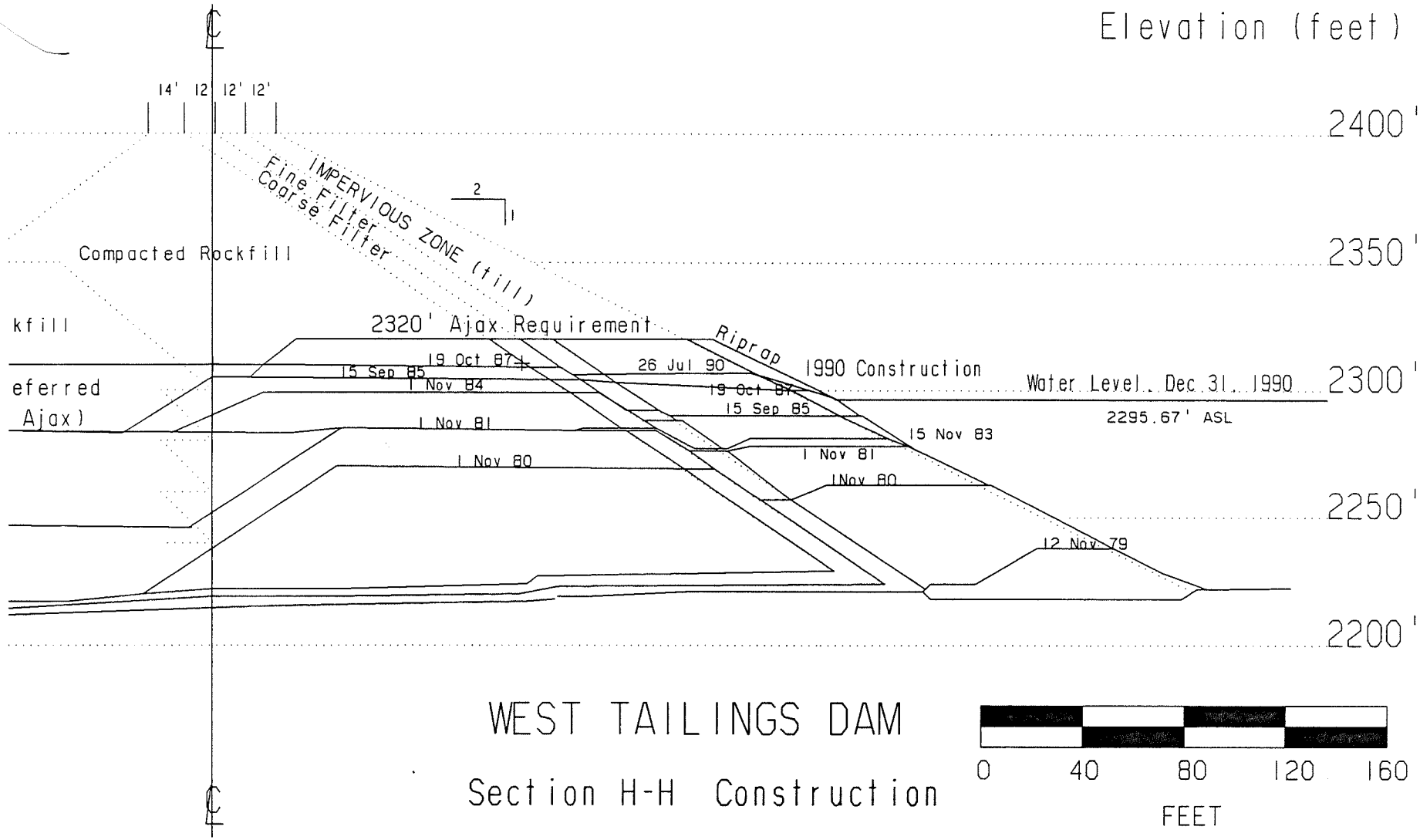
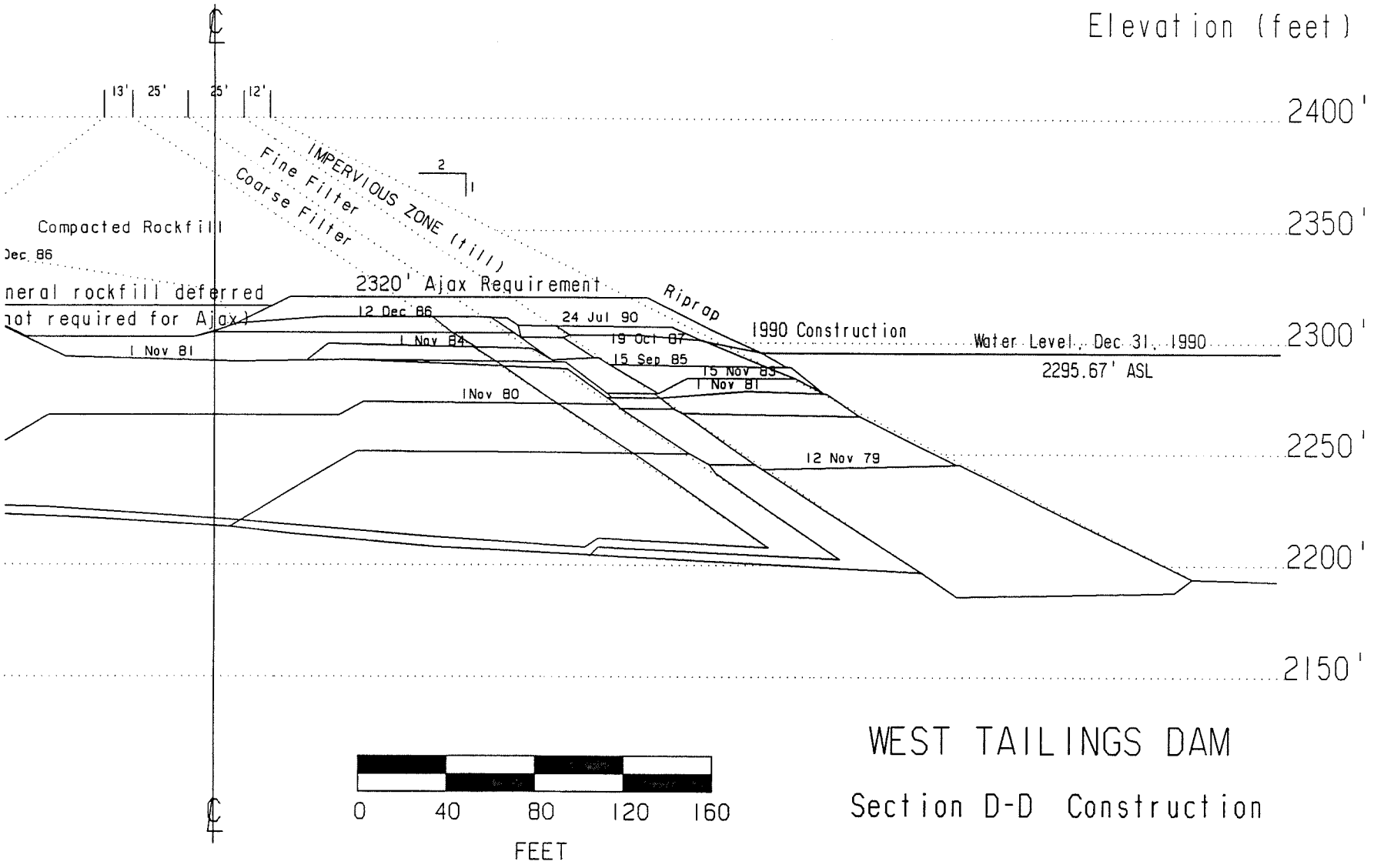

