Tahera Diamond Corporation

CONSTRUCTION RECORD REPORT
EAST AND SOUTHEAST DAMS
JERICHO DIAMOND MINE, NU

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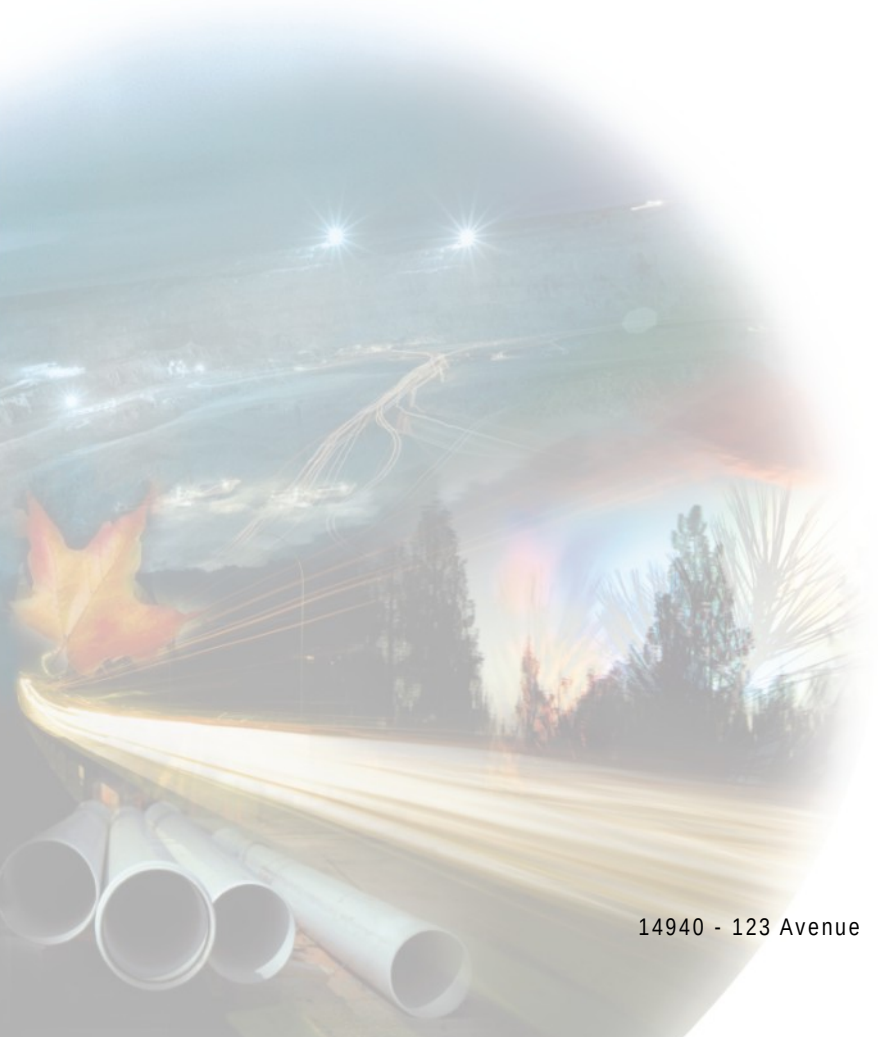

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EXECUTIVE SUMMARY

The East and Southeast Dams were constructed at the Jericho Diamond Mine as part of the Processed Kimberlite Containment Area. The dams will retain the fine processed kimberlite discharged from the process plant.

The dams were constructed according to the East and Southeast Dam Design report, Construction Specifications, and Construction Drawings (EBA 2005a, and EBA 2005b). The East Dam was constructed during the 2005/2006 winter, and the majority of the Southeast Dam was constructed during the 2006/2007 winter. Portions of the Southeast Dam were completed during the summer of 2007, and the Southeast Dam instrumentation was installed in September 2007.

The primary retention element in the dams is a geomembrane liner. The liner is keyed into a trench that is founded in bedrock or ice-saturated frozen ground. The liner is tied into the trench using frozen fill that is intended to remain in a permafrost condition. The superstructure is constructed of run-of-mine rock, till granular fill, and coarse processed kimberlite.

The dams were generally completed according to the designs and specifications. The following deviations to the design were made during the construction:

- The geomembrane liner used in dams was a 60 mil HDPE single-sided textured liner as opposed to a polypropylene liner. The change in the liner was proposed by the liner supplier and installer, and approved by the design team.
- The key trenches in the dams were deeper than originally designed. The deeper depth was required to found the key trench in ice-saturated ground as identified by falling head percolation tests carried out during construction.
- The Southeast Dam was moved downstream by up to 14 m. The downstream shift was required to accommodate the deeper key trench.
- The geomembrane liner at the Southeast Dam north abutment was tied into bedrock using a mechanical connection instead of frozen ground as originally designed. The mechanical connection was required since delays in the construction schedule did not allow the frozen fill to be placed in this zone of the dam. The mechanical connection consisted of a concrete beam tied into the bedrock with steel dowels. The geomembrane liner was attached to the concrete beam using a neoprene gasket, steel bar and concrete anchor bolts.

The quality control soil testing and construction record drawings are presented in this report.

The dams were constructed according to the design drawings and specifications, with exceptions noted in this report. The deviations to the design did not modify the design intent of the dams and the dams are anticipated to function as intended.

TABLE OF CONTENTS

PAGE

TABLE OF CONTENTS

PAGE

TABLE OF CONTENTS

PAGE

TABLE OF CONTENTS

PAGE

PHOTOGRAPHS

TABLE OF CONTENTS

APPENDICES

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 GENERAL

The East and Southeast Dams were constructed at the Jericho Diamond Mine as part of Tahera Diamond Corporation's (TDC's) Processed Kimberlite Management Plan. The dams were constructed successively during the 2005/2006 and 2006/2007 winter construction seasons. EBA Engineering Consultants Ltd. (EBA) provided construction monitoring and quality assurance testing services during the construction of both dams. TDC contracted Nuna Logistics Limited (Nuna) and Clark Builders to produce construction materials and construct the dams. The East and Southeast Dams were constructed concurrently with the West Dam.

The East and Southeast Dams are located at the east end of Long Lake. A general site plan is presented in Drawing ED-1 in Appendix A. A description of the dam construction and the quality control test results are presented in this report. Construction record drawings have also been prepared and are submitted as a separate document. A reduced version of the drawings is included for reference in Appendix A. The dams were generally constructed according to the guidelines and requirements presented in the East and Southeast Design Report, Construction Specifications and Construction Drawings (EBA 2005). Deviations from the design documents are described in Sections 4.1.2 and 5.1.2.

1.2 DAM DESIGN CONCEPT

The intent of the East and Southeast Dams is to prevent uncontrolled discharge of water and solids from the Processed Kimberlite Containment Area (PKCA) into the surrounding environment.

The East and Southeast Dams are lined dams with the liner placed in a key trench that will remain frozen. The liner system consists of a high density polyethylene (HDPE) geomembrane with nonwoven geotextile protective layers on each side of the liner. Each key trench was excavated into saturated, permanently frozen soil or competent bedrock. The liner is tied into the key trench with layers of frozen saturated granular fill. The superstructure is constructed of rockfill. Zones of till and coarse processed kimberlite were placed upstream of the liner. Typical design cross-sections for the East and Southeast Dams are shown in Drawing ED-4.

2.0 CONSTRUCTION MATERIALS

2.1 GENERAL

The following fill materials were used in the construction of East and Southeast Dams:

- Bedding Material (20 mm minus);

- Transition material (200 mm minus);
- Run-of-mine rockfill;
- Till Material;
- Coarse Processed Kimberlite (CPK); and
- Geomembrane Liner.

The above materials are discussed in the following sections.

2.2 BEDDING MATERIAL (20 MM MINUS)

The Bedding Material was used to construct the key trench levelling course, fillet zone and key trench backfill. The design called for the 20 mm minus bedding material to be used as liner bedding above and below the liner. CPK was substituted for the Bedding Material on the upper portion of the liner as described in Sections 4.1.2 and 5.1.2.

Nuna's Clemro crusher produced the 20 mm minus material from granite run-of-mine feed obtained from the Jericho Pit development. The 20 mm material was temperature and moisture conditioned prior to placement in the dam.

The specified gradation limits are presented in the design documents and shown on the particle size analyses in Appendix B and I. Quality assurance particle size analysis testing conducted during the production of the material indicated that the average gradation was within the specified gradation limits. Details of the quality assurance testing can be found in Sections 4.2.1 and 5.2.1.

2.3 TRANSITION MATERIAL (200 MM MINUS)

The 200 mm minus material is used as a transition between the Bedding Material and the run-of-mine rockfill.

Nuna's Clemro crusher produced the 200 mm minus material from granite run-of-mine feed obtained from the Jericho Pit development. The maximum particle size of the material is specified as 200 mm; however, the top size of the material produced during dam construction was typically 150 mm or less. The 200 mm material was the product of the crusher jaw and did not require further processing.

The specified gradation limits are presented in the design documents and shown on the particle size analyses in Appendix B and I. Quality assurance particle size analysis testing conducted during the production of the material indicated that the average gradation was within the specified gradation limits.

2.4 RUN-OF-MINE MATERIAL

The run-of-mine rockfill forms the downstream shell of the dam and consists of granite run-of-mine material obtained from Jericho Pit. The material generally had a maximum particle size of about 700 mm. Occasionally, larger particles were present during placement.

Care was taken to ensure that the material was placed in such a way to avoid segregation and nesting of these larger particles.

The material was visually inspected by the EBA site representative to verify that, in general, the particles adhered to the maximum particle size and that deleterious materials such as snow or till were not present. Additionally, EBA observed that the specified lift thickness was maintained and that the material was compacted sufficiently. Compaction of the rockfill was achieved by truck traffic and a drum compactor.

2.5 TILL MATERIAL

Till Material forms the upstream shell of the East and Southeast Dams overlying the bedding material over the composite liner system.

Till was obtained from native deposits within Jericho Pit and other sources on site. During construction of the East Dam in 2006, till was hauled directly from Jericho pit and placed at the dam. While the Southeast Dam was being constructed in 2007, there was no usable source of till available in the pit. Material was excavated from the till dump adjacent to the pit for placement at the dam. The Till Material generally had a maximum particle size of about 300 mm. Occasionally, larger particles were present during placement and were placed at the upstream edge of the Till Zone. Care was taken to ensure that the material was placed in such a way to avoid segregation and nesting of these large or oversize particles.

The material was visually inspected by the EBA site representative to verify that, in general, the particles adhered to the maximum particle size, that the specified lift thickness was maintained, and that the material was compacted sufficiently. Compaction of the till was achieved by truck traffic and a drum compactor.

2.6 COARSE PROCESSED KIMBERLITE

Coarse Processed Kimberlite (CPK) covers the upstream slope of the till zone. The material was also used as a substitute for liner bedding above and below the upper portion of the liner.

CPK was obtained from ore processing operations in TDC's Process Plant. The material was discharged from (conveyor) CV06 on the east side of the plant. The material was used as liner cover during the placement of the second phase (above original ground) of the composite liner system and for the CPK zone on the upstream slope of the dam.

At the request of TDC, EBA investigated the material's suitability for use as key trench backfill. EBA found that the material did not retain sufficient moisture to meet the minimum 85% saturation.

The material was visually inspected by the EBA site representative to ensure that the specified lift thickness was maintained and that the material was compacted sufficiently. Compaction of the CPK was achieved with a drum compactor.

2.7 GEOMEMBRANE LINER

The geomembrane liner is the primary water retention element in the East and Southeast Dams. The dam design was based on the use of a 40 mil polypropylene membrane with layers of 542 g/m^2 (16 oz./yd^2) nonwoven geotextile placed above and below. At TDC's request, 60 mil textured high-density polyethylene (HDPE) liner was substituted. The nonwoven geotextile was used as specified. Details of the liner substitution can be found in Sections 4.1.2 and 5.1.2. The liner material and installation services were provided by A&A Technical Services (A&A) of Yellowknife, NT.

3.0 CONSTRUCTION EQUIPMENT

3.1 GENERAL

Nuna provided the majority of the equipment for dam construction. Small equipment, such as walk-behind compactors and skid-steer excavators, was provided by Clark Builders during construction of the East Dam and by TDC during construction of the Southeast Dam. Two different methods of producing saturated fill were used during construction of the two dams. Details of the equipment are presented in the following sections.

3.2 MOBILE CONSTRUCTION EQUIPMENT

Table 1 presents the major equipment used during the construction of the East and Southeast Dams.

TABLE 1: EQUIPMENT USED DURING CONSTRUCTION

Haul Trucks	Bulldozers	Excavators	Loaders	Other
Cat D300	Cat D4	Cat 345	Cat 980 B/G	Cat CS-573E "waffle" drum
Cat 769	Cat D9	Cat 330 breaker/drill	Cat 966	Walk behind drum packer and plate tampers
Cat 730			Cat 950	Ingersoll Rand 300 drill
Cat 777			Cat 938	Light plants
Sterling Tandem "roll-off"			Cat 992	Water truck
			Cat IT-28	Vacuum truck
				Grove 50 ton crane
				Bobcat skid steer

3.3 CRUSHER

Nuna used their Clemro mobile crusher to produce the granular materials required for dam construction. The crusher system consists of a primary jaw crusher, a vibratory screen deck and a secondary cone crusher. The Clemro crusher produced the 20 mm and 200 mm materials for the project.

3.4 SATURATED FILL BATCH PLANTS

3.4.1 General

Two different systems were used to produce and temperature and moisture condition the 20 mm fill during the 2006 and 2007 construction seasons. The individual systems are discussed in the following sections.

3.4.2 Reimer Truck Batch Plant

The East Dam was constructed in 2006 with saturated fill produced using a Reimer Truck Mobile Batch Plant. The Reimer mobile concrete batch plant was converted for the production of the moisture and temperature conditioned fill. The Reimer was located in a "Sprung" type building, located east of the Process Plant. The 20 mm minus material was loaded into the Reimer's hoppers using a Cat 950 or similar loader. The auger attachment was removed from the rear of the Reimer, and the granular material was discharged directly onto a conveyor. The conveyor was positioned within the building to allow Cat D300 and 769 trucks, entering from the north end of the building, to be loaded and depart from the south end of the building. Heat and moisture were added to the material using a hot water system and spray bars attached to the conveyor. A pair of steam boilers was used to heat water in a large double-walled asphalt tanker. The hot water was sprayed on the 20 mm material as it moved along the conveyor providing the necessary heat and moisture.

The Reimer Truck Batch Plant was troublesome throughout the season. The large volumes of material being produced by the plant necessitated frequent maintenance to the Reimer Batch Plant. Little or no work was able to be performed at the East or West Dams if the plant was not operational. In addition, the material was temperature conditioned using hot water, without the benefit of any external heat source. To bring the fill from the frozen stockpiles to the minimum allowable temperature, excessive water was required, resulting in longer freezeback times due to the higher moisture content. The production of sufficient hot water also proved challenging, and the plant often had to be put on standby during a shift to allow the water to be brought up to the required temperature.

The plant was operated and maintained by Clark Builders during the 2006 construction season. The Reimer Truck Modified Batch Plant is shown in Photo 1.

3.4.3 Modified Asphalt Plant

TDC arranged for Nuna's Modified Asphalt Plant to be mobilized to site to address the 2006 material production problems. The unit was transported from BHP Billiton's EKATI Diamond mine along the Tibbitt to Contwoyto Winter Road to the Jericho site. Production of saturated fill using the Modified Asphalt Plant began on March 19, 2007.

The plant was used throughout construction of the Southeast Dam levelling course, fillet and key trench backfill. The following describes the plant:

- Frozen 20 mm material is placed into the grizzly-equipped external feed hopper using a front end loader.
- A conveyor belt transports the 20 mm material from the external hopper to the inside of the process plant.
- A short conveyor belt operating at an increased rate is used to place the 20 mm material into the rotary mixing drum.
- A diesel-fired burner/blower is used to thaw and heat the 20 mm material in the upper portion of the rotary mixing drum.
- A metered volume of water is added to the 20 mm as it passes through the rotary mixing drum. The 20 mm material is mixed, resulting in a homogenous moisture conditioned material.
- The moisture conditioned 20 mm exits the rotary mixing drum via a chute and is carried to an overhead surge bin by a conveyor belt.
- The overhead surge bin contains the 20 mm material until a D300 haul truck is positioned below the surge bin to receive the material.

EBA monitored the production of the plant by sampling and testing the product for moisture content, temperature and particle size. The Modified Asphalt Plant is shown in Photo 2.

4.0 EAST DAM

4.1 CONSTRUCTION ACTIVITIES

4.1.1 General

Construction activities for the East Dam occurred between September 2005 and June 2006. The East Dam was constructed according to the guidelines and requirements stated in the design documents. Deviations from the design were documented and are discussed in Section 4.1.2.

During construction of the East Dam, the work was split between Nuna and Clark Builders. A general description of the duties is as follows:

- Clark Builders provided the labour crew and small equipment for key trench cleaning and snow removal. They also operated the Reimer Truck Batch Plant.
- Nuna provided the mobile equipment and operators for the construction of the dam.

EBA carried out quality control testing, prepared weekly reports and maintained a photographic record of the work completed during construction. The weekly reports are included in Appendix F. The photographs referred to in the following sections are

presented in the Photographs section of the report. The major components of the construction are listed below and are summarized in detail in the following sections.

4.1.2 Deviations from Design

The liner system specified in the construction documents is a 40 mil thick unsupported polypropylene (PPE) geomembrane or equivalent. TDC requested the substitution of 60 mil high density polyethylene (HDPE) roll stock with texturing on one side because the materials were readily available though the liner installer. The substitution of liner materials required a review of the dam's stability analysis (EBA, 2006b). EBA performed this review in January of 2006 and found that the stability of the dam remained within the design criteria. The properties of the substituted HDPE are presented in Table 2.

TABLE 2: LINER PROPERTIES

Property	Test Method	Units	HDPE Value
Thickness (Nominal)	ASTM D5594	mm	1.45
Tensile Strength at Break	ASTM D6693	N/mm	16
Elongation at Break	ASTM D6693	%	100
Tear Resistance	ASTM D1004	N	187
Puncture Resistance	ASTM D4833	N	400

In order to reduce the volume of crushed 20 mm material required for the dam, TDC requested the substitution of CPK for key trench backfill and liner bedding at the East Dam.

EBA and Nuna constructed two test pads outside of the dam footprint to determine if the CPK could provide the specified degree of saturation for key trench backfill. The pads were constructed using same methodology that was used to place the saturated 20 mm material. Once the pads achieved freezeback (maximum temperature of -2°C), multiple core samples were taken from each pad by EBA using the method described in Section 4.2.2. The maximum saturation achieved by an individual core sample was 75%, well below the required saturation. Also, the pads were found to be friable and core recovery was very difficult or in some cases not possible. Because of the poor test results and its free draining nature, CPK was not used as key trench backfill at the East Dam.

EBA did allow the substitution of CPK as liner bedding for the upper (sloping) portion of the liner. EBA compared the grain size of the 200 mm and till materials to the grain size of the CPK and found that the materials met the filter transition criteria specified by in the East and Southeast Dam Design Report (EBA, 2005).

A road constructed of run-of-mine rockfill was placed over the crest of the East Dam to provide construction access for the Southeast Dam. The additional material is shown on the construction record drawings in Appendix A. Stability analyses were performed by

EBA to verify that the additional fill would not have a detrimental effect on the stability of the dam. The stability analysis is presented in Appendix H.

4.1.3 Survey

Sub-Arctic Surveys Ltd. (SAS) of Yellowknife, NT provided the following survey services throughout construction of the East Dam:

- Original ground surface surveying prior to construction;
- Layout of blast hole patterns for key trench excavation;
- Construction grade control;
- As-built surveys throughout construction;
- Calculation of material volumes placed in the East Dam on a weekly basis;
- Survey of instrumentation installations; and
- Survey of 20 mm and 200 mm stockpiles.

4.1.4 Foundation Preparation

4.1.4.1 General

Foundation preparation was necessary to ensure that the liner system was keyed into competent, ice-saturated permafrost soils and bedrock. Each aspect of foundation preparation is described in the following sections.

4.1.4.2 Percolation Testing

EBA estimated the depth to ice saturated permafrost soil and bedrock with a percolation testing program conducted from September 22, 2005 to September 27, 2005. A total of seven percolation test holes were drilled with a Gardiner-Denver 300 drill rig to a depth of between 6 m and 10 m along the length of the dam. Holes were not drilled from approximately 0+035 to 0+095 as this area contained saturated till that was to be excavated to frozen ground.

The percolation test holes were filled with water, and the water level in the hole was observed over a period of time. In most cases, there was an immediate drop in the water level. The water level in the percolation test holes was monitored for up to 36 hours to determine the static water depth. The depth to static water level was inferred as the depth to ice-saturated soil or bedrock.

The results of the percolation testing presented in Table 3 indicate that the depth to ice-saturated soil or bedrock varied from approximately 0.3 m to 3.6 m. The key trench base elevation was adjusted such that the key trench base was below the static water level elevation in the percolation holes.

TABLE 3: PERCOLATION TEST SUMMARY						
Borehole Number	Northing	Easting	Surface Elevation (m)	Overburden Depth (m)	Depth to Static Water (m)	Total Depth (m)
1	7318506	477506	522.6	0.3	1.2	8
2	7318486	477510	521.8	0.2	2	8
3	7318463	477509	520.3	0.3	2.3	8
4	7318450	477505	518.5	0.2	2.3	6
5	7318437	477497	515.9	1.5	0.3	6
6	7318340	477488	522.8	0.1	3.6	10

4.1.4.3 Grubbing

Nuna grubbed all surficial vegetation, organic soils and open-graded boulders prior to starting key trench excavation. Grubbing was conducted with a bulldozer or excavator and grubbed materials were loaded into haul trucks and disposed of. The grubbing operation is shown in Photo 3.

4.1.4.4 Key Trench Excavation

The East Dam key trench was developed using drill and blast techniques followed by excavation. The blasts were designed by Nuna to create a key trench to the depths determined by the percolation testing. Drilling operations were performed by McCaws Drilling and Blasting (McCaws) using a Gardiner-Denver 300 drill. Upon completion of blasting operations, the Cat 345 commenced excavation of the key trench to the base of the blasted rock or to frozen saturated till.

4.1.4.5 Key Trench Cleaning

Clark Builders cleaned the base and walls of the key trench with compressed air hoses, hand tools and a skid steer loader. Nuna provided additional equipment support during cleaning of the key trench to remove waste material or snow. All loose frozen soil and bedrock in the key trench was removed from the dam footprint and cleaning was inspected and approved by EBA before fill placement was authorized. Sections of bedrock with ice on the surface were tarped and heated with indirect fired heaters to melt the ice. Levelling course material was placed immediately after the removal of the tarps. Key trench cleaning was ongoing until the levelling course was completed. Key trench cleaning is shown in Photos 4 through 6.

4.1.5 Bedding Material Placement (20 mm)

4.1.5.1 Levelling Course and Key Trench Backfill

A levelling course of 20 mm granular fill was placed in the base of the key trench to provide a smooth subgrade beneath the liner system. The levelling course fill was constructed of saturated and compacted 20 mm fill from the batch plant. Levelling course and key trench backfill placement are shown in Photos 7 through 9.

4.1.5.2 Fillet

The fillet is a wedge of 20 mm fill constructed above the levelling course on the upstream side of the key trench and serves to support the liner in the key trench. The fillet was constructed of moisture conditioned compacted 20 mm material. The lifts of material were shaped using an excavator to provide a flat surface for the liner to be laid. Fillet construction is shown in Photo 10.

4.1.5.3 Liner Bedding Above the Key Trench

Bedding below the liner on the slope of the dam was 20 mm granular fill. The material was placed with a Cat D4 dozer and compacted. The bedding material above the liner was CPK. The CPK material was placed up the slope using a Cat D4 dozer or an excavator. The material was compacted as the upstream till zone was placed.

4.1.6 Transition Material Placement (200 mm)

The 200 mm material was used as transition between the run-of-mine superstructure and the liner bedding. The 200 mm fill in the transition zone of the dam was placed by a Cat D4 dozer or Cat 345 excavator in lifts approximately 0.5 m in thickness. Compaction of the fill was performed by the Cat CS-573E drum compactor. Due to the freezing conditions, the 200 mm material was placed without moisture conditioning. The 200 mm material placement is shown in Photo 11.

4.1.7 Run-of –Mine Rockfill Placement

The run-of-mine material, used for the dam's structure, was placed in lifts approximately 1.0 m thick. The construction specifications call for a maximum lift thickness of 700 mm; however, this requirement was relaxed by the EBA site representative to improve placement of the material. Run-of-mine material was transported to the dam using Cat D300, 769 or 777 haul trucks. A Cat D9 dozer or Cat 345 excavator was used to spread the fill. Compaction of the fill was achieved through truck traffic across the material. Run-of-mine material placement is shown in Photo 12.

4.1.8 Till Placement and Till Material

A zone of Till Material was placed on the upstream face of the frozen core. The material was placed in lifts approximately 300 mm thick using the Cat D4 or D9 dozer. The

Cat CS-573E drum compactor and haul truck traffic were used to compact the fill. Till material placement is shown in Photo 13.

4.1.9 Liner Placement

The liner was placed in two phases. The first phase consisted of placing the liner within the key trench; the second phase consisted of placing liner on the upstream slope. The liner system is comprised of a layer of 60 mil textured high density polyethylene cushioned between two layers of 16 oz. nonwoven geotextile.

The first phase of the liner placement included placing the liner within the key trench. The liner extended out of the key trench to a hinge point. The liner hinge point was covered with sheets of plywood and 20 mm material to protect the liner while construction continued.

For the second phase of liner placement on the upstream slope, the liner hinge was uncovered and inspected for damage. Several sections had been damaged while being exhumed and were patched. The liner was extended up the slope and along the crest.

Various aspects of composite liner placement are presented in Photos 14 and 15. Placement of the first phase by A&A commenced on January 20 and was completed on January 26, 2006. A Grove crane was used to manoeuvre the rolls during placement. A&A continued placement with the second phase being installed from April 2 to April 7, 2006.

4.1.10 Instrumentation

4.1.10.1 Horizontal Ground Temperature Cables

Horizontal ground temperature cables were installed at approximately Sta. 0+100 and 0+150 in the East Dam. The cables were installed immediately above the levelling course.

The leads for the horizontal cables were strung out across the downstream portion of the dam and protected with a bed of coarse processed kimberlite material. The leads were terminated within steel housings at the downstream crest of the dam. The ground temperature cables were installed with multiple water stops along the length of the cable. The water stops consist of hydrated bentonite paste wrapped around the cable. The cables and water stops were buried by approximately 300 mm of saturated 20 mm fill immediately following installation. Locations of the cable and the individual temperature beads were surveyed by SAS and are shown on Drawing ED-5. Ground Temperature Cable installation is shown in Photo 16.

The ground temperature profiles for the installed horizontal ground temperature cables are presented in Figures E1 and E2 in Appendix E.

4.1.10.2 Survey Monitoring Points

Five survey monitoring points were installed on the dam crest directly above the liner crest. The survey point consisted of a 300 mm square steel place welded to a rod. The rod is

protected by a steel pipe. The survey points can be used to determine if dam settlement is occurring. The location of the settlement points are shown on Drawing ED-5.

4.2 QUALITY ASSURANCE TESTING

4.2.1 20 mm Material

4.2.1.1 Particle Size Analysis

Particle size analyses were conducted on 20 mm material during two phases of the project to verify compliance with the specifications:

- during production crushing (26 tests); and
- during placement of moisture conditioned fill at the dam (27 tests).

Particle size analyses conducted during crush production indicate that the average gradation was within the specified limits, as presented in Figure B-1. A detailed summary of the analyses is presented in Appendix B.

Particle size analyses conducted during placement of moisture-conditioned fill at the dam indicate that the average gradation was within the specified limits, as presented in Figure B-2. A detailed summary of the analyses is presented in Appendix B.

4.2.1.2 Moisture Content

Moisture content testing of the 20 mm material was measured on samples during placement of moisture conditioned fill at the dam (112 tests).

Typically, two or more moisture content samples of placed 20 mm material were taken per shift. The fill was sampled from the load after the dozer or loader spread. The average moisture content of the saturated bedding material was 11.2%. Based on EBA's experience, the moisture contents were in the range to meet or exceed the design intent.

A summary of all moisture content testing conducted during each construction phase is presented in Appendix C.

4.2.1.3 Density and Saturation Testing

Density measurements, using a Troxler moisture-density gauge, were conducted on the 20 mm material throughout construction of the dam. The percent compaction was calculated using a maximum dry density of 2185 kg/m^3 determined from moisture-density testing (ASTM D698). The average compaction, saturation and number of tests conducted for the 20 mm material are as follows:

- Levelling course and key trench backfill (compaction 87.9%, saturation 95.2%, 28 tests); and
- Fillet zone (compaction 95.2%, 93 tests).

The results of the density testing are presented in Appendix C. Saturation values were calculated based on moisture density results from the Troxler. The values meet or exceed the design intent.

4.2.2 Ice Saturation Core Testing

Confirmatory ice saturation testing was conducted on samples extracted from individual lifts during construction. Issues with the availability of electrical power and mechanical problems with the coring rig meant that few core samples were taken. Field personnel relied on saturation and density measurements from the Troxler moisture-density unit as discussed in Section 4.2.1.3.

A concrete coring drill with a 100 mm diameter barrel was used to retrieve the samples. A mixture of water and glycol was used as a cutting fluid. The fluid was chilled to minimize thermal erosion of the frozen cores during extraction. The cutting fluid was captured and removed from the dam structure once coring was complete. Results from the core testing are summarized in Appendix C.

The average ice saturation measured from the core samples was 96.5% (2 tests). The minimum average design saturation is specified as 85%.

