

**TECK WASHINGTON INCORPORATED
PEND OREILLE MINE – TAILINGS DISPOSAL FACILITY # 3**



2017 ANNUAL INSPECTION REPORT

PREPARED FOR:

Teck Washington Incorporated
1382 Pend Oreille Mine Road
Metaline Falls, WA, USA
99153

PREPARED BY:

Knight Piésold Ltd.
Suite 1400 – 750 West Pender Street
Vancouver, BC V6C 2T8 Canada
p. +1.604.685.0543 • f. +1.604.685.0147

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Rev 0
February 2, 2018

Knight Piésold
CONSULTING
www.knightpiesold.com

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Knight Piésold Ltd.

Suite 1400

750 West Pender Street

Vancouver, British Columbia Canada V6C 2T8

Telephone: (604) 685-0543

Facsimile: (604) 685-0147

www.knightpiesold.com

Knight Piésold
CONSULTING

EXECUTIVE SUMMARY

The Pend Oreille Mine is located in northeast Washington State and has a mining history dating back over seventy years. The mine site was re-opened in 2004 and operated until 2009 when it was placed in care and maintenance. Mining operations resumed in 2014. Mill tailings are contained in an engineered Tailings Disposal Facility (TDF) located at the historical #3 tailings disposal site. The reconstructed TDF #3 provides containment utilizing two earthfill embankments with an impoundment double lined with 60 mil High Density Polyethylene (HDPE). An engineered leakage collection and recovery system (LCRS) between the liners collects and removes seepage from beneath the primary (upper) liner. The total amount of tailings in TDF #3 since 2004 is 4,553,332 tons. A total of 2,942,237 tons of tailings were deposited in the facility from 2004 to 2009 when mine operations were suspended followed by 1,611,095 tons of tailings deposited since the mine re-opened in December 2014 to the end of October 2017.

Mr. Bruno Borntraeger, P.Eng of Knight Piésold Ltd. completed the Annual Inspection of TDF #3 and associated works on October 4, 2017. This annual inspection report describes the condition of the various components of the active Tailings Disposal Facility. The components were inspected and found to be in good condition and operating well.

Teck Washington Incorporated (TWI) conducts routine inspections of TDF #3, particularly after the spring thaw to check the liner system for any winter damage. Some minor tears in the geomembrane liner were discovered over the course of the year, but were not attributed to winter damage. Depending on the severity of the tear, it was either patch welded immediately, sand bagged or sealed with tailings. There were no major issues noted during the inspection or reported during the past year.

Instrumentation records indicate the facility is performing within design tolerances. Piezometers situated within the Leakage Collection and Removal System (LCRS) indicate the LCRS system is performing within design tolerances, as pore pressures within the LCRS were typically negligible with minor fluctuations observed during brief periods when LCRS recovery increased prior to the tailings solids blinding off the localized defects. The LCRS pump was replaced in December 2016 and an increase in LCRS pore pressures were noted in the first half of 2017. The pump operating levels settings were adjusted and the pore pressures decreased back downwards to historical trends.

The Basin Underdrain piezometers recorded pore pressures consistent with the tailings pond elevation. The pumping of the basin underdrain system was suspended on October 26, 2015. The LCRS system is effectively collecting leakage through the upper liner and controlling the head on the bottom liner within design tolerances. Pumping of the Basin Underdrain system would only be required if performance of the LCRS deteriorated and operation of the Basin Underdrain was needed to enhance tailings consolidation.

The survey monuments recorded no significant movement over the past 12 months.

The pond elevation increased approximately 3.57 feet from 2,389.23 ft to 2,392.80 ft between September 2016 and October 2017 from tailings deposition and surface water inputs. The floating evaporators were operated for the removal of excess water in the pond. A bathymetric survey was completed in October 2017 and the tailings solids volume was estimated to be 84.6 million cubic feet with a pond volume of 24.3 million cubic feet (557.6 ac-ft). An estimated 59.7 million cubic feet of

storage volume remains between the pond surface water elevation and the freeboard elevation of 2,414 ft. Additional tailings storage capacity can be obtained by reducing the pond volume to the targeted operational design volume of 190.5 acre-feet. The maximum theoretical storage capacity volume remaining to the maximum filling elevation of 2,414 ft is 75.7 million cubic feet assuming the pond volume is reduced to the targeted operational pond volume.

The O&M Manual was revised in December 2015 and recommendations noted from the 2014 Annual Inspection and the 2014 Dam Safety Review were incorporated into the updated revision.

Specific recommendations for 2017 include:

- The “sink hole” inspection requirement can be reduced to an annual inspection by the Geotechnical Engineer. Mine site visual inspections can be suspended, and
- Conduct annual pond bathymetry surveys to verify pond size and confirm evaporation efficiency.

Ongoing recommendations from the site inspection include:

- Continue monitoring surface monuments on a monthly basis
- Continue to remove weeds from the embankment slopes
- Continue the evaporation program to remove excess water from precipitation and runoff that has accumulated within TDF #3
- Continue to remove burrowing animals from the embankments
- Operation of the Basin Underdrain pumping system was suspended until the closure phase. Continue monitoring pore pressures
- Review the filling schedule and tailings deposition plan on an annual basis to develop tailings beaches over the liner system and establish the pond configuration so it is not in contact with the liner system, and
- The latest Dam Safety Review was completed in 2014 and the next Dam Safety Review is planned for 2019.

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ABBREVIATIONS

BU.....	Basin Underdrain
DSR.....	Dam Safety Review
GBE.....	Great Basin Environmental
gpm.....	Gallons per Minute
HDPE.....	High Density Polyethylene
LCRS.....	Leakage Collection Removal System
mil.....	Thousands of an Inch
O&M.....	Operations and Maintenance
TDF.....	Tailings Disposal Facility
TWI.....	Teck Washington Incorporated

1 – INTRODUCTION

The Pend Oreille Mine is located in northeast Washington State, approximately 80 miles north of Spokane and 12 miles south of the Canadian border. The mine property is accessible by paved road from a turnoff on Highway 31, located approximately two miles north of the town of Metaline Falls. The Pend Oreille Mine site has a mining history dating back over seventy years. Tailings disposal was into three separate facilities identified as Tailings Disposal Facilities #1, #2, and #3. The mine location is shown on Figure 1.1.



Figure 1.1 Pend Oreille Mine Location

The mine site was re-opened in 2004 and operated until 2009 when it was placed in care and maintenance. The mine resumed operations in December 2014. The mill tailings, derived from a conventional lead-zinc flotation process, are contained in an engineered TDF located on the historical #3 tailings disposal site. The reconstructed TDF #3 provides containment utilizing two earthfill embankments designated the Northwest and Northeast Embankments. The entire impoundment area of TDF #3 is double lined with 60 mil High Density Polyethylene (HDPE). An engineered leakage recovery system (LCRS) between the liners collects and removes seepage from beneath the primary (upper) liner to an LCRS sump. The LCRS sump is accessed through riser pipes located on the upstream slope of the embankment. A submersible pump re-circulates leakage from the LCRS sump to the tailings pond and flows are measured through a totalizing flow meter. Tailings are discharged into the facility from individual discharge points along either of the two distribution tailings pipelines. Tailings discharge (spigot) points along the west tailings distribution

pipeline are designated W1, W2, W3 and W4, and along the east tailings distribution pipeline are designated E0.5, E1, E2, E3 and E4. A floating reclaim barge is used to pump water back to the mill. A recent drone flyover overview of TDF #3 is shown on Figure 1.2.



Figure 1.2 TDF # 3 Drone Flyover

The most recent construction program was the Stage 2 expansion constructed between September 2006 and August 2007. The expanded facility operated briefly with tailings deposition until mid-2009 when the mine transitioned to a period of care and maintenance. New tailings and reclaim piping systems were installed prior to the resumption of operations in December 2014.

This report on the 2017 annual inspection describes the current condition of the various components of the Tailings Disposal Facility.

2 – SITE INSPECTION

2.1 GENERAL

Mr. Bruno Borntraeger, P.Eng. of Knight Piésold Ltd. carried out an annual inspection on October 4, 2017. The 2017 inspection included the following:

- Review of the Leachate Collection and Removal System (LCRS) leakage rate monitoring
- Review of vibrating wire piezometer monitoring records
- Review of tailings deposition
- Inspection of the geomembrane condition in the Stage 2 impoundment
- Inspection of the embankments at the northwest and northeast end of the facility
- Inspection of the Stage 2 crest, slopes and survey monuments
- Inspection of the “sink hole” upstream of the facility
- Inspection of tailings and reclaim piping systems on the crest of the dam
- Inspection of the evaporator system at Tailings Disposal Facility #3, and
- Inspection of the Reclaim Barge and LCRS pump back systems.

A series of photographs collected during the site inspection are provided in Appendix A. Pond and tailings beach configurations at the time of the inspection are shown schematically on Figure 2.1.

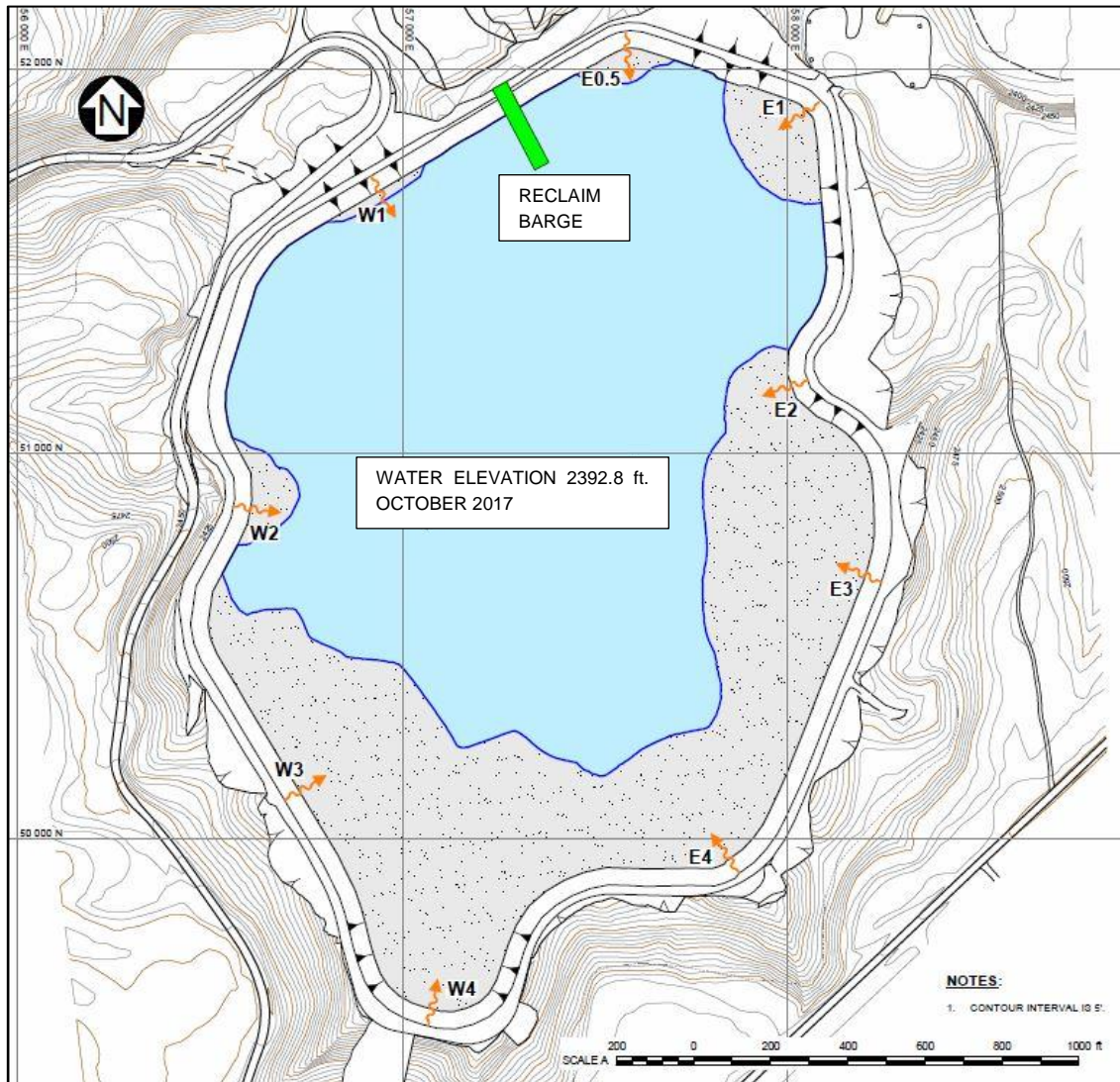


Figure 2.1 Tailings Disposal Facility #3 – General Arrangement

2.2 TAILINGS IMPOUNDMENT

The tailings pond level was at an elevation 2,392.8 ft at the end of October 2017. A total of 2,942,237 tons of tailings were deposited into the facility prior to July 1, 2009, after which tailings discharge was suspended. An additional 1,611,095 tons of tailings were discharged into the facility from the start-up in December 2014 to the end of October 2017. 604,282 tons of tailings were deposited between the 2016 and 2017 annual inspections. The amount of tailings in the facility to the end of October is 4,553,332 tons.