North West Seepage Pond
2090 ft ASL
West Starter Dam
West Dam
Settlement Gauges
Hughes Lake
215 ft ASL
East Starter Dam
East Dam
Settlement Gauges
Afton Waste Dump #1
East Dam
Afton Tailings Pond
2295.67 ft ASL, Dec. 31/90
WEST DAM
South Seepage Pond
2207 ft ASL
Alkali Creek Diversion
Goat Lake
2350 ft ASL
0 200 400 600 800
Scale in feet
AFTON MINES
TAILINGS POND
Plan View, Topography
1" : 400'

FIG. 5



Station 41+00

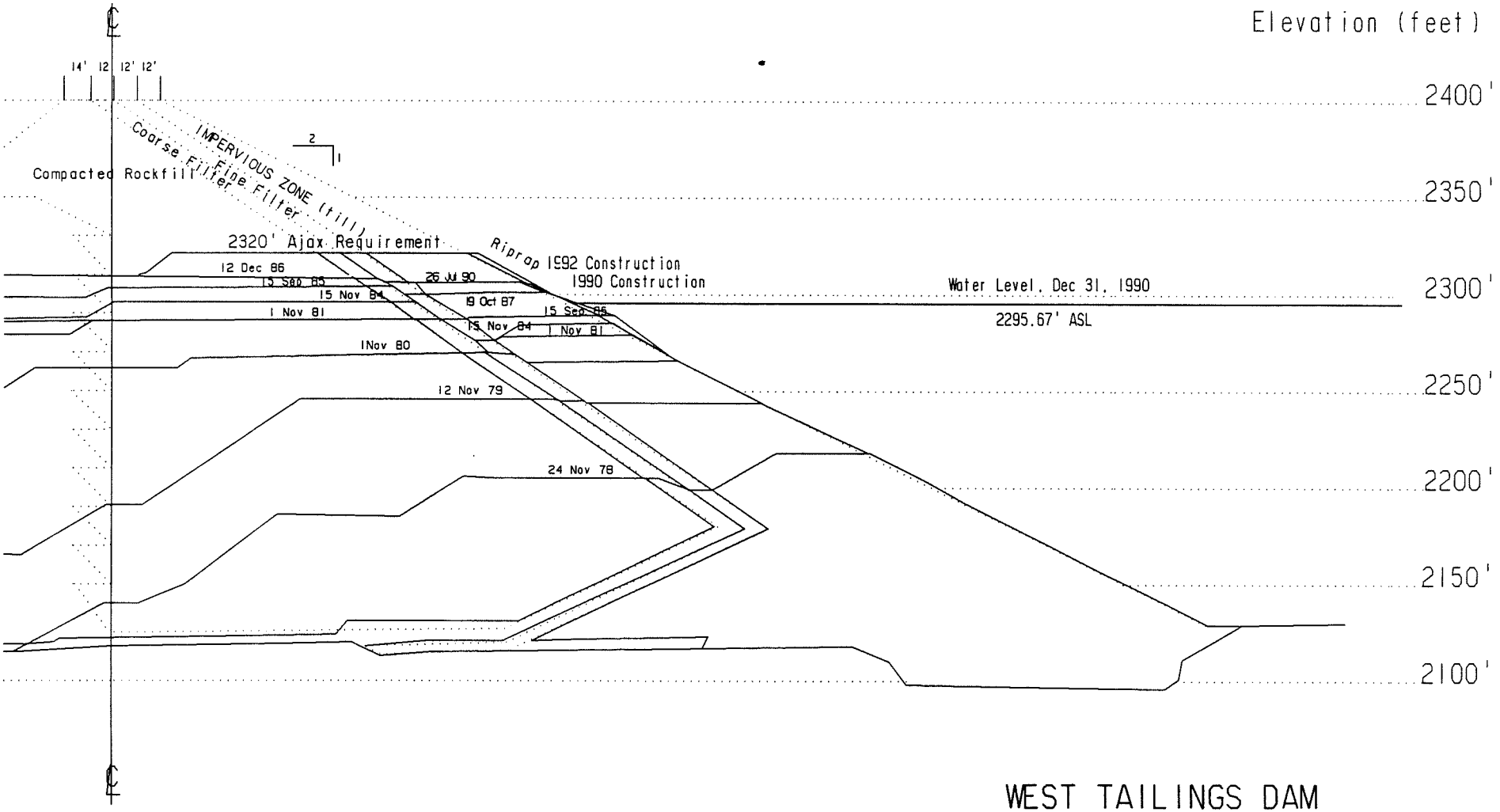
Facing North



WEST TAILINGS DAM

Section D-D Construction

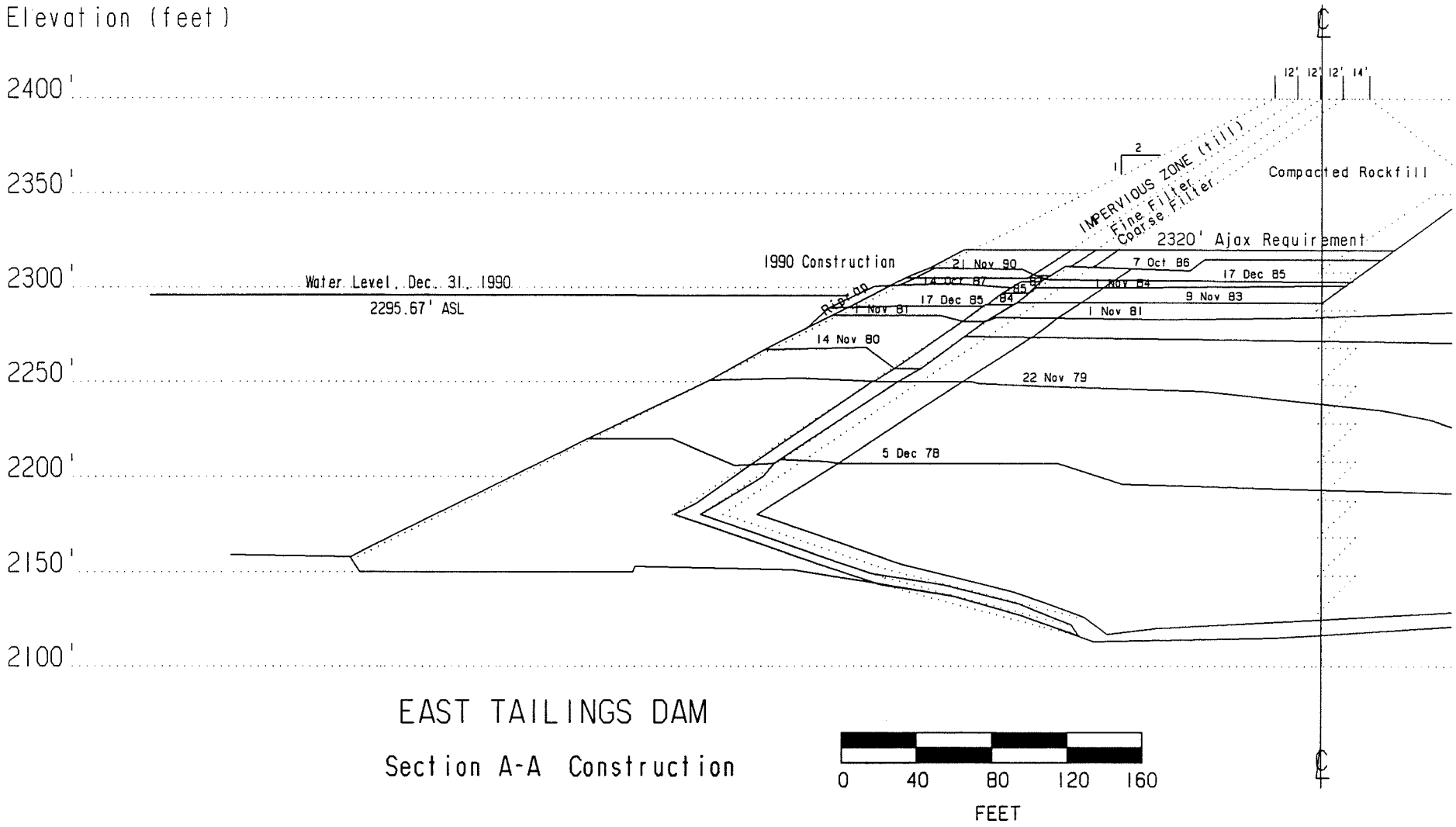
Station 21+60
(Transition Zone)
Facing North