4.2.3 200 mm Material

4.2.3.1 Particle Size

Samples of 200 mm material were taken during crushing operations and during dam construction. Samples obtained from the crusher were taken off the jaw crusher discharge belt. Samples obtained during construction activities were taken from the material stockpile or in situ sampling during material placement. Particle size analyses conducted on the 200 mm transition material indicated that average particle size distribution was within the limits presented in the Construction Specifications. The average gradation of the produced 200 mm material is presented in Appendix B.

4.2.4 Liner

A&A conducted a Quality Assurance/Quality Control testing program during liner installation. The results of this program are presented in their Construction Report, which is presented in Appendix G. EBA conducted periodic visual inspections throughout liner construction. The liner system was installed in accordance with the requirements stated in the design documents.

5.0 SOUTHEAST DAM CONSTRUCTION

5.1 CONSTRUCTION ACTIVITY

5.1.1 General

The Southeast Dam was constructed according to the guidelines and requirements stated in the design documents. Deviations from the design were documented and are discussed in Section 5.1.2. Construction activities for the Southeast Dam occurred between September 2005 and August 2007. The key trench was blasted and excavated in 2005; however, dam construction was put on hold to concentrate on the East and West Dams, and significant construction activity did not resume until 2007.

Construction of the Southeast Dam was carried out by Nuna and Clark Builders. A general description of the duties is as follows:

- Nuna provided the mobile equipment, operators and labour crew for the construction of the Southeast Dam. Nuna maintained and operated their Clemro Crusher and Modified Asphalt Plant for production of construction materials.
- Clark Builders provided a carpenter crew for the construction of the concrete beam along the northern rock abutment at the Southeast Dam.

EBA carried out quality control testing, prepared weekly reports and maintained a photographic record of the work completed. The weekly reports are included in Appendix M. The photographs referred to in the following sections are presented in the Photographs section of the report. The major components of the construction are listed below and are summarized in detail in the following sections.

5.1.2 Deviations from Design

5.1.2.1 Liner

The liner system specified in the construction documents is a 40 mil thick unsupported polypropylene (PPE) geomembrane or equivalent. As with the East Dam, TDC requested the substitution of 60 mil high density polyethylene (HDPE) roll stock with texturing on one side because the materials were readily available though the liner installer. The substitution of liner materials required a review of the dam's stability analysis (EBA, 2006b). EBA performed this review in January of 2006 and found that the stability of the dam remained within the design criteria. The properties of the substituted HDPE are presented in Table 2 in Section 4.1.2.

5.1.2.2 Liner Bedding

In order to reduce the volume of crushed 20 mm material required for the dam, TDC requested the substitution liner bedding at the Southeast Dam. EBA allowed the substitution of CPK as liner bedding above and below the liner on the upper portion of the

liner. The particle size distribution of the CPK met the filter criteria to the 200 mm transition material as specified in the East and Southeast Dam Design Report (EBA, 2005a)

5.1.2.3 Fillet Zone and Key Trench

A design change was made to lower the elevation of the fillet zone of the Southeast Dam. A lower fillet zone was required to accommodate the deeper key trench than originally designed. The as-built depth of the key trench would have required a fillet with a very wide base making the key trench too narrow and consuming a large volume of 20 mm material. The revised fillet was constructed to a height of approximately 1.0 m above the elevation of the key trench base. By lowering the fillet zone, the footprint of the Southeast Dam was shifted downstream by up to 14 m depending on the depth of the key trench.

The southern end of the key trench was extended approximately 42 m from Sta. 0+062 to 0+020 in order to have the key trench located where the original ground was below elevation 524 m. The fillet zone was continued to the end of the key trench extension where it "day lighted" at the 524 m elevation.

5.1.2.4 North Abutment

The abutment at the northern end of the Southeast Dam key trench is a near vertical face of blasted bedrock. The liner system was to be tied to the rock face using a core of frozen saturated 20 mm fill; however, construction delays and moderating weather made this connection detail unviable. An alternate system was developed that used mechanical connection to attach the liner to the rock abutment. A concrete beam was constructed along the abutment that slopes at an angle approximating the liner slope. The concrete beam is anchored to the rock face with vertical and battered anchors. The liner system is bolted to the concrete beam with a neoprene gasket system. Design documents for the concrete beam are presented in Appendix O, and the beam is discussed in more detail in Section 5.1.10.

5.1.3 Surveying

Sub-Arctic Surveys Ltd. (SAS) of Yellowknife, NT provided the following survey services throughout construction of the East Dam:

- Original ground surface surveying prior to construction;
- Layout of blast hole patterns for key trench excavation;
- Construction grade control;
- As-built surveys throughout construction; and
- Survey of 20 mm and 200 mm stockpiles.

5.1.4 Foundation Preparation

5.1.4.1 General

Foundation preparation was necessary to ensure that the liner system was keyed into competent, ice-saturated permafrost soils and bedrock. Each aspect of foundation preparation is described in the following sections.

5.1.4.2 Percolation Testing

EBA estimated the depth to ice-saturated permafrost soil and bedrock with a percolation testing program conducted from October 4, 2005 to October 6, 2005. A total of eleven percolation test holes were drilled with a Gardiner-Denver 300 drill rig to a depth of between 6 m and 8 m along the length of the dam. The percolation test holes were subsequently filled with water. In most cases, there was an immediate drop in the water level. The water level in the percolation test holes was monitored for up to 36 hours to determine the static water depth. The depth to static water level was inferred as the depth to ice-saturated soil or bedrock.

The results of the percolation testing (presented in Table 4) indicate that the depth to ice-saturated soil or bedrock varied from approximately 0.1 m to 2.2 m.

TABLE 4: PERCOLATION TEST SUMMARY (OCTOBER 2005)

Borehole Number	Northing	Easting	Surface Elevation (m)	Overburden Depth (m)	Depth to Static Water (m)	Total Depth (m)
1	7318326	477428	523.4	0.1	2.2	6
2	7318321	477419	520.6	0.1	1	6
3	7318318	477409	521.0	0.1	1	6
4	7318309	477392	518.9	0.2	2	6
5	7318301	477373	516.1	0.3	1.6	6
6	7318296	477353	517.3	1.1	1.2	6
7	7318288	477337	517.5	1.5	1.2	6
8	7318275	477320	520.3	1.8	0.15	8
9	7318265	477303	521.6	0.3	2.2	8
10	7318256	477283	521.9	0.1	0.1	8
11	7318250	477276	522.7	0.1	1.9	8

The key trench was blasted and excavated in the fall of 2005; however, due to schedule constraints, the dam was not completed during the 2006 construction season. The key trench was left open during the summer of 2006, and in October 2006, a second set of percolation holes was drilled to determine if the ground conditions had changed because of thaw in the key trench during the summer of 2006. A series of seven holes was drilled along the key trench in the rock at the northern and southern ends of the dam. The results

of the percolation testing presented in Table 5 indicated that the depth to ice-saturated soil or bedrock had changed and was up to 3.5 m below the base of the key trench.

TABLE 5: PERCOLATION TEST SUMMARY (OCTOBER 2006)

Borehole Number	Northing	Easting	Key Trench Base Elevation (m)	Water Level Elevation (m)	Depth to Static Water (m)	Total Depth (m)
1	7318320	477417	517.8	517.8	0.0	6
2	7318318	477409	518.0	516.1	1.9	6
3	7318310	477393	516.2	515.8	0.4	6
4	7318275	477319	518.2	516.1	2.1	6
5	7318265	477302	519.2	518.2	1.1	6
6	7318256	477283	519.7	519.1	0.6	6
7	7318246	477273	520.6	517.1	3.5	6

The percolation tests indicated that a water loss occurred in the active layer below the excavated key trench. A third series of percolation tests was performed on January 18, 2007. Test holes were drilled and filled with hot water. The holes were insulated at the surface elevation to prevent the premature formation of ice in the holes.

The results of the percolation testing (presented in Table 6) indicated that the depth to ice-saturated soil or bedrock varied from approximately 0.0 m to 0.4 m below the base of the key trench.

TABLE 6: PERCOLATION TEST SUMMARY (JANUARY 2007)

Borehole Number	Northing	Easting	Key Trench Base Elevation (m)	Water Level Elevation (m)	Depth to Static Water (m)	Total Depth (m)
1	7318242	477271	520.6	517.8	0.0	6
2	7318252	477278	519.7	516.1	0.0	6
3	7318263	477297	519.6	515.8	0.4	6
4	7318274	477315	518.8	516.1	0.0	6
5	7318299	477362	515.6	518.2	0.0	6
6	7318312	477396	517.0	519.1	0.0	6
7	7318317	477413	518.1	517.1	0.4	6.5

The results of the third series of percolation testing determined that additional key trench excavation was not required; therefore, key trench cleaning commenced immediately after the tests were complete. Percolation testing before and after key trench excavation is shown in Photos 17 and 18.

5.1.4.3 Grubbing

All surficial vegetation, organic soils and open-graded boulders were grubbed prior to starting key trench excavation. Grubbing was conducted with a bulldozer or excavator and grubbed materials were loaded into haul trucks and disposed of. Grubbing of the Southeast Dam is shown in Photo 19.

5.1.4.4 Key Trench Excavation

The Southeast Dam key trench was constructed using drill and blast techniques followed by excavation. The blasts were designed by Nuna to create a key trench to the depths determined by the percolation testing. Drilling operations were performed by McCaws using a Gardiner-Denver 300 drill. Upon completion of blasting operations, the Cat 345 commenced excavation of the key trench to the base of the blasted rock or to frozen saturated till. An aspect of key trench drilling is shown in Photo 20.

5.1.5 Key Trench Cleaning

A large volume of snow had to be removed from the exposed Southeast Dam key trench prior to commencement of detail key trench cleaning. Nuna cleaned the base and walls of the key trench with compressed air hoses, hand tools and heavy equipment. The ripper tooth attachment on the Cat 345 excavator was modified to accept a 50 mm air hose and nozzle attachment. The excavator was then used to scratch loose material and blow it to the edges of the key trench where it could be removed with the excavator bucket. Labourers with hand tools and air lances performed the detailed cleaning, removing all loose frozen soil and bedrock in the key trench. The key trench was inspected and approved by EBA before fill placement was authorized. There were significant deposits of ice bonded to the bedrock since the key trench was open and exposed for an entire year. Removal of ice is a slow process, and the lack of available labour compounded the delays. When possible, levelling course material was placed immediately after a section of the trench was approved. Key trench cleaning was ongoing until the levelling course was completed. Various aspects of key trench cleaning are shown in Photos 21 through 23.

5.1.6 20 mm Material Placement

5.1.6.1 Levelling Course and Key Trench Backfill

A levelling course of 20 mm material was required in the base of the key trench to provide a smooth subgrade beneath the liner system. The levelling course fill was constructed of saturated and compacted 20 mm material from the batch plant. The temperature of the saturated mix was typically increased to between 25 and 45°C when placing the first lift of material over the base of the key trench. Subsequent lifts of levelling course and key trench backfill were placed with a reduced mix temperature to accelerate freezeback. Levelling course placement is shown in Photo 24.

5.1.6.2 Fillet

The fillet is a wedge of 20 mm material constructed above the levelling course on the upstream side of the key trench and serves to support the liner in the key trench. The fillet was constructed of moisture conditioned compacted 20 mm material. The fill was placed in lifts using an excavator and compacted with a 10-tonne drum roller or a walk-behind compactor. The lifts of material were then shaped using an excavator to provide a flat surface for the liner to be laid. Fillet placement is shown in Photo 25.

5.1.6.3 Liner Bedding Placement

The key trench backfill and fillet zones are the bedding for the liner within the key trench. Above the key trench, CPK was placed above and below the liner for bedding. The CPK material was placed up the slope using a Cat D4 dozer or an excavator. The material was compacted as the upstream till zone was placed. Bedding placement is shown in Photo 26.

5.1.7 200 mm Material Placement

The 200 mm material was used as a transition material between the run-of-mine superstructure and the liner bedding. The 200 mm fill placed in the transition zone of the dam was placed by a Cat D4 dozer or Cat 345 excavator in lifts approximately 0.5 m in thickness. Compaction of the fill was performed by the Cat CS-573E drum compactor. Due to the freezing conditions, the 200 mm material was placed without moisture conditioning. The 200 mm placement is shown in Photo 27.

5.1.8 Run-of-Mine Material Placement

The run-of-mine superstructure downstream of the liner was placed and compacted in 1000 mm lifts. The construction specifications call for a maximum lift thickness of 700 mm; however, this requirement was relaxed by the EBA site representative to improve placement of the material. Oversize particles were placed at the downstream edge of the dam shell. The run-of-mine shell was constructed primarily of granite rock; however, numerous loads of diabase rock were also used in the structure. The run-of-mine material was hauled from the Jericho Pit using Cat 777, 769 or 730 hauls trucks and placed using a Cat D4 or D8 dozer and a Cat 345 excavator. Compaction of the material was achieved by truck traffic operating on the surface and using a Cat CS-573E waffle drum compactor. During placement, additional run-of-mine was stockpiled on the crest of the East Dam and used as required. TDC was instructed to remove any excess material upon completion of the Southeast Dam. Run-of-mine placement is shown in Photo 28.

5.1.9 Till and CPK Placement

The till zone upstream of the liner system was placed and compacted in multiple lifts. The construction specifications call for a maximum lift thickness of 300 mm. Field observations by the EBA representative found that the specified thickness was too shallow for proper placement of the 300 mm minus till material. The specification was relaxed to a thickness

of 500 mm for the remaining lifts. The till was excavated from the till dump adjacent to the Jericho pit as no till source was available from the pit itself. The till zone construction is shown in Photo 29.

5.1.10 Concrete Beam Installation

The Southeast Dam encountered several construction delays during the season. The result of the delay was the continuation of construction activities into the summer season. A zone of frozen saturated fill was to be used to tie the liner system into the rock face at the northern abutment. However, moderating weather conditions led to the substitution of a concrete beam for the liner tie in rather than a frozen core of 20 mm material.

The tie-in beam comprises a reinforced concrete beam, mechanically connected to the bedrock using grouted rebar anchors. The beam design provides a mechanical bond and seal between the concrete beam and the bedrock, and provides a smooth surface to connect the liner to. The liner system is anchored to the beam using a flat bar and concrete anchors and a neoprene gasket. The tie-in design is documented in a letter submitted to TDC on May 23, 2007 and is reproduced in Appendix O.

The concrete beam was designed to be approximately 450 mm wide by 600 mm high; however, irregularities in the bedrock contours dictated that the beam dimensions and reinforcing steel be field adjusted to accommodate site specific conditions.

Foundation preparation for the beam started on May 24, 2007 and continued intermittently during dam construction. Loose rock was scaled and removed to provide a clean surface on which to cast the beam. A rock ledge, rising at a 2H:1V slope, from the base of the fillet to near the dam crest was exposed during foundation preparation and was used to support the beam. Cross slopes along the ledge varied from near horizontal to an approximate 40° dip.

Clark Builders was retained to install the rock anchors, re-enforcing steel, concrete and liner attachments. The rock anchor holes were drilled by McCaws using a Cat 330 excavator with a drill attachment. Rock anchor and re-enforcing steel installation took place between June 30 and July 1 followed by concrete placement on July 6. The liner was attached to the concrete on July 12 and July 13 completing the beam.

Various aspects of the installation are presented in Photos 30 through 32.

5.1.11 Liner Placement

The liner system in the Southeast Dam is the dam's primary water retention element. The liner system consists of the following components:

- Geomembrane (60 mil high density polyethylene (HDPE) liner, textured one side); and
- Upstream and downstream cushions (542 g/m^2 nonwoven geotextile).

The Construction Specifications called for a 40 mil polypropylene geomembrane to be used; however, TDC requested the substitution of the HDPE liner. The geomembrane was

assembled using HDPE roll stock provided by A&A. The rolls were deployed along the dam slope using a spreader bar and front-end loader with a fork or stinger attachment. The geomembrane panels were placed with the textured side face up and welded using a split wedge fusion unit or extrusion unit. All geomembrane seams were surveyed by SAS prior to backfilling. Damage to the geomembrane was marked and repaired according to the Construction Specifications. Damaged areas were noted by the liner installer and surveyed by SAS.

The nonwoven geotextile rolls were deployed using a spreader bar attachment and a front-end loader with a fork or stinger attachment. The panels were overlapped a minimum of 600 mm and were sealed together with a heat gun. Instances of damage to the geotextile were patched according to the Construction Specifications.

The liner system was installed in three phases:

- Phase 1 Installation of the liner below the hinge.
- Phase 2 Installation of the liner above the hinge.
- Phase 3 Installation of liner/concrete beam tie in.

All of the liner system components were purchased from A&A, and the first two phases of the Southeast Dam's liner were installed under their supervision with logistical support provided by Nuna. Scheduling conflicts meant that A&A was not available to install the final phase of the liner. TDC contracted Western Tank and Lining Ltd. (WTL) of Okotoks, Alberta to complete the tie-in of the liner to the concrete beam. EBA oversaw the installation of all phases of the liner, but liner quality assurance testing was the responsibility of the installer. The liner concrete beam tie-in is shown in Photo 33.

5.1.12 Instrumentation

5.1.12.1 General

Ground temperature cables (GTC) and survey monitoring points were installed in the Southeast Dam for performance monitoring purposes. Ground temperature cables were installed horizontally at the base of the key trench beneath the liner system. The cables permit the monitoring of the temperature along the liner/levelling course interface and beneath the fillet at the base of the key trench. An additional GTC was installed in the concrete beam at the northern abutment. Survey monitoring points were installed above the crest of the liner along the length of the dam. The instruments are discussed in the following sections.

5.1.12.2 Horizontal Ground Temperature Cables

Horizontal ground temperature cables were installed at approximately Sta. 0+150 and 0+200 in the Southeast Dam. A cable was also installed along the north abutment concrete beam liner tie-in at Sta. 0+240. The cables were installed immediately above the levelling course. The leads for the horizontal cables were strung out across the downstream portion

of the dam and protected with a bed of coarse processed kimberlite material. The leads were terminated within steel housings at the downstream crest of the dam. The ground temperature cables were installed with multiple water stops along the length of the cable. The water stops consist of hydrated bentonite paste wrapped around the cable. The cables and water stops were buried by approximately 300 mm of saturated 20 mm fill immediately following installation. Locations of the cable and the individual temperature beads were surveyed by SAS. An aspect of GTC installation is presented in Photo 34.

Ground temperature profiles for the Southeast Dam are presented in Appendix L. The temperature data indicates that the key trench base at Sta. 0+150 and 0+200 was approximately -2°C in October 2007. The temperature at the concrete beam tie was above 0°C in October 2007. This is as expected since that portion of the dam was constructed during the summer of 2007.

5.1.12.3 Survey Monitoring Points

A total of seven survey monitoring points were installed above the liner crest along the alignment of the dam. The monitoring points consist of 300 mm by 300 mm flat plates with a rod sticking up though the fill. The rod is protected by 50 mm pipe. The northings, eastings and elevations of the survey monitoring points are to be regularly surveyed to monitor settlement or lateral movement. The data will serve as the baseline against which all subsequent surveys will be compared. The locations of the survey monitoring points are presented in the Construction Record Drawings. A survey monitoring point is shown in Photo 35.

5.2 QUALITY ASSURANCE TESTING

5.2.1 20 mm Material

5.2.1.1 Particle Size Analysis

Particle size analyses were conducted on 20 mm material during two phases of the project to ensure compliance with the specifications:

- during production crushing (20 tests); and
- during placement of moisture conditioned fill at the dam (41 tests).

Particle size analyses conducted during production and placement indicate that the average gradation was within the specified limits, as presented in Figure I-1. A detailed summary of the analyses is presented in Appendix I

5.2.1.2 Moisture Content

Moisture content testing of the 20 mm fill was measured during placement of moisture conditioned fill at the dam (98 tests).

Typically, two or more moisture content samples of placed fill were taken per shift. The fill was sampled after the material was placed and spread. The average moisture content of the 20 mm material in the levelling course and key trench backfill was 9.5%.

A summary of all moisture content testing conducted during each construction phase is presented in Appendix J.

5.2.1.3 Density and Saturation Testing

Density and moisture measurements, using a Troxler moisture-density gauge, were conducted on the 20 mm material throughout construction of the dam. The percent compaction was calculated using a maximum dry density of 2100 kg/m^3 determined from moisture-density testing. The average compaction, saturation and number of tests conducted for the 20 mm material are as follows:

- Levelling course and Frozen Core lifts (compaction 94.7%, saturation 96.9% and 70 tests); and
- Fillet zone (compaction 97.6%, 51 tests).

The results of the density testing are presented in Appendix J. Saturation values were calculated based on moisture density results from the Troxler. These values are presented with the compaction results.

5.2.2 Ice Saturation Core Testing

Ice saturation is the controlling parameter for the frozen lifts of key trench backfill. Confirmatory ice saturation testing was conducted on samples extracted from individual lifts during construction. Issues with the availability of electrical power and mechanical problems with the coring rig meant that few core samples were taken during the 2007 season. Field personnel relied on saturation and density measurements from the Troxler moisture-density unit as discussed in Section 5.2.1.3.

A concrete coring drill with a 100 mm diameter barrel was used to retrieve the samples. A mixture of water and glycol was used as a cutting fluid. The fluid was chilled to minimize thermal erosion of the frozen cores during extraction. The cutting fluid was captured and removed from the dam structure once coring was complete. Results from the core testing are summarized in Appendix J.

The average ice saturation measured from the core samples was 85% (3 tests). The minimum average design saturation is specified as 85%.

5.2.3 200 mm Material

5.2.3.1 Particle Size

Samples of 200 mm material were taken during crushing operations and during dam construction. Samples obtained from the crusher were taken off the jaw crusher discharge

belt. Samples obtained during construction activities were taken from the material stockpile or by in situ sampling during material placement. Particle size analyses conducted on the 200 mm transition material indicated that average gradation was within the limits presented in the Construction Specifications. The average gradation of the produced 200 mm material is presented in Figure I-3 in Appendix I.

5.2.4 Liner

A&A or WTL conducted Quality Assurance/Quality Control testing programs during liner installation. The results of this program are presented in their Construction Report, which is presented in Appendix N. EBA conducted periodic visual inspections throughout liner construction. The liner system was installed in accordance with the requirements stated in the design documents.

5.2.5 Concrete Beam

The quality assurance testing on the concrete beam included field air content and slump testing of the concrete and grout mixed on site. Additionally, compressive strength test cylinders were cast during placement of the concrete and grout. Compressive strength results are presented in Appendix P.

The concrete cylinder test strengths varied from 12.6 to 34.3 MPa compared to a specified strength of 30 MPa. The wide variation appears to be caused by poor mix control with the concrete mixer. The beam is expected to perform as intended, even though the concrete strengths are lower than desired.

6.0 LONG-TERM DAM MONITORING

6.1 PURPOSE

Performance monitoring is an integral part of the operation of any water retention structure. The primary design concept of the East and Southeast Dams presumes that the key trench and foundation of the dam remains frozen. Long-term monitoring of the dam will include the following:

- Monitor the thermal regime to confirm thermal predictions;
- Monitor settlement movements of the dam; and
- Satisfy regulatory requirements for dam performance monitoring.

6.2 THERMAL MONITORING

The ground temperature cables installed in the East and Southeast Dams need to be read on a regular basis. EBA recommends that the cable be read on a monthly basis for the service life of the dam. The data will be used to confirm the thermal predictions used to design the dams.

6.3 SURVEY MONITORING

The survey monitoring points installed in the East and Southeast Dams need to be surveyed on a regular basis. EBA recommends that a survey be performed on a monthly basis for the first two years followed by annual surveys. Each survey should note northings, eastings and elevations. Elevation measurements must be performed with a spirit level to an accuracy of ±1 cm or greater.

6.4 DAILY INSPECTIONS

As detailed in the Processed Kimberlite Management Plan (EBA, 2006a), daily visual inspections of the dam and tailings discharge should be carried out. Signs of instability, such as deformations, slumping and cracks should be reported to the design engineers. Signs of seepage from the dam should also be reported.

6.5 ANNUAL INSPECTIONS

The water license for Jericho Mine requires an inspection of each dam in July on an annual basis. The specific tasks conducted during the inspection include the following:

- Inspection of the upstream and downstream slopes for any signs of distress;
- Inspection of the dam crests for any sign of transverse cracking; and
- Inspection of the abutments and downstream toe for any evidence of seepage.

7.0 CLOSURE

We trust this satisfies your present requirements. If you have any questions, please contact the undersigned at your convenience.

EBA Engineering Consultants Ltd.

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Project Engineer, Arctic Region
Direct Line: 780.451.2130 x556
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REGISTERED PROFESSIONAL ENGINEER
W. T. HORNE
LICENSEE
Nov 5, 2007
N.W.T.

THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS and GEOPHYSICISTS OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
Nov. 5, 2007 **P 018**
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REFERENCES

EBA Engineering Consultants Ltd., 2005a. Jericho Project, East and Southeast Dam Design Report. Submitted to Tahera Diamond Corporation. August 2005. EBA File No.: 1100060.004

EBA Engineering Consultants Ltd., 2005b. Jericho Project, East and Southeast Dam Construction Specifications. Submitted to Tahera Diamond Corporation. August 2005. EBA File No.: 1100060.004

EBA Engineering Consultants Ltd., 2006a. Jericho Project, Processed Kimberlite Management Plan. Submitted to Tahera Diamond Corporation. February 2006. EBA File No.: 1100060.004

EBA Engineering Consultants Ltd., 2006b. Memo to File: "Stability Analysis of East and South Dams Jericho Diamond Mine, Nunavut". January 26, 2006.

PHOTOGRAPHS

Photo 1
East Dam
Reimer Truck Batch Plant.

Photo 2
Southeast Dam
Modified Asphalt Plant.

Photo 3
East Dam
Grubbed footprint of East Dam.

Photo 4
East Dam
Labour crew cleaning key trench with compressed air.

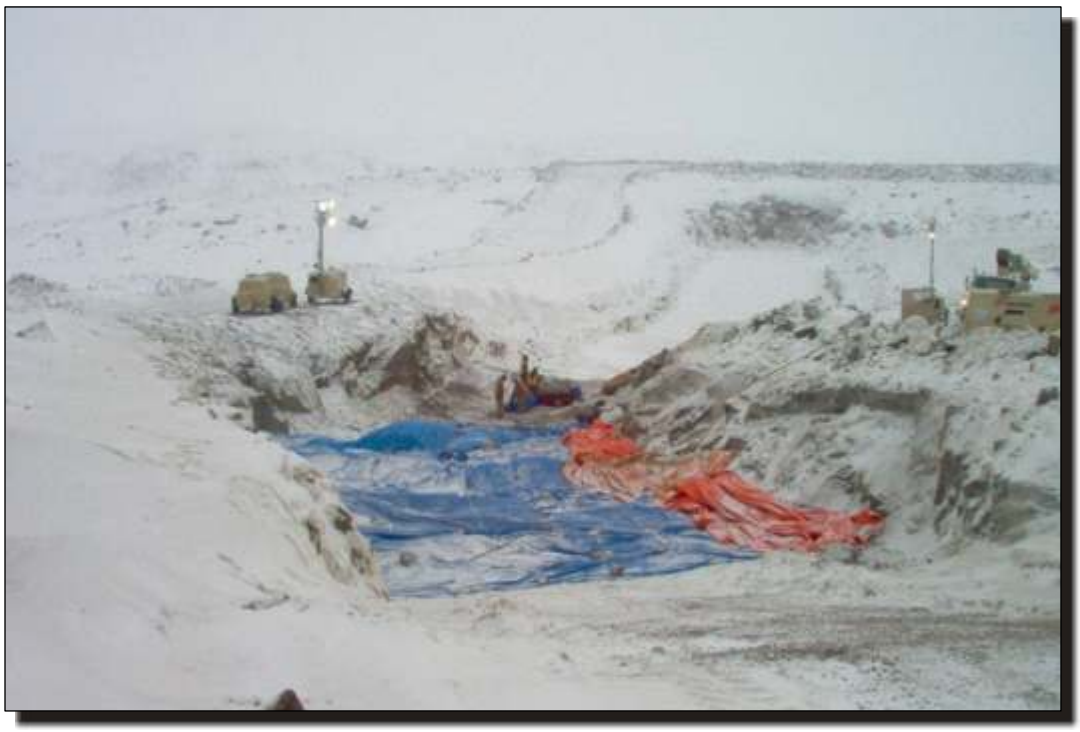


Photo 5
East Dam
Melting ice in key trench with heaters and tarps.

Photo 6
East Dam
Excavator cleaning key trench and removing snow.

Photo 7
East Dam
Placing saturated levelling course.

Photo 8
East Dam
Loader spreading 20 mm minus levelling course.

Photo 9
East Dam
Levelling course placement.

Photo 10
East Dam
Placement and compaction of Fillet Zone.

Photo 11
East Dam
Transition material placed over key trench material.

Photo 12
East Dam
Construction of run-of-mine rockfill shell.

Photo 13
East Dam
Placement of upstream till zone.

Photo 14
East Dam
Installation of second liner phase.

Photo 15
East Dam
Extrusion welding of liner hinge.

Photo 16
East Dam
Installation of horizontal ground temperature cable.