The mine site was under a temporarily shutdown on the day of the inspection, so no tailings deposition was observed. Tailings deposition in 2017 focussed on establishing tailings beaches against the liner system and isolating the pond from the liner system to minimize winter ice damage. The W2 discharge location was being extended to the center of the basin at the time of the inspection. The short term deposition plan recommended for TDF #3 is as follows:

- October 2017 – Spigot between W1 and W2 to build up tailings sands against the liner and displace the pond away from contacting the lined slopes
- November 2017 to March 2018 – Spigot at E4 to establish an overall slope that approaches the final closure surface and displace the pond towards the north, and
- March 2018 to June 2018 – Utilize the floating spigot and infill the deep central depression.

A sketch showing the sequential filling plan for the facility is presented on Figure 2.2. The tailings beaches and supernatant pond at the time of the inspection in September 2017 are reflected on Figure 2.1.

As expected, some minor defects in the geomembrane liner were discovered during routine inspections over the course of the year. Depending on its severity, defects were either patched immediately, sand bagged or sealed with tailings. Mine personnel conducted a wildlife fence detailed inspection in 2017 and conducted repairs. There were no major performance issues reported during this annual period.

2.3 TAILINGS EMBANKMENT

No signs of distress were noted during the inspection of the Northeast and Northwest Embankments. No seepage, wet or soft spots were observed on the downstream slopes. The embankment slopes were approximately planar and there was no evidence of cracking, bulging, or slumping in the embankment fill. The embankment crest appeared to be level with no signs of differential settlement or distress. The abutments appear sound with no evidence of erosion, seepage, settlement or cracking. There was no evidence of animal burrowing on the crest. TWI implements an ongoing pest control program during the summer months, which has proven effective. The reclaimed downstream embankment slopes were mowed during the summer as part of the ongoing maintenance of the dam. Trees were removed from the left abutment of the northeast dam from a previous State Dam Safety recommendation. The “sink hole” was inspected and no issues were noted. It should continue to be inspected annually by a Geotechnical Engineer. Routine inspections by mine personnel can be suspended.

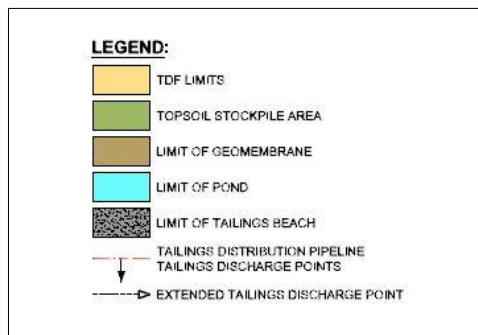
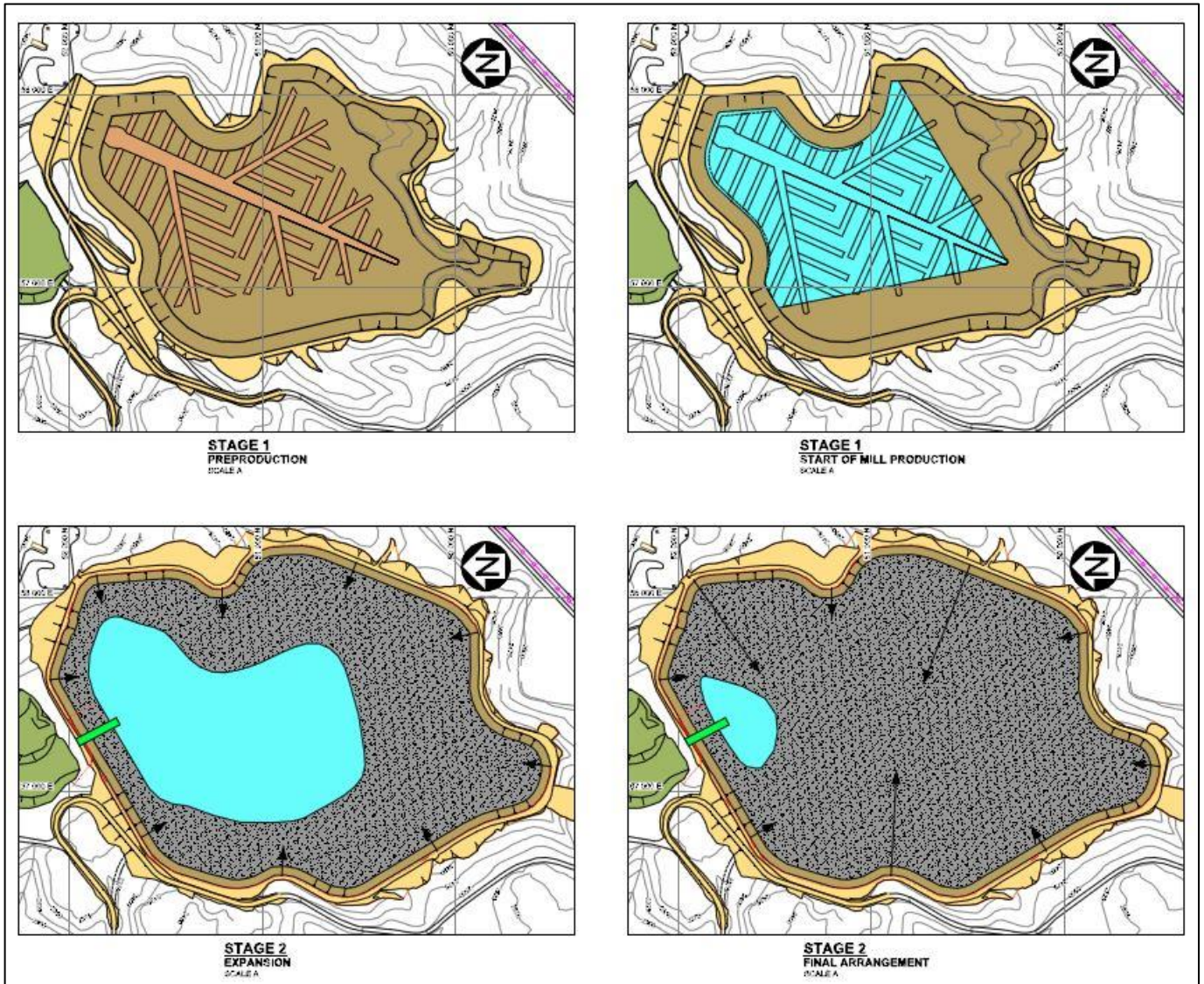


Figure 2.2 Tailings Disposal Facility #3 – Sequential Filling

2.4 LCRS MONITORING

Water reporting to the LCRS is pumped out via the LCRS riser pipes and the flow volume is measured. The daily and 7-day average leakage flow rates from the LCRS are provided on Figure 2.3. The LCRS flow rates fluctuated above and below the Level 1 Action Leakage Rate of 5 gpm from September 2014 to March 2015, then dropped below the Level 1 Action Leakage Rate in March 2015 and stabilized in the range of 0 to 2.5 gpm. The drop to historical LCRS leakage rates (July 2004 to July 2009) was expected once active tailings deposition resumed around the facility via the spigot points.

Leakage rates remained at historical levels from March 2015 to February 2016. The LCRS flow rates fluctuated above and below the Level 1 Action Leakage Rate from February 2016 to June 2016. Leakage rates peaked at 23 gpm in July 2016, just below the Level 3 Action Leakage Rate and two liner leaks were suspected: one near the barge area and one near the LCRS area. Tailings discharge and sand bag placement were focused in suspected leak areas and leakage rates decreased to the range of 2 to 4 gpm below the Level 1 Action Leakage Rate of 5 gpm.

In January 2017, the leakage rate again exceeded the Level 1 Action Leakage Rate peaking in May 2017 at approximately 10 gpm. Suspected liner leaks were sealed and the leakage rate was reduced to below the Level 1 Action Leakage Rate in August 2017. TWI continues to monitor leakage rates and uses acoustic sounding methods to detect leaks as necessary.

2.5 PIEZOMETER MONITORING

Five vibrating wire piezometers (BU-1 to BU-5) operate in the basin underdrain and three vibrating wire piezometers (LCRS-1 to LCRS-3) operate in the LCRS collection trench. Piezometer readings are obtained on a daily basis and the results are summarized in Appendix B.

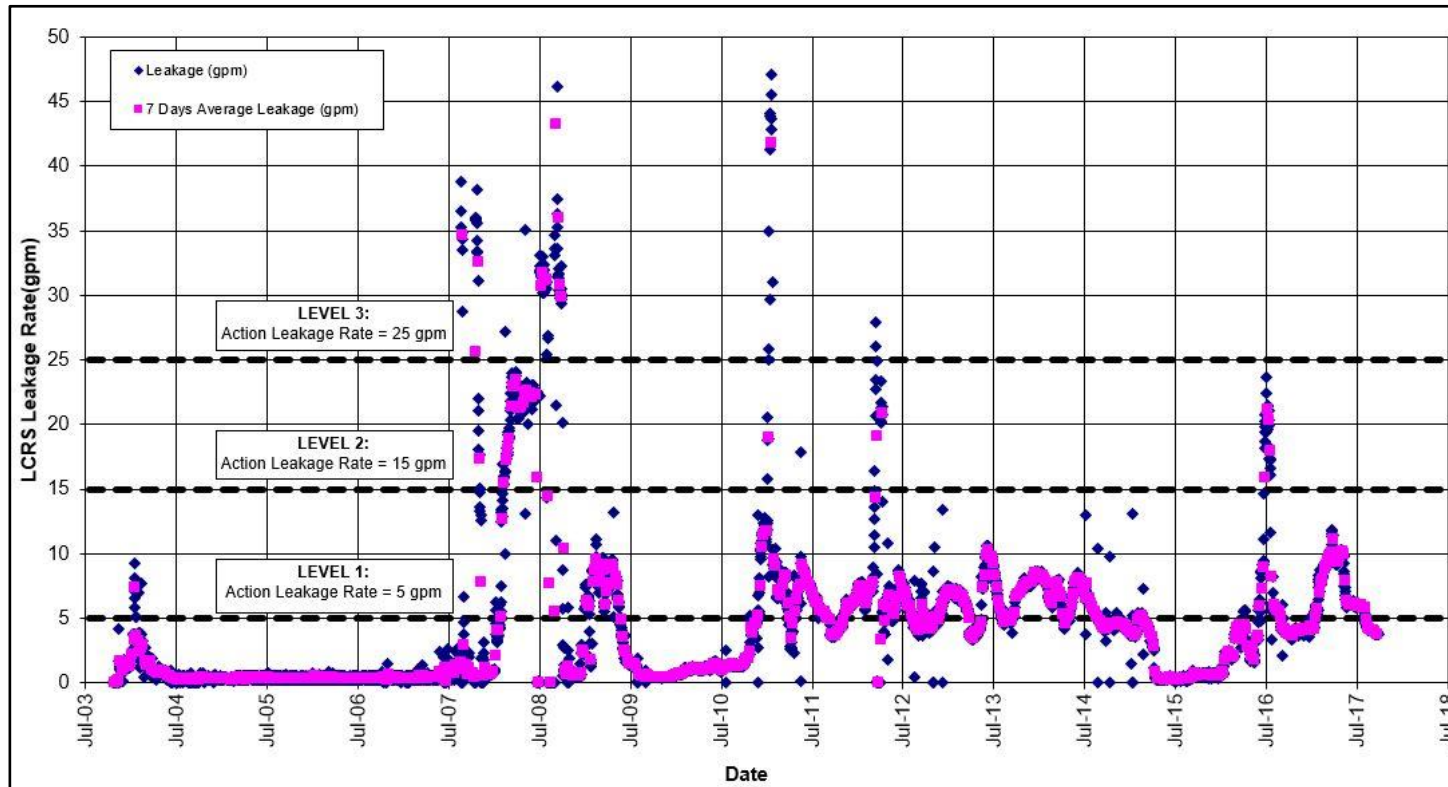
Basin Underdrain piezometers (BU-1 to BU-5) record hydrostatic pore pressures consistent with the tailings pond water elevation and fluctuate with the pond water level. Readings are adjusted for barometric pressure and show a slight jump upwards at the start of 2008 when the old barometer was replaced with a new barometer. A similar rise/step occurred in May 2012 with a new barometer replacement. Piezometer BU-3 did not function correctly when first installed in 2003. The original readout box was replaced with a new piezometer readout box in May 2009. The BU-3 piezometer readings starting in May 2009 follow the trends of the other functioning Basin Underdrain piezometers. Piezometer BU-3 data was previously not reported in annual inspection reports due to erroneous readings but has been added since 2014 when the monitoring data indicated similar responses and trends with the other four Basin Underdrain piezometers. The Basin Underdrain piezometers recorded pore pressures mirroring the increasing tailings pond elevation, which is consistent with expectations. Piezometer BU-5 has experienced a period of fluctuating and scattered data points commencing in July 2014. There is no real trend observed in the scatter of points but the monitoring trend is still discernible within the data cluster.