Station 16+40
Facing North

WEST TAILINGS DAM

Section A-A Construction

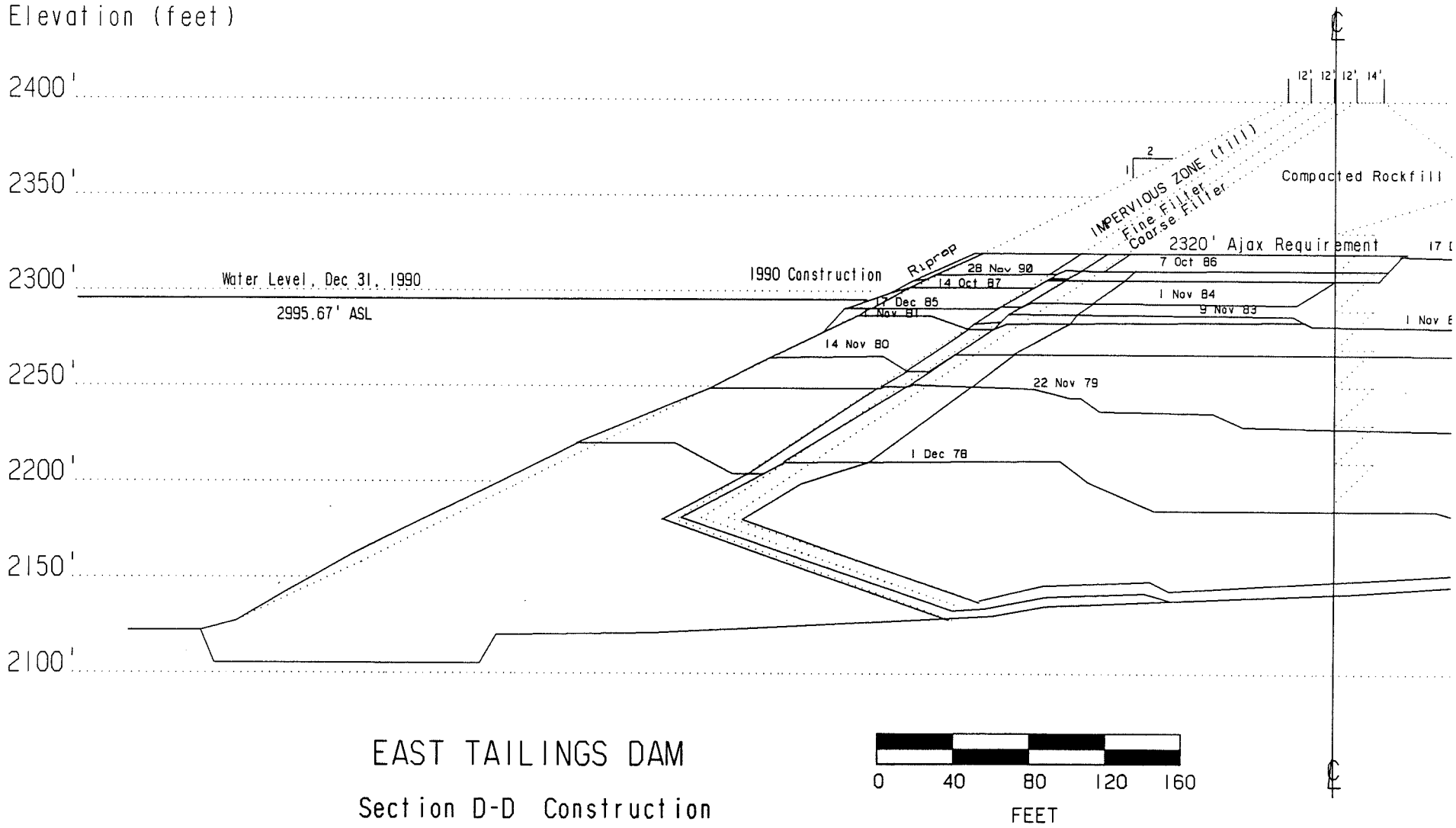


EAST TAILINGS DAM

Section A-A Construction

Station 17+58

Facing North



EAST TAILINGS DAM

Section D-D Construction

Station 10+63
Facing North

APPENDIX B

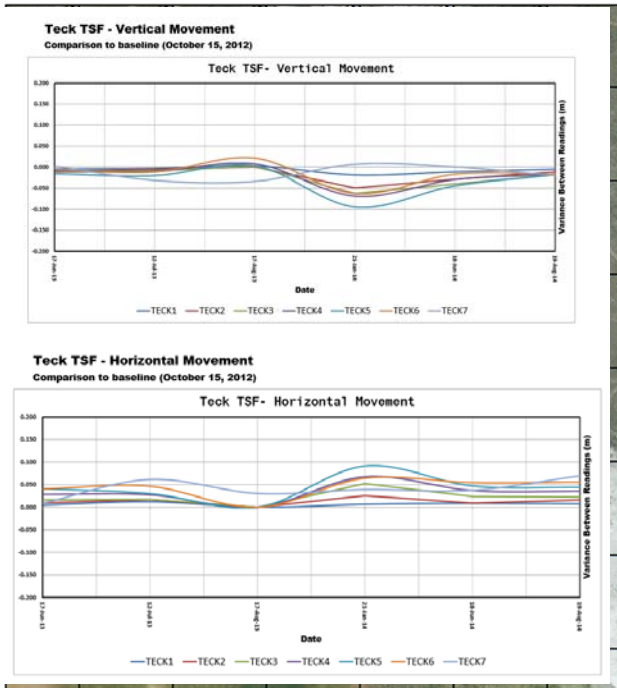
NEW GOLD - TECK TSF AND SPILLWAY MONITORING PRESENTATION

(Pages B-1 to B-7)

Teck TSF Monitoring

19/08/2014

Teck TSF Monitoring



Negligible movement can be attributed to environmental differences from day to day.