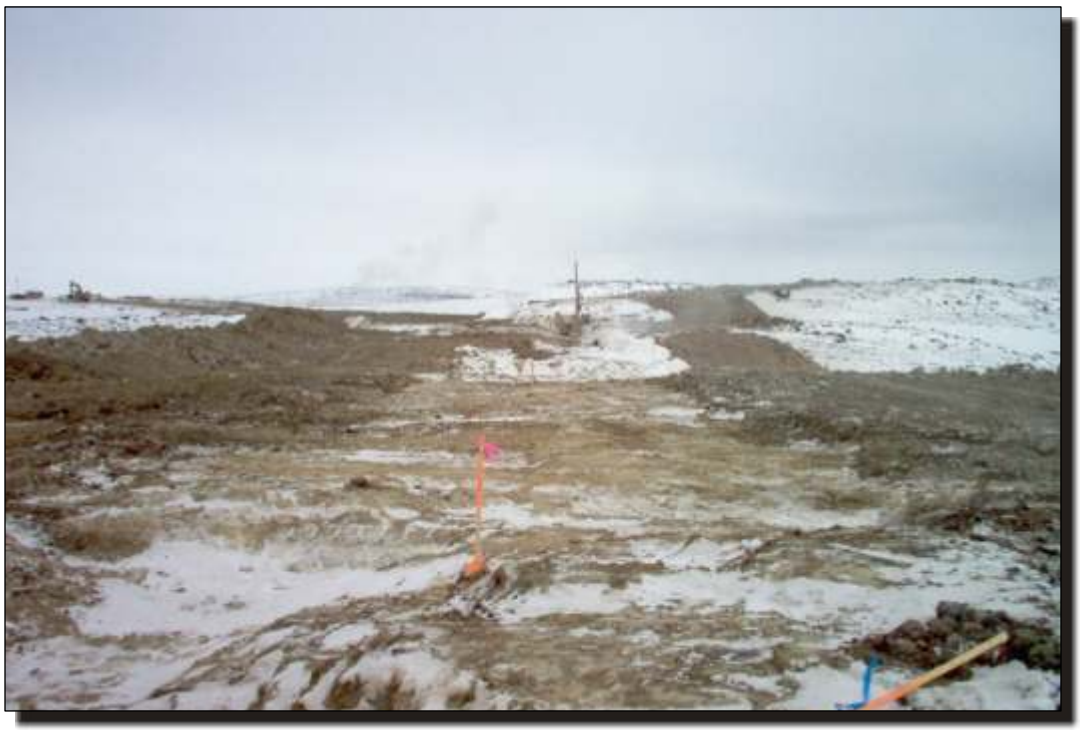


Photo 17
Southeast Dam
Drilling percolation holes prior to key trench excavation.

Photo 18
Southeast Dam
Drilling percolation test holes after key trench was excavated.

Photo 19
Southeast Dam
Grubbing footprint of dam with an excavator.

Photo 20
Southeast Dam
Drilling holes for key trench blasting.

Photo 21
Southeast Dam
Excavation of snow from key trench.

Photo 22
Southeast Dam
Labour crew cleaning trench with compressed air.

Photo 23
Southeast Dam
Excavator cleaning key trench with compressed air and ripper tooth.

Photo 24
Southeast Dam
Placement of levelling course.

Photo 25
Southeast Dam
Fillet zone along upstream side of key trench.

Photo 26
Southeast Dam
Placement of downstream liner bedding.

Photo 27
Southeast Dam
Placement of transition material.

Photo 28
Southeast Dam
Placement of run-of-mine rockfill shell.

Photo 29
Southeast Dam
Placement of till zone upstream of liner.

Photo 30
Southeast Dam
Removal of loose rock from north abutment.

Photo 31
Southeast Dam
Re-enforcing steel and formwork for concrete beam.

Photo 32
Southeast Dam
Completed concrete beam.

Photo 33
Southeast Dam
HDPE Liner attached to concrete beam.

Photo 34
Southeast Dam
Horizontal ground temperature cable installation.

Photo 35
Southeast Dam
Survey monitoring point.

APPENDIX

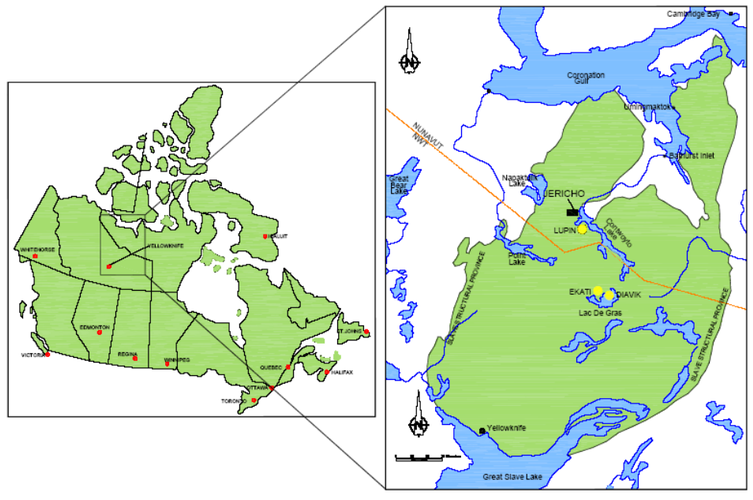
APPENDIX A EAST AND SOUTHEAST DAM CONSTRUCTION RECORD DRAWINGS (REDUCED SCALE)

TAHERA Diamond Corporation

JERICHO PROJECT

EAST AND SOUTHEAST DAM

RECORD DRAWINGS



LOCATION PLAN

DRAWING LIST

DRAWING	DRAWING TITLE
ED-1	PROCESSED KIMBERLITE CONTAINMENT AREA LOCATION
ED-2	EAST DAM AND SOUTHEAST DAM SURFICIAL GEOLOGY
ED-3	EAST DAM AND SOUTHEAST DAM LOCATION PLAN
ED-4	EAST DAM AND SOUTHEAST DAM TYPICAL CROSS SECTIONS
ED-5	EAST DAM AND SOUTHEAST DAM KEY TRENCH LAYOUT PLAN
ED-6	EAST DAM AND SOUTHEAST DAM LINER LAYOUT PLAN
ED-7	EAST DAM PROFILE AND CROSS SECTION
ED-8	SOUTHEAST DAM PROFILE AND CROSS SECTION

OCTOBER 2007

EBA ENGINEERING CONSULTANTS LTD.

CONSULTANTS REFERENCE NO.: 1100060.015

ACAD FILENAME: 1100060015Q00b.dwg

NOTE:

REVISED ALIGNMENT RECEIVED FROM MINE SITE ON AUGUST 17, 2007 (REV 2).

AS-BUILT SECTIONS/PROFILES WERE SAMPLED WITH THE ORIGINAL ALIGNMENT

0 20 100
metres

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REFERENCE DRAWINGS

No.	DESCRIPTION	DATE	APPROVED
1	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

REVISION

CLIENT

TAHERA
Diamond Corporation

THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS and GEOPHYSICISTS OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
P 018
EBA ENGINEERING CONSULTANTS LTD.

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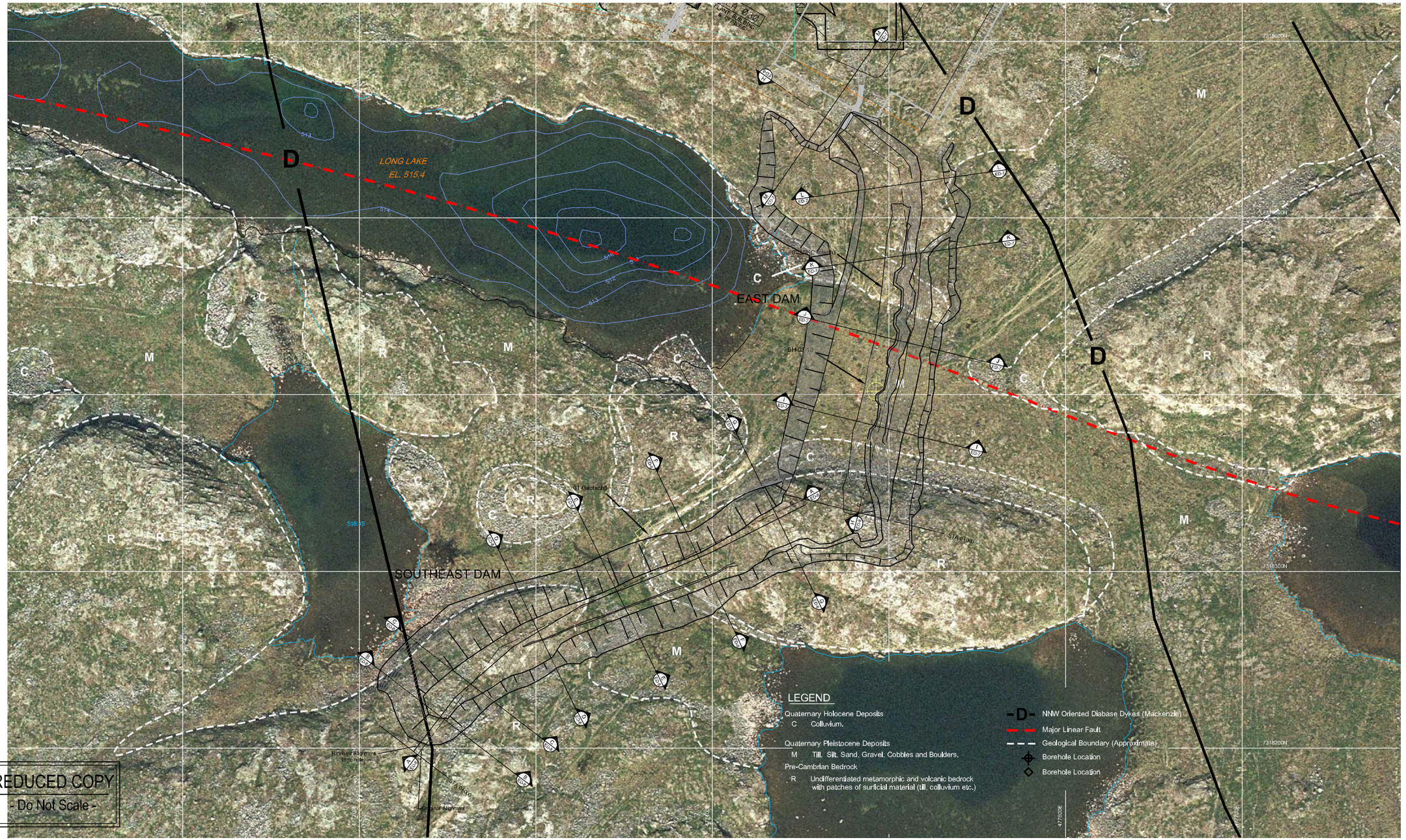
Jericho Project

PROCESSED KIMBERLITE CONTAINMENT AREA LOCATION PLAN

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
1100060.015 1100060015Q01b.dwg	DBD	WTH	1	ED-1
OFFICE: EBA-EDM	DATE: October, 2007			



Date of Photography: August 5, 1995.
Scale of Photography: 1:5,000
Survey control supplied by: Canamera Geological Ltd.
Survey control based on: UTM Projection, NAD 27, Zone 12
Compiled by The ORTHOSHOP, Calgary, October 1995.
WO 7423

Surficial Geology by Thurber (2003).
Revised by EBA Engineering Consultants Ltd. (2006)

Surficial Geology is approximate. Actual conditions will vary.

NOTE:

REVISED ALIGNMENT RECEIVED FROM MINE SITE ON AUGUST 17, 2007 (REV 2).

AS-BUILT SECTIONS/PROFILES WERE SAMPLED WITH THE ORIGINAL ALIGNMENT

REFERENCE DRAWINGS			
DRAWING No.	DRAWING TITLE	DATE	REV
-	-	DD/MM/YY	

REVISION			
No.	DESCRIPTION	DATE	APPROVED
2	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
1	REVISED CREST ELEVATION	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

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EAST DAM AND SOUTHEAST DAM SURFICIAL GEOLOGY

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
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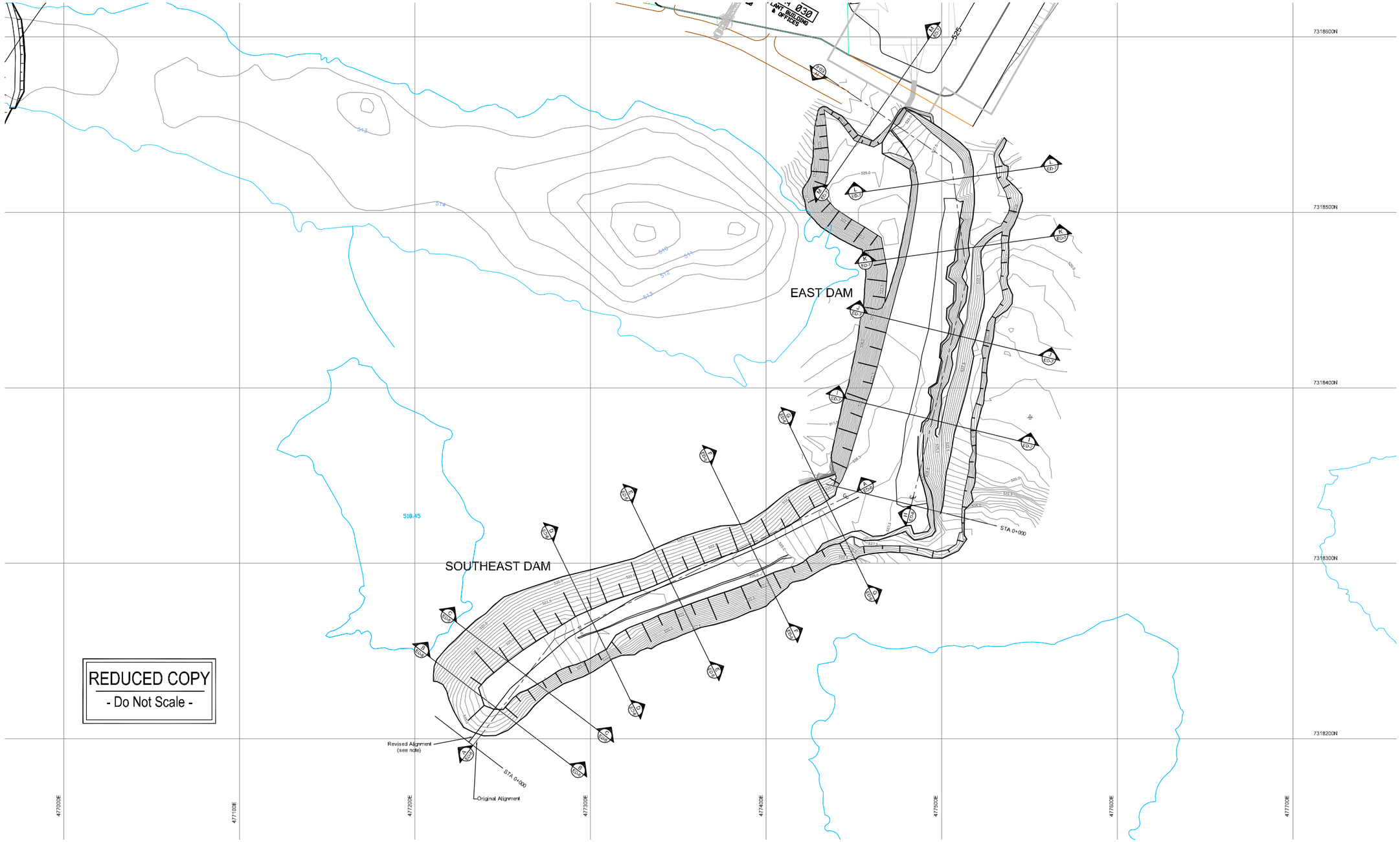
OFFICE: EBA-EDM	DATE: October, 2007			



NOTE:

REVISED ALIGNMENT RECEIVED FROM MINE SITE ON AUGUST 17, 2007 (REV 2).

AS-BUILT SECTIONS/PROFILES WERE SAMPLED WITH THE ORIGINAL ALIGNMENT

0 10 50
metres

REFERENCE DRAWINGS

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REVISION

No.	DESCRIPTION	DATE	APPROVED
3	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
2	REVISED SOUTHEAST DAM	MAY/07	WTH
1	REVISED CREST ELEVATION	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

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EAST DAM AND SOUTHEAST DAM LOCATION PLAN

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
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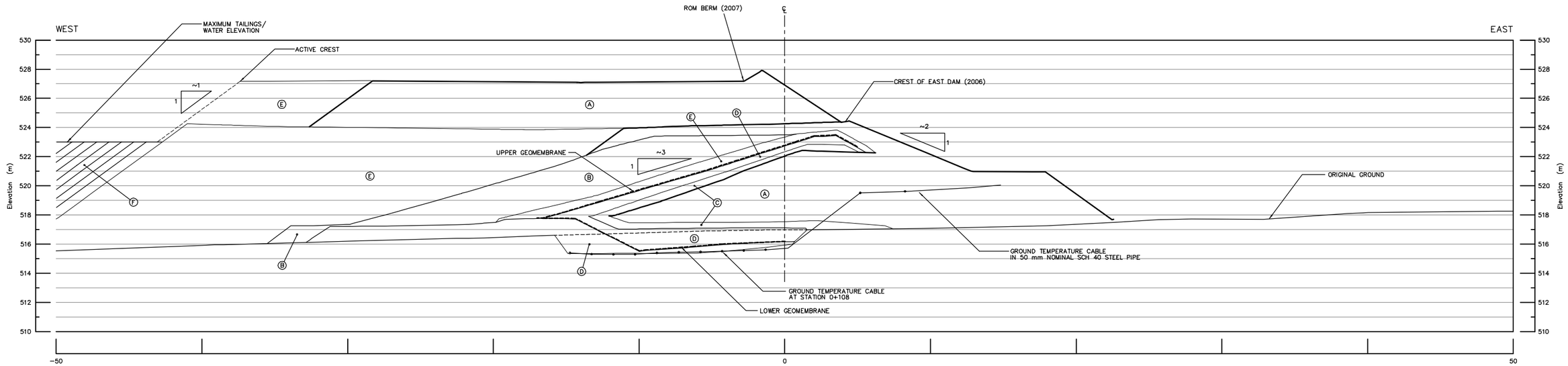
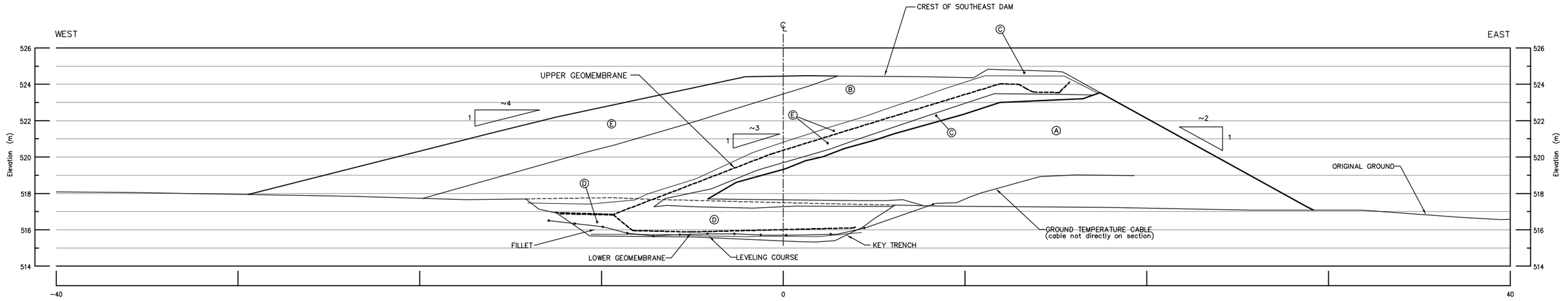
OFFICE: EBA-EDM	DATE: October, 2007			



EAST DAM – TYPICAL SECTION



SOUTHEAST DAM – TYPICAL SECTION

REDUCED COPY
- Do Not Scale -

MATERIAL TYPES
- Ⓐ RUN–OF MINE
- Ⓑ TILL
- Ⓒ 200mm MINUS
- Ⓓ 20mm MINUS
- Ⓔ COARSE TAILINGS

0 5 metres

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REFERENCE DRAWINGS

No.	DESCRIPTION	DATE	APPROVED
3	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	
2	REVISED SOUTHEAST DAM	MAY/07	WTH
1	REVISED CREST ELEVATION	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

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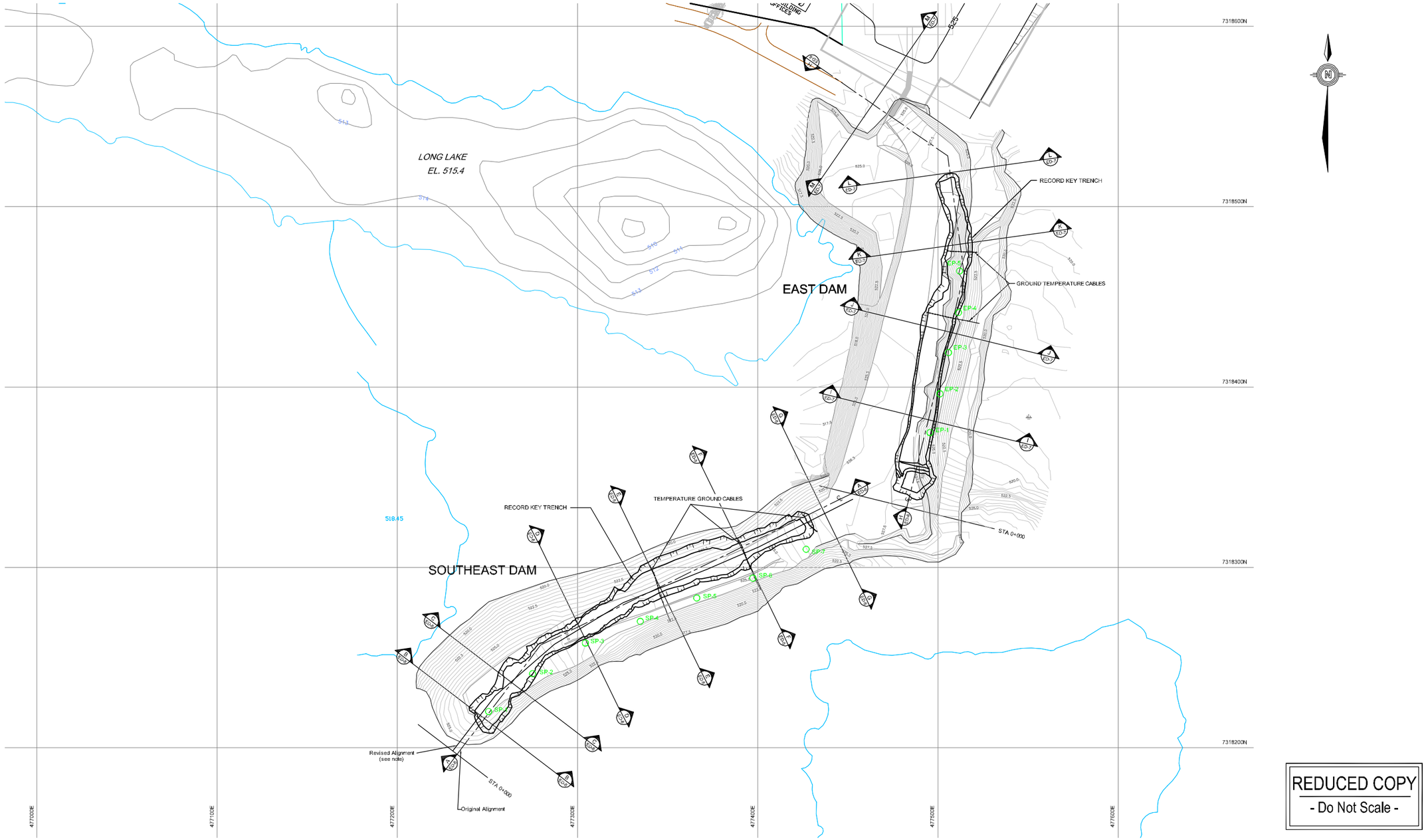
EAST DAM AND SOUTHEAST DAM TYPICAL CROSS-SECTIONS

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
1100060.015 1100060015Q04b.dwg	DBD	WTH	3	ED-4
OFFICE: EBA-EDM	DATE: October, 2007			



REDUCED COPY
- Do Not Scale -

NOTE:

REVISED ALIGNMENT RECEIVED FROM MINE SITE ON AUGUST 17, 2007 (REV 2).

AS-BUILT SECTIONS/PROFILES WERE SAMPLED WITH THE ORIGINAL ALIGNMENT

LEGEND:

○ – SETTLEMENT POINTS

0 10 50
metres

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REFERENCE DRAWINGS

No.	DESCRIPTION	DATE	APPROVED
2	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
1	REVISED LENGTH OF SOUTHEAST DAM KEY TRENCH	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

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EAST DAM AND SOUTHEAST DAM KEY TRENCH LAYOUT PLAN

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
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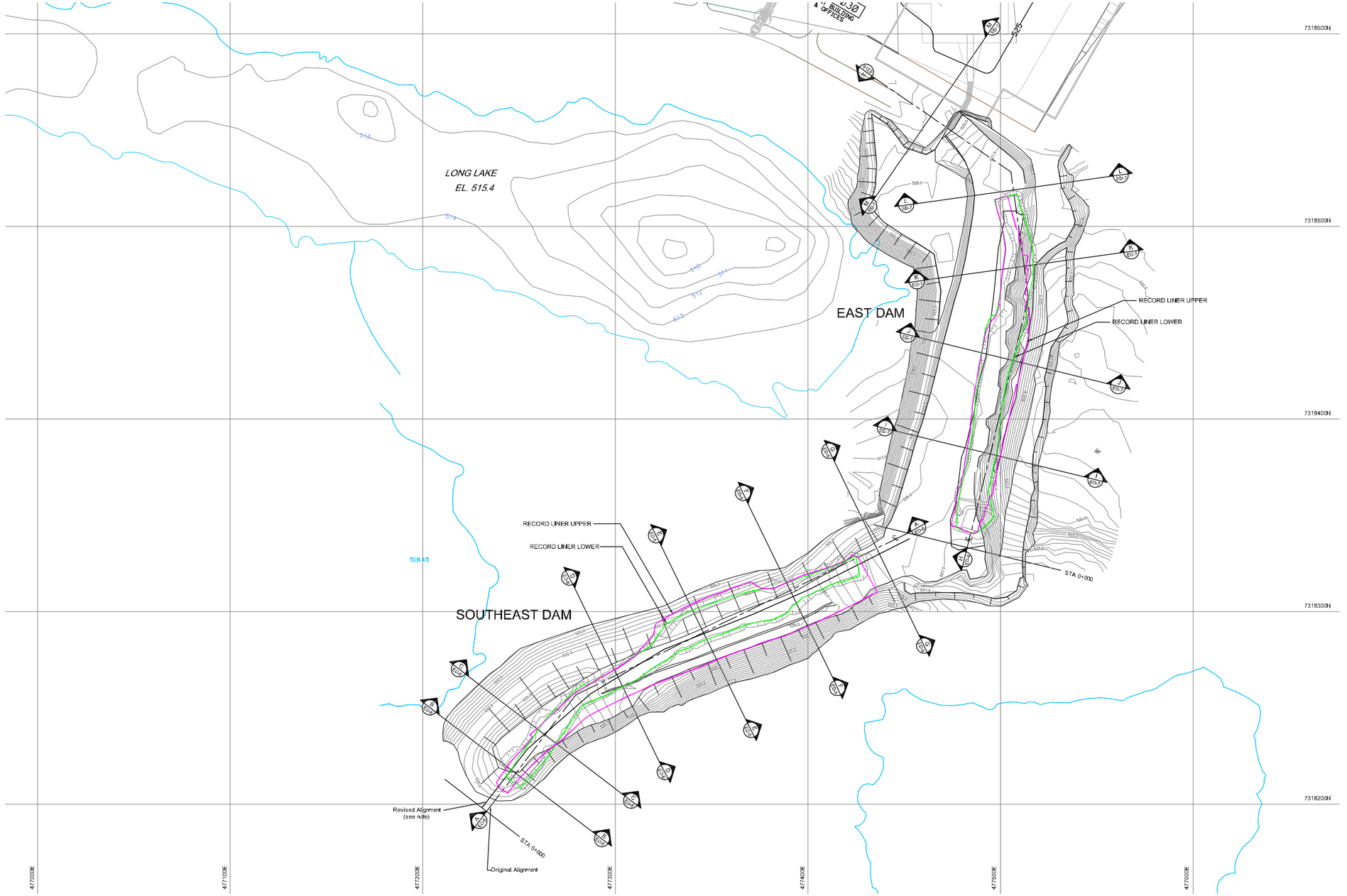
OFFICE: EBA-EDM	DATE: October, 2007			



REDUCED COPY
- Do Not Scale -

NOTE:

REVISED ALIGNMENT RECEIVED FROM MINE SITE ON AUGUST 17, 2007 (REV 2).