The Basin Underdrain pumping system was commissioned in September 2012. A downward trend was immediately noted in the Basin Underdrain piezometers situated in the sand and gravel underdrains and the piezometers located between the underdrains also demonstrated pore pressure reductions at slower rates. The pumping rate in the Basin Underdrain decreased from the higher initial rate of 100 gpm to 40 gpm and the pore water pressures in the Basin Underdrain piezometers responded to reflect hydrostatic conditions within the tailings mass. The Basin Underdrain pump

ceased operation in July 2013, was repaired and dewatering of the underdrain continued at a pumping rate between 40 and 55 gpm.

Basin Underdrain piezometers currently indicate hydrostatic pore pressures conditions in the tailings mass. Basin Underdrain pump operations were suspended October 26, 2015 and will resume during the closure phase. The LCRS system is effectively collecting leakage through the upper liner and controlling the head on the bottom liner within design tolerances. Pumping of the Basin Underdrain system would only be required if performance of the LCRS deteriorated and operation of the Basin Underdrain was needed to enhance tailings consolidation during operations.

The piezometers installed in the LCRS (LCRS-1, 2 & 3) trench typically indicate negative pore water pressures confirming the LCRS trench sand and gravel is unsaturated and drained. There was a brief period when the LCRS pump was replaced and the LCRS responded with a slight increase in pore pressures. The higher levels recorded in the LCRS were found to be indicative of the higher level sensors on the pump on-off control system. The level sensors were adjusted to a lower elevation in the riser pipe and pore pressures decreased back downwards to historic levels. The LCRS piezometers indicate the LCRS system is performing well within design tolerances as water pressures within the LCRS trench are decreasing towards the minimal level normally observed.



LCRS LEAKAGE RATE TRIGGERS
 LEVEL 1 - UNUSUAL CONDITIONS THAT DO NOT YET REPRESENT A POTENTIAL EMERGENCY BUT DO REQUIRE PROMPT INVESTIGATION AND RESOLUTION. AN INTERNAL ACTION PLAN IS DEVELOPED.
 LEVEL 2 - CONDITIONS THAT REPRESENT A POTENTIAL EMERGENCY, IF SUSTAINED OR ALLOWED TO PROGRESS, BUT NO EMERGENCY SITUATION IMMINENT. AN INTERNAL ACTION PLAN IS DEVELOPED.
 LEVEL 3 - AN EMERGENCY DEFINED BY FAILURE OF A SIGNIFICANT COMPONENT. SUCH FAILURE MAY HAVE ALREADY OCCURRED, OR BE IMMINENT. LEAKAGE RATES IN EXCESS OF THIS RATE MUST BE REPORTED TO DEPARTMENT OF ECOLOGY.

Figure 2.3 Tailings Disposal Facility #3 – LCRS Leakage Rate vs. Time

NOTES:

1. Hydrostatic measurements were not available between November 21-24, 2003 due to filling and draining of the LCRS for the leak detection survey.

2.6 SURVEY MONUMENTS

On-going surveillance of potential dam movement using survey monuments continued on a monthly basis in 2017. The surveillance data is summarized in Appendix B.

Generally, the survey movement monitoring in 2017 was within the tolerances specified in the O&M Manual. Measured deflection in Q3 of 2017 at M6 was outside the 2 inch tolerance. This deflection does not appear to be consistent with any of the other greater than 2 inch deflection seen at this monument. Further monitoring is necessary before any potential movement trends can be established.

2.7 WATER MANAGEMENT

The general location and extent of the supernatant pond is shown on Photo 1 (Appendix A). TWI has continued with a program of enhanced evaporation to control the amount of water retained in the facility. Large floating fan forced evaporators were operated in 2017. The Goldsim water balance model was updated throughout the year in compliance with the corporate guidance document.

A volumetric survey conducted in October 2017 provided an updated pond volume estimate. The pond volumes previously estimated and reported in the annual inspection reports were reviewed and compiled into a graph summarizing the pond volume versus time as shown on Figure 2.4.

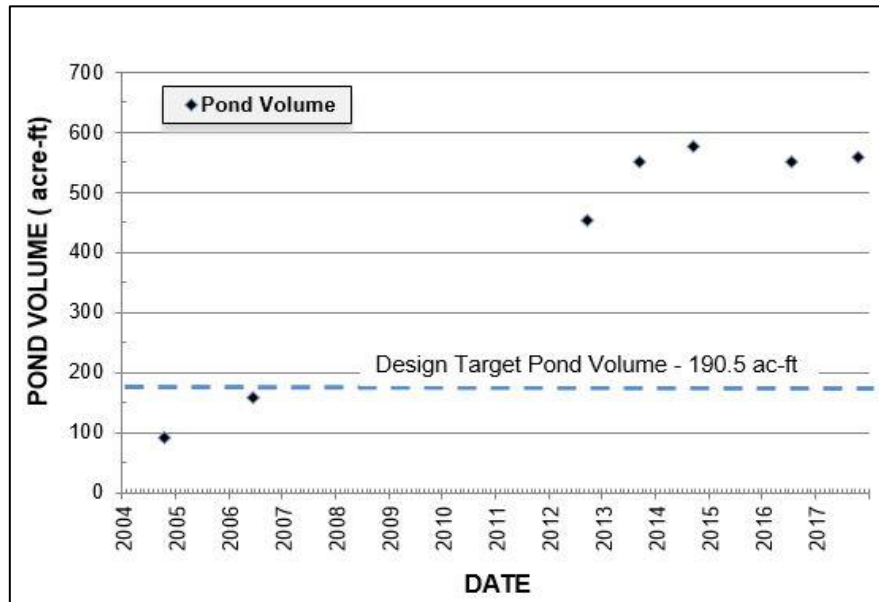


Figure 2.4 Tailings Disposal Facility #3 – Pond Volume versus Time

The targeted operational design pond volume of 190.5 acre-feet is included on the plot. The pond volume increased substantially during the care and maintenance period as expected. The implementation of the evaporative program combined with tailings void losses during ongoing tailings deposition has halted the upward trend.

TDF #3 has a freeboard requirement of six feet for containment of the design storm event. The facility currently has approximately 21.2 feet of freeboard available for tailings solids storage, and

storm water storage. The 2014 Dam Safety Review (DSR) recommended a review of the design storm and freeboard requirements to reflect updated procedures in the Department of Ecology Technical Memorandum. The updated O&M manual addressed the design storm review and confirmed six feet of freeboard was valid.

2.8 FILLING SCHEDULE

Tailings deposition resumed in December 2014. There is sufficient capacity remaining in the facility for tailings solids and storm water storage based on the updated filling curve on Figure 2.5. Survey measurements have recently been the most reliable source for determining pond elevation.

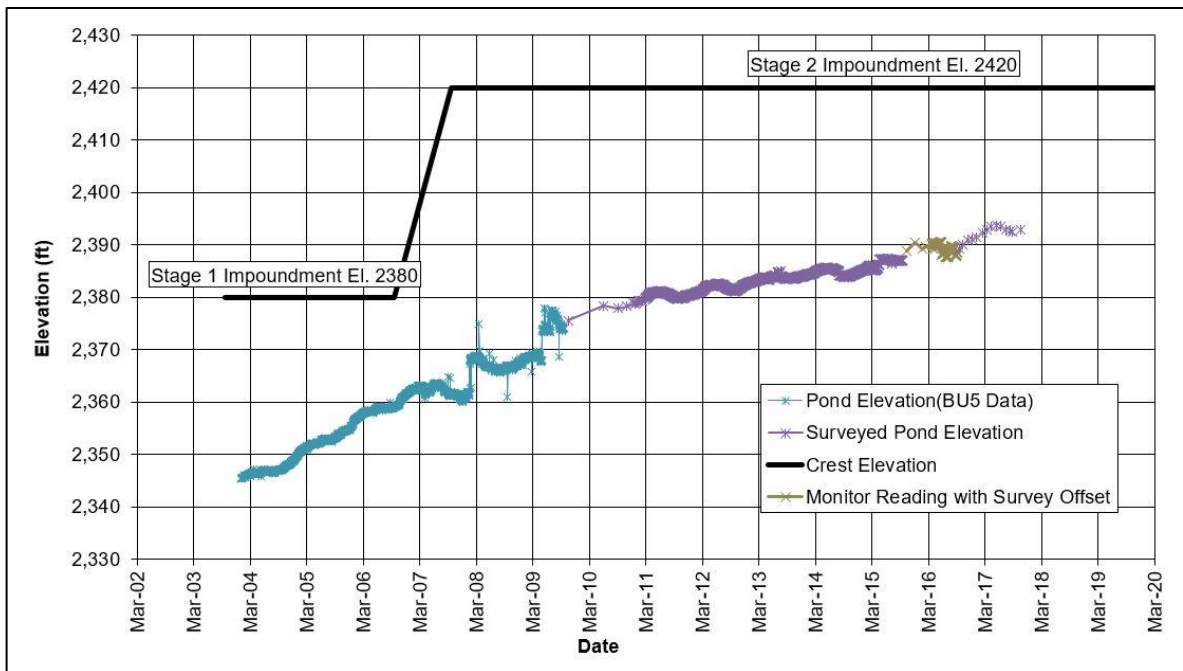


Figure 2.5 Tailings Disposal Facility #3 – Filling Curve

TWI completed a bathymetric survey in 2017 and the volumes for tailings solids and pond water were updated. The tailings solids volume is approximately 84,600,000 ft³ and the water volume is approximately 24,300,000 ft³.

The plan view bathymetric survey is shown on Figure 2.6.