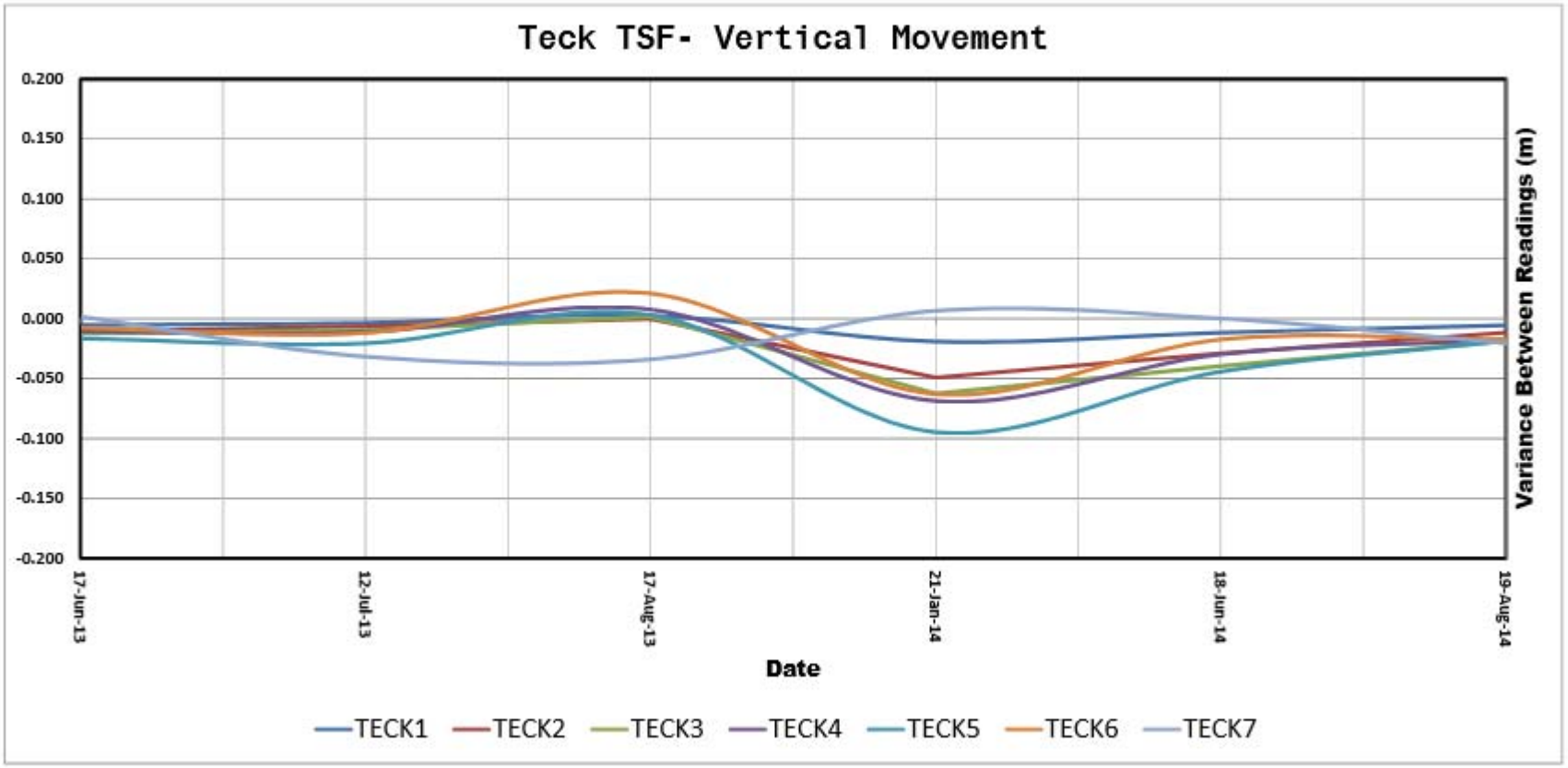
TECK TSF PRISMS
PLAN VIEW

Filename	Author	Scale	Date
	BSTRAHL	1:5000	20-Aug-2014

New Afton Mine

Teck TSF - Vertical Movement

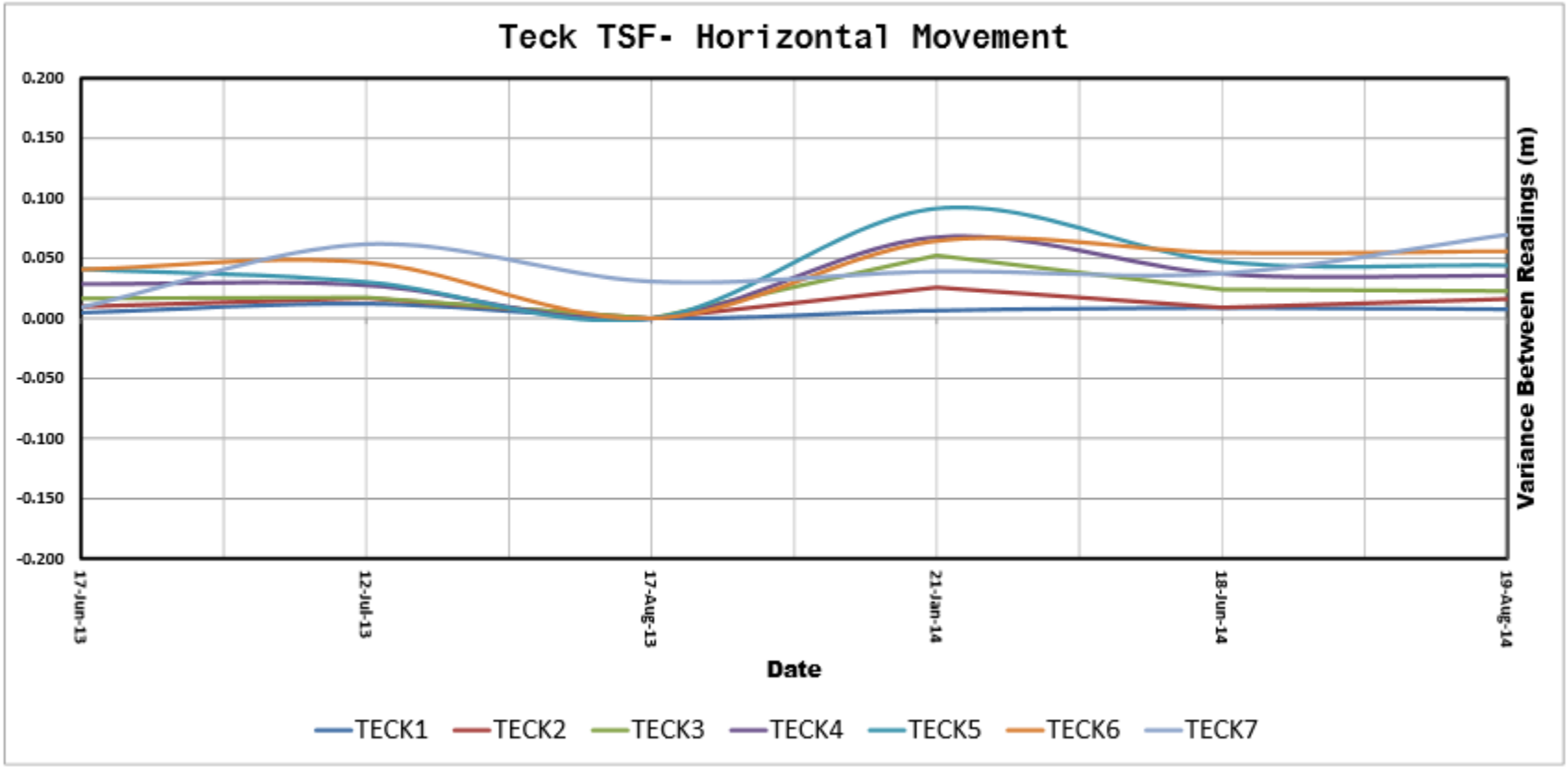
Comparison to baseline (October 15, 2012)



Negligible movement can be attributed to environmental differences from day to day.