AS-BUILT SECTIONS/PROFILES WERE SAMPLED WITH THE ORIGINAL ALIGNMENT

0 10 50
metres

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REFERENCE DRAWINGS

No.	DESCRIPTION	DATE	APPROVED
2	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
1	REVISED CREST ELEVATION	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

REVISION

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Jericho Project

EAST DAM AND SOUTHEAST DAM LINER LAYOUT PLAN

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
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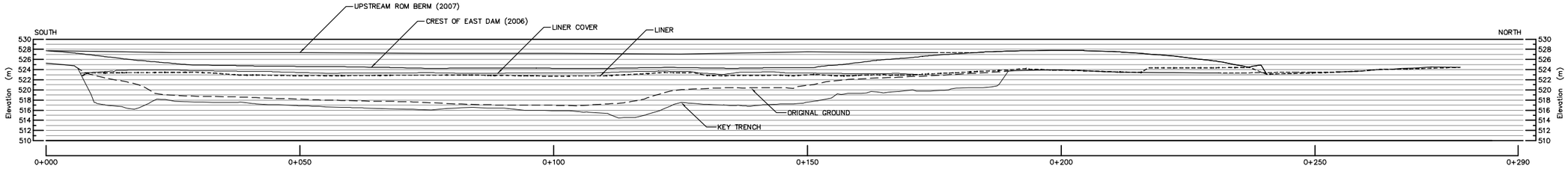
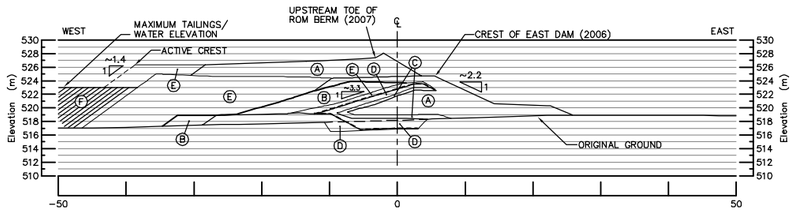
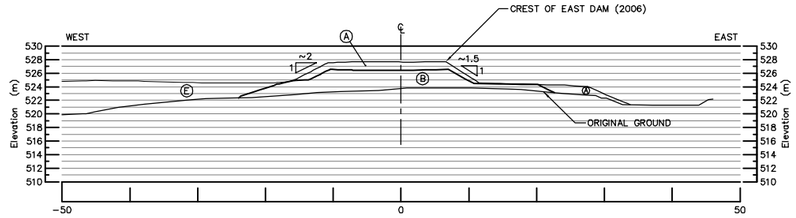
OFFICE: EBA-EDM	DATE: October, 2007			



LONGITUDINAL PROFILE H (ED-3)



SECTION (STATION 0+050) I (ED-3)



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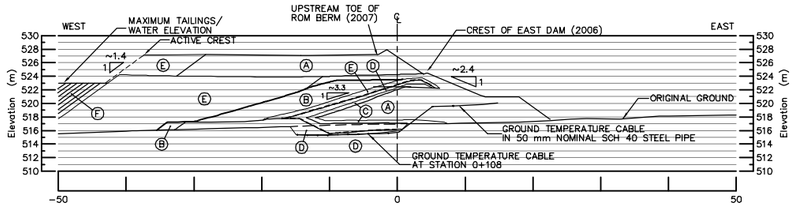

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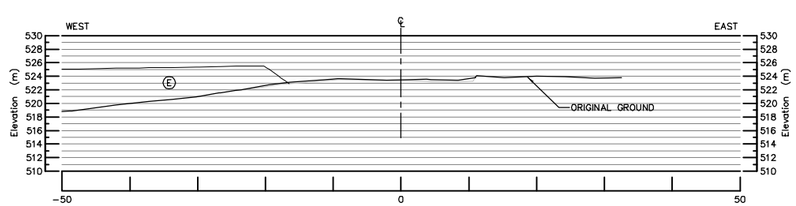
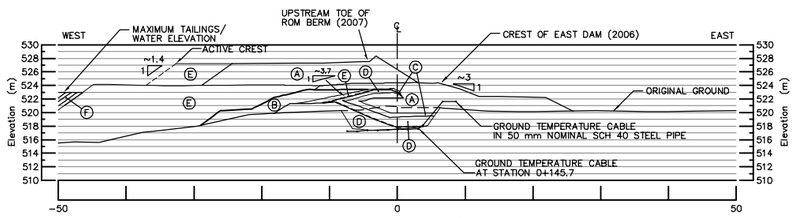


SECTION (STATION 0+250) M (ED-3)



SECTION (STATION 0+150) K (ED-3)

REDUCED COPY
- Do Not Scale -

MATERIAL TYPES
- (A) RUN-OF MINE
- (B) TILL
- (C) 200mm MINUS
- (D) 20mm MINUS
- (E) COARSE TAILINGS

0 20 metres

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REFERENCE DRAWINGS

No.	DESCRIPTION	DATE	APPROVED
2	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
1	REVISED CREST ELEVATION	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

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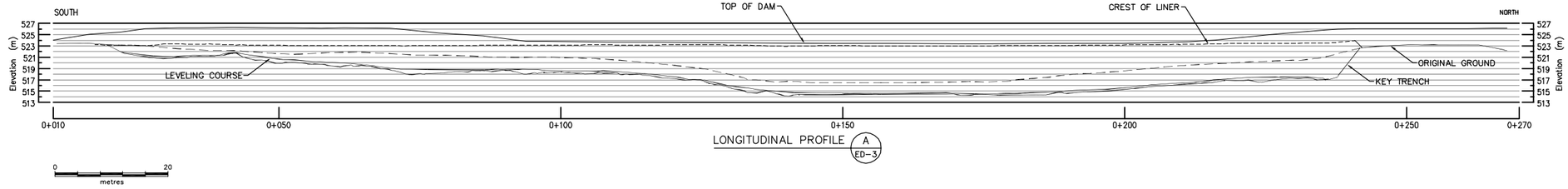
Jericho Project

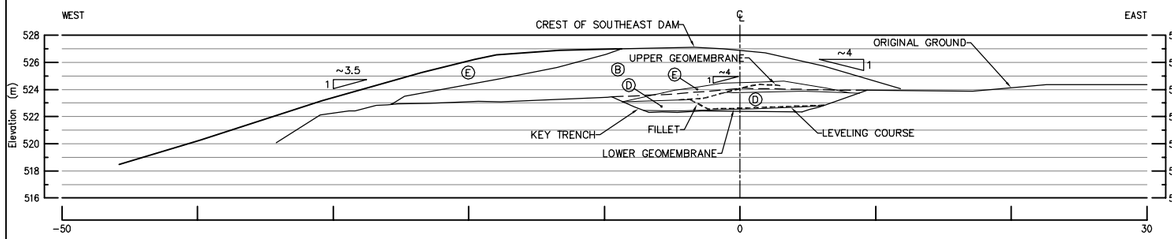
EAST DAM
PROFILE AND CROSS-SECTIONS

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
1100060.015 1100060015Q07c.dwg	DBD	WTH	2	ED-7
OFFICE: EBA-EDM	DATE: October, 2007			

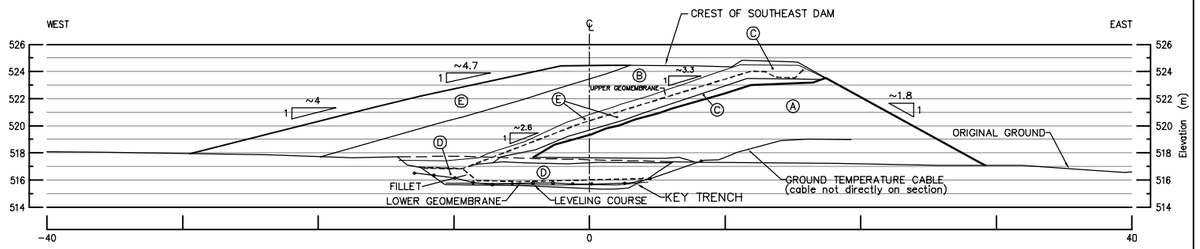


LONGITUDINAL PROFILE (A / ED-3)

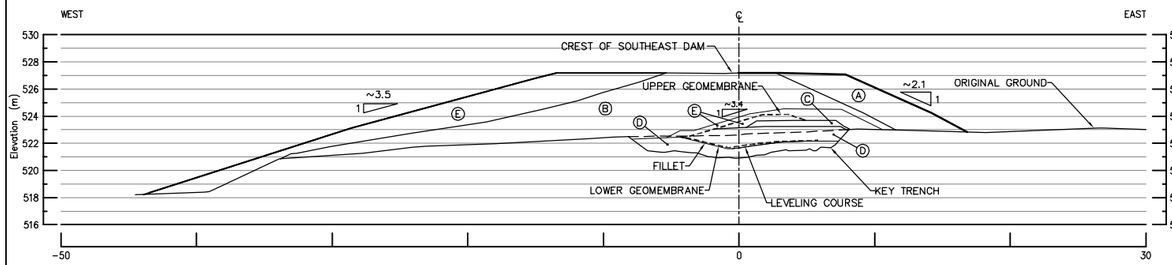
0 20 metres



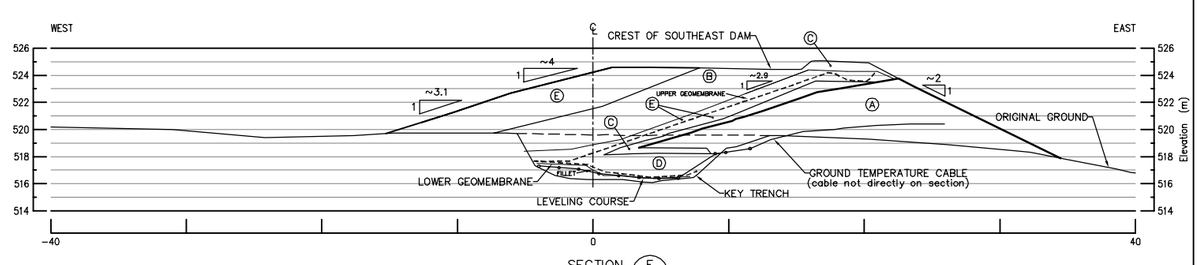
SECTION (B / ED-3) (STATION 0+025)



SECTION (E / ED-3) (STATION 0+150)



SECTION (C / ED-3) (STATION 0+050)



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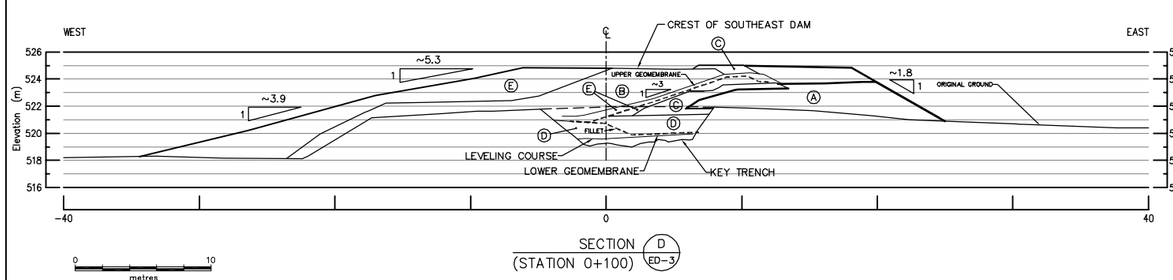
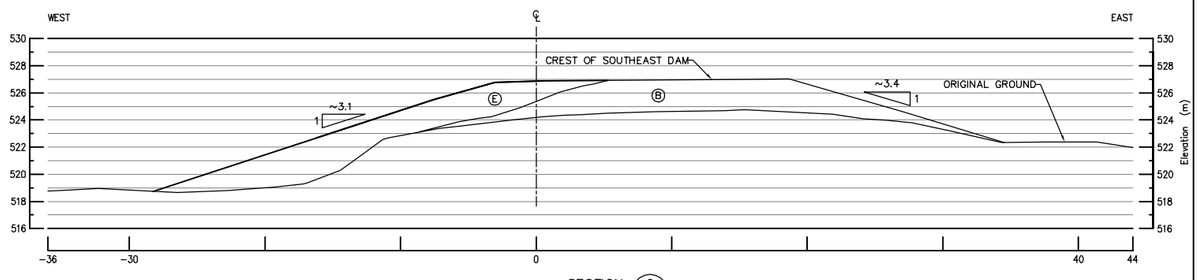


0 10 metres

SECTION (D / ED-3) (STATION 0+100)



SECTION (G / ED-3) (STATION 0+250)

REDUCED COPY
- Do Not Scale -

MATERIAL TYPES
- (A) RUN-OF MINE
- (B) TILL
- (C) 200mm MINUS
- (D) 20mm MINUS
- (E) COARSE TAILINGS

REFERENCE DRAWINGS

DRAWING No.	DRAWING TITLE	DATE	REV
–	–	DD/MM/YY	

REVISION

No.	DESCRIPTION	DATE	APPROVED
3	EAST DAM AND SOUTHEAST DAM – RECORD DRAWING	OCT/07	WTH
2	REVISED SOUTHEAST DAM	MAY/07	WTH
1	REVISED CREST ELEVATION	JAN/06	WTH
0	ISSUED FOR CONSTRUCTION	AUG/05	WTH
A	ISSUED FOR REVIEW	AUG/05	WTH

CLIENT

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JERICHO PROJECT

SOUTHEAST DAM
PROFILE AND CROSS-SECTIONS

PROJECT NO./FILE NO.	DWN	CKD	REV	DRAWING NO.
1100360.015 1100360015Q08c.dwg	DBD	WTH	3	ED-8
OFFICE: EBA-EDM	DATE: October, 2007			

APPENDIX

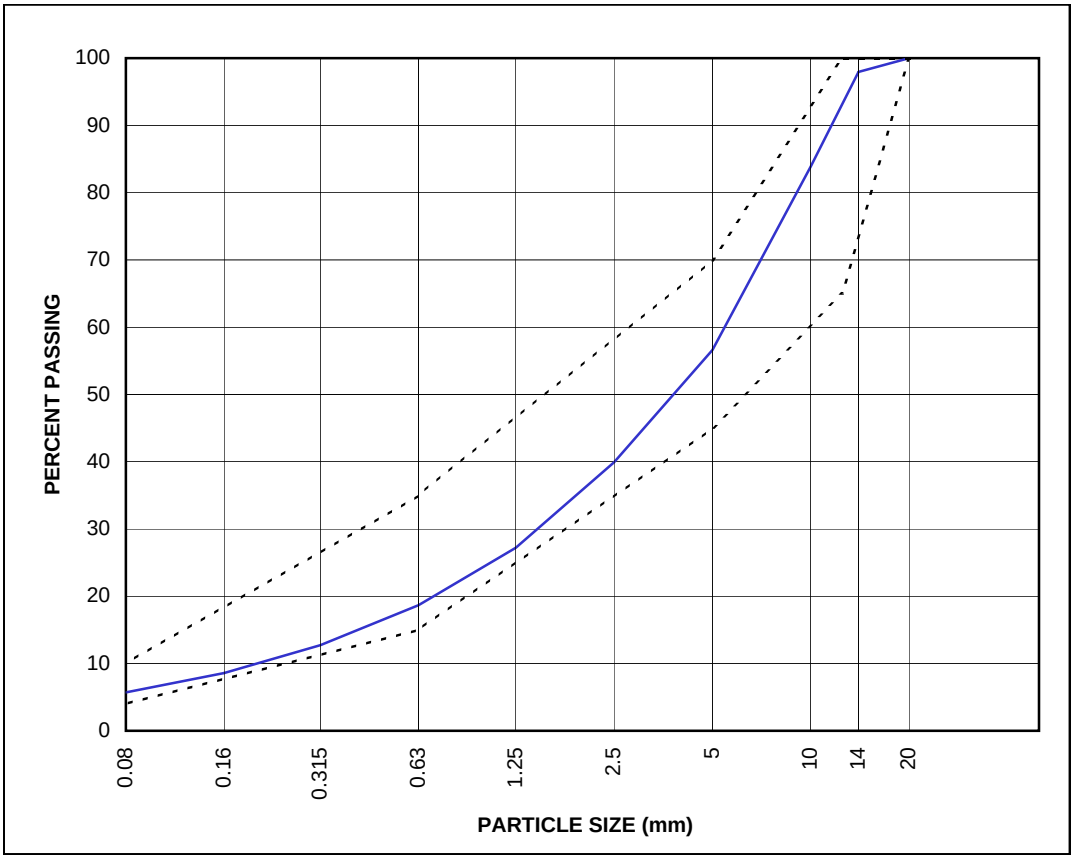
APPENDIX B EAST DAM PARTICLE SIZE ANALYSIS RESULTS

EBA ENGINEERING CONSULTANTS LTD.

FIGURE B-1: PARTICLE SIZE SUMMARY REPORT - 2006 CRUSHER

PROJECT:	Jericho Dams - East Dam	**SAMPLE NOs:**	20mm-001 to 20mm-026
ADDRESS:	Jericho, NU	**SAMPLE DESCRIPTION:**	
PROJECT NO:	0101-04-1100060.007	20 mm minus material	
		20mm Mat'l Avg. - Clemro	
CLIENT:	Tahera Diamond Corp.	**AVG. MOISTURE CONT.:**	1.5%
		COLOUR PLATE #:	n/a
	Jericho, NT	**BULK REL DENSITY:**	n/a
ATTENTION:	H. Gates \ R. Jones	**BULK REL. DENSITY (SSD):**	n/a
		APPARENT REL. DENSITY:	n/a
		ABSORPTION:	n/a

PARTICLE SIZE	PERCENT PASSING
20.0	100.0
14.0	98.0
10.0	83.9
5.0	56.6
2.5	39.9
1.25	27.2
0.630	18.7
0.315	12.7
0.160	8.6
0.080	5.7



Remarks:

Reviewed by: _____ P.Eng.

EBA ENGINEERING CONSULTANTS LTD.

20 mm PARTICLE SIZE SUMMARY SHEET - 2006 CRUSHER

Project: **Jericho Dams - East Dam**
Project No: 0101-04-1100060.007
Address: Jericho, NU
Client: Tahera Diamond Corp.
Attention: H. Gates \ R. Jones

Sample Description: 20 mm minus material
Summary of all gradation samples
Sampled from Clemro crusher

OVERALL SUMMARY:

Sieve Size (mm)	20.0	14.0	10.0	5.0	2.5	1.250	0.630	0.315	0.160	0.080	M.C.
Specified Maximum	100	100		70			35			10	--
20mm Mat'l Avg. - Clemro	**100.0**	**98.0**	**83.9**	**56.6**	**39.9**	**27.2**	**18.7**	**12.7**	**8.6**	**5.7**	**1.5%**
Specified Minimum	100	65		45			15			4	--

DETAILED WEEKLY SUMMARY:

Sample Number	Date Tested	Crushed By :	Sampling Point	Percent Passing Sieve Sizes (mm)										Moist. Cont.
				20.0	14.0	10.0	5.0	2.5	1.25	0.63	0.315	0.16	0.08	
Crusher 20mm-001	25-Sep-05	Clemro	Crusher	100.0	96.9	81.2	53.2	36.8	25.4	17.6	11.8	7.5	4.7	0.5%
Crusher 20mm-002	26-Sep-05	Clemro	Crusher	100.0	98.9	88.1	60.4	42.0	27.5	17.5	10.8	6.7	4.3	1.9%
Crusher 20mm-003	27-Sep-05	Clemro	Crusher	100.0	99.1	88.2	63.2	43.9	29.2	19.7	13.4	9.3	6.4	3.6%
Crusher 20mm-004	11-Oct-05	Clemro	Crusher	100.0	97.5	82.0	52.1	36.9	24.9	16.4	10.7	6.9	4.4	3.2%
Crusher 20mm-005	11-Oct-05	Clemro	Crusher	100.0	99.3	92.0	63.9	49.0	38.1	29.8	22.6	15.4	8.2	2.9%
Crusher 20mm-006	12-Oct-05	Clemro	Crusher	100.0	99.5	86.2	57.9	40.1	26.6	17.9	11.9	7.9	5.1	1.8%
Crusher 20mm-007	12-Oct-05	Clemro	Crusher	100.0	99.0	87.6	63.4	45.5	31.6	22.1	15.5	10.8	7.2	3.2%
Crusher 20mm-008	24-Oct-05	Clemro	Crusher	100.0	99.1	93.9	75.3	56.8	40.3	27.7	18.4	11.9	7.7	1.9%
Crusher 20mm-009	24-Oct-05	Clemro	Crusher	100.0	99.3	91.5	66.4	46.9	30.4	19.8	13.1	8.9	6.3	3.7%
Crusher 20mm-010	10-Nov-05	Clemro	Crusher	100.0	97.8	85.4	54.7	36.7	23.3	15.1	9.6	6.1	4.0	1.4%
Crusher 20mm-011	14-Nov-05	Clemro	Crusher	100.0	99.1	88.3	63.4	44.3	29.0	19.6	13.3	9.3	6.6	1.4%
Crusher 20mm-012	15-Nov-05	Clemro	Crusher	100.0	97.9	88.1	61.5	43.6	28.7	18.3	11.4	7.1	4.6	1.9%
Crusher 20mm-013	16-Nov-05	Clemro	Crusher	100.0	99.4	88.6	63.7	45.7	31.8	22.3	15.9	11.4	8.1	3.2%
Crusher 20mm-014	17-Nov-05	Clemro	Crusher	100.0	99.1	88.1	63.2	44.1	29.3	20.0	13.5	9.4	6.7	2.0%
Crusher 20mm-015	20-Nov-05	Clemro	Crusher	100.0	98.0	84.8	58.8	40.9	27.1	18.2	12.3	8.5	6.0	1.5%
Crusher 20mm-016	18-Feb-06	Clemro	Crusher	100.0	96.5	76.8	44.7	29.8	19.8	13.4	9.1	6.1	3.9	0.0%
Crusher 20mm-017	18-Feb-06	Clemro	Crusher	100.0	97.1	77.0	47.1	32.0	21.7	14.7	9.9	6.6	4.2	0.0%
Crusher 20mm-018	19-Feb-06	Clemro	Crusher	100.0	98.4	86.9	62.1	44.4	30.2	20.3	13.4	8.4	5.0	0.0%
Crusher 20mm-019	7-Mar-06	Clemro	Crusher	100.0	96.0	75.0	46.8	30.9	20.8	14.0	9.5	6.4	4.4	1.6%
Crusher 20mm-020	8-Mar-06	Clemro	Crusher	100.0	96.4	76.5	46.3	31.5	20.6	13.7	8.9	5.7	3.6	1.4%
Crusher 20mm-021	8-Mar-06	Clemro	Crusher	100.0	97.0	80.6	53.3	38.7	26.6	18.4	12.9	8.9	6.2	0.0%
Crusher 20mm-022	16-Mar-06	Clemro	Crusher	100.0	97.4	78.5	48.9	32.7	20.7	13.3	8.6	5.6	3.8	0.0%
Crusher 20mm-023	17-Mar-06	Clemro	Crusher	100.0	96.5	78.8	50.5	35.6	23.9	15.9	10.2	6.4	3.9	1.8%
Crusher 20mm-024	26-Mar-06	Clemro	Crusher	100.0	97.1	78.2	52.1	36.1	24.6	17.1	11.6	7.6	4.6	0.0%
Crusher 20mm-025	27-Mar-06	Clemro	Crusher	100.0	96.5	74.9	45.1	31.3	22.1	15.1	9.5	5.3	2.1	0.0%
Crusher 20mm-026	4-Apr-06	Clemro	Crusher	100.0	97.5	83.6	54.3	42.1	33.5	27.6	22.8	19.3	16.5	0.0%

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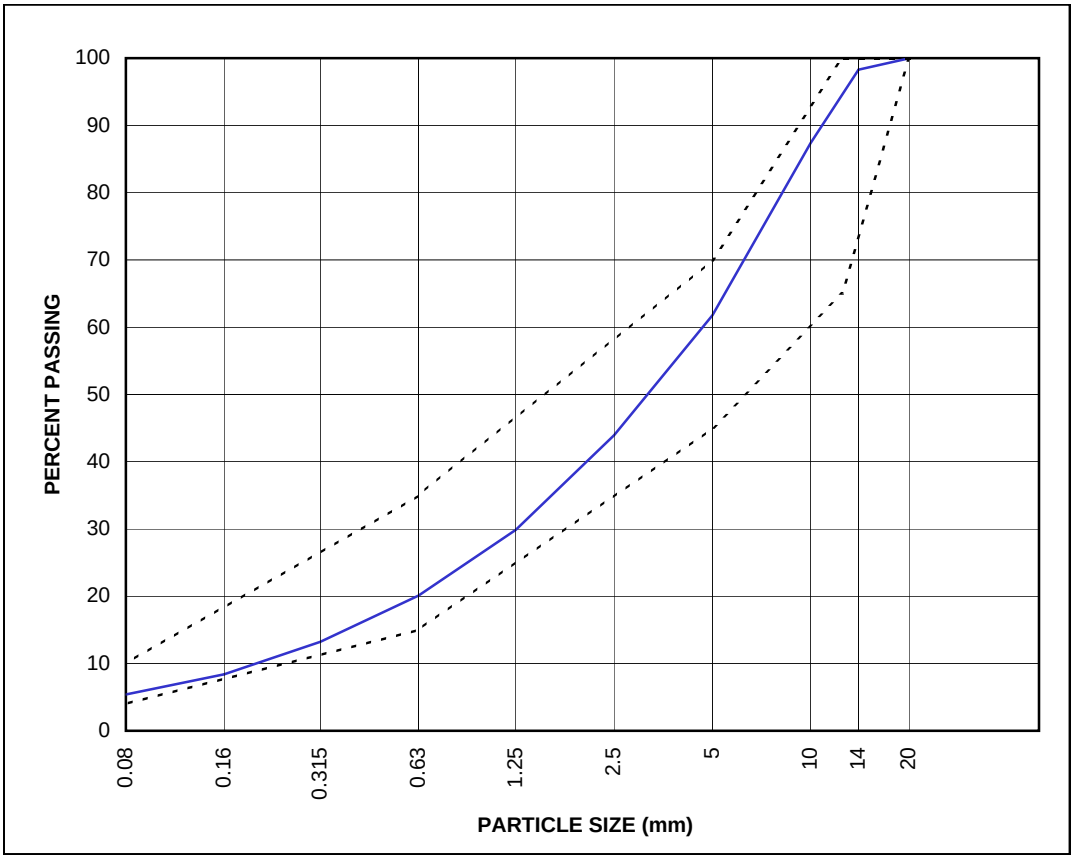
FIGURE B-2: PARTICLE SIZE SUMMARY REPORT- 2006 PLANT

PROJECT:	Jericho Project	**SAMPLE NO:**	20mm-001 to 20mm-021
ADDRESS:	Jericho, NU	**SAMPLE DESCRIPTION:**	
PROJECT NO:	0101-04-1100060.007		20 mm minus material
			20mm Mat'l Avg. - Clemro
CLIENT:	Tahera Diamond Corp.	**AVG. MOISTURE CONT.:**	8.7%
		COLOUR PLATE #:	n/a
	Jericho, NU	**BULK REL DENSITY:**	n/a
ATTENTION:	H. Gates \ R. Jones	**BULK REL. DENSITY (SSD):**	n/a
		APPARENT REL. DENSITY:	n/a
		ABSORPTION:	n/a

PARTICLE SIZE	PERCENT PASSING
20.0	100.0
14.0	98.3
10.0	87.4
5.0	61.8
2.5	43.9
1.25	29.9
0.630	20.1
0.315	13.2
0.160	8.4
0.080	5.4



Remarks:

Reviewed by: _____ P.Eng.

EBA ENGINEERING CONSULTANTS LTD.