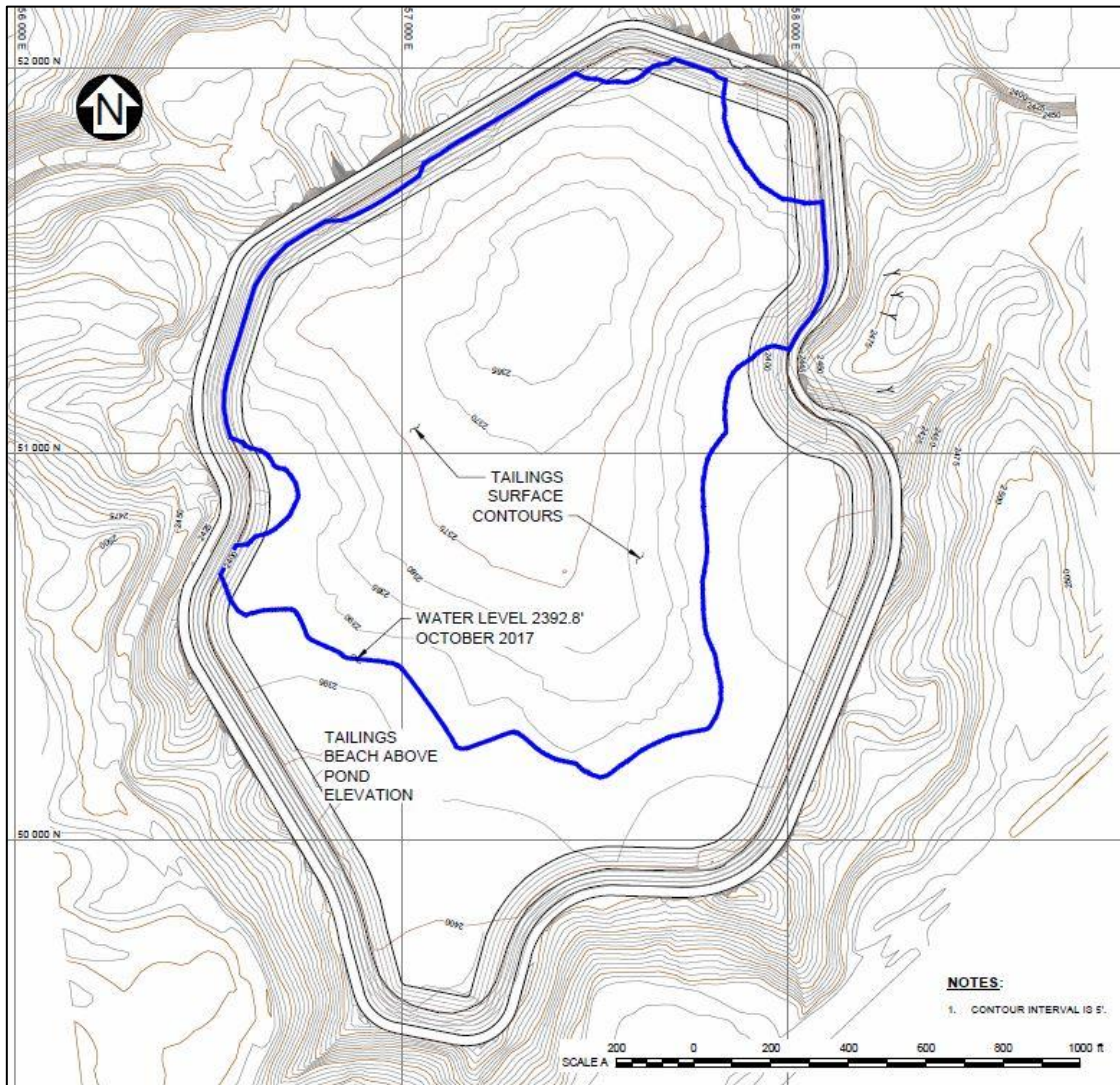


Figure 2.6 Tailings Disposal Facility #3 – Bathymetric Survey Plan

The total estimated storage volume for TDF #3 is 168 million cubic feet. Currently 59.7 million cubic feet of storage volume remains between the pond surface water elevation and the freeboard elevation of 2,414 ft. Additional tailings solids storage capacity can be obtained by reducing the pond volume to the targeted operational design volume. The remaining tailings solids storage volume is 75.7 million cubic feet if the pond volume is reduced to the design operational value at the freeboard elevation of 2,414 ft.

2.9 SURFACE WATER CONTROL

Inspection of the surface water control measures at the TDF confirmed the surface water drainage works are in reasonably good condition. Surface water drainage works were added to the perimeter bench to direct runoff into the impoundment as part of the Stage 2 Expansion. These structures have been functioning properly.

3 – SUMMARY AND RECOMMENDATIONS

Mr. Bruno Borntraeger, P.Eng. of Knight Piésold Ltd. completed an Annual Inspection of Tailings Disposal Facility #3 and associated works on October 4, 2017 as part of the routine dam safety inspection program implemented annually by TWI. Visual inspection and review of instrumentation records have confirmed the facility is performing within design tolerances. There are no new recommendations or deficiencies to note resulting from the 2017 annual inspection.

Specific recommendations for 2017 include:

- The “sink hole” inspection requirement can be reduced to an annual inspection by the Geotechnical Engineer. Mine site visual inspections can be suspended, and
- Conduct annual pond bathymetry surveys to verify pond size and confirm evaporation efficiency.

Ongoing recommendations from the site inspection include:

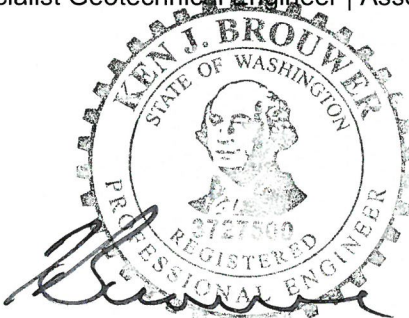
- Continue monitoring surface monuments on a monthly basis
- Continue to remove weeds from the embankment slopes
- Continue the evaporation program to remove excess water from precipitation and runoff that has accumulated within TDF #3
- Continue to remove burrowing animals from the embankments
- Operation of the Basin Underdrain pumping system was suspended until the closure phase. Continue monitoring pore pressures
- Review the filling schedule and tailings deposition plan on an annual basis to develop tailings beaches over the liner system and establish the pond configuration so it is not in contact with the liner system, and
- The latest Dam Safety Review was completed in 2014 and the next Dam Safety Review is planned for 2019.

4 – CERTIFICATION

This report was prepared and reviewed by the undersigned.

Prepared: BB For
Cyrus Niamir, P.Eng.
Project Engineer

Reviewed: Bruno Borntraeger
Bruno Borntraeger, P.Eng.
Specialist Geotechnical Engineer | Associate

Reviewed: 
Ken Brouwer, P.E. Washington State
President

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TAILINGS DISPOSAL FACILITY #3

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APPENDIX A
SITE INSPECTION PHOTOGRAPHS
(Pages A-1 to A-9)



PHOTO 1 – View of tailings basin from the south.



PHOTO 2 – View of east side of tailings basin from the south.



PHOTO 3 – View of west side of tailings basin from the south.

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PHOTO 4 – Reclaim barge, access gangway and floating evaporators.



PHOTO 5 – Reclaim barge and evaporators from the east.



PHOTO 6 – E0.5 and E1 discharge locations on east side of tailings basin.

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PHOTO 7 – Northeast geomembrane lined slope.



PHOTO 8 – East side of tailings basin from the north.



PHOTO 9 – North side of tailings basin from the east.

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PHOTO 10 – East side of tailings basin looking south from E2 discharge point.



PHOTO 11 – East side of tailings basin from the north.



PHOTO 12 – E4 discharge location looking north.

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PHOTO 13 – West side of tailings basin from the south.



PHOTO 14 – South side of tailings basin from the west.



PHOTO 15 – View of northwest tailings basin from the west.

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PHOTO 16 – W2 floating pipe discharge location.

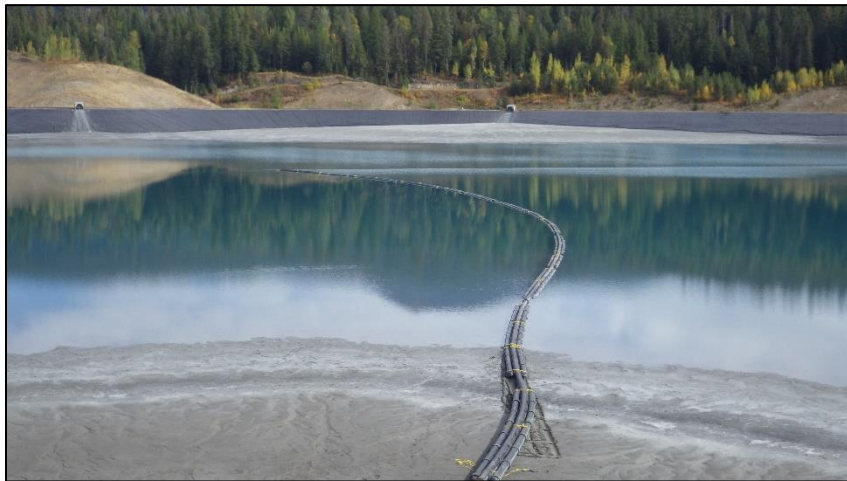


PHOTO 17 – W2 floating pipe discharge location.

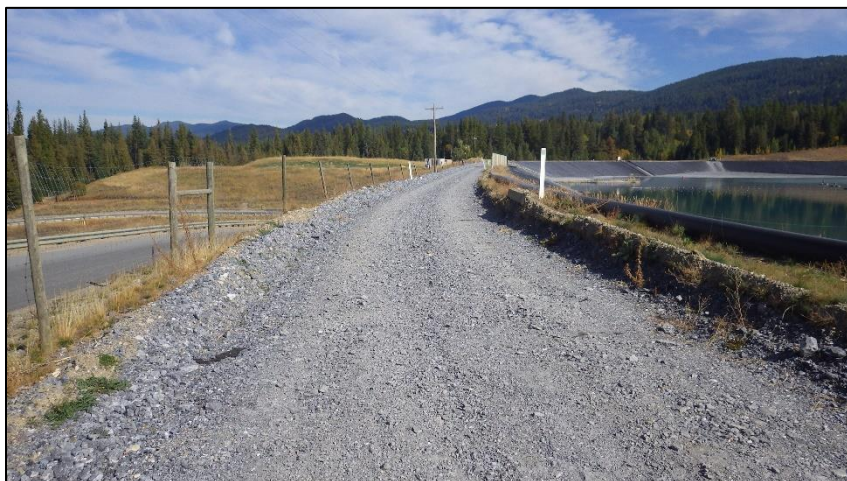


PHOTO 18 – Northwest perimeter berm and dam crest.

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PHOTO 19 – Northeast perimeter road and dam crest.



PHOTO 20 – Eastern perimeter road around tailings basin.



PHOTO 21 – Southern perimeter road around tailings basin.

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PHOTO 22 – Typical spigot location discharge point (with hut).



PHOTO 23 – Downstream face of Northeast Dam.



PHOTO 24 – “Sink hole” location upstream of TDF#3 basin.

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PHOTO 25 – Mine access road and downstream slope of Northwest Dam.