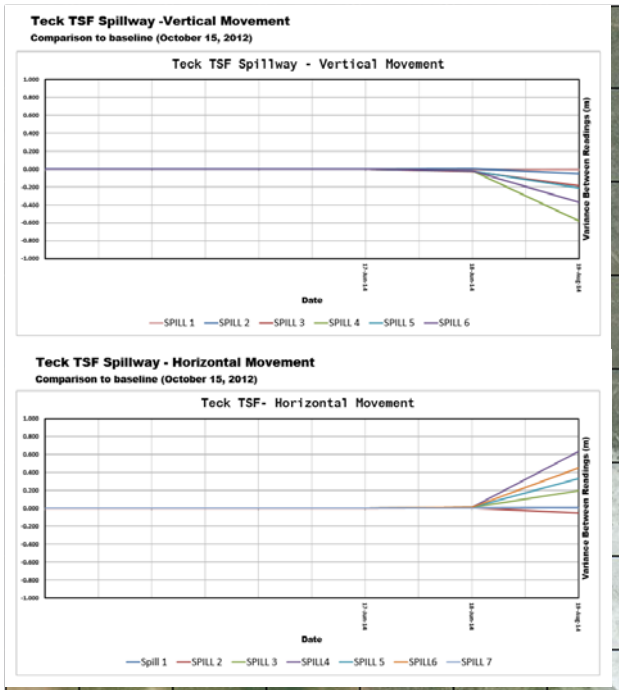
Teck TSF - Horizontal Movement

Comparison to baseline (October 15, 2012)



Negligible movement can be attributed to environmental differences from day to day.

Spillway Monitoring



New Prism's just added to monitor area of cracking.