20 mm PARTICLE SIZE SUMMARY SHEET - 2006 PLANT

Project: **Jericho Project**
Project No: 0101-04-1100060.007

Address: Jericho, NU
Client: Tahera Diamond Corp.
Attention: H. Gates \ R. Jones

Sample Description: 20 mm minus material
Summary of all gradation samples
Sampled from Reimer Truck Batch Plant

OVERALL SUMMARY:

Sieve Size (mm)	20.0	14.0	10.0	5.0	2.5	1.250	0.630	0.315	0.160	0.080	M.C.
Specified Maximum	100	100		70			35			10	--
20mm Mat'l Avg. - Clemro	**100.0**	**98.3**	**87.4**	**61.8**	**43.9**	**29.9**	**20.1**	**13.2**	**8.4**	**5.4**	**8.7%**
Specified Minimum	100	65		45			15			4	--

DETAILED WEEKLY SUMMARY:

Sample Number	Date Tested	Crushed By :	Sampling Point	Percent Passing Sieve Sizes (mm)										Moist. Cont.
				20.0	14.0	10.0	5.0	2.5	1.25	0.63	0.315	0.16	0.08	
E.Dam 20mm-001	27-Oct-05	Clemro	Reimer	100.0	97.7	85.5	56.9	37.6	25.1	17.4	12.8	9.9	7.7	7.4%
E.Dam 20mm-002	30-Oct-05	Clemro	Reimer	100.0	98.6	87.6	67.5	53.7	40.2	28.5	19.0	11.8	7.2	9.7%
E.Dam 20mm-003	30-Oct-05	Clemro	Reimer	100.0	98.3	86.7	58.8	41.5	26.4	17.3	11.8	8.3	6.1	7.5%
E.Dam 20mm-004	5-Nov-05	Clemro	Reimer	100.0	98.6	87.7	67.2	53.4	40.0	28.1	18.9	11.5	6.3	9.7%
E.Dam 20mm-005	18-Nov-05	Clemro	Reimer	100.0	99.1	89.0	69.8	55.2	41.3	28.5	18.8	10.8	5.9	10.6%
E.Dam 20mm-006	20-Nov-05	Clemro	Reimer	100.0	98.3	85.1	60.9	45.9	33.0	22.9	14.9	8.2	5.2	9.3%
E.Dam 20mm-007	26-Nov-05	Clemro	Reimer	100.0	99.5	96.1	76.1	58.4	42.1	29.1	19.5	12.7	8.5	9.9%
E.Dam 20mm-008	27-Nov-05	Clemro	Reimer	100.0	97.4	84.8	56.4	40.1	28.2	19.7	13.4	8.8	5.7	7.9%
E.Dam 20mm-009	28-Nov-05	Clemro	Reimer	100.0	98.5	87.9	61.8	45.2	30.4	20.3	13.4	8.9	5.9	9.8%
E.Dam 20mm-010	30-Nov-05	Clemro	Reimer	100.0	97.1	83.8	57.2	38.4	24.7	15.9	9.9	6.1	3.8	7.4%
E.Dam 20mm-011	1-Dec-05	Clemro	Reimer	100.0	98.4	85.2	53.5	30.3	16.6	9.8	5.9	3.8	2.5	6.0%
E.Dam 20mm-012	2-Dec-05	Clemro	Reimer	100.0	96.2	72.7	40.1	24.1	15.3	10.7	7.8	6.0	4.9	5.2%
E.Dam 20mm-013	3-Dec-05	Clemro	Reimer	100.0	97.9	84.0	58.1	39.4	25.7	16.8	10.8	7.1	4.9	8.1%
E.Dam 20mm-014	4-Dec-05	Clemro	Reimer	100.0	99.3	91.3	67.1	48.8	33.7	22.3	14.2	8.8	5.7	6.6%
E.Dam 20mm-015	5-Dec-05	Clemro	Reimer	100.0	99.1	92.3	68.7	46.3	29.7	19.1	12.2	7.9	5.2	10.0%
E.Dam 20mm-016	10-Dec-05	Clemro	Reimer	100.0	97.9	86.4	62.2	44.7	30.8	20.7	13.2	7.8	4.4	8.4%
E.Dam 20mm-017	11-Dec-05	Clemro	Reimer	100.0	96.9	82.4	54.7	38.0	25.3	16.6	10.7	6.7	4.3	8.0%
E.Dam 20mm-018	13-Jan-06	Clemro	Reimer	100.0	99.3	94.9	68.6	45.7	27.9	16.5	9.7	5.2	2.8	9.9%
E.Dam 20mm-019	13-Jan-06	Clemro	Reimer	100.0	99.4	93.0	69.6	47.8	31.6	21.2	14.2	9.2	6.3	9.5%
E.Dam 20mm-020	14-Jan-06	Clemro	Reimer	100.0	98.9	88.4	63.0	43.2	28.5	18.5	12.1	7.7	5.4	7.7%
E.Dam 20mm-021	15-Jan-06	Clemro	Reimer	100.0	99.1	91.2	64.9	45.7	31.3	21.0	13.7	8.7	5.5	8.5%
E.Dam 20mm-022	26-Jan-06	Clemro	Reimer	100.0	98.5	84.7	56.3	39.6	27.7	19.0	12.7	8.2	5.2	12.9%
E.Dam 20mm-023	27-Jan-06	Clemro	Reimer	99.1	96.8	82.8	52.6	35.5	23.8	15.8	10.4	6.8	4.4	7.3%
E.Dam 20mm-024	4-Mar-06	Clemro	Reimer	100.0	98.7	90.1	64.1	46.4	32.1	22.1	14.6	9.2	5.5	9.3%
E.Dam 20mm-025	6-Mar-06	Clemro	Reimer	100.0	98.7	90.1	64.1	46.4	32.1	22.1	14.6	9.2	5.5	9.3%
E.Dam 20mm-026	11-Mar-06	Clemro	Reimer	100.0	98.1	89.4	67.8	53.1	38.1	26.7	18.0	11.7	7.5	12.6%
E.Dam 20mm-027	17-Mar-06	Clemro	Reimer	100.0	97.8	86.4	60.1	41.6	25.4	15.7	9.7	5.7	3.3	6.5%

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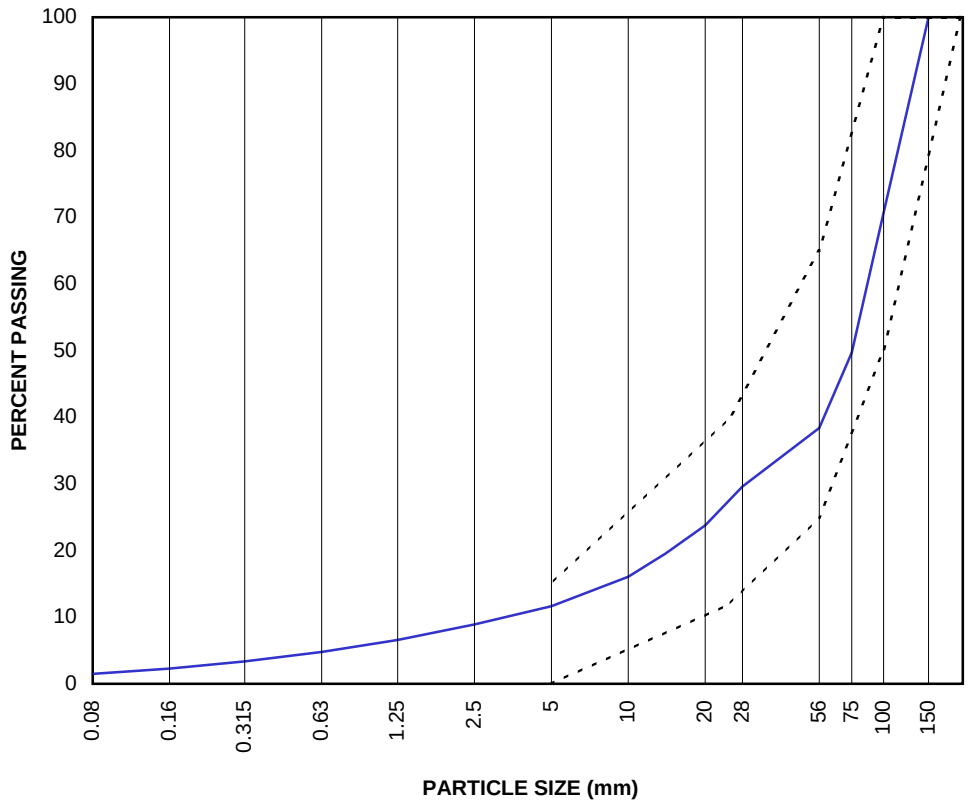
FIGURE B-3: PARTICLE SIZE ANALYSIS - TRANSITION 200 mm minus

PROJECT:	PKCA Dams	**SAMPLE NO:**	150mm_Apr_16_rev
ADDRESS:	Jericho Diamond Project	**SAMPLE DESCRIPTION:**	
PROJECT NO:	0101-04-1100060.007		150 mm (Blast Rock)
DATE TESTED:	Apr 16/06 By: JGD		
CLIENT:	Tahera Diamond Corp.	**NAT. MOISTURE CONT.:**	Not Done
		COLOUR PLATE #:	n/a
		BULK REL DENSITY:	n/a
ATTENTION:	Roland Jones/Harold Gates	**BULK REL. DENSITY (SSD):**	n/a
		APPARENT REL. DENSITY:	n/a
		ABSORPTION:	n/a

PARTICLE SIZE	PERCENT PASSING
150	100
100	71
75	50
56	38
28	30
20	24
14	20
10	16
5	12
2.5	9
1.25	7
0.630	5
0.315	3
0.160	2.3
0.080	1.5



Remarks: Sample taken by crusher crew

Assumed 100 percent passing 150 mm sieve

Reviewed by: _____

APPENDIX

APPENDIX C EAST DAM FIELD DENSITY, MOISTURE AND DEGREE OF SATURATION RESULTS

Compaction and Saturation Summary

Moisture Content Summary – Levelling Course and Key Trench Backfill

Moisture Content Summary – Fillet Zone

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm minus
Project Number: 1100060.007
Compaction Standard: ASTM D698
Maximum Dry Density: 2185 kg/m3

Machine No:
Specified Compaction: 95%
Specified Saturation: 90%
Optimum Moisture Content: 7.8%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
1	28-Nov-05	BS	0+87	1st lift	Fillet	2246	2115		6.2%			96.8%
2	28-Nov-05	BS	0+78	1st lift	Fillet	2238	2131		5.0%			97.5%
3	28-Nov-05	BS	0+71	1st lift	Fillet	2203	2106		4.6%			96.4%
4	28-Nov-05	BS	0+62	1st lift	Fillet	2208	2095		5.4%			95.9%
5	28-Nov-05	BS	0+56	1st lift	Fillet	2210	2054		7.6%			94.0%
6	28-Nov-05	BS	0+45	1st lift	Fillet	2241	2035		10.1%			93.2%
7	29-Nov-05	150	0+86	2nd lift	Fillet	2271	2111		7.6%			96.6%
8	29-Nov-05	150	0+71	2nd lift	Fillet	2243	2100		6.8%			96.1%
9	29-Nov-05	150	0+60	2nd lift	Fillet	2238	2123		5.4%			97.2%
10	29-Nov-05	150	0+51	2nd lift	Fillet	2261	2090		8.2%			95.6%
11	29-Nov-05	150	0+81	3rd lift	Fillet	2256	2103		7.3%			96.2%
12	29-Nov-05	150	0+74	3rd lift	Fillet	2261	2088		8.3%			95.5%
13	29-Nov-05	150	0+60	3rd lift	Fillet	2251	2086		7.9%			95.5%
14	29-Nov-05	150	0+48	3rd lift	Fillet	2241	2081		7.7%			95.2%
15	30-Nov-05	150	0+109	2nd lift	Fillet	2238	2080		7.6%			95.2%
16	30-Nov-05	150	0+91	2nd lift	Fillet	2220	2102		5.6%			96.2%
17	30-Nov-05	150	0+76	3rd lift	Fillet	2248	2121		6.0%			97.1%
18	30-Nov-05	150	0+62	3rd lift	Fillet	2244	2086		7.6%			95.4%
19	30-Nov-05	150	0+108	3rd lift	Fillet	2221	2099		5.8%			96.1%
20	1-Dec-05	150	0+63	3rd lift	Fillet	2206	2117		4.2%			96.9%
21	1-Dec-05	150	0+74	3rd lift	Fillet	2216	2108		5.1%			96.5%
22	1-Dec-05	150	0+50	3rd lift	Fillet	2220	2108		5.3%			96.5%
23	1-Dec-05	150	0+68	3rd lift	Fillet	2248	2097		7.2%			96.0%
24	1-Dec-05	150	0+110	4th lift	Fillet	2256	2074		8.8%			94.9%
25	1-Dec-05	150	0+80	4th lift	Fillet	2249	2069		8.7%			94.7%

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm minus
Project Number: 1100060.007
Compaction Standard: ASTM D698
Maximum Dry Density: 2185 kg/m3

Machine No:
Specified Compaction: 95%
Specified Saturation: 90%
Optimum Moisture Content: 7.8%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
26	2-Dec-05	150	0+35	1st lift	Fillet	2206	2067		6.7%			94.6%
27	2-Dec-05	150	0+40	2nd lift	Fillet	2214	2093		5.8%			95.8%
28	2-Dec-05	150	0+90	4th lift	Fillet	2224	2067		7.6%			94.6%
29	2-Dec-05	150	0+70	4th lift	Fillet	2215	2080		6.5%			95.2%
30	2-Dec-05	150	0+54	4th lift	Fillet	2196	2083		5.4%			95.4%
31	2-Dec-05	150	0+48	4th lift	Fillet	2231	2054		8.6%			94.0%
32	2-Dec-05	150	0+87	5th lift	Fillet	2244	2074		8.2%			94.9%
33	3-Dec-05	150	0+75	5th lift	Fillet	2228	2086		6.8%			95.5%
34	3-Dec-05	150	0+63	5th lift	Fillet	2234	2076		7.6%			95.0%
35	3-Dec-05	150	0+47	4th lift	Fillet	2216	2125		4.3%			97.2%
36	3-Dec-05	150	0+37	3rd lift	Fillet	2238	2115		5.8%			96.8%
37	4-Dec-05	150	0+74	517.3	Fillet	2210	2069		6.8%			94.7%
38	4-Dec-05	150	0+66	517.5	Fillet	2220	2063		7.6%			94.4%
39	4-Dec-05	150	0+45	517.4	Fillet	2197	2106		4.3%			96.4%
40	4-Dec-05	150	0+32	517.4	Fillet	2214	2093		5.8%			95.8%
41	7-Dec-05	150	0+81	518.3	Fillet	2194	2064		6.3%			94.5%
42	7-Dec-05	150	0+60	518.1	Fillet	2201	2094		5.1%			95.8%
43	7-Dec-05	150	0+42	518.2	Fillet	2211	2078		6.4%			95.1%
44	7-Dec-05	150	0+36	517.8	Fillet	2203	2078		6.0%			95.1%
45	9-Dec-05	150	0+065	grade	Fillet	2230	2102		6.1%			96.2%
46	9-Dec-05	150	0+025	3rd lift	Fillet	2196	2078		5.7%			95.1%
47	9-Dec-05	150	0+015	4th lift	Fillet	2213	2076		6.6%			95.0%
48	9-Dec-05	150	0+10	4th lift	Fillet	2224	2082		6.8%			95.3%
49	9-Dec-05	150	0+23	6th lift	Fillet	2215	2064		7.3%			94.5%
50	9-Dec-05	150	0+25	4th lift	Fillet	2199	2090		5.2%			95.7%

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Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm minus
Project Number: 1100060.007
Compaction Standard: ASTM D698
Maximum Dry Density: 2185 kg/m3

Machine No:
Specified Compaction: 95%
Specified Saturation: 90%
Optimum Moisture Content: 7.8%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
51	9-Dec-05	150	0+15	5th lift	Fillet	2231	2077		7.4%			95.1%
52	9-Dec-05	150	0+09	5th lift	Fillet	2220	2073		7.1%			94.9%
53	10-Dec-05	150	0+030	5th lift	Fillet	2223	2089		6.4%			95.6%
54	10-Dec-05	150	0+010	6th lift	Fillet	2182	2062		5.8%			94.4%
55	10-Dec-05	150	0+020	6th lift	Fillet	2218	2083		6.5%			95.3%
56	10-Dec-05	150	0+03	5th lift	Fillet	2214	2085		6.2%			95.4%
57	10-Dec-05	150	0+10	6th lift	Fillet	2230	2069		7.8%			94.7%
58	10-Dec-05	150	0+15	6th lift	Fillet	2210	2058		7.4%			94.2%
59	10-Dec-05	150	0+04	8th Lift	Fillet	2199	2084		5.5%			95.4%
60	10-Dec-05	150	0+11	8th lift	Fillet	2209	2090		5.7%			95.6%
61	10-Dec-05	150	0+15	6th lift	Fillet	2213	2068		7.0%			94.7%
62	10-Dec-05	150	0+20	10th lift	Fillet	2222	2081		6.8%			95.2%
63	10-Dec-05	150	0+07	12th lift	Fillet	2225	2093		6.3%			95.8%
64	11-Dec-05	150	0+110	1st lift	Fillet	2224	2073		7.3%			94.9%
65	11-Dec-05	150	0+130	1st lift	Fillet	2227	2079		7.1%			95.2%
66	11-Dec-05	150	0+175	1st lift	Fillet	2197	2090		5.1%			95.7%
67	11-Dec-05	150	0+120	2nd lift	Fillet	2219	2078		6.8%			95.1%
68	11-Dec-05	150	0+135	2nd lift	Fillet	2229	2072		7.6%			94.8%
69	11-Dec-05	150	0+151	2nd lift	Fillet	2234	2069		8.0%			94.7%
70	11-Dec-05	150	0+145	3rd lift	Fillet	2236	2076		7.7%			95.0%
71	11-Dec-05	150	0+120	3rd lift	Fillet	2224	2084		6.7%			95.4%
72	12-Jan-06	150	0+162	6th lift	Fillet	2194	2084		5.3%			95.4%
73	12-Jan-06	150	0+150	6th lift	Fillet	2206	2064		6.9%			94.4%
74	12-Jan-06	150	0+138	6th lift	Fillet	2210	2062		7.2%			94.4%
75	12-Jan-06	150	0+142	7th lift	Fillet	2186	2060		6.1%			94.3%

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm minus
Project Number: 1100060.007
Compaction Standard: ASTM D698
Maximum Dry Density: 2185 kg/m3

Machine No:
Specified Compaction: 95%
Specified Saturation: 90%
Optimum Moisture Content: 7.8%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
76	12-Jan-06	150	0+132	7th lift	Fillet	2197	2057		6.8%			94.1%
77	12-Jan-06	150	0+128	7th lift	Fillet	2202	2052		7.3%			93.9%
78	12-Jan-06	150	0+151	8th lift	Fillet	2178	2049		6.3%			93.8%
79	12-Jan-06	150	0+133	8th lift	Fillet	2207	2063		7.0%			94.4%
80	13-Jan-06	150	0+180	2nd lift	Fillet	2214	2077		6.6%			95.1%
81	13-Jan-06	150	0+170	3rd lift	Fillet	2209	2082		6.1%			95.3%
82	13-Jan-06	150	0+175	4th lift	Fillet	2187	2050		6.7%			93.8%
83	13-Jan-06	150	0+165	5th lift	Fillet	2199	2076		5.9%			95.0%
84	14-Jan-06	150	0+180	5th lift	Fillet	2198	2078		5.8%			95.1%
85	14-Jan-06	150	0+160	6th lift	Fillet	2224	2092		6.3%			95.8%
86	14-Jan-06	150	0+170	7th lift	Fillet	2208	2073		6.5%			94.9%
87	14-Jan-06	150	0+15	10th lift	Fillet	2204	2064		6.8%			94.4%
88	14-Jan-06	150	0+20	10th lift	Fillet	2191	2046		7.1%			93.6%
89	14-Jan-06	150	0+24	10th lift	Fillet	2211	2045		8.1%			93.6%
90	14-Jan-06	150	0+128	11th lift	Fillet	2189	2055		6.5%			94.1%
91	14-Jan-06	150	0+132	11th lift	Fillet	2191	2044		7.2%			93.5%
92	14-Jan-06	150	0+148	12th lift	Fillet	2214	2089		6.0%			95.6%
93	14-Jan-06	150	0+156	12th lift	Fillet	2203	2055		7.2%			94.1%
94	20-Feb-06	150	0+045	KTB		2191	1925		13.8%		97.2%	88.1%
95	20-Feb-06	150	0+050	KTB		2152	1876		14.7%		94.5%	85.9%
96	20-Feb-06	150	0+055	KTB		2161	1865		15.9%		100.0%	85.3%
97	20-Feb-06	150	0+065	KTB		2177	1905		14.3%		96.8%	87.2%
98	21-Feb-06	150	0	KTB		2179	1913		13.9%		95.6%	87.6%
99	21-Feb-06	150	0+095	KTB		2167	1857		16.7%		100.0%	85.0%
100	22-Feb-06	150	0+075	KTB		2189	1892		15.7%		100.0%	86.6%

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm minus
Project Number: 1100060.007
Compaction Standard: ASTM D698
Maximum Dry Density: 2185 kg/m3

Machine No:
Specified Compaction: 95%
Specified Saturation: 90%
Optimum Moisture Content: 7.8%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
101	22-Feb-06	150	0+060	KTB		2182	1873		16.5%		100.0%	85.7%
102	3-Mar-06	150	0+130	KTB		2132	1841		15.8%		95.3%	84.3%
103	3-Mar-06	150	0+159	KTB		2185	1915		14.1%		97.3%	87.6%
104	4-Mar-06	150	0+160	KTB		2184	1906		14.6%		99.1%	87.2%
105	6-Mar-06	150	0+075	KTB	C/L	2171	1921		13.0%		90.8%	87.9%
106	6-Mar-06	150	0+080	KTB	2.0 m U/S	2199	1946		13.0%		95.2%	89.1%
107	6-Mar-06	150	0+085	KTB		2224	1989		11.8%		94.1%	91.0%
108	6-Mar-06	150	0+100	KTB		2158	1895		13.9%		92.4%	86.7%
109	7-Mar-06	150	0+045	KTB		2219	2023		9.7%		82.9%	92.6%
110	10-Mar-06	150	0+080	KTB	2.0 m D/S	2239	2008		11.5%		95.3%	91.9%
111	10-Mar-06	150	0+095	KTB	2.0 m U/S	2241	1974		13.5%		100.0%	90.4%
112	11-Mar-06	150	0+100	4th lift	1.0 m D/S	2201	1946		13.1%		96.0%	89.1%
113	11-Mar-06	150	0+080	4th lift	1.0 m U/S	2164	1939		11.6%		83.8%	88.7%
114	11-Mar-06	150	0+070	KTB	2.0 m D/S	2231	1918		16.3%		100.0%	87.8%
115	11-Mar-06	150	0+065	KTB	1.0 m D/S	2182	1926		13.3%		93.7%	88.1%
116	12-Mar-06	150	0+055	4th lift	1.0 m D/S	2195	1955		12.3%		91.6%	89.5%
117	12-Mar-06	150	0+040	4th lift	1.0 m D/S	2176	1945		11.9%		86.9%	89.0%
118	17-Mar-06	150	0+115	KTB	C/L	2159	1949		10.8%		79.5%	89.2%
119	17-Mar-06	150	0+135	KTB	C/L	2207	1994		10.7%		86.1%	91.2%
120	17-Mar-06	150	0+140	KTB	1.0 m D/S	2142	1855		15.5%		95.8%	84.9%
121	17-Mar-06	150	0+048	KTB	C/L	2113	1818		16.2%		93.9%	83.2%
122	26-Mar-06	150	0+040	Liner		2203	2006		9.8%		81.0%	91.8%
123	26-Mar-06	150	0+050	Liner		2178	2030		7.3%		63.3%	92.9%
124	28-Mar-06	150	0+070	Liner		2168	2017		7.5%		63.3%	92.3%
125	28-Mar-06	150	0+060	Liner		2212	2024		9.3%		79.6%	92.6%

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm minus
Project Number: 1100060.007
Compaction Standard: ASTM D698
Maximum Dry Density: 2185 kg/m3

Machine No:
Specified Compaction: 95%
Specified Saturation: 90%
Optimum Moisture Content: 7.8%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
126	2-Apr-06	150	0	Liner		2197	1994		10.2%		82.1%	91.2%
127	2-Apr-06	150	0	Liner		2150	1933		11.2%		80.1%	88.5%

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Reimer Truck Batch Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Levelling Course and Key Trench Backfill

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
1	05/10/25	10:45					29.3	SC	612.2	582.9	548.7	6.2
2	05/10/25	11:15	4				26.8	SC	598.2	571.4	524.2	9.0
3	05/10/25	11:35					25.2	SC	593.8	568.6	492.5	15.4
4	05/10/26	1:05					25.7	SC	499.5	473.8	432.3	9.6
5	05/10/26	1:35					25.6	SC	474.6	449.0	424.7	11.7
6	05/10/26	2:16					26.8	SC	476.8	450.0	398.2	13.0
7	05/10/26	4:35					26.9	SC	449.4	422.5	381.8	10.7
8	05/10/29	2:00	3				23.6	SC	475.1	451.5	413.7	9.1
9	05/10/29	2:45						SC				9.7
10	05/10/29	3:45					25.7	SC	479.6	453.9	412.4	10.1
11	05/10/30	2:45					50.7	SC	661.3	610.6	550.8	10.9
12	05/10/30	3:15					49.6	SC	692.3	642.7	581.6	10.5
13	05/10/31	2:00					50.7	SC	588.6	537.9	490.8	9.6
14	05/11/03		4				51.1	SC	527.8	476.7	432.2	10.3
15	05/11/03						51.3	SC	546.3	495.0	438.7	12.8
16	05/11/04						51.6	SC	590.6	539.0	539.0	12.4
17	05/11/04						50.9	SC	576.4	525.5	525.5	11.2
18	05/11/05						51.7	SC	537.4	485.7	435.5	11.5
19	05/11/05						51.4	SC	602.1	550.7	486.2	13.3
20	05/11/06						47.0	SC	530.2	483.2	431.2	12.1
21	05/11/06						47.2	SC	596.4	549.2	477.6	15.0
22	05/11/12	15:45	10				25.0	MM	721.5	645.2	620.2	12.3
23	05/11/12	16:15					25.0	MM	587.5	528.1	503.1	11.8
24	05/11/12	16:45	9				25.0	MM	572.9	516.8	491.8	11.4
25	05/11/13						25.5	MM	498.2	451.7	426.2	10.9

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Reimer Truck Batch Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Levelling Course and Key Trench Backfill

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
26	05/11/13		9				25.5	MM	545.2	493.3	467.8	11.1
27	05/11/14		4				25.5	MM	578.5	529.1	503.6	9.8
28	05/11/15						25.5	MM	519.7	468.3	442.8	11.6
29	05/11/15		15				25.5	MM	548.6	493.4	467.9	11.8
30	05/11/15						25.5	MM	492.7	446.8	421.3	10.9
31	05/11/16						25.5	MM	595.7	538.3	512.8	11.2
32	05/11/16		12				25.5	MM	622.0	558.1	532.6	12.0
33	05/11/16						25.5	MM	559.0	504.8	479.3	11.3
38	05/11/19						25.5	MM	587.5	526.8	501.3	12.1
39	05/11/19		8				25.5	MM	535.8	485.6	460.1	10.9
40	05/11/21						25.5	MM	528.2	476.8	451.3	11.4
41	05/11/21		14				25.5	MM	503.2	455.1	429.6	11.2
42	05/11/23						25.5	MM	538.7	487.4	461.9	11.1
43	05/11/23		10				25.5	MM	514.2	468.2	442.7	10.4
44	05/11/25						25.5	SC	201.3	175.8	158.6	10.3
45	05/11/25		15				24.6	SC	222.6	198.0	175.6	12.8
46	05/11/26						25.6	SC	307.2	281.6	259.5	8.5
47	05/11/26		15				25.4	SC	315.1	289.7	263.1	10.1
48	05/11/27		14				25.6	SC	312.4	286.8	262.7	9.2
49	05/11/27						25.6	SC	326.1	300.5	271.7	10.6
50	06/01/26	10:30	5				25.0	JLP	979.0	863.1	838.1	13.8
51	06/01/26	17:10	5				25.0	JLP	892.7	774.0	749.0	15.8
52	06/02/27	10:00	2				22.1	JLP	892.0	810.6	788.5	10.3
53	06/02/20	22:00	10				2423.1	PEP	3601.9	3433.5	1010.4	16.7
54	06/02/22	2:45	10				2417.2	PEP	3495.7	3323.1	905.9	19.1

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Reimer Truck Batch Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Levelling Course and Key Trench Backfill

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
54	06/02/22	2:45	10				2417.2	PEP	3495.7	3323.1	905.9	19.1
55	06/02/23	22:25	12				2423.3	PEP	3854.4	3641.7	1218.4	17.5
56	06/02/25	3:00					2421.9	PEP	3716.5	3536.9	1115.0	16.1
57	06/02/27	22:00					2417.5	PEP	3647.2	3566.2	1148.7	7.1
58	06/03/04	10:00					28.4	JGD	3301.3	3029.9	3001.5	9.0
59	06/03/06	11:00					13.7	JGD	1586.7	1447.8	1434.1	9.7
60	06/03/06	13:30					2417.8	JGD	5854.5	5470.4	3052.6	12.6
61	06/03/06	21:00					2419.1	PEP	4006.2	3854.9	1435.8	10.5
62	06/03/07	5:00					2420.2	PEP	3897.8	3647.9	1227.7	20.4
63	06/03/07	9:30					2422.4	JGD	11357.4	10666.5	8244.1	8.4
64	06/03/08	2:15					14.5	JGD	1378.0	1269.9	1255.4	8.6
65	06/03/11	3:00					2419.9	JGD	6338.1	5899.1	3479.2	12.6
66	06/03/12	5:00					15.3	JGD	2108.3	1886.3	1871.0	11.9
67	06/03/17	3:00					2427.9	JGD	5398.3	5216.7	2788.8	6.5
68	06/03/24	20:30					789.9	PEP	7416.5	7037.5	6247.6	6.1
69	06/03/24	22:00					2420.1	PEP	8942.6	8499.2	6079.1	7.3
70	06/03/25	1:20					2420.2	PEP	10115.3	9140.2	6720.0	14.5
71	06/03/25	2:30					2423.1	PEP	9462.4	8982.7	6559.6	7.3
72	06/03/25	6:00					2419.7	PEP	8991.1	8648.8	6229.1	5.5
73	06/04/02	DS					2704.6	JGD	6752.0	6386.2	3681.6	9.9
74	06/04/02	NS					2421.4	PEP	9572.9	9031.8	6610.4	8.2

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Reimer Truck Batch Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Fillet

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
1	05/11/28	2:30					25.6	SC	396.3	370.7	342.9	8.1
2	05/11/29	11:00	15				25.6	SC	384.2	358.6	335.7	6.8
3	05/11/29	2:30					25.5	SC	378.1	352.6	331.0	6.5
4	05/11/30	11:00	15				25.7	SC	385.7	360.0	336.9	6.9
5	05/11/30	1:30					25.5	SC	390.1	364.6	343.2	6.2
6	05/12/01	10:30					25.5	SC	402.1	376.6	353.9	6.4
7	05/12/02	1:30					25.6	SC	376.4	350.8	327.8	7.0
8	05/12/03	2:30					25.7	SC	384.3	358.6	334.7	7.1
9	05/12/05	10:30					25.5	SC	391.6	366.1	342.7	6.8
10	05/12/09	10:00	8				23.5	MM	411.2	389.6	366.1	5.9
11	05/12/09	13:30					23.5	MM	431.9	407.7	384.2	6.3
12	05/12/09	16:00					23.5	MM	423.9	400.9	377.4	6.1
13	05/12/09	N 20:00	12				25.5	SC	391.2	365.7	340.8	7.3
14	05/12/09	N 1:30					25.6	SC	385.6	360.0	337.4	6.7
15	05/12/10	N 10:00	13				25.5	SC	389.4	363.9	339.3	7.2
16	05/12/10	N 1:40					25.7	SC	403.6	377.9	352.2	7.3
17	05/12/11	N9:00	12				25.1	SC	421.3	396.2	367.3	7.9
18	05/12/11	N 10:00					26.4	SC	409.6	383.2	354.0	8.2
19	05/12/11	N 11:15					25.8	SC	396.4	370.6	347.3	6.7
20	05/12/11	N 3:45					25.6	SC	384.6	359.0	336.3	6.7
21	06/01/12	10:00	10				24.9	SC	395.7	370.8	345.1	7.4
22	06/01/12	11:00					25.1	SC	417.5	392.4	362.3	8.3
23	06/01/12	12:00					25.0	SC	473.0	448.0	417.5	7.3
24	06/01/12	13:00					25.2	SC	410.6	385.4	360.5	6.9
25	06/01/13	9:00	8				25.2	MM	480.4	451.4	426.2	6.8

EBA ENGINEERING CONSULTANTS LTD.