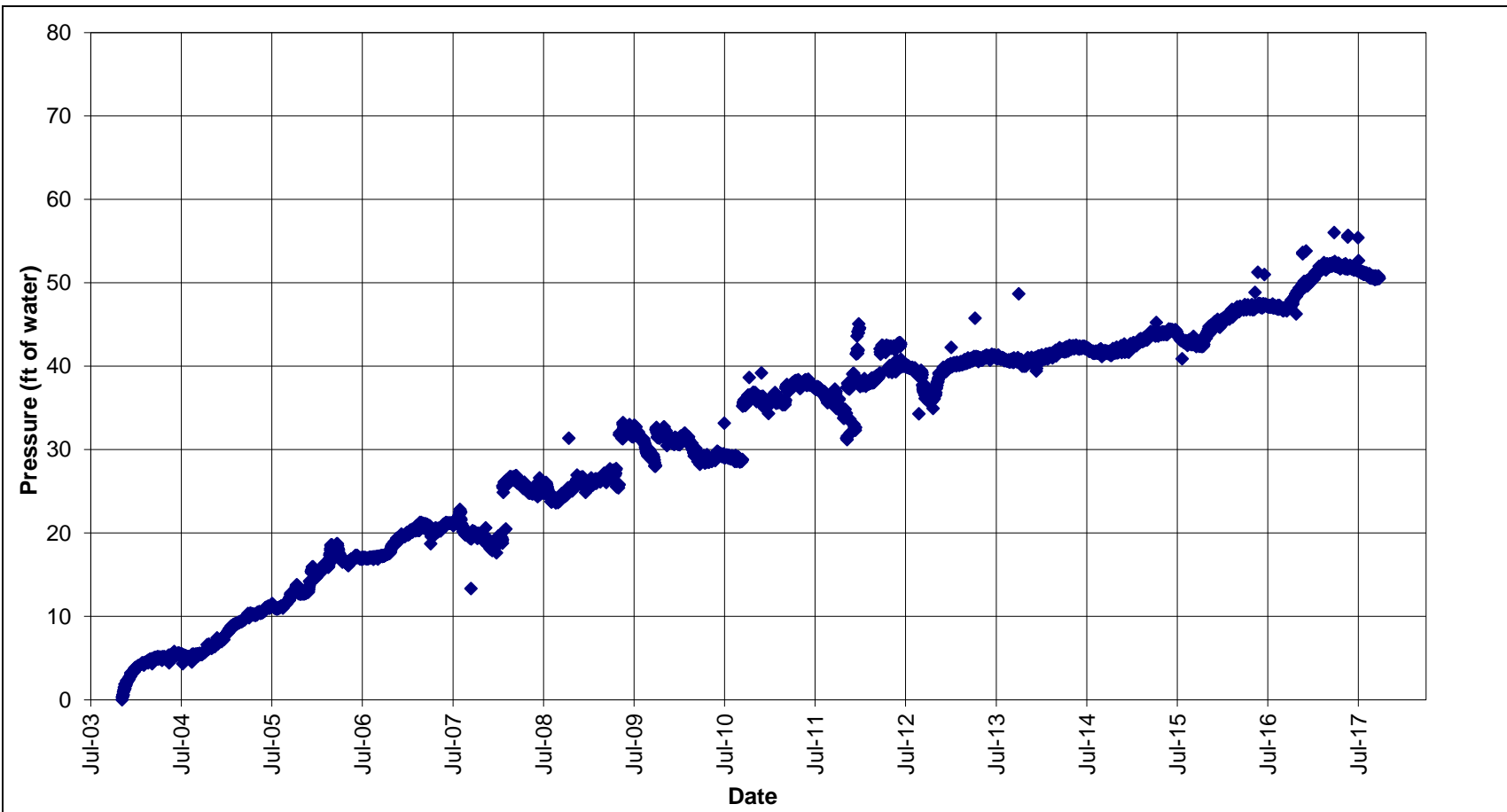
PHOTO 26 – Downstream slope of Northwest Dam.

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PEND OREILLE MINE
TAILINGS DISPOSAL FACILITY #3

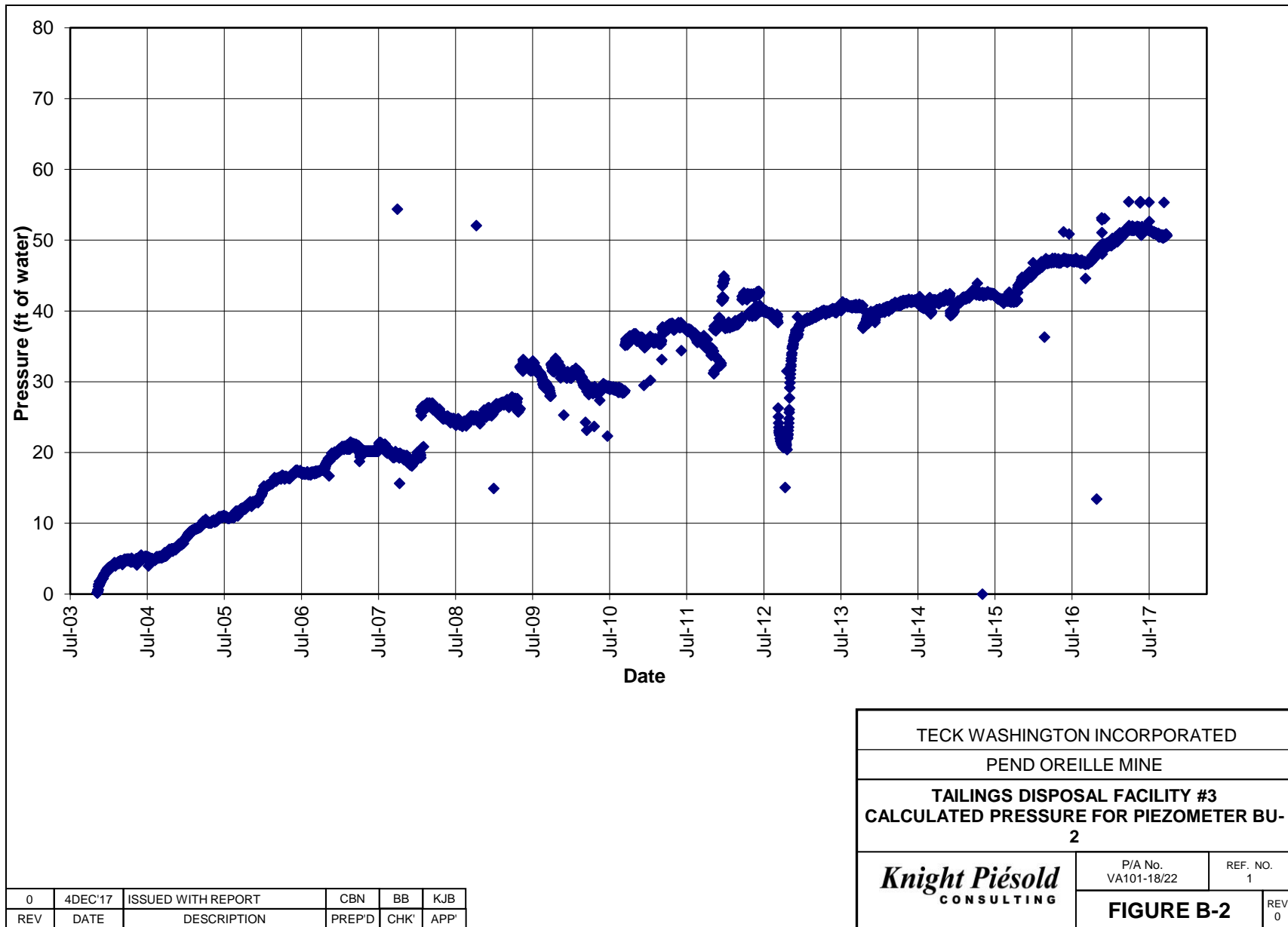
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APPENDIX B
INSTRUMENTATION RECORDS
(Pages B-1 to B-12)



TECK WASHINGTON INCORPORATED	
PEND OREILLE MINE	
TAILINGS DISPOSAL FACILITY #3 CALCULATED PRESSURE FOR PIEZOMETER BU-1	
<i>Knight Piésold</i> CONSULTING	P/A No. VA101-18/22
	REF. NO. 1
FIGURE B-1	
	REV 0

0	4DEC'17	ISSUED WITH REPORT	CBN	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'	APP'



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 PEND OREILLE MINE
 TAILINGS DISPOSAL FACILITY #3
 CALCULATED PRESSURE FOR PIEZOMETER BU-2