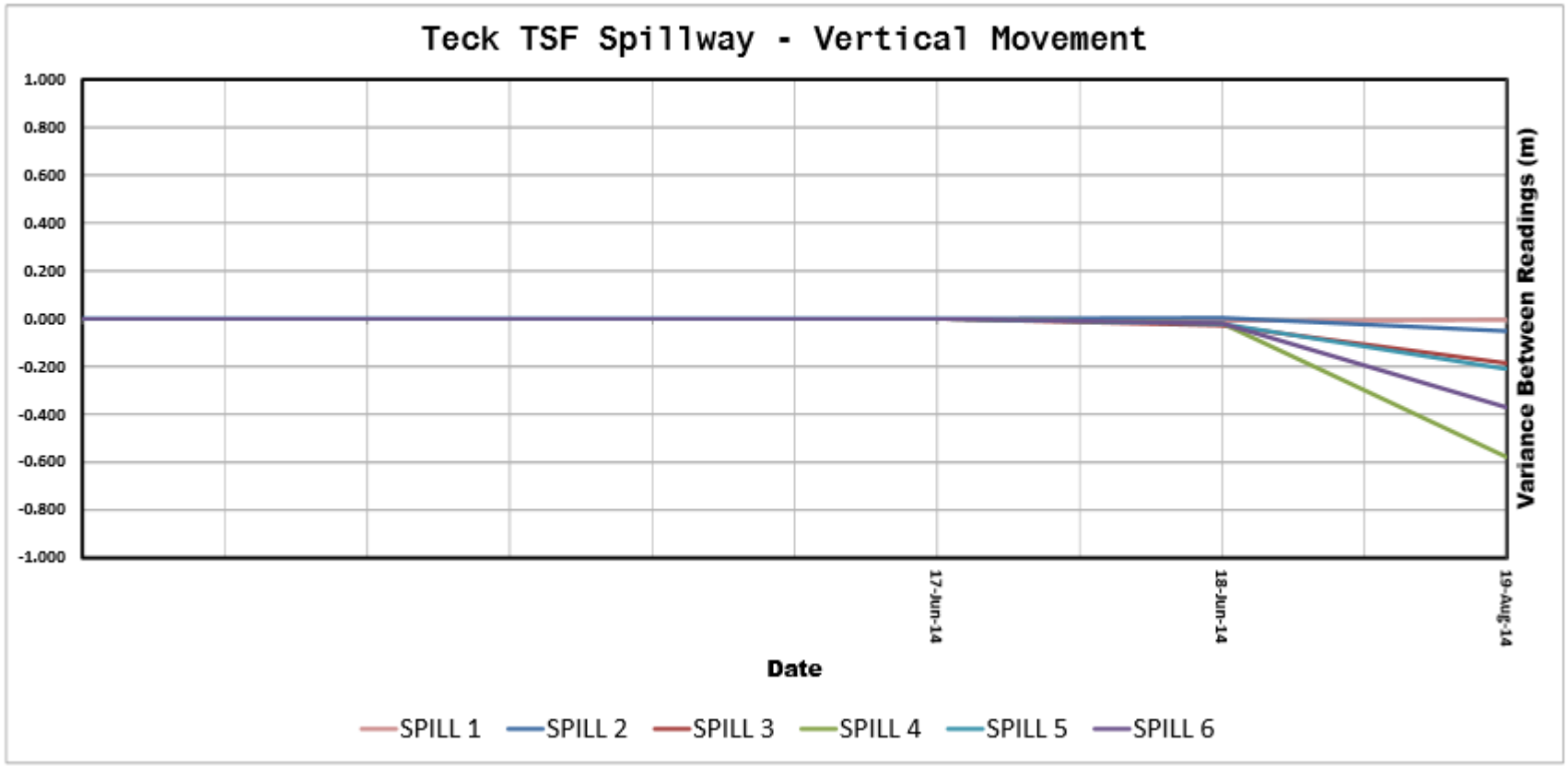
TECK TSF PRISMS
PLAN VIEW

Filename	Author	Scale	Date
	BSTRAHL	1:5000	20-Aug-2014

New Afton Mine

Teck TSF Spillway -Vertical Movement

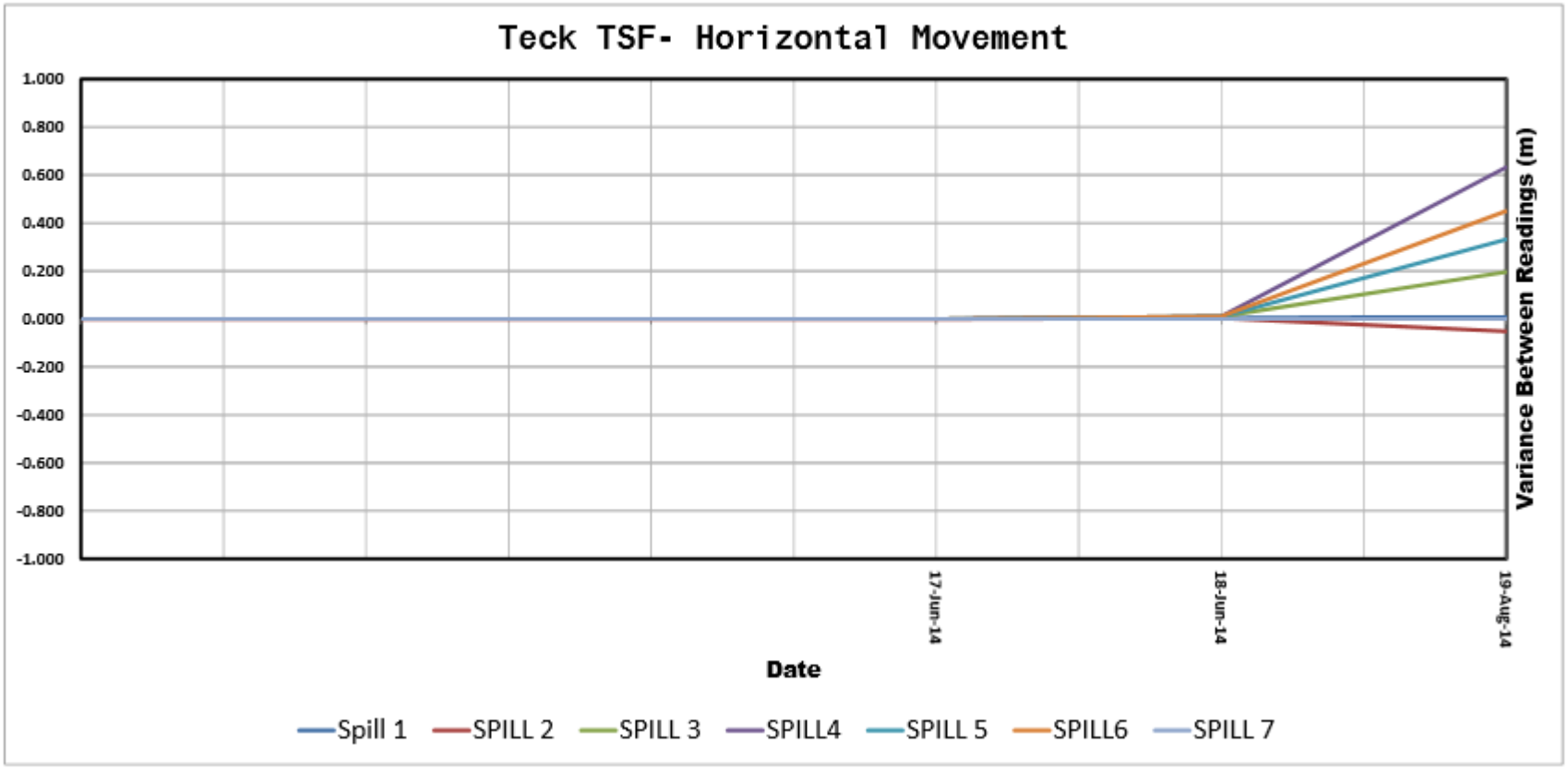
Comparison to baseline (October 15, 2012)



New Prism's just added to monitor area of cracking.

Teck TSF Spillway - Horizontal Movement

Comparison to baseline (October 15, 2012)



New Prism's just added to monitor area of cracking.