Project: **East Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Reimer Truck Batch Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Fillet

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
26	06/01/13	11:00					25.2	MM	432.8	405.8	380.6	7.1
27	06/01/13	14:00					25.0	MM	404.0	377.9	352.9	7.4
28	06/01/13	8:15P	9				25.0	SC	391.8	366.8	342.7	7.0
29	06/01/13	9:15P					25.1	SC	403.6	378.5	353.3	7.1
30	06/01/14	14:30	10				24.9	MM	412.1	387.2	362.2	6.9
31	06/01/14	16:00					24.9	MM	422.9	398.0	371.3	7.2
32	06/01/14	8:10P	10				25.0	SC	431.9	406.9	375.5	8.4
33	06/01/14	9:30P					25.1	SC	420.4	395.3	366.2	7.9
34	06/01/14	11:00P					25.0	SC	398.6	373.6	348.3	7.3
35	06/01/15	9:00	9				25.0	MM	432.8	405.4	380.4	7.2
36	06/01/15	11:00					25.0	MM	414.2	387.4	362.4	7.4
37	06/01/15	8:30P	8				25.1	SC	416.3	391.2	365.3	7.1
38	06/01/15	9:30P					25.0	SC	394.8	369.8	345.1	7.2

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Project	**East Dam**	Production Method:	Reimer Truck Batch Plant
Address:	**Jericho Diamond Mine**	Soil Description:	20 mm Material
Client:	**Tahera Diamonds Corporation**	Project Number:	1100060.007
Attention:	**H. Gates/R. Jones/T. Loschiavo**		

Core Samples

Lab Number	**001**	**005**	**006**	**007**	**008**	
Placement Date						
Cored By	JGD	JGD				
Date	Mar 09/06					
Cored Length (mm)						
Location: Station	0+038	0+097				
Offset						
Location: Northing	7318190.395	7318427.891				
Easting	477491.148	477502.587				
Elevation	518.5	517.2				
Test by						
Photo: Roll No.						
Frame No.(s)						
Trimmed Core (Frozen)						
Average Length (mm)	190	144				
Average Ø (mm)	98	98				
Mass in air (g)	2871.8	2028.8				
Mass in water (g)	1556.2	1057.7				
Mass with ice coating (g)	2916.2	2060.3				
Moisture Content						
Tare wt. (g)	2425.6	2433.4				
Wet wt. + tare (g)	5317.8	4497.0				
Dry wt. + tare (g)	4981.2	4177.1				
Wt. Water (g)	336.6	319.9				
Dry Wt. (g)	2555.6	1743.7				
Moist. Cont.	13.2%	18.3%				
Volume (cm^3), by mass	1312	968				
Volume (cm^3), by dimensions	1433	1086				
Frozen Bulk Density (kg/m^3)	2190	2095				
Frozen Dry Density (kg/m3)	1935	1770				
Ice Saturation	**93.6%**	**99.5%**				
Comments:						

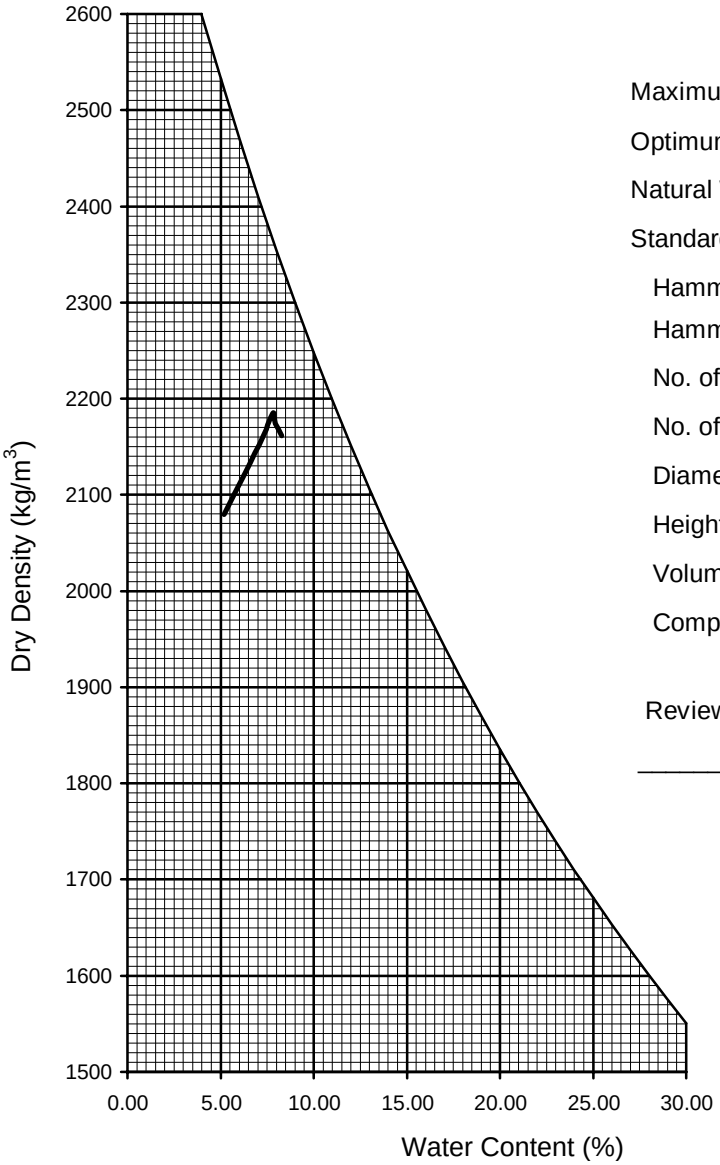
APPENDIX

APPENDIX D EAST DAM MOISTURE DENSITY RELATIONSHIP

EBA ENGINEERING CONSULTANTS LTD.

MOISTURE-DENSITY RELATIONSHIP

Project:	Jericho Diamond Project	Sample No.:	3922-1
Address:	Jericho Diamond Mine, NU	Date Sampled:	n/a
		Sample Locatio	
Project No.:	0101-1100060.003		
Date Tested:	16-Jun-05 By: MB	Sample Description:	-20 mm crush
Client:	Tahera Diamond Corp.		
Attention	Mr. Roland Jones/Harold Gates		



Maximum Dry Density:	2185 kg/m^3
Optimum Water Content:	7.8%
Natural Water Content:	1.5%

Standard Proctor (ASTM D 698) Part D

Hammer Weight:	2.5 kg
Hammer Drop:	305 mm
No. of Layers:	3
No. of Blows / Layer:	56
Diameter of Mould:	152 mm
Height of Mould:	116 mm
Volume Mould:	2124 cm^3
Compactive Effort:	600 kJ/m^3

Reviewed By:

_____ P. Eng.

APPENDIX

APPENDIX E EAST DAM GROUND TEMPERATURE PROFILES

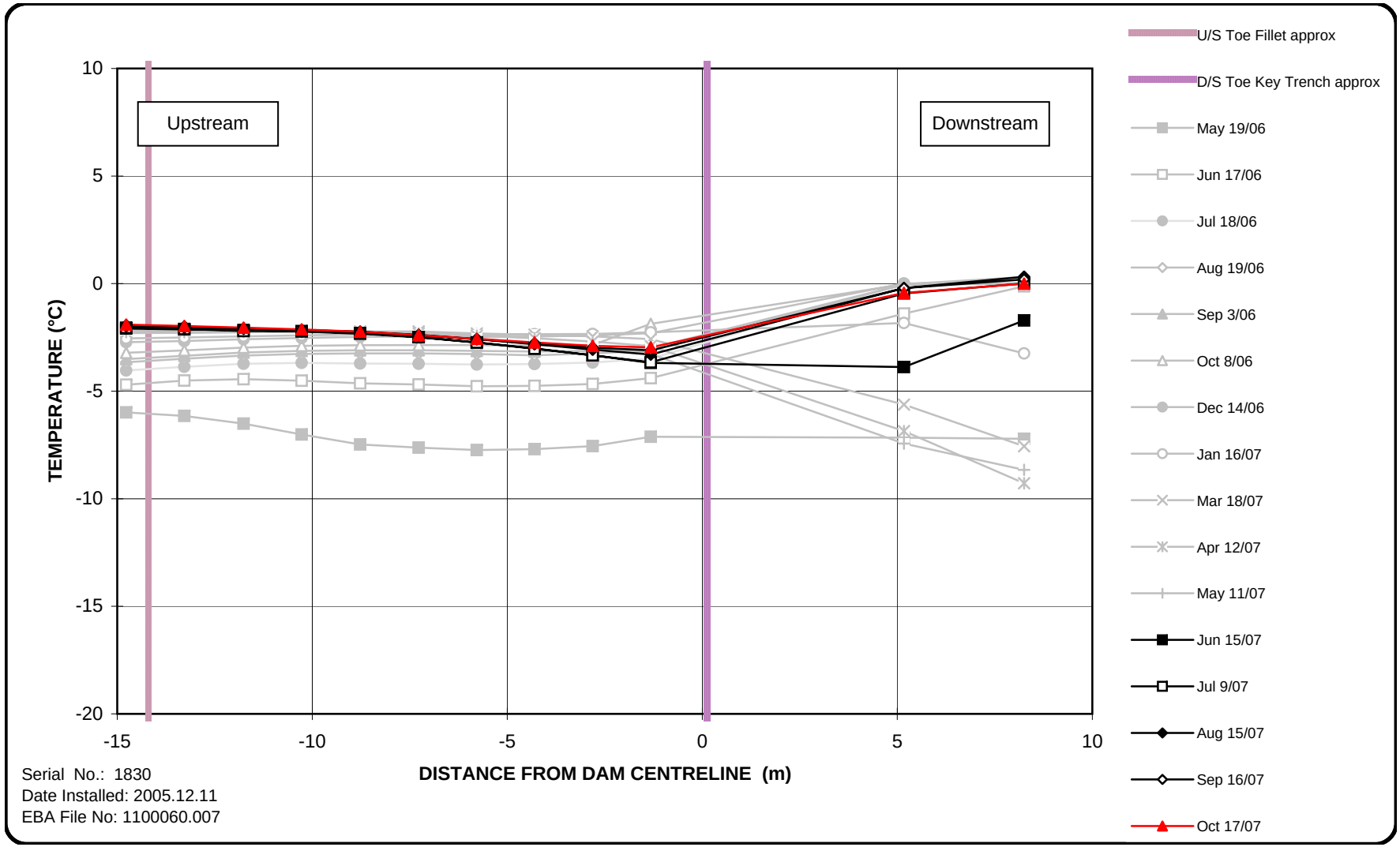


Figure E-1
Horizontal Ground Temperature Distribution
East Dam
Station 0+100, Trench Elevation 517 m

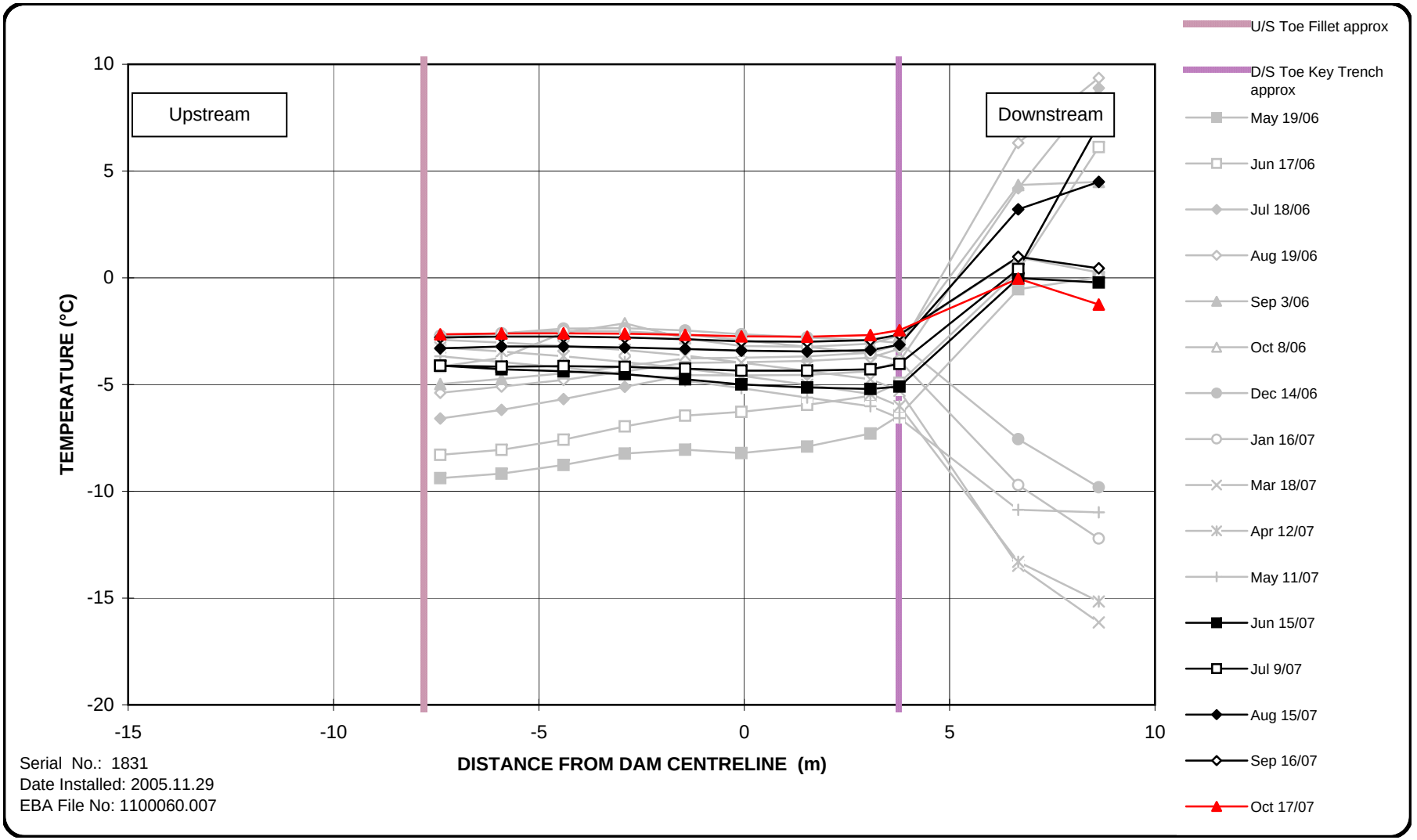


Figure E-2
Horizontal Ground Temperature Distribution
East Dam
Station 0+150, Trench Elevation 515 m

APPENDIX

APPENDIX F EAST DAM WEEKLY REPORTS

PKCA DAM & DYKE CONSTRUCTION
WEEKLY REPORT
Ending: November 19, 2005

On-Site EBA Personnel: Mike Monk (Nov. 13 – Nov. 19)

Weather:	Nov. 13 (Sun.)	@ 12:00 hrs.	-26°C, sunny & clear, light wind
	Nov. 14 (Mon.)	@ 12:00 hrs.	-32°C, sunny & clear, windy
	Nov. 15 (Tues.)	@ 12:00 hrs.	-20°C, overcast, cloudy, light wind
	Nov. 16 (Wed.)	@ 12:00 hrs.	-18°C, overcast, cloudy, light wind
	Nov. 17 (Thurs.)	@ 12:00 hrs.	-15°C, overcast, cloudy, light wind
	Nov. 18 (Fri.)	@ 12:00 hrs.	-12°C, cloudy with sunny periods, light wind
	Nov. 19 (Sat.)	@ 12:00 hrs.	-25°C, cloudy, periods of blowing snow, windy

On November 14, material placement was shut down at the East Dam due to the cold temperatures and high winds. The moisture conditioned 20 mm material being placed was starting to freeze before it could be placed and suitably compacted. The existing boiler on site was unable to sufficiently heat the mixing water used to produce the moisture conditioned 20 mm material. The first load placed was tested by EBA for temperature, compaction and saturation levels with unacceptable results, therefore, material placement ceased for the remainder of the day.

1.0 Overview of Construction Activities

Key trench cleaning and levelling course placement activities continued at the East Dam. Snow removal and key trench excavation continued at the Southeast Dam. Key trench drilling started at the West Dam. The crusher continued to produce 20 mm minus material.

2.0 East Dam Construction Activities

Clark Builder's continued key trench cleaning and levelling course placement activities at the East Dam throughout the report period. Labourers (2 to 5) used hand tools, shovels and air hoses to clean areas of the key trench bottom in preparation for material placement. The Cat 950 loader and Bobcat with a broom attachment were also used throughout the key trench cleaning. As soon as an area of the key trench was cleaned, it was inspected by EBA and approved for material placement. The Riemer mix truck was used to produce the moisture conditioned 20 mm minus levelling course material. Between one and four Cat D300 haul truck loads of material were produced each and every day during the last week. Due to the water capacity and water heating constraints that currently exist on site, four loads per day is the maximum quantity of levelling course material that can be produced. In total, 21 truck loads of levelling course material were placed at the East Dam. Each load is estimated at 10 m^3, therefore, approximately 210 m^3 of levelling course was placed during this report period. The material was placed and spread using the Cat 950 loader and was compacted using plate tampers and the vibratory double drum walk behind roller. The QA/QC testing conducted by EBA on the levelling course material is outlined below in section 6.0.

The new boiler for the batch plant arrived on site November 17. However, the water tank that the boiler will be hooked up to was taken over to the truckshop by Clark Builder's to flush all of the glycol lines and won't become available again for several days. It is also expected to take a couple days to hook up the

boiler and water system after the water tank becomes available. It is very important that this new water heating system for the Riemer mix truck become operational as soon as possible. This system is required in order to produce larger quantities of heated, moisture conditioned 20 mm minus material.

3.0 Southeast Dam Construction Activities

Nuna continued to clean out the snow and remaining blasted material from the Southeast Dam key trench between November 13 and November 15. Nuna used the Cat 345 hoe, Cat D4 dozer and a Cat D300 haul truck to excavate the key trench. The snow was pushed off the upstream side of the dam footprint. Most of the blasted material was unusable due to excessive snow contamination and was also pushed upstream of the dam. On November 14, the east half of the Southeast Dam key trench was ready for final cleaning, however due to the lack of Clark Builder's labourers available on site, this work could not start during this report period.

4.0 West Dam Construction Activities

On November 18, Nuna used the Cat 345 hoe to excavate the drifted snow to provide access for the drill rig at the north abutment of the West Dam. In the afternoon on November 19, McCaw's started key trench drilling activities at the north end of the dam using the 300 air-track drill rig. Key trench drill, blast and excavation activities as well as percolation testing will continue throughout the next week.

5.0 Material Production

Nuna's crusher continued to produce 20 mm minus material for dam construction throughout the report period. On November 19, the crusher started to crush kimberlite for the process plant using only the jaw crusher. It is understood that this material will be used to commission the process plant over the Christmas holidays. It is also understood that the pit operations and hence the crusher will be shut down as of November 30.

Sub-Arctic Surveys (SAS) did stockpile surveys of the dam construction materials currently on site. As of November 18, there is approximately 13,000 m^3 of 20 mm minus material and 2,150 m^3 of 150 mm minus material available for use at the dams. In addition, there is approximately 1,400 m^3 of filter material remaining to complete construction of the Divider Dyke. These quantities are loose stockpile volumes, not compacted in place volumes. The design quantities for the dams without any contingency for compaction or overbuild are as follows: 29,600 m^3 of 20 mm minus material and 14,100 m^3 of 150 mm minus material. SAS is currently working on the surveys for in place volumes, however, minimal material has been placed thus far in the dams.

6.0 Quality Assurance Testing

Quality assurance testing was conducted at the crusher throughout material production. Five (5) samples of 20 mm minus material were taken from the crusher belt for gradation testing. The sieve results showed the 20 mm minus material to be within the specified gradation limits.

Quality assurance testing was conducted on the levelling course material produced by the Riemer truck. Fifteen (15) temperature and moisture content measurements were made on the material during placement at the dam. The material temperature ranged between 4°C and 15°C, with an average temperature of about 10°C. The moisture content ranged from 9.8 to 12.1%, with an average moisture of about 11.4%. Twenty (20) density tests were conducted on the levelling course using a nuclear densometer. The

density test results ranged between 88.2 and 93.2%, with an average compaction of about 90.4% of maximum dry density. The moisture contents from the compaction testing ranged from 9.6 to 12.1%, with an average moisture of about 11.1%. The degree of saturation of the levelling course material was also determined using the density and moisture content results. The degree of saturation ranged from 70.6 to 95.5%, with an average saturation of about 85.8%. Two (2) random samples of the levelling course material were taken during placement for gradation testing. The sieve results showed the material to be within the specified gradation limits for the 20 mm minus material.

7.0 Next Week's Activities

The following activities are planned for the next report period:

- Start and complete set up of the new boiler system at the batch plant.
- Complete levelling course placement at the East Dam.
- Start fillet zone construction at the East Dam.
- Start final cleaning of the key trench at the Southeast Dam.
- Continue key trench drill and blast activities at the West Dam.
- Continue percolation testing at the West Dam.
- Start key trench excavation activities at the West Dam.
- Continue material production using the crushing plant.

8.0 Safety

There were no safety concerns during this report period.

9.0 Closure

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the e-mail address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Mike Monk, P.Eng.
Project Engineer
(mmonk@eba.ca)

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: November 26, 2005

On-Site EBA Personnel: Mike Monk (Nov. 20 – Nov. 26)

Shane Collins (Nov. 24 – Nov. 26)

Weather:

Nov. 20 (Sun.)	@ 12:00 hrs.	-35°C, sunny, blowing snow, very windy
Nov. 21 (Mon.)	@ 12:00 hrs.	-25°C, sunny & clear, some wind
Nov. 22 (Tues.)	@ 12:00 hrs.	-28°C, sunny & clear, calm wind
Nov. 23 (Wed.)	@ 12:00 hrs.	-25°C, overcast, blowing snow, very windy
Nov. 24 (Thurs.)	@ 12:00 hrs.	-19°C, overcast, blowing snow, windy
Nov. 25 (Fri.)	@ 12:00 hrs.	-15°C, overcast, blowing snow, very windy
Nov. 26 (Sat.)	@ 12:00 hrs.	-20°C, sunny & clear, calm wind

The overall weather was quite poor on site during the report period. On November 20, 23, 24 and 25 there were high winds and blowing snow which hindered progress on the dams. On November 20, material placement did not take place at the East Dam due to the cold temperatures and high winds. The existing boiler on site was unable to sufficiently heat the mixing water used to produce the moisture conditioned 20 mm material. The new boiler and water system at the batch plant was not operational until November 25.

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Snow removal, key trench cleaning and levelling course placement activities continued periodically at the East Dam. Key trench drill, blast and excavation continued on the key trench at the West Dam. Till and run-of-mine (ROM) material placement resumed at the West Dam. The percolation testing was completed on the north abutment of the West Dam. No construction activities took place at the Southeast Dam or Divider Dyke. The crusher produced a small quantity of 150 mm minus material.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report. The dam construction is behind schedule primarily due to three reasons: 1) our inability to produce significant quantities of heated, moisture conditioned 20 mm material, 2) the lack of available labour to remove snow and clean the key trench and 3) due in part to poor weather and blowing snow. The East Dam was ready to start final key trench cleaning on October 3, which is approximately two weeks after we started dam construction. Levelling course placement should have been able to proceed right after the key trench cleaning to eliminate all of the re-cleaning and re-excavation of snow. It has now been almost eight weeks and we are just finishing the levelling course at the East Dam. The Southeast Dam key trench has been ready for final cleaning since October 19. We have not yet even started this work.

The new boiler was operational on November 25th. This will increase production; however a night shift and dedicated labourer crews are needed to maintain the level of production assumed in the construction schedule.

2.0 EAST DAM CONSTRUCTION ACTIVITIES

Clark Builder's continued snow removal, key trench cleaning and levelling course placement activities at the East Dam periodically throughout the report period. Labourers (2 to 5) used hand tools, shovels and air hoses to clean areas of hard packed snow from the key trench bottom in preparation for material placement. The Cat 950 loader and Bobcat with a broom attachment were also used throughout the snow removal activities. As soon as an area of the key trench was cleaned, it was inspected by EBA and approved for material placement. The Riemer mix truck was used to produce the moisture conditioned 20 mm minus levelling course material. Between two and five Cat D300 haul truck loads of material were produced each day of material production. There were a couple days during the last week in which no material was produced and no work was done at the East Dam because the Clark labourers were all pulled off to complete the raw water intake line and to clean the truckshop. In total, fifteen (15) truck loads of levelling course material were placed at the East Dam. Each load is estimated at 10 m^3, therefore, approximately 150 m^3 of levelling course was placed during this report period. The material was placed and spread using the Cat 950 loader and was compacted using plate tampers and the vibratory double drum walk behind roller. The QA/QC testing conducted by EBA on the levelling course material is outlined below in section 5.0.

3.0 WEST DAM CONSTRUCTION ACTIVITIES

McCaw's continued key trench drill and blast activities at the north abutment and south end of the dam throughout the report period. The Cat 345 hoe was used to provide support as required to the drill rig. There were two blasts at the north abutment on November 20 and

25, respectively. On November 20, several additional probe holes were drilled between ~0+150 and ~0+175 to confirm depth to bedrock. The bedrock within this area was shallower than the key trench design depth of 2.0 m. Therefore this area was drilled and blasted on November 22. On November 24, Nuna started key trench excavation and continued till and ROM material placement activities. The second lift (~1.0 m thick) of ROM was placed on both the upstream and downstream sides of the key trench. The ROM material was hauled from the pit using the Cat 777 haul trucks and was placed using the Cat D9 dozer. The second and third lifts (~300 mm thick) of till material were placed upstream of the key trench. The till material was excavated from the key trench using the Cat 345 hoe and was placed using a Cat D300 haul truck and Cat D4 dozer. The ROM was compacted using the loaded haul trucks and the till material was compacted using the 10-tonne vibratory roller. Any snow or unsuitable material was removed prior to material placement. In total, approximately 3,800 m^3 of ROM and 1,000 m^3 of till material were placed at the West Dam during the report period.

4.0 MATERIAL PRODUCTION

On November 19, the crusher continued to crush kimberlite for the process plant until the end of shift on November 21. It is understood that this material will be used to commission the process plant over the Christmas holidays. On November 22, the crusher continued to produce 150 mm minus material for dam construction. In the PM on November 23, the crusher went down because the motor for the jaw crusher burned out. Approximately 2,000 m^3 of 150 mm material was produced during the report period. It is understood that the pit operations and hence the crusher will be shut down as of November 30.

Sub-Arctic Surveys (SAS) did stockpile surveys of the dam construction materials currently on site. As of November 26, there is approximately 12,800 m^3 of 20 mm minus material and 4,000 m^3 of 150 mm minus material available for use at the dams. In addition, there is approximately 1,400 m^3 of filter material remaining to complete construction of the Divider Dyke. These quantities are loose stockpile volumes, not compacted in place volumes. The design quantities for the dams without any contingency for compaction or overbuild are as follows: 29,600 m^3 of 20 mm minus material and 14,100 m^3 of 150 mm minus material. SAS is currently working on the surveys for in place volumes, however, minimal material has been placed thus far in the dams.

5.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the levelling course material produced by the Riemer truck. Fifteen (15) temperature and moisture content measurements were made on the material during placement at the dam. The material temperature ranged between 10°C

and 15°C, with an average temperature of about 13.5°C. The moisture content ranged from 8.5 to 12.8%, with an average moisture of about 10.7%.

Twelve (12) density tests were conducted on the levelling course using a nuclear densometer. The density test results ranged between 87.2 and 92.4%, with an average compaction of about 90.6% of maximum dry density. The moisture contents from the nuclear densometer ranged from 9.8 to 12.4%, with an average moisture of about 10.7%. The degree of saturation of the levelling course material was also determined using the density and moisture content results. The degree of saturation ranged from 75.6 to 98.5%, with an average saturation of about 83.6%. One (1) random sample of the levelling course material was taken during placement for gradation testing. The sieve results showed the material to be slightly fine and out of the specified gradation limits for the 20 mm minus material; however the material was judged to be acceptable for the dam construction.

6.0 NEXT WEEK'S ACTIVITIES

The following activities are planned for the next report period:

- Complete levelling course placement at the East Dam.
- Install the ground temperature cables at the East Dam.
- Start fillet zone construction at the East Dam.
- Start final cleaning of the key trench at the Southeast Dam.
- Continue key trench drill and blast activities at the West Dam.
- Complete percolation testing at the West Dam.
- Continue key trench excavation activities at the West Dam.
- Continue till and ROM material placement at the West Dam.
- Start final cleaning of the key trench at the West Dam.

7.0 SAFETY

There were no safety concerns during this report period.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the e-mail address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Mike Monk, P.Eng.

Project Engineer

(mmonk@eba.ca)

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: January 21, 2006

On-Site EBA Personnel: Mike Monk (Jan . 15 – Jan. 21)

Jason Porter (Jan. 18 – Jan 21.)

Weather:

Jan 15(Sun.)	@ 12:00 hrs.	-24°C, light wind, clear and sunny
Jan 16 (Mon.)	@ 12:00 hrs.	-28°C, light wind, clear and sunny
Jan 17 (Tues.)	@ 13:00 hrs.	-20°C, light wind, flurries
Jan 18 (Wed.)	@ 12:00 hrs.	-28°C, overcast, moderate winds, blowing snow
Jan 19 (Thurs.)	@ 12:00 hrs.	-35°C, wind 5km/hr NE, clear
Jan 20 (Fri.)	@ 12:00 hrs.	-25°C, wind 7km/hr SW, clear
Jan 21 (Sat.)	@ 12:00 hrs.	-25°C, wind 20km/hr SSW, overcast

The overall weather was fairly good on site during the report period except for one day. On December 16, there were high winds and blowing snow which hindered progress on the dams on both day and night shifts.

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Progress was made on all three dams during the report period. Liner and granular fill placement were the main activities on the West Dam. Three ground temperature cables (GTC) were installed at the West Dam during the week. Processing of 20 mm core material has stabilized and good production is occurring at the batch plant. Installation of liner also commenced at the East Dam with snow removal activities ongoing. The focus of activities at the South East Dam was the removal of the large amount of accumulated snow in the key trench. Mike Monk (EBA) switched to nightshift on January 20th to monitor nightshift construction of the West Dam.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 EAST DAM CONSTRUCTION ACTIVITIES

The East Dam fillet zone was completed on Jan 16th (Nightshift). Ground temperature cables were previously installed and the co-ordinates of each bead of the strings were surveyed by SAS. Clark Builder's continued snow removal during the report period. Placement of geo-textile and HDPE geo-membrane commenced on January 20th. At the end of the report period, five panels had been placed and welded beginning at the south end of the key trench. Quality control testing of welded seams is being performed as seams are completed.

PHOTO!!