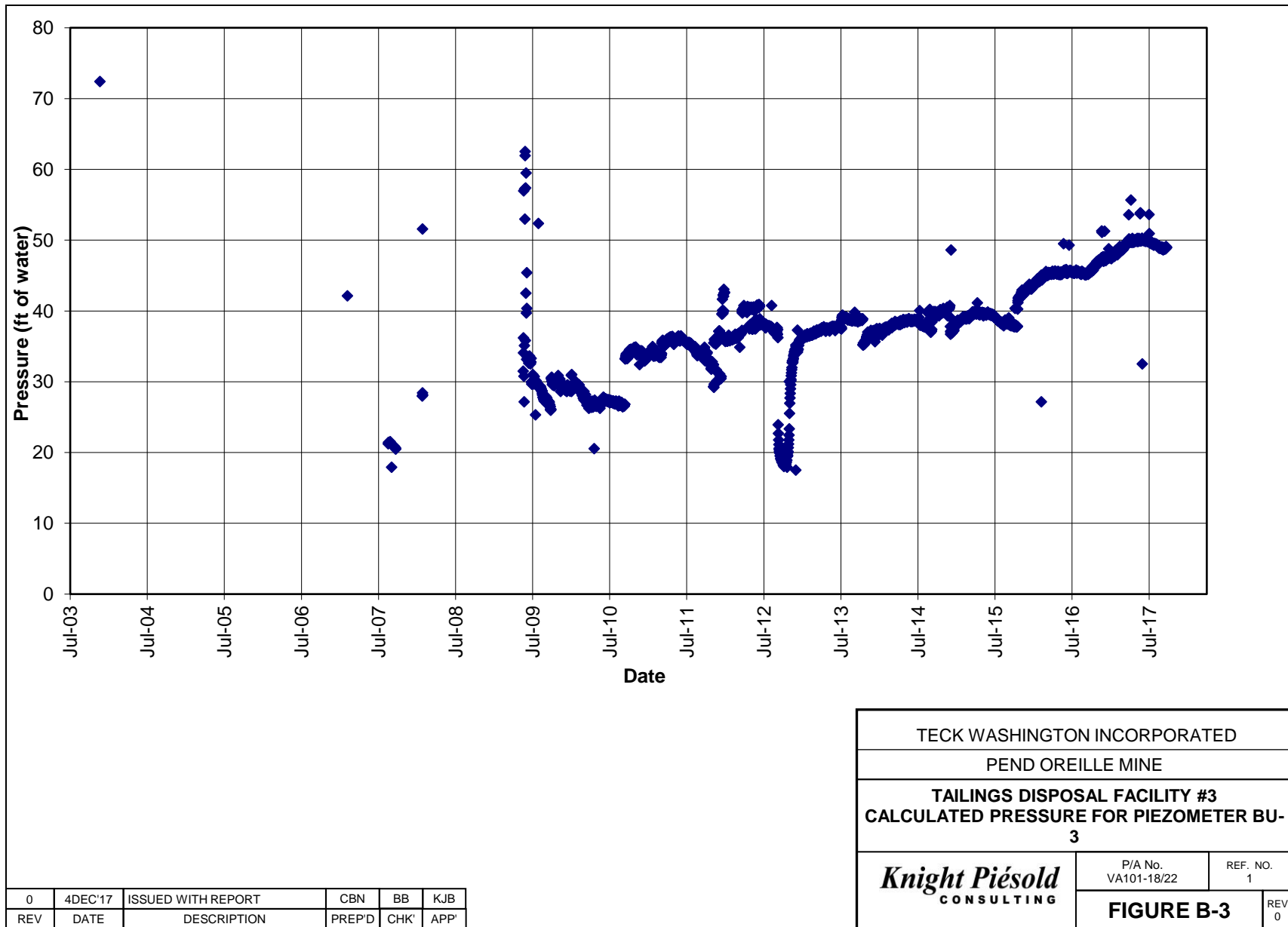
Knight Piésold
 CONSULTING

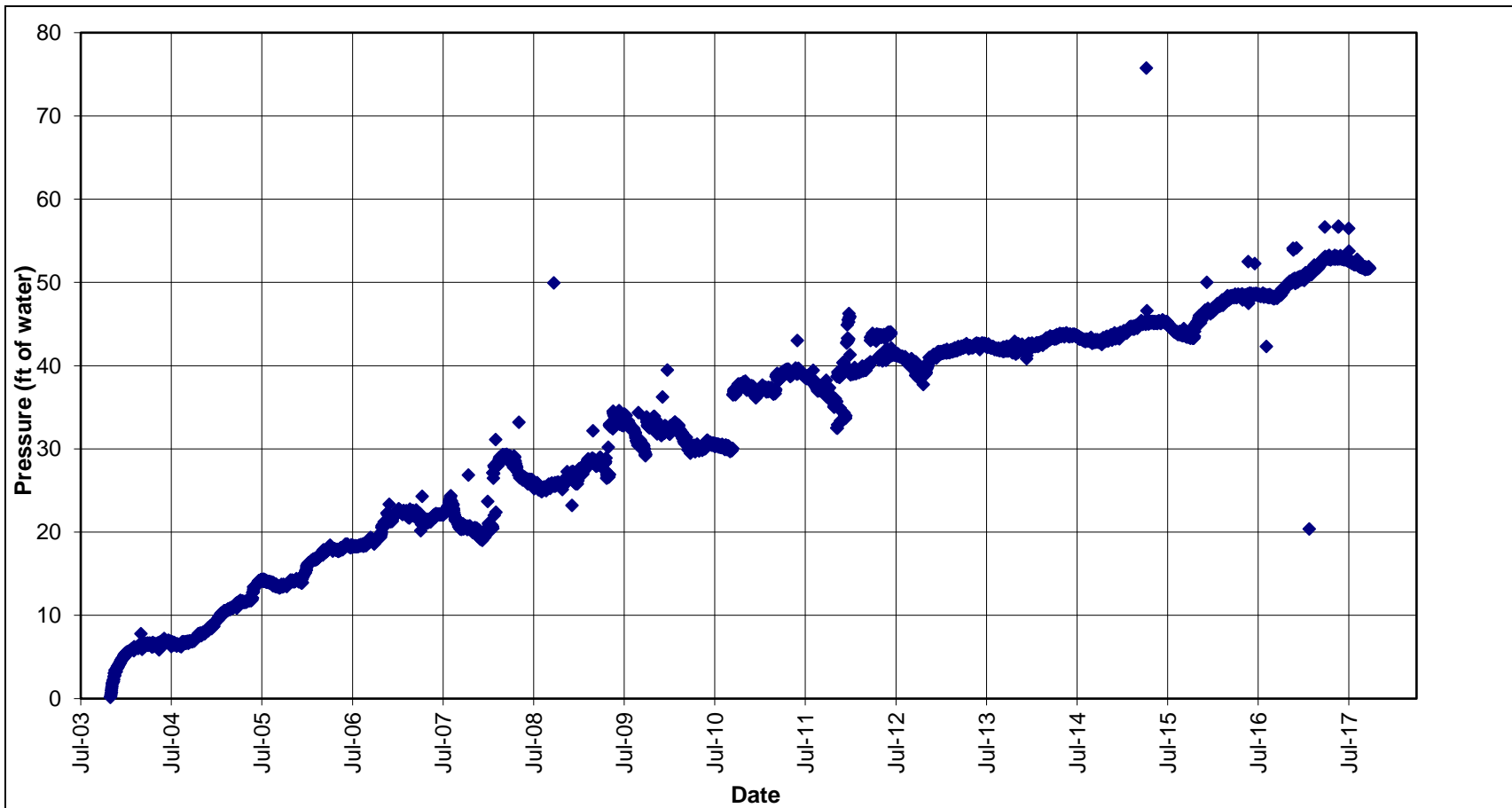
P/A No. VA101-18/22
 REF. NO. 1

FIGURE B-2

REV 0

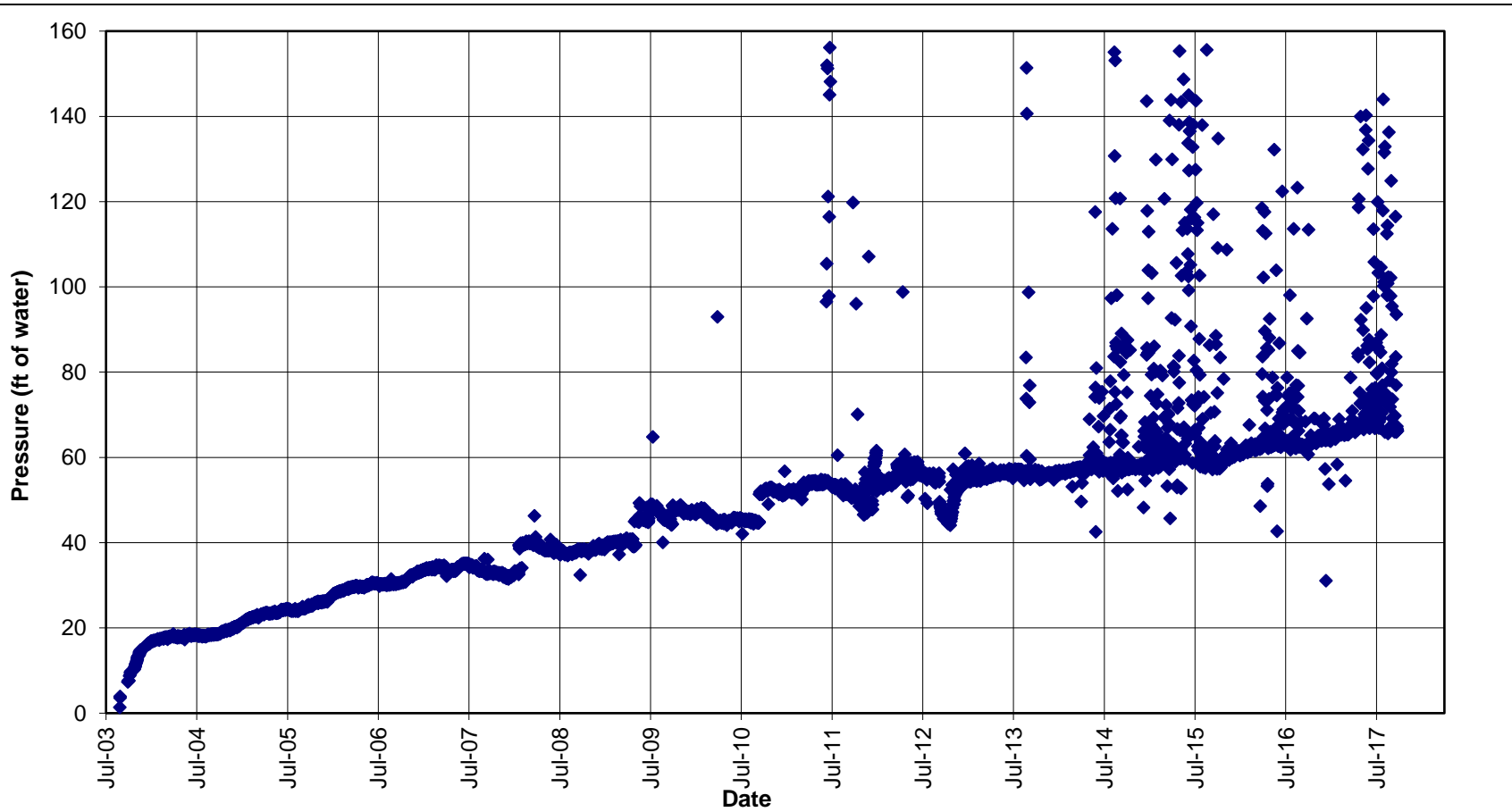
0	4DEC'17	ISSUED WITH REPORT	CBN	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'	APP'





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TAILINGS DISPOSAL FACILITY #3 CALCULATED PRESSURE FOR PIEZOMETER BU-4	
<i>Knight Piésold</i> CONSULTING	P/A No. VA101-18/22
	REF. NO. 1
FIGURE B-4	
REV 0	

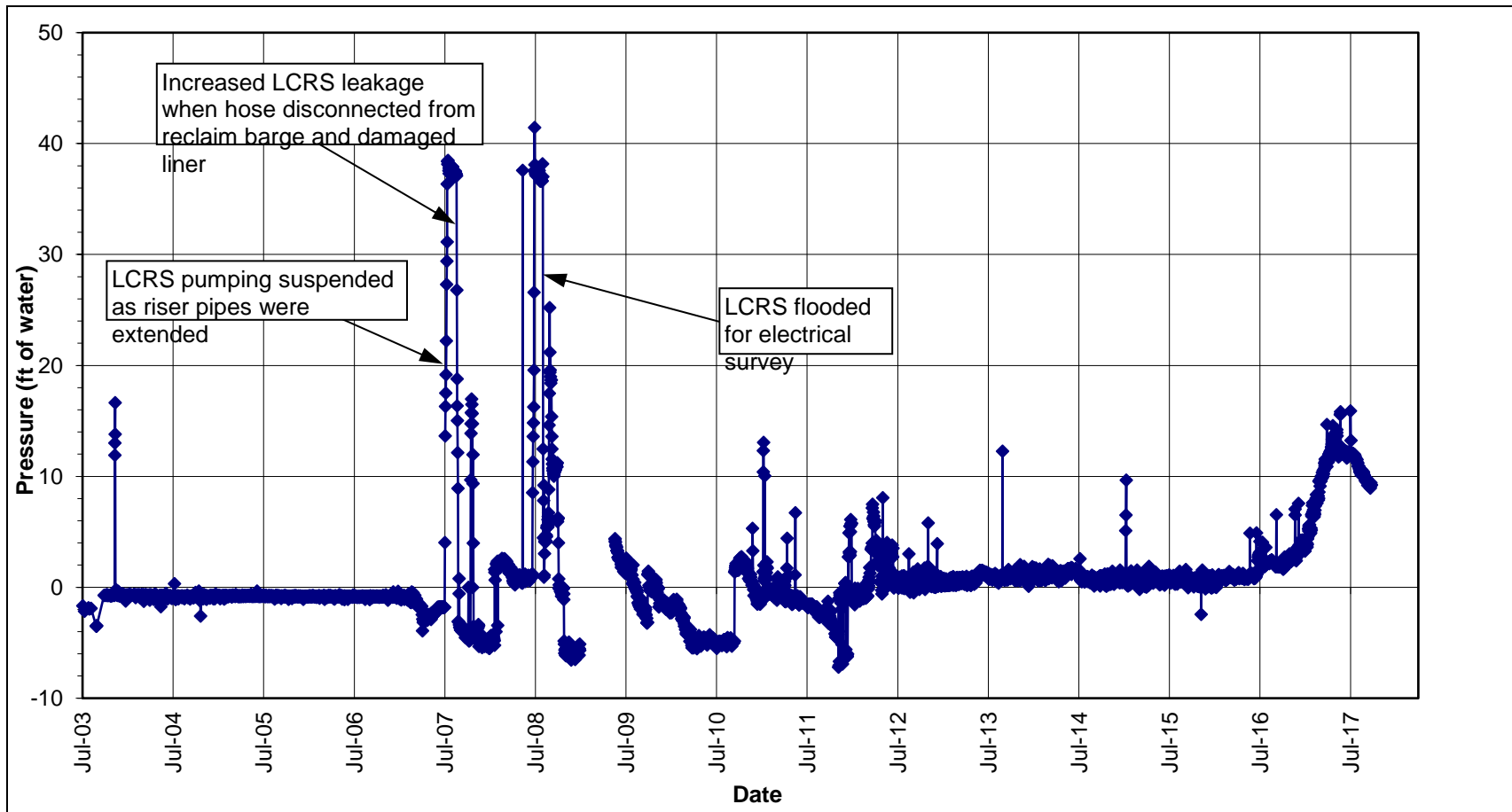
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REV	DATE	DESCRIPTION	PREP'D	CHK'	APP'D



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 PEND OREILLE MINE
 TAILINGS DISPOSAL FACILITY #3
 CALCULATED PRESSURE FOR PIEZOMETER BU-5

<i>Knight Piésold</i> CONSULTING	P/A NO. VA101-18/20	REF. NO. 1
	FIGURE B-5	

0	4DEC'17	ISSUED WITH REPORT	CBN	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'	APP'D



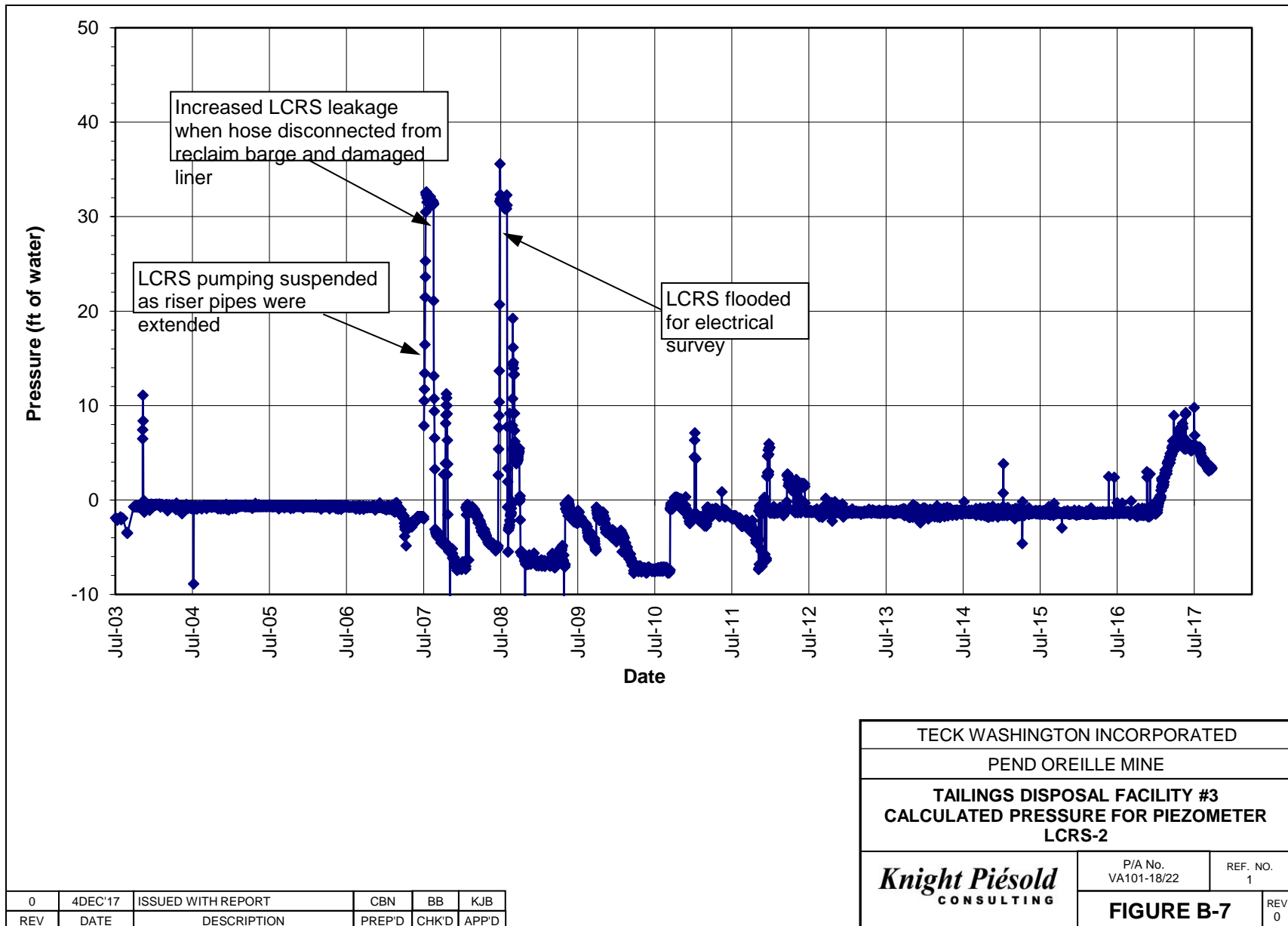
TECK WASHINGTON INCORPORATED
 PEND OREILLE MINE
 TAILINGS DISPOSAL FACILITY #3
 CALCULATED PRESSURE FOR PIEZOMETER
 LCRS-1

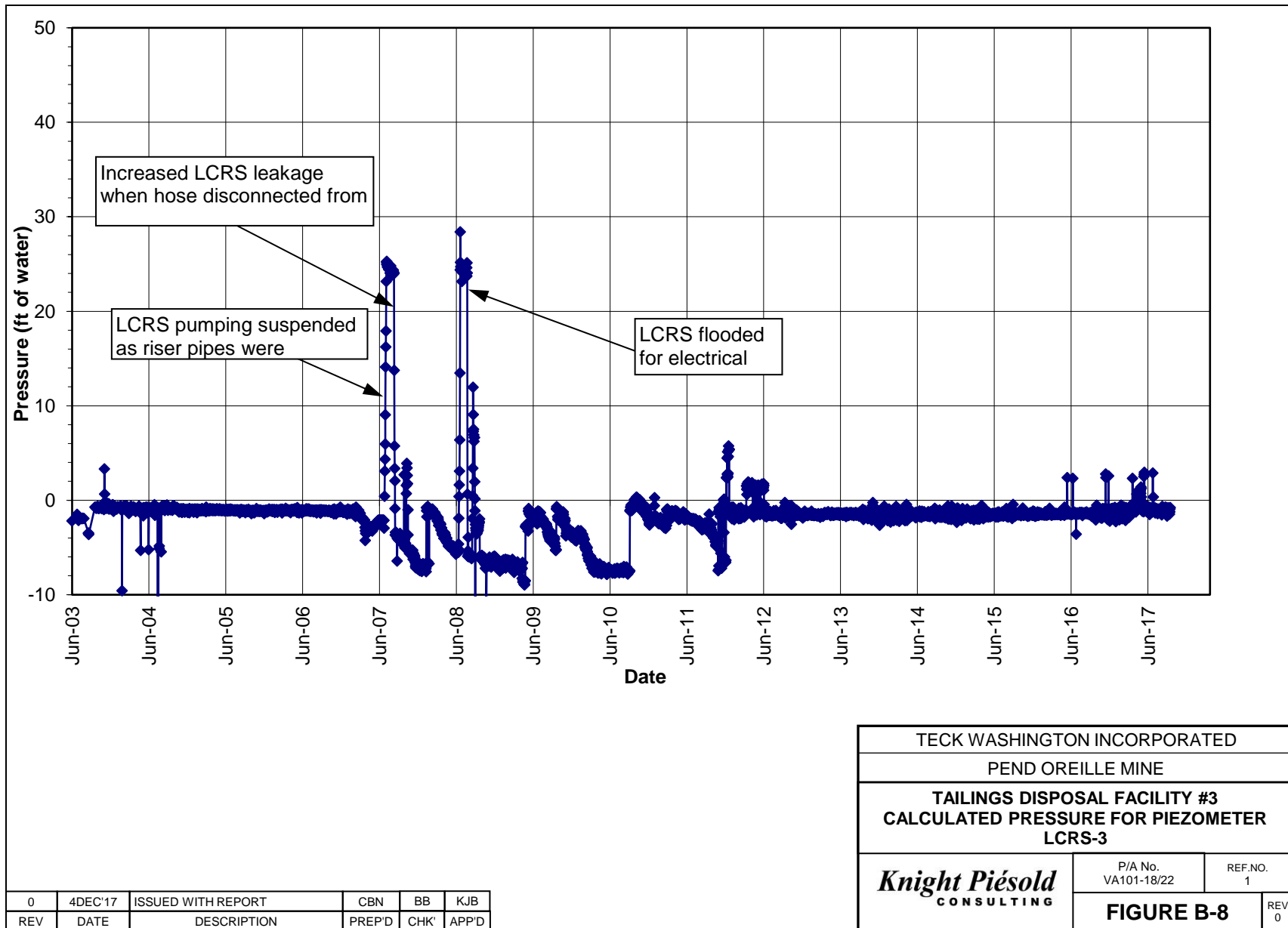
Knight Piésold
 CONSULTING

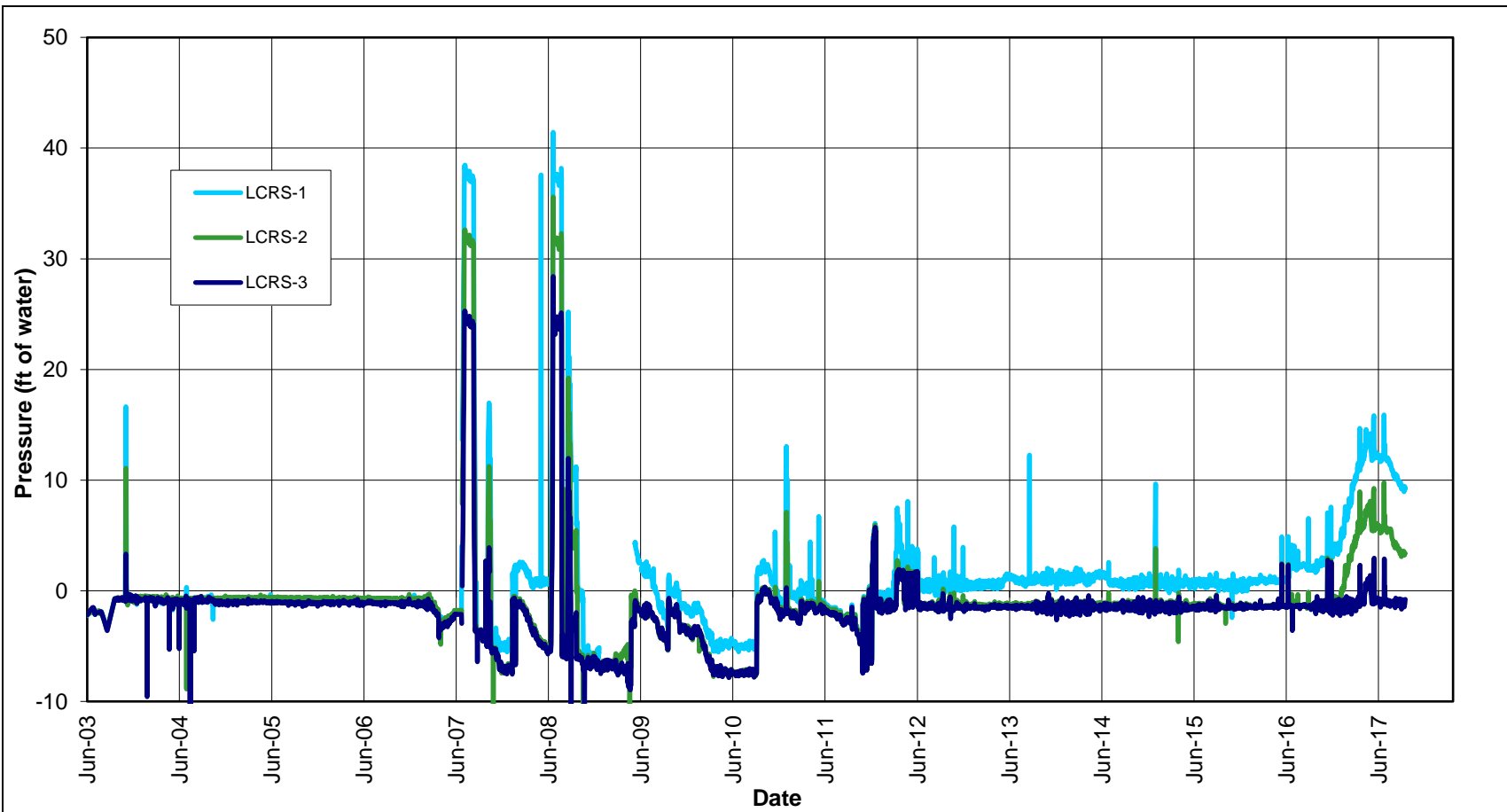
P/A No. VA101-18/22 REF. NO. 1

FIGURE B-6 REV 0

0	4DEC'17	ISSUED WITH REPORT	CBN	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