3.0 WEST DAM CONSTRUCTION ACTIVITIES

The East Dam fillet zone was completed on Jan 16th (Dayshift). A&A Technical (A&A) were mobilized to site during the report period. Installation of Geosynthetic Clay Liner (GCL) commenced and was completed at the West Dam. Panels were laid out by hand with the 75 ton Grove crane or Cat 345 excavator hoisting the rolls. Panel edges were lined with betonite and then heat sealed to the adjacent panel. Damage to a few rolls had occurred during transport. The liner was thoroughly inspected and all holes were covered with bentonite powder and patched with squares of GCL. Patches had a minimum overlap of 300 mm and were heat sealed to the liner.

Placement of first lift of core material began on began on January 20th and was completed by the end of dayshift on January 21st. The lift thickness for the first lift was 400 mm. A thicker lift was used in order to protect the liner from damage from truck and compactor traffic. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement.

PHOTO!!

Three ground temperature cables (GTC's) were installed in the key trench prior to the first lift of fill. Cables were installed at 0+040, 0+080, and 0+120. The cables were strung across the base of the key trench and up the fillet zone of the core. The co-ordinates of each bead of the strings were surveyed by SAS. Bentonite paste was placed on the cables to prevent water travel along the strings. The cables were read before and after installation to ensure that no damage had occurred.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Snow removal continued at the South East Dam during the report period. A large volume of snow had accumulated in the key trench excavation and was removed using the Cat 345 excavator and a front end loader. Clean snow was stockpiled on the upstream side of the

key trench and soil, or snow contaminated with soil, was stockpiled downstream of the key trench. Once snow removal is complete Clark Builders can resume cleaning of the key trench base.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher remains idle. A letter from EBA to Tahara on January 20, 2006 recommended that crushing resume as soon as possible in order to prevent further construction delays. The process plant began running a small amount of feed through the plant during the report period however, the volume of tailings produced is too low to give representative samples for analysis.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the fillet and core material produced by the Riemer truck. Fifteen (15) temperature and moisture content measurements were made on the material during placement at the dam. The average fill temperature, when placed on site, was approximately 4°C. The moisture content ranged from 8.5 to 12.8%, with an average moisture of about 10.7%.

Using a nuclear densometer, twelve (12) density tests were conducted on fill placed at the West Dam. The density test results ranged between 84.6% and 90.6%, with an average compaction of about 88.6% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 9.5% to 14.1%, with an average moisture of about 11.7%. The degree of saturation of the levelling course material was also determined using the density and moisture content results. The degree of saturation ranged from 71.4 to 90.9%, with an average saturation of about 83.7%. One (1) random sample of the core material was taken during placement for gradation testing. The sieve results showed the material to be within the specified gradation limits for the 20 mm minus material.

7.0 NEXT WEEK'S ACTIVITIES

The following activities are planned for the next report period:

- Continue placement of core material at West Dam.
- Complete installation of HDPE liner at East Dam
- Commence placement of core material at East Dam
- Continue cleaning of the key trench base at the Southeast Dam.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the e-mail address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.

Project Engineer

jporter@eba.ca

Mike Monk, P.Eng.

Project Engineer

mmonk@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: January 28, 2006

On-Site EBA Personnel: Mike Monk (Jan . 22 – Jan. 28)

Jason Porter (Jan. 22 – Jan 28.)

Paul Paquet (Jan 25 – Jan 28.)

Weather:

Jan 22(Sun.)	@ 12:00 hrs.	-19°C, wind 10km/hr S, overcast and snow
Jan 23 (Mon.)	@ 13:00 hrs.	-24°C, wind 6km/hr N, overcast
Jan 24 (Tues.)	@ 12:00 hrs.	-30°C, wind 6km/hr S, clear
Jan 25 (Wed.)	@ 11:30 hrs.	-33°C, wind 5km/hr SW, clear
Jan 26 (Thurs.)	@ 13:45 hrs.	-32°C, wind 23km/hr NE, light snow
Jan 27 (Fri.)	@ 08:50 hrs.	-37°C, wind 2km/hr SSW, clear
Jan 28 (Sat.)	@ 12:25 hrs.	-36°C, wind 1km/hr SSW, clear

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction activities focused on the West and East Dams during the report period. Liner installation, up to the hinge elevation, was completed at the East Dam during the report period. Placement of 20 mm core material took place at both East and West Dams.

Construction activities were limited near the end of the report period. Dwindling fuel supplies forced the elimination of the nightshift construction crew after January 25th. Currently, efforts are being made to acquire a supply of fuel from the neighbouring Lupin Mine. Additionally, one D300 haul truck incurred significant internal engine damage and may be out of service for up to two weeks.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 EAST DAM CONSTRUCTION ACTIVITIES

The East Dam liner was completed up to the liner elevation on January 26th. The upstream edge of the liner was covered with plywood and dry 20 mm fill to prevent damage by wind. Placement of key trench backfill commenced on January 26th. A single Cat D300 articulating trucks hauled saturated fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Sub-Arctic Surveys (SAS) provided an estimate the volume of fill required to cover the key trench base with 300 mm of fill. The volume of 20 mm granular fill available on site is very limited however; EBA recommended that a portion of the fill be used to protect the liner installation at the East Dam. EBA stated that the thermosyphons evaporators could be placed up to 300 mm below the original ground level at the West Dam. By placing the evaporators at the lower elevation approximately 735 m^3 of fill could be directed to the East Dam for immediate use as liner cover. By the end of the report period the lift of 20 mm key trench fill extended from 0+008 to 0+110 or approximately 60% of the length of the trench. The surveyed volume of fill placed in the key trench is 399 m^3.

3.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued during the report period. Two (2) Cat D300 articulating trucks hauled saturated fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. The second and third lifts were completed and the fourth lift was started. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Multiple single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of the individual lifts. Frozen core samples were taken from the second and third lifts. The power supply to the coring rig was insufficient during the coring of the second lift. As a result, only a single core was obtained from the lift. A more reliable power source was obtained for the third lift and four cores were drilled.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the East and West Dams.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher remains idle. The process plant continued processing a small amount of feed through the plant during the report period. However, the plant is not fully operational and therefore will not produce representative sample. It is expected that samples will be obtained during the next report period.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Fifteen (14) temperature and moisture content measurements were taken on the material during placement at the dams. The average fill temperature, when placed on site, was approximately 5°C. The moisture content ranged from 7.9 to 15.8%, with an average moisture of about 11%.

Twelve (12) density tests were conducted on fill placed at the West Dam using a nuclear densometer. The density test results ranged between 85.4% and 92.8%, with an average compaction of about 92.8% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 8.9% to 13.8%, with an average moisture of about 11.3%. The degree of saturation of the levelling course material was also determined using the density and moisture content results. The degree of saturation ranged from 76.7 to 94.3%, with an average saturation of about 84.6%. Three (3) random samples of the core material were taken during placement for gradation testing. The sieve results showed the material to be within the specified gradation limits for the 20 mm minus material.

Four (4) density tests were conducted on fill placed at the East Dam. The density test results ranged between 89.9% and 92.0%, with an average compaction of about 90.4% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 10% to 10.9%, with an average moisture of about 10.4%. The degree of saturation of the levelling course material was also determined using the density and moisture content results. The degree of saturation ranged from 75 to 90.9%, with an average saturation of about 80.6%. Two (2) random samples of the core material were taken during placement for gradation testing. The sieve results showed the material to be within the specified gradation limits for the 20 mm minus material.

Four test cores were taken from the third lift of the West Dam during the report period. The core samples will be tested to determine the level of saturation within the lift.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of core material at West Dam.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the e-mail address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.
Project Engineer
jporter@eba.ca

Mike Monk, P.Eng.
Project Engineer
mmonk@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: February 4, 2006

On-Site EBA Personnel: Jason Porter (Jan. 29 – Feb. 4)
Mike Monk (Jan . 29 – Jan. 30)
Paul Paquet (Jan. 29 – Jan. 30)

Weather:

Jan 29(Sun.)	@ 12:00 hrs.	-34°C, wind 0km/hr SE, clear
Jan 30 (Mon.)	@ 12:00 hrs.	-29°C, wind 2km/hr ENE, overcast
Jan 31 (Tues.)	@ 12:00 hrs.	Not Recorded
Feb 1 (Wed.)	@ 15:00 hrs.	-23°C, wind gusting 25km/hr E, snow
Feb 2 (Thurs.)	@ 12:00 hrs.	-20°C, wind 6km/hr SSE, overcast
Feb 3 (Fri.)	@ 15:00 hrs.	-17°C, wind 5km/hr NW, overcast
Feb 4 (Sat.)	@ 13:00 hrs.	-24°C, wind 5km/hr SSW, Sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction activities focused on the West Dam during the report period. Placement of 20 mm core material continues throughout the report period. The shortage of fuel resulted in the operation of only dayshift during the report period. The Cat D300 that had engine problems during the last report period remained down for the week. Blowing snow was deposited in the dam key trenches therefore significant labour effort was expended on snow removal.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 EAST DAM CONSTRUCTION ACTIVITIES

The focus of construction was shifted to the West Dam. Concerns about available remaining quantities of 20 mm core material resulted in the suspension of East Dam construction.

3.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued during the report period. Two (2) Cat D300 articulating trucks hauled saturated fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. The second and third lifts were completed and the fourth lift was started. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Multiple single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of the individual lifts. Frozen core samples were taken from the second and third lifts. The power supply to the coring rig was insufficient during the coring of the second lift. As a result, only a single core was obtained from the lift. A more reliable power source was obtained for the third lift and four cores were drilled.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the East and West Dams.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher remains idle. The process plant continued processing feed during the report period. A sample of coarse rejects was taken during the report period. The sample was taken when the high-pressure grinding rolls (HPGR) were operational. A grain size analysis showed that the sample was much closer to the specified requirements. A test pad of the fill was placed west of the East Dam. When the pad is frozen, core samples will be taken.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Three (3) temperature and moisture content measurements were taken on the material during placement at the dams. The average fill temperature, when placed on site, was approximately 6°C. The moisture content ranged from 7.0 to 10.3%, with an average moisture content of about 8.8%.

Using a nuclear densometer, eight (8) density tests were conducted on fill placed at the West Dam. The density test results ranged between 85.1% and 93.6%, with an average compaction of about 87.9% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 10.2% to 16.0%, with an average moisture of about 13.5%. The degree of saturation of the 20 mm material was also determined using the density and moisture content results. The degree of saturation ranged from 84.3 to 100%, with an average saturation of about 94.0%. Three (3) random samples of the core material

were taken during placement for gradation testing. The sieve results showed the material to be within the specified gradation limits for the 20 mm minus material.

Four test cores were taken from the third lift of the West Dam during the report period. The core samples will be tested to determine the level of saturation within the lift.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of core material at West Dam.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the e-mail address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.
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Mike Monk, P.Eng.
Project Engineer
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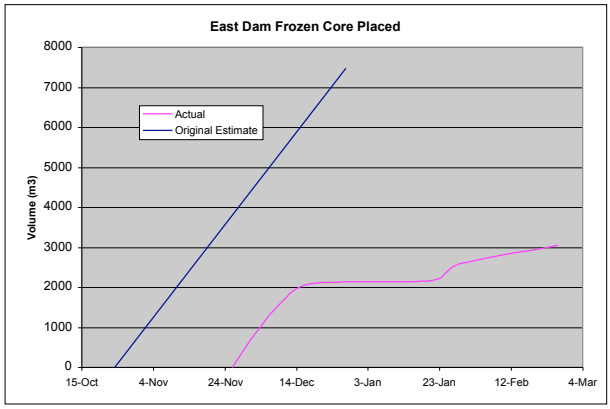
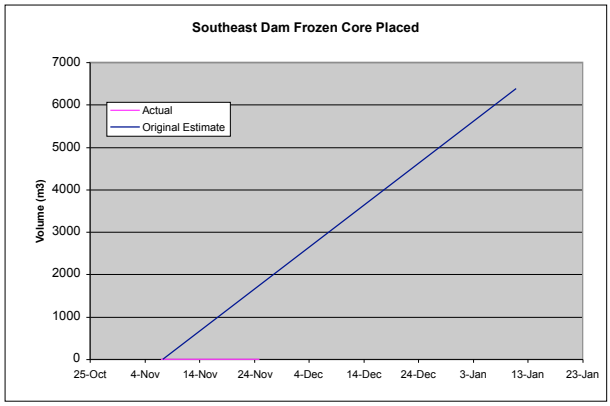
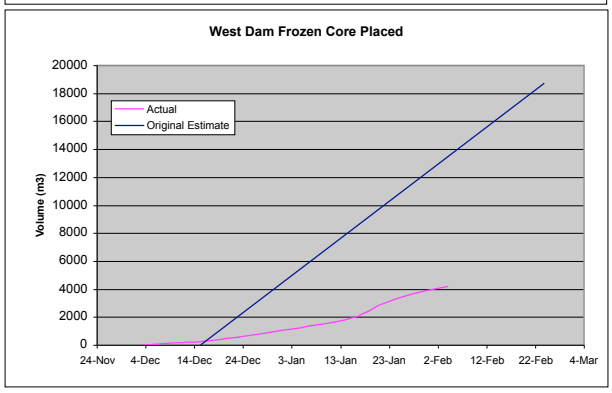
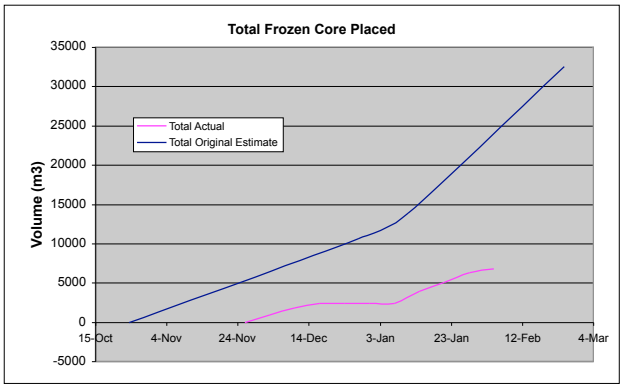
PKCA DAM CONSTRUCTION PROGRESS







	Total Quantity	Complete	Percent Complete
Material Production - Crushing			
150 mm Production	15510	4000	26%
20 mm Production	32560	13000	40%
Filter Production	1980	2000	101%
EAST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			95%
20 mm Material Placement	7480	3350	45%
Liner System Placement (HDPE & Geotextile)			57%
Instrumentation Installations			30%
SOUTHEAST DAM			
Foundation Preparation			
Key Trench Excavation			95%
Key Trench Cleaning			0%
20 mm Material Placement	6380	0	0%
150 mm Material Placement	2860	0	0%
Run-of-Mine Material Placement	15400	5000	32%
Till Material Placement	9460	4000	42%
Liner System Placement (HDPE & Geotextile)			0%
Instrumentation Installations			0%
WEST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			100%
20 mm Material Placement	18700	4250	23%
150 mm Material Placement	8360	250	3%
Run-of-Mine Material Placement	57200	10950	19%
Till Material Placement	3410	5000	147%
Liner System Placement (GCL)			40%
Instrumentation Installations			20%
DIVIDER DYKE "A" (2005 Construction - Elev. 521 m)			
Foundation Preparation			100%
Run-of-Mine Material Placement			
Superstructure - Downstream of Filter Zone			75%
Rip-Rap - Upstream of Filter Zone			75%
Transition (150 mm) Material Placement			
Superstructure - Downstream of Filter Zone			75%
Filter (20 mm) Material Placement			
Superstructure - Upstream of Transition Zone			75%



PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: February 11, 2006

On-Site EBA Personnel: Jason Porter (Feb 5 – Feb. 8)

Mike Monk (Feb 8 – Feb. 11)

Paul Paquet (Feb 9 – Feb. 11)

Weather:

Feb 5(Sun.)	@ 12:30 hrs.	-18°C, wind 0km/hr , clear.
Feb 6 (Mon.)	@ 13:00 hrs.	-26°C, wind 18km/hr SSE, blowing snow.
Feb 7 (Tues.)	@ 12:00 hrs.	-30°C, wind 6km/hr S, clear.
Feb 8 (Wed.)	@ 07:30 hrs.	-17°C, wind gusts to 25km/hr SSE, overcast
Feb 9 (Thurs.)	@ 07:00 hrs.	-10°C, high winds, blowing snow
Feb 10 (Fri.)	@ 012:00 hrs.	-15°C, wind 5km/hr SSW, sun
Feb 11 (Sat.)	@ 12:00 hrs.	-24°C, wind 5km/hr SSW, sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction activities focused on the West Dam during the report period. Progress on the dams was slow. One of the two D300 dump trucks remains down with engine damage. Blowing snow caused significant delays by filling in parts of the dam. Removal of the snow required significant hand labour and equipment time.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 EAST DAM CONSTRUCTION ACTIVITIES

No significant activity took place at the East Dam during the report period while work focused on the West Dam.

3.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued during the report period. A single Cat D300 articulating truck hauled saturated fill to a Cat D4 dozer, which spread the fill. Additionally, the Stirling roll-off truck with dump box was occasionally used to haul 20 mm fill. A Cat 573 grooved drum vibratory packer compacted the lifts. The fifth and sixth lifts were constructed during the report period. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Multiple single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of the individual lifts.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West Dam.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher resumed operation during the report period. The screen deck required repair shortly after startup. The crusher remained down for the rest of the report period. Samples of coarse tailings were obtained from the plant. Moisture content testing and grain size analyses were performed on the samples. Construction of another coarse tailings test pad is planeed for next report period.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Eight (8) temperature and moisture content measurements were taken on the material during placement at the dams. The average fill temperature, when placed on site, was approximately 6°C. The moisture content ranged from 8.8 to 12.5%, with an average moisture of about 10.7%.

Using a nuclear densometer, eleven (11) density tests were conducted on fill placed at the West Dam. The density test results ranged between 86.8% and 92.6%, with an average compaction of about 90.3% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 6.7% to 12.4%, with an average moisture of about 10.1%. The degree of saturation of the 20 mm minus material was also determined using the density and moisture content results. The degree of saturation ranged from 45.3 to 94.4%, with an average saturation of about 78.4%. A single sample (1) of the core material was taken during placement for gradation testing. The sieve results showed the material to be within the specified gradation limits for the 20 mm minus material.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm material at West Dam;
- Snow removal and 20 mm placement at the East Dam.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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Mike Monk, P.Eng.
Project Engineer
mmonk@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: February 25, 2006

On-Site EBA Personnel: Jason Porter (Feb 22 – Feb. 25)

Mike Monk (Feb 19 – Feb. 23)

Paul Paquet (Feb 19 – Feb. 25)

Weather:

Feb 19(Sun.)	@ 12:00 hrs.	-16°C, wind 3km/hr N.
Feb 20 (Mon.)	@ 13:00 hrs.	-20°C, wind 30km/hr W, blowing snow.
Feb 21 (Tues.)	@ 12:00 hrs.	Not recorded
Feb 22 (Wed.)	@ 07:30 hrs.	Not recorded
Feb 23 (Thurs.)	@ 07:00 hrs.	Not Recorded
Feb 24 (Fri.)	@ 10:30 hrs.	-30°C, light wind, sun
Feb 25 (Sat.)	@ 12:00 hrs.	-36°C, wind 6km/hr SSW, sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at both the East and West dams during the report period. Arctic Foundations installed two thermosyphons loops on the West Dam during the latter half of the report period. Snow removal and the placement of 20 mm key trench backfill were the main activities at the East Dam.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued during the report period. The key trench was backfilled up to the original ground level prior to the placement of the thermosyphon loops. Cat D300 articulating trucks (2) hauled saturated fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement.

Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

Arctic Foundations mobilized to site on Wednesday February 22. Installation of the themosyphon evaporators commenced on the 23rd and was completed and tested by the evening of the 25th. The northern evaporator loop was terminated at approximately 0+030 to allow equipment access to the north abutment. The north abutment requires snow removal and levelling course placement along the rock face so the Geo-synthetic Clay Liner (GCL) can be extended to the final 523.5 m elevation. The thermosyphon evaporator pipe can then be extended up the north abutment and out to the radiator location. The extension of evaporator pipes requires an Arctic Foundations welder to return to site.

Figure 1. Installation of thermosyphon evaporator loops at West Dam. Aspect: N

3.0 EAST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued at the East Dam throughout the report period. Saturated fill was placed solely during night shift. Snow was removed from exposed sections of liner using hand tools and loaded into a crane and bucket. The Cat 345 excavator was also used to remove large drifts from the key trench.

A single Cat D300 articulating truck hauled saturated fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West Dam.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher remained idle during the report period.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Three (3) temperature and moisture content measurements were made on the material during placement at the West Dam. The average fill temperature, when placed on site, was approximately 7°C. The moisture content ranged from 10.9 to 19.7% with an average of 14.7%.

Using a nuclear densometer, eight (8) density tests were conducted on fill placed at the West Dam. The density test results ranged between 83.8% and 89.6%, with an average compaction of 86.8% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 9.2% to 16.5%, with an average moisture of 13.1%. The degree of saturation of the 20 mm material was also determined using the density and moisture content results. The degree of saturation ranged from 58.5% to 100%, with an average saturation of 86.7%.

Four (4) temperature and moisture content measurements were made on the material during placement at the East Dam. The average fill temperature, when placed on site, was approximately 8°C. The moisture content ranged from 7.1% to 19.1% with an average of 15.3%.

Using a nuclear densometer, eight (8) density tests were conducted on fill placed at the East Dam. The density test results ranged between 85.0% and 88.1%, with an average compaction of 86.4% of maximum dry density. The moisture contents measure by the nuclear densometer ranged from 13.8% to 16.7%, with an average moisture of 15.2%. The degree of saturation of the 20 mm material was also determined using the density and moisture content results. The degree of saturation ranged from 94.5% to 100%, with an average saturation of 98.0%.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm material at West Dam;
- Cleaning and backfilling of north abutment of West Dam
- Snow removal and 20 mm placement at the East Dam.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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Mike Monk, P.Eng.
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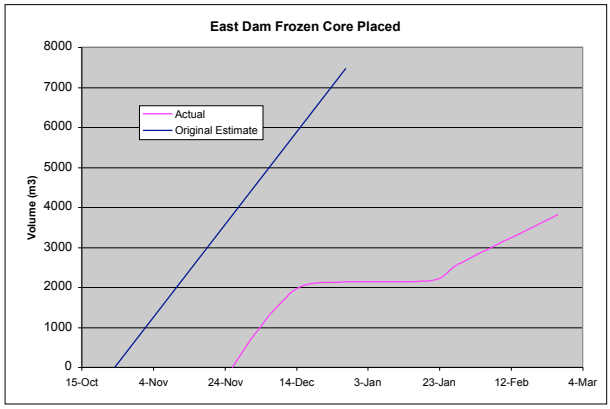
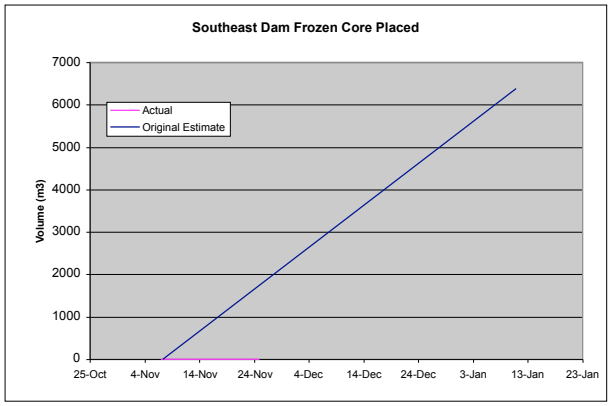
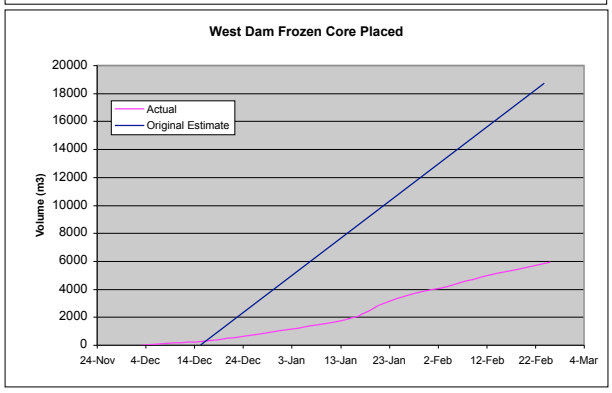
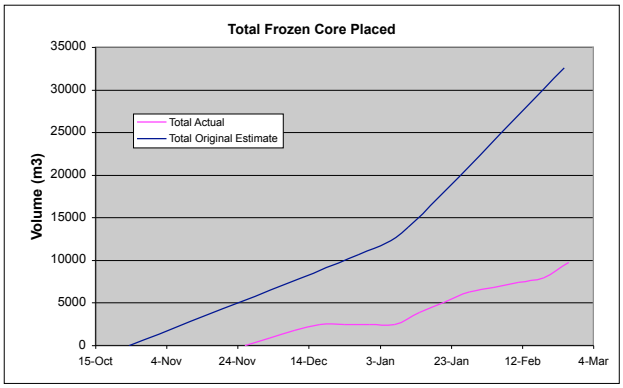
PKCA DAM CONSTRUCTION PROGRESS







	Total Quantity	Complete	Percent Complete
Material Production - Crushing			
150 mm Production	15510	4000	26%
20 mm Production	32560	13000	40%
Filter Production	1980	2000	101%
EAST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			95%
20 mm Material Placement	7480	3850	51%
Liner System Placement (HDPE & Geotextile)			57%
Instrumentation Installations			30%
SOUTHEAST DAM			
Foundation Preparation			
Key Trench Excavation			95%
Key Trench Cleaning			0%
20 mm Material Placement	6380	0	0%
150 mm Material Placement	2860	0	0%
Run-of-Mine Material Placement	15400	5000	32%
Till Material Placement	9460	4000	42%
Liner System Placement (HDPE & Geotextile)			0%
Instrumentation Installations			0%
WEST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			100%
20 mm Material Placement	18700	5950	32%
150 mm Material Placement	8360	250	3%
Run-of-Mine Material Placement	57200	10950	19%
Till Material Placement	3410	5000	147%
Liner System Placement (GCL)			40%
Instrumentation Installations			60%
DIVIDER DYKE "A" (2005 Construction - Elev. 521 m)			
Foundation Preparation			100%
Run-of-Mine Material Placement			
Superstructure - Downstream of Filter Zone			75%
Rip-Rap - Upstream of Filter Zone			75%
Transition (150 mm) Material Placement			
Superstructure - Downstream of Filter Zone			75%
Filter (20 mm) Material Placement			
Superstructure - Upstream of Transition Zone			75%



PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: March 4, 2006

On-Site EBA Personnel:	Jason Porter	(Feb 25 – Mar. 4)
	Jon Dixon	(Mar 1 – Mar. 4)
	Paul Paquet	(Feb 25 – Mar. 4)

Weather:

Feb 26(Sun.)	@ 10:30 hrs.	-37°C, wind 6km/hr SSW, Sun.
Feb 27 (Mon.)	@ 07:30 hrs.	-34°C, wind 2km/hr S, Clear.
Feb 28 (Tues.)	@ 12:00 hrs.	-23°C, wind 20km/hr NE, Overcast.
Mar 1 (Wed.)	@ 11:30 hrs.	-23°C, wind 18km/hr SW, Overcast.
Mar 2 (Thurs.)	@ 12:00 hrs.	-21°C, wind 30 km/hr S, Clear.
Mar 3 (Fri.)	@ 10:30 hrs.	-13°C, wind 23 km/hr SE, Sun/clear
Mar 4 (Sat.)	@ 12:00 hrs.	-13°C, wind 6 km/hr SE, Sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at both the East and West dams during the report period. Placement of saturated 20 mm granular fill over the thermosyphon evaporators was the main activity at the West Dam. Snow removal and the placement of 20 mm key trench backfill were the main activities at the East Dam.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

The thermosyphon loops at the West Dam were covered with saturated 20 mm granular fill during the report period. (8th lift) The batch plant had mechanical problems with one of the boilers during the report period. Hot water was supplied by the main boiler however, the volume produced was not sufficient to maintain the required temperature. The plant had to halt production several times per shift to allow the water to reheat. The second boiler was repaired by the end of the report period. Placement of the 9th lift (2nd above thermosyphons) commenced during the report period. Two (2) Cat D300 articulating trucks hauled saturated

fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

Cleaning of the north abutment re-commenced during the report period. The geo-synthetic clay liner (GCL) was peeled back and accumulated snow was removed using an excavator and hand tools. The exposed rock was given a final cleaning using compressed air.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued at the East Dam throughout the report period. Snow was removed from exposed sections of liner using hand tools and loaded into a crane and bucket.

A single Cat D300 articulating truck hauled saturated fill to a Cat D4 dozer, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

By the end of the report period, the liner in the base of the key trench has been covered by 20 mm fill.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West Dam.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher remained idle during the report period.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Nine (9) moisture content measurements were made on the material during placement at the West Dam. The moisture content ranged from 10.6 to 13.8% with a average value of 12.5%.

Using a nuclear densometer, eight (8) density tests were conducted on fill placed at the West Dam. A summary of the results for the West Dam is presented in Table 1

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2159	13.5%	1903	87.1	83.5
Min.:	2118	11.8%	1836	84.0	84.0
Max.:	2202	16.6%	1970	90.1	99.3
Stdev.:	29.9	1.5%	44.6	2.0	5.2

Table 1 West Dam Saturation Summary

Two (2) moisture content measurements were made on the material during placement at the East Dam. The moisture content ranged from 7.1 to 9.0%.

Using a nuclear densometer, four (4) density tests were conducted on fill placed at the West Dam. A summary of the results for the East Dam is presented in Table 2

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2184	15.3%	1884	86.2	97.9
Min.:	2132	14.1%	1841	84.3	95.3
Max.:	2185	16.5%	1915	87.6	100.0
Stdev.:	25.9	1.1%	33.6	1.5	2.1

Table 2 East Dam Saturation Summary

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm material at West Dam;
- Cleaning and backfilling of north abutment of West Dam
- Snow removal and 20 mm placement at the East Dam.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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Mike Monk, P.Eng.
Project Engineer
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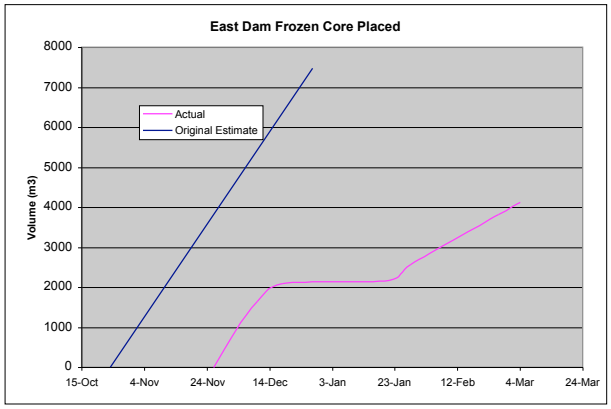
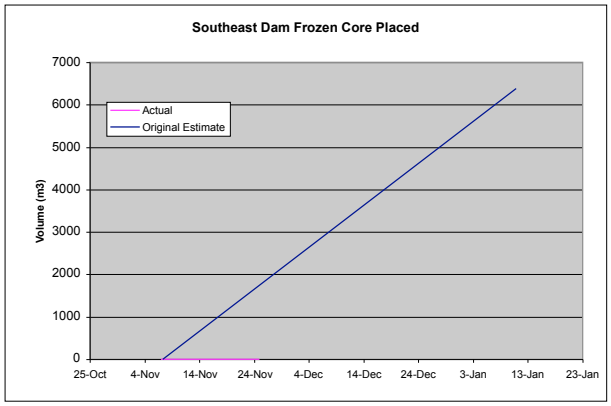
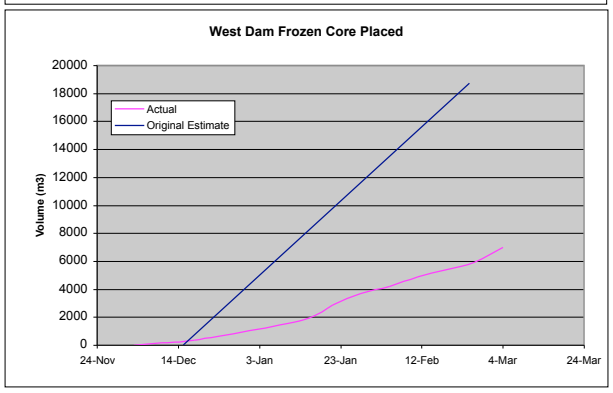
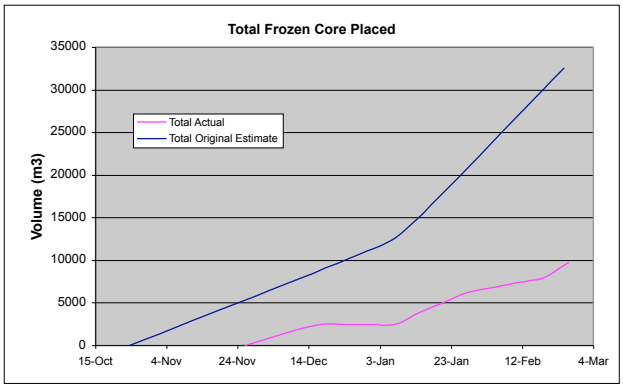
PKCA DAM CONSTRUCTION PROGRESS







	Total Quantity	Complete	Percent Complete
Material Production - Crushing			
150 mm Production	15510	4000	26%
20 mm Production	32560	13000	40%
Filter Production	1980	2000	101%
EAST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			95%
20 mm Material Placement	7480	4124	55%
Liner System Placement (HDPE & Geotextile)			57%
Instrumentation Installations			30%
SOUTHEAST DAM			
Foundation Preparation			
Key Trench Excavation			95%
Key Trench Cleaning			0%
20 mm Material Placement	6380	0	0%
150 mm Material Placement	2860	0	0%
Run-of-Mine Material Placement	15400	5000	32%
Till Material Placement	9460	4000	42%
Liner System Placement (HDPE & Geotextile)			0%
Instrumentation Installations			0%
WEST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			100%
20 mm Material Placement	18700	6991	37%
150 mm Material Placement	8360	250	3%
Run-of-Mine Material Placement	57200	10950	19%
Till Material Placement	3410	5000	147%
Liner System Placement (GCL)			40%
Instrumentation Installations			60%
DIVIDER DYKE "A" (2005 Construction - Elev. 521 m)			
Foundation Preparation			100%
Run-of-Mine Material Placement			
Superstructure - Downstream of Filter Zone			75%
Rip-Rap - Upstream of Filter Zone			75%
Transition (150 mm) Material Placement			
Superstructure - Downstream of Filter Zone			75%
Filter (20 mm) Material Placement			
Superstructure - Upstream of Transition Zone			75%



PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: March 11, 2006

On-Site EBA Personnel:	Jason Porter	(Mar. 5 – Mar. 9)
	Jon Dixon	(Mar. 5 – Mar. 11)
	Paul Paquet	(Mar. 5 – Mar. 9)
	Mike Monk	(Mar. 9 – Mar. 11)

Weather:

Mar. 5 (Sun.)	@ 08:30 hrs.	-19°C, wind 16km/hr SE, Sun.
Mar. 6 (Mon.)	@ 14:00 hrs.	-14°C, wind 6km/hr ESE.
Mar. 7 (Tues.)	@ 11:40 hrs.	-12°C, wind 5km/hr S.
Mar. 8 (Wed.)	@ 12:00 hrs.	-19°C, wind 24km/hr SE, Blowing Snow.
Mar. 9 (Thurs.)	@ 12:00 hrs.	-18°C, wind 8km/hr S, Overcast.
Mar. 10 (Fri.)	@ 12:00 hrs.	-10°C, no wind, Sunny & Clear
Mar. 11 (Sat.)	@ 12:00 hrs.	-8°C, no wind, Sunny & Clear

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at both the East and West dams during the report period. Snow removal and the placement of saturated 20 mm core material were the main activities at the West Dam. Snow removal and the placement of saturated 20 mm key trench backfill were the main activities at the East Dam.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Snow removal and placement of saturated 20 mm material focused primarily on the level course and fillet zone within the north abutment. The accumulated snow was removed using an excavator and hand tools. The exposed rock was given a final cleaning using compressed air. Material was placed within this area using the Cat 345 hoe and was compacted using a vibratory plate tamper.

Prior to fill placement, snow was removed from within the core using hand tools, a loader and a Bobcat. Snow was removed from exposed sections of liner using hand tools and loaded into Bobcat bucket. Placement of the 9th core lift (2nd above thermosyphons) was completed and the 10th core lift commenced during the report period. Two (2) Cat D300 articulating trucks hauled saturated fill to a Cat 930 loader, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

The batch plant had mechanical problems periodically with the sliders and conveyor belts of the Riemer which resulted some down time. On occasion, the batching had to be halted for short periods due to low temperatures of the mixing water.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued at the East Dam throughout the report period. Snow was removed from exposed sections of liner using hand tools and loaded into a Bobcat bucket.

A single Cat D300 articulating truck hauled saturated fill to a Cat 930 loader, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

By the end of the report period, approximately 70% of the saturated 20 mm key trench backfill material was placed at the dam.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West and East Dams.

5.0 MATERIAL PRODUCTION

Nuna's Clemro crusher resumed 20 mm minus production for the dams. Samples were taken from the belt for gradation testing. produced On March 10, the crusher switched over to produce 150 mm minus kimberlite material for the process plant which continued throughout the remainder of the report period.

6.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Eight (8) moisture content measurements were made on the material during placement at

the West Dam. The moisture content ranged from 4.6 to 12.7% with an average value of 9.0%.

Using a nuclear densometer, seven (7) density tests were conducted on fill placed at the West Dam. A summary of the results for the West Dam is presented in Table 1

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2212	11.5%	1984	90.8	90.8
Min.:	2163	9.1%	1948	89.1	71.6
Max.:	2272	13.0%	2056	94.1	98.5
Stdev.:	34.2	1.3	35.2	1.6	8.9

Table 1 West Dam Saturation Summary

Seven (7) moisture content measurements were made on the material during placement at the East Dam. The moisture content ranged from 8.4 to 20.4% with an average value of 12.0%.

Using a nuclear densometer, eleven (11) density tests were conducted on fill placed at the East Dam. A summary of the results for the East Dam is presented in Table 2

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2203	12.8%	1953	89.4	94.7
Min.:	2158	9.7%	1895	86.7	82.9
Max.:	2241	16.3%	2023	92.6	113.2
Stdev.:	30.4	1.7	40.4	1.8	8.5

Table 2 East Dam Saturation Summary

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material at West Dam;
- Place GCL and extend thermosyphon piping at north abutment of West Dam;
- Continue 20 mm placement in the key trench and on the fillet slope at East Dam;
- Start C1 Diversion Channel snow removal and construction of Reach A.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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Jason Porter, P.Eng.
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PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: March 18, 2006

On-Site EBA Personnel:	Mike Monk	(Mar. 12 – Mar. 18)
	Jon Dixon	(Mar. 12 – Mar. 18)

Weather:

Mar. 12 (Sun.)	@ 12:00 hrs.	-12°C, no wind, Sunny & Clear.
Mar. 13 (Mon.)	@ 12:00 hrs.	-24°C, wind 5km/hr NE, Overcast.
Mar. 14 (Tues.)	@ 12:00 hrs.	-28°C, wind 10km/hr NE, Sunny & Clear.
Mar. 15 (Wed.)	@ 12:00 hrs.	-32°C, wind 24km/hr E, Blowing Snow.
Mar. 16 (Thurs.)	@ 12:00 hrs.	-24°C, wind 5km/hr NE, Ice Fog.
Mar. 17 (Fri.)	@ 12:00 hrs.	-19°C, no wind, Sunny & Clear
Mar. 18 (Sat.)	@ 12:00 hrs.	-18°C, no wind, Sunny & Clear.

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at both the West and East dams as well as Reach A of the C1 Diversion Channel during the report period. Installation of ground temperature cables (GTC's), snow removal and placement of saturated 20 mm granular fill core material were main activities at the West Dam. Snow removal and the placement of 20 mm key trench backfill were the main activities at the East Dam. Snow removal and till placement within the inlet area of Reach A were the main activities at the C1 Diversion Channel.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

The thermosyphon loops installed at the West Dam need to be extended up into the North abutment. The geosynthetic clay liner (GCL) must also be placed prior to extending the thermosyphon loops. Therefore, the Clark Builder's labourers concentrated their snow removal activities in this area. However, due to poor weather and periods of blowing snow, the North abutment was cleaned and re-cleaned several times. The GCL placement and extension of the thermosyphon loops is expected to be done early next week.

Placement of saturated 20 mm frozen core material continued at the West Dam throughout the report period. Prior to fill placement, snow was removed from within the core using hand tools, a loader and a Bobcat. Snow was removed from exposed sections of liner using hand tools and loaded into Bobcat bucket.

The 10th, 11th and 12th lifts of frozen core were completed during the report period. Two (2) Cat D300 articulating trucks hauled saturated fill to a Cat 930 loader, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

The next three (3) GTC's were installed after the 10th lift of frozen core. In total, six (6) GTC's have been installed thus far within the frozen core. The Cat 345 hoe and Cat D9 dozer were used to rip and excavate three trenches through the transition and ROM zones downstream of the core. The GTC's were placed within these trenches (2 in each), bedded and covered with dry 20 mm minus crush and extended to the downstream toe of the dam.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

Placement of 20 mm key trench backfill continued at the East Dam throughout the report period. Prior to fill placement, snow was removed from within the key trench using hand tools, a loader and a Bobcat. Snow was removed from exposed sections of liner using hand tools and loaded into Bobcat bucket.

A single Cat D300 articulating truck hauled saturated fill to a Cat 930 loader, which spread the fill. A Cat 573 grooved drum vibratory packer compacted the lifts. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. Single bead thermistors (SBT's) were placed in each lift to monitor the freezeback of individual lifts.

By the end of the report period, the required 20 mm frozen fill within the key trench was approximately 95% complete.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West and East Dams as well as the C1 Diversion Channel.

5.0 C1 DIVERSION CHANNEL CONSTRUCTION ACTIVITIES

On March 14, construction activities resumed on the C1 Diversion Channel and continued throughout the remainder of the report period. The accumulated snow was excavated from within the inlet area of Reach A using the Cat 345 hoe and two (2) Cat D300 articulating trucks. A cut-off trench was excavated along the toe of the existing water intake access road and was backfilled using the excess filter material that was used during construction of

Divider Dyke A. The filter material was placed in lifts and was compacted using the Cat 573 grooved drum vibratory packer. Till material placement commenced within the inlet area. Till material was placed in lifts using a Cat D9 dozer and two (2) Cat 777 haul trucks.

6.0 MATERIAL PRODUCTION

Nuna's Clemro crusher continued to produce 150 mm minus kimberlite material for the process plant. On March 14, the crusher resumed 20 mm minus production for the dams which continued until March 18, at which time the crusher switch to 150 mm minus production for the dams.

7.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Five (5) moisture content measurements were made on the material during placement at the West Dam. The moisture content ranged from 8.3 to 10.9% with an average value of 9.2%.

Using a nuclear densometer, eighteen (18) density tests were conducted on fill placed at the West Dam. A summary of the results for the West Dam is presented in Table 1.

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2191	12.7%	1945	89.0	92.9
Min.:	1981	5.7%	1796	82.2	36.5
Max.:	2261	16.7%	2041	93.4	112.4
Stdev.:	70.8	2.5	65.9	3.0	15.7

Table 1 West Dam Saturation Summary

Two (2) moisture content measurements were made on the material during placement at the East Dam. The moisture content ranged from 6.5 to 11.9%.

Using a nuclear densometer, six (6) density tests were conducted on fill placed at the East Dam. A summary of the results for the East Dam is presented in Table 2.

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2165	12.9%	1919	87.8	89.0
Min.:	2113	10.7%	1818	83.2	79.5
Max.:	2207	16.2%	1994	91.2	95.8
Stdev.:	34.8	2.4	67.3	3.1	6.0

Table 2 East Dam Saturation Summary

8.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material at West Dam;
- Place GCL and extend thermosyphon loops in north abutment of West Dam;
- Snow removal and continue 20 mm placement at the East Dam;
- Place 150 mm material below the hinge at the East Dam;
- Start placing ROM superstructure at the East Dam;
- Continue C1 Diversion Channel snow removal and construction of Reach A;
- Start C1 Diversion Channel construction of Reach B.

9.0 SAFETY

There were no safety concerns during this report period.

10.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Mike Monk, P.Eng.
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Jason Porter, P.Eng.
Project Engineer
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PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: March 25, 2006

On-Site EBA Personnel:	Jason Porter	(Mar 22 – Mar. 25)
	Mike Monk	(Mar 19 – Mar. 25)
	Paul Paquet	(Mar 22 – Mar. 25)
	Jon Dixon	(Mar 19 – Mar. 22)

Weather:

Mar. 19 (Sun.)	@ 12:00 hrs.	-16°C, wind 6km/hr SSW, Sun.
Mar. 20 (Mon.)	@ 12:00 hrs.	-10°C, wind 2km/hr S, Clear.
Mar. 21 (Tues.)	@ 12:00 hrs.	-3°C, wind 20km/hr NE, Overcast.
Mar. 22 (Wed.)	@ 12:00 hrs.	-2°C, wind 18km/hr SW, Overcast.
Mar 23 (Thurs.)	@ 12:00 hrs.	-2°C, wind 30 km/hr S, Clear.
Mar 24 (Fri.)	@ 12:00 hrs.	weather not recorded
Mar 25 (Sat.)	@ 12:00 hrs.	-10°C, wind 5 km/hr NE, Sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at both the West and East dams as well as Reach A of the C1 Diversion Channel during the report period. Construction at the West Dam was slowed by warm weather therefore little core construction took place. GCL was placed on the north abutment and the thermosyphon pipes were extended up to the 521 m elevation. East Dam construction activities included placement of 150 mm granular fill and ROM material below and above the liner hinge. Snow removal within the inlet area of Reach A and foundation preparation of Reach B were the main activities at the C1 Diversion Channel.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report. A week ending survey was not performed at the West Dam therefore the loads placed during the week will be included in next week's summary.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

On March 19, the geo-synthetic clay liner (GCL) was extended at the north abutment. The GCL was placed using the Cat 936 loader. Seams were overlapped a minimum of 0.5 m with bentonite powder was placed within each seam as per design. On March 20, the thermosyphon loops were extended up into the north abutment to approximate Elev. 521 m. Tahera authorized Clark Builder's to perform this work as Arctic Foundations was unavailable to mobilize to site.

Placement of saturated 20 mm frozen core material continued at the West Dam. Prior to fill placement, snow was removed from within the core using hand tools, a loader and a Bobcat. Snow was removed from exposed sections of liner using hand tools and loaded into a Bobcat bucket.

The 13th lift of frozen core was completed and the thermosyphon piping at the north abutment was partially covered during the report period. Two (2) Cat D300 articulating trucks hauled saturated fill to a Cat 930 loader, which spread the fill. A Cat 573 grooved drum vibratory packer and vibratory plate tamper were used to compact the lift. Moisture sampling, compaction/saturation testing and sieve analyses were performed throughout placement. A single bead thermistor (SBT) was placed in the lift to monitor the freezeback.

Due to the warm weather conditions on site, frozen core placement activities ceased in the morning on March 22. No additional material was placed at the West Dam throughout the remainder of the report period.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

The placement of 20 mm liner cover over the key trench fillet zone was completed during the report period. Snow was removed from exposed sections of liner using hand tools and loaded into Bobcat bucket. Placement of 150 mm granular fill in the key trench commenced on March 21. Snow was removed from the key trench using hand tools, a loader and a Bobcat prior to fill placement. The 150 mm fill was hauled using a Cat D300 haul truck and placed using the Cat 345 excavator. ROM placement commenced on March 22. Cat 777 haul trucks hauled ROM fill to the Cat D9 dozer. The south end of the dam will not be backfilled until A&A Technical arrive on site to repair two holes in the liner at approximately 0+010. SAS provided grade control for fill placement and acquired as-built survey data during construction.

The ground temperature cables (GTC's) were extended to the downstream toe of the dam during the report period. A trench was excavated through the existing ROM fill and processed kimberlite coarse tailings were used to bed the trench. The cable was extended from the crest of the key trench to the downstream toe and covered with approximately 400 mm of tailings. SAS surveyed the alignment of the cable and the locations of the temperature beads on the cable.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West and East Dams as well as the C1 Diversion Channel.

5.0 C1 DIVERSION CHANNEL CONSTRUCTION ACTIVITIES

During the report period, snow removal activities continued within the inlet area of Reach A and periodically within Reach B. The accumulated snow was excavated from within the inlet area of Reach A using the Cat 345 hoe and two (2) Cat D300 articulating trucks. On March 24 and 25, the Cat D9 dozer was used to rip the original ground within Reach B. Construction of Reach B as well as drill & blast activities for the HDPE liner key trench and channel within the inlet area of Reach A are expected to commence early next week.

6.0 MATERIAL PRODUCTION

Nuna's Clemro crusher continued producing 20 mm minus material for the dams. On March 20, the crusher switched to the production of 50 mm minus kimberlite material for the remained of the report period.

7.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. One (1) moisture content measurement was made on the material during placement at the West Dam. The moisture content was 13.0%.

Using a nuclear densometer, three (3) density tests were conducted on fill placed at the West Dam. A summary of the results for the West Dam is presented in Table 1.

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2107	13.6%	1855	84.9	84.0
Min.:	2050	12.2%	1812	82.9	72.5
Max.:	2164	16.2%	1929	88.3	92.9
Stdev.:	57.0	2.3	64.1	2.9	10.4

Table 1 West Dam Saturation Summary

Five (5) moisture content measurements were made on the material during placement at the East Dam. The moisture content ranged from 5.5 to 14.5% with an average value of 8.0%. This moisture conditioned 20 mm material was used as liner bedding placed above the hinge point of the dam.

8.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material at West Dam;
- Complete all material placement (20 mm, 150 mm, ROM, till) below Phase 2 of the liner at the East Dam;
- Mobilize A&A Technical to repair the 2 holes in the HDPE liner and start Phase 2 of liner placement at the East Dam;
- Continue C1 Diversion Channel snow removal and construction of Reach A;
- Complete C1 Diversion Channel construction of Reach B.

9.0 SAFETY

There were no safety concerns during this report period.

10.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

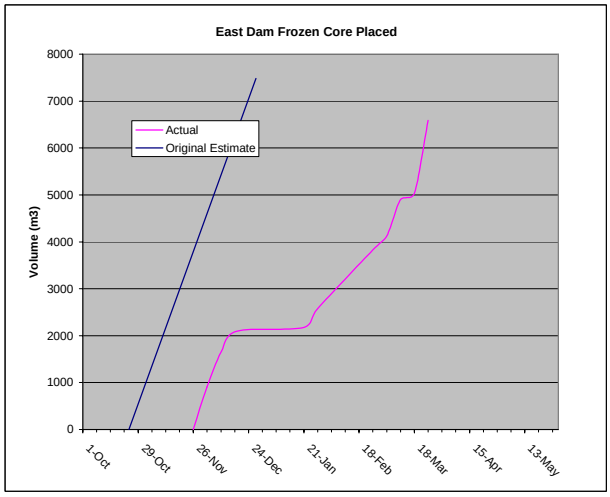
EBA Engineering Consultants Ltd.

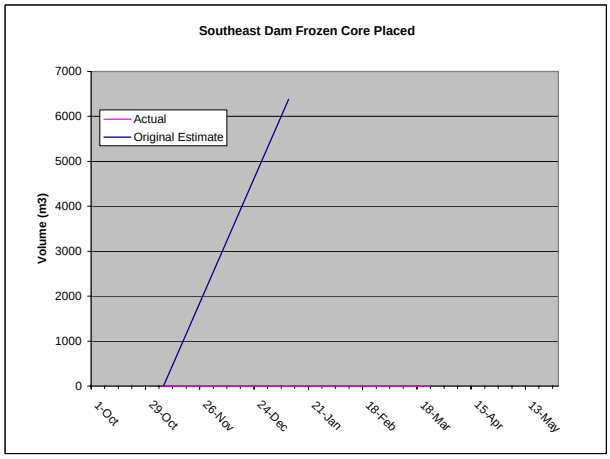
Mike Monk, P.Eng.
Project Engineer
mmonk@eba.ca

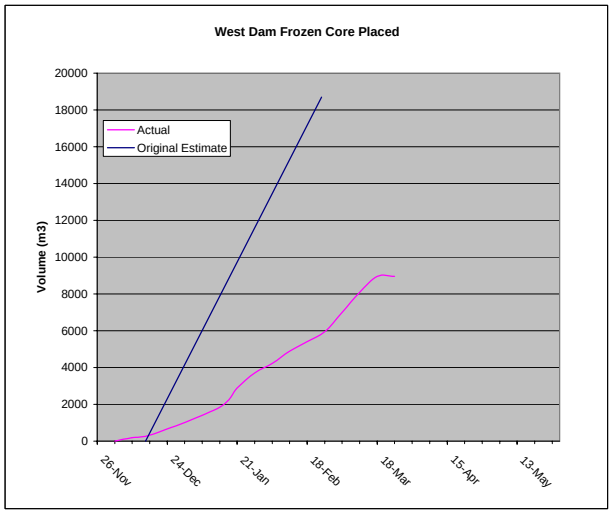
Jason Porter, P.Eng.
Project Engineer
jporter@eba.ca

PKCA DAM CONSTRUCTION PROGRESS

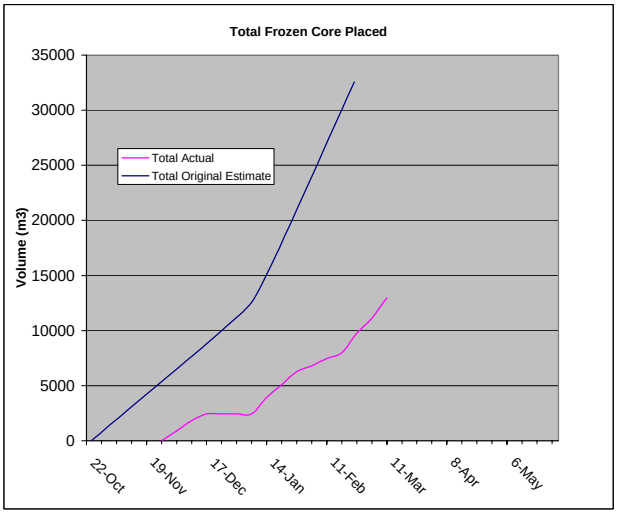
25-Mar-06







	Total Quantity	Complete	Percent Complete
Material Production - Crushing			
150 mm Production	15510	9000	58%
20 mm Production	32560	21000	64%
Filter Production	1980	2000	101%
EAST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			95%
20 mm Material Placement	7480	6585	88%
Liner System Placement (HDPE & Geotextile)			57%
Instrumentation Installations			30%
SOUTHEAST DAM			
Foundation Preparation			
Key Trench Excavation			95%
Key Trench Cleaning			0%
20 mm Material Placement	6380	0	0%
150 mm Material Placement	2860	0	0%
Run-of-Mine Material Placement	15400	5000	32%
Till Material Placement	9460	4000	42%
Liner System Placement (HDPE & Geotextile)			0%
Instrumentation Installations			0%
WEST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			100%
20 mm Material Placement	18700	8964	48%
150 mm Material Placement	8360	250	3%
Run-of-Mine Material Placement	57200	10950	19%
Till Material Placement	3410	5000	147%
Liner System Placement (GCL)			50%
Instrumentation Installations			80%
DIVIDER DYKE "A" (2005 Construction - Elev. 521 m)			
Foundation Preparation			100%
Run-of-Mine Material Placement			
Superstructure - Downstream of Filter Zone			75%
Rip-Rap - Upstream of Filter Zone			75%
Transition (150 mm) Material Placement			
Superstructure - Downstream of Filter Zone			75%
Filter (20 mm) Material Placement			
Superstructure - Upstream of Transition Zone			75%



PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: April 8, 2006

On-Site EBA Personnel:	Jason Porter	(Apr. 2- Apr. 8)
	Paul Paquet	(Apr. 2- Apr. 8)
	Jon Dixon	(Apr. 2- Apr. 8)

Weather:	Apr 2 (Sun.)	@ 12:00 hrs.	not recorded
	Apr 3 (Mon.)	@ 13:30 hrs.	-11°C, wind 16km/hr NNE, Sun/Clear.
	Apr 4 (Tues.)	@ 14:30 hrs.	-21°C, wind 3km/hr NNE, Sun.
	Apr 5 (Wed.)	@ 13:00 hrs.	-25°C, wind 5km/hr SE, Sun.
	Apr 6 (Thurs.)	@ 13:00 hrs.	-12°C, wind 44 km/hr SSE, blowing snow.
	Apr 7 (Fri.)	@ 14:00 hrs.	-3°C, wind 8 km/hr SE, light snow.
	Apr 8 (Sat.)	@ 13:45 hrs.	-11°C, wind 7 km/hr NNW, Sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at both the West and East dams as well as the C1 Diversion Channel during the report period. Core placement continued at the West Dam during the week and placement of ROM, 150 mm transition fill, and 20 mm liner bedding continued at the East Dam. A&A Technical Services (A&A) returned to site and made repairs to the liner and placement of the East Dam Phase 2 liner panels commenced. Excavation of blast rock and snow continued in Reach A of the C1 diversion channel.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Core placement continued at the West Dam during the report period. Lifts 16 through 18 were placed during the report period. Currently lifts are being placed from the north end to the south end with the material day lighting in at Elev. 519 m. Saturated 20 mm fill was processed in the batch plant using the Reimer truck and hauled to site in a Cat D300 articulating haul truck and a Cat 769 haul truck. The fill was placed using a Cat 930 loader and compacted with the Cat 573 grooved drum compactor. Quality Assurance testing was

performed on the fill during placement. A summary of test results can be found in Section 7.0. Freezeback of individual lifts was monitored using single bead thermistors (SBT's). The freezeback of the lifts has been taking longer than usual due to the warm weather and increasing daylight hours.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

Liner placement at the East Dam was completed during the report period. Liner panels of 60 mil high-density polyethylene were double hot wedge fusion welded. Panels were aligned parallel to the slope with a minimum 150 mm overlap on the seams. Hot wedge welds were pressure tested in the air channel between the seams. Extrusion welding was used to make repairs and join panel sections. Extrusion welds were tested for leaks using a vacuum box. Liner installation was completed on April 7th. Placement of liner bedding commenced on April 8th. A 500 mm lift of coarse processed kimberlite was used as liner bedding above the liner. The lift was placed using a Cat D4 loader and compacted using a Cat 573 compactor. Fill was hauled to the dam with the Cat D300 articulating haul truck and a Cat 769 haul truck.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West and East Dams and the C1 Diversion Channel.

5.0 C1 DIVERSION CHANNEL CONSTRUCTION ACTIVITIES

Snow removal and excavation activities continued within the inlet area of Reach A during the report period. A series of seven small blasts took place during the report period along the Reach A channel. The Cat 345 excavator was used to remove the blasted material however, the excavator was committed to the construction of the East Dam for the majority of the week. As a result, the placement of blast mats in Reach A had to be performed with a crane which slowed construction progress. By the end of the report period, the excavator had been dedicated to the C1 work.

6.0 MATERIAL PRODUCTION

Nuna's Clemro crusher produced some 20 mm minus material for the dams and for general site use. From April 3rd through 6th the crusher produced 20 mm and then switched over to crush kimberlite material for the process plant.

7.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Thirteen (13) moisture content measurement was made on the material during placement at the West Dam. The average moisture content was 12.3%.

Using a nuclear densometer, twelve (12) moisture-density tests were conducted on fill placed at the West Dam. A summary of