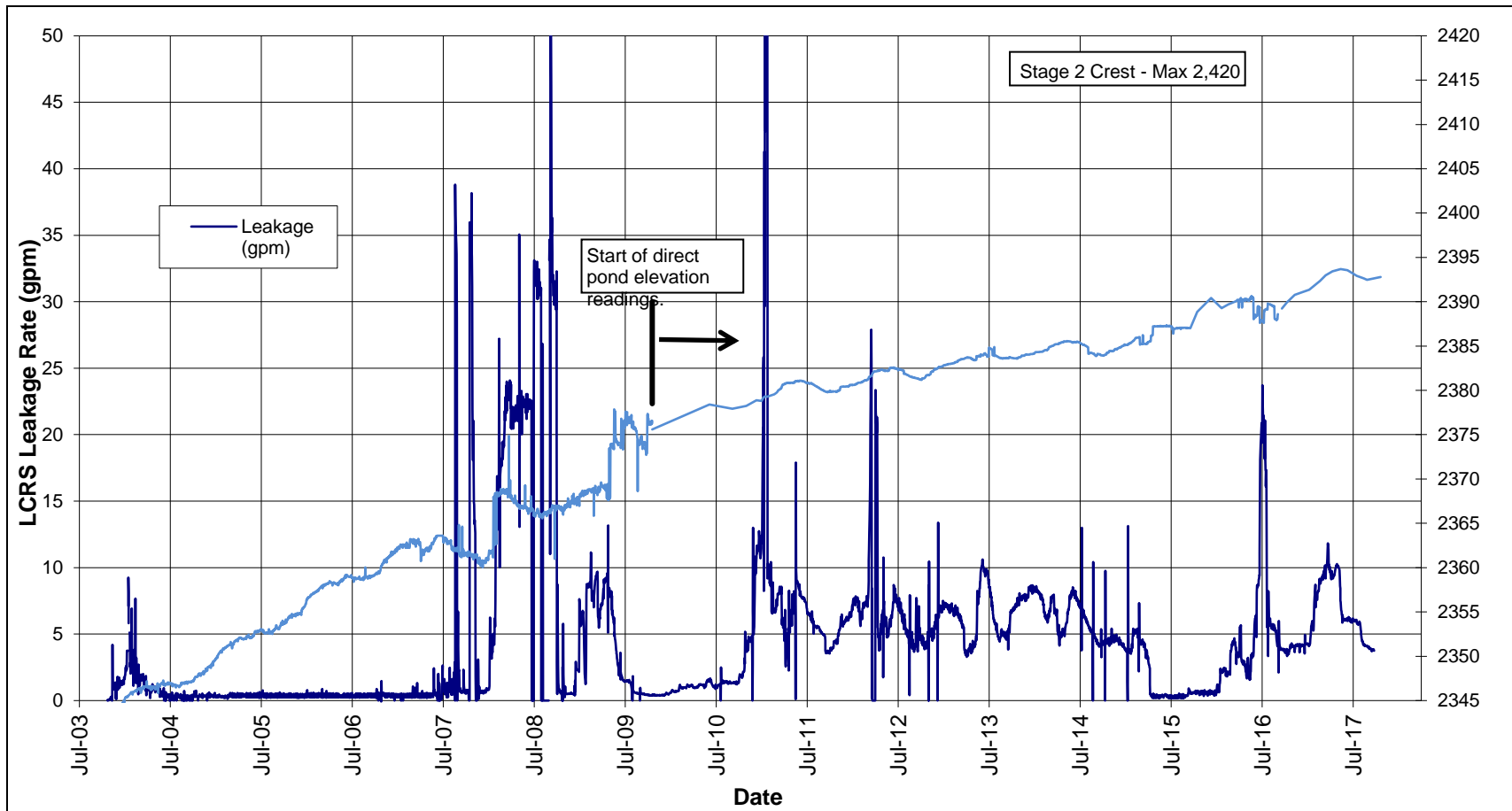






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TAILINGS DISPOSAL FACILITY #3 CALCULATED PRESSURE FOR LCRS PIEZOMETERS	
<i>Knight Piésold</i> CONSULTING	P/A No. VA101-18/22
REF. NO. 1	
FIGURE B-9	
REV 0	

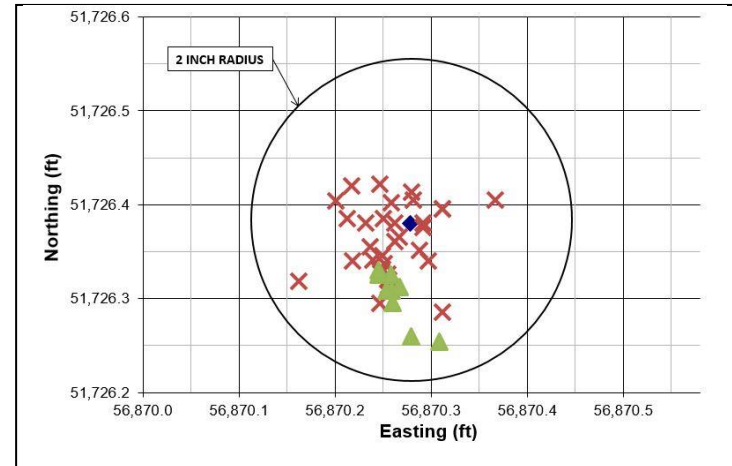
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REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



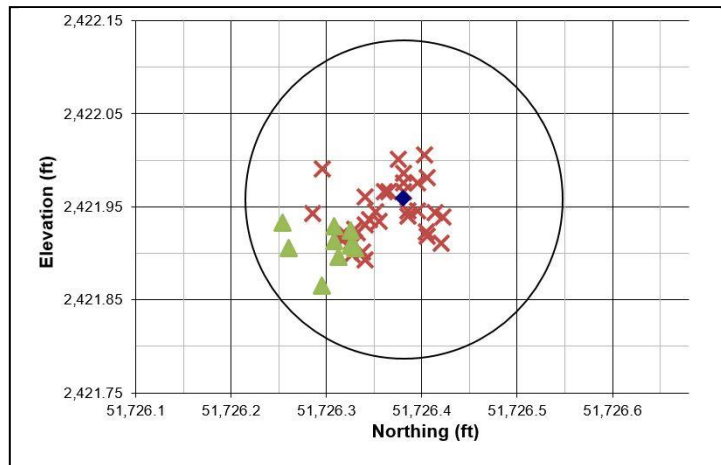
TECK WASHINGTON INCORPORATED	
PEND OREILLE MINE	
TAILINGS DISPOSAL FACILITY #3 LCRS LEAKAGE RATE	
<i>Knight Piésold</i> CONSULTING	P/A NO. VA101-18/22
	REF. NO. 1
FIGURE B-10	
REV 0	

0	4DEC'17	ISSUED WITH REPORT	CBN	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

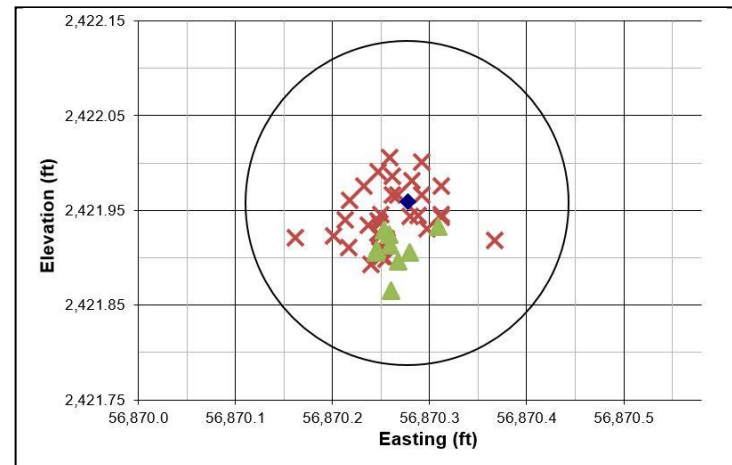
◆ Initial Survey ✕ 2009 to 2016 Readings ▲ 2017 readings



M5 Plan View



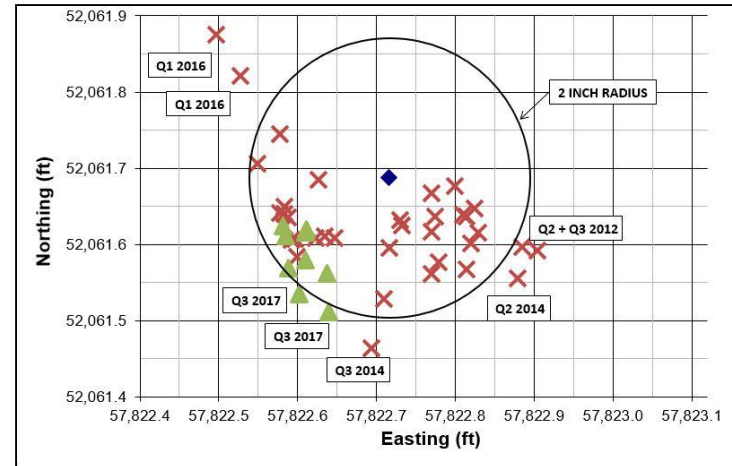
M5 Elevation vs. Northing



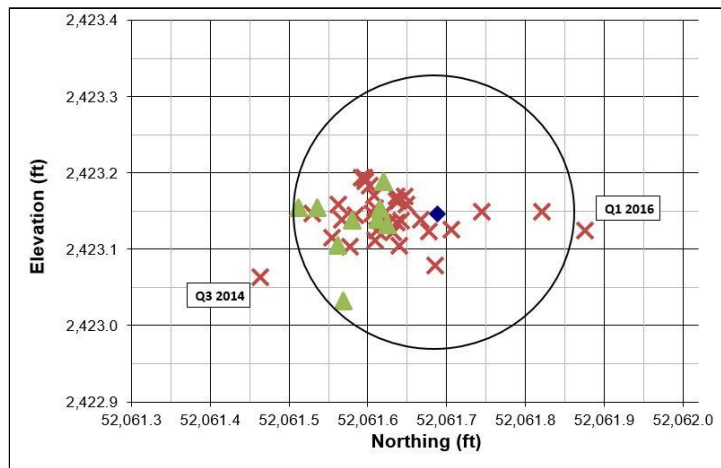
M5 Elevation vs. Easting

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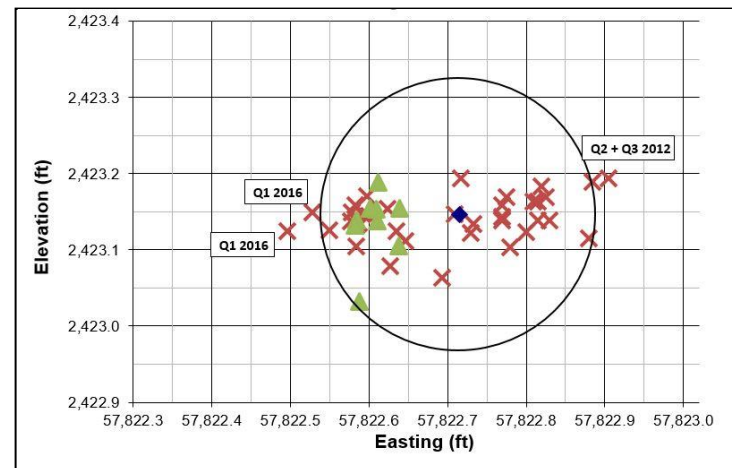
◆ Initial Survey × 2009 to 2016 Readings ▲ 2017 readings



M6 Plan View



M6 Elevation vs. Northing



M6 Elevation vs Easting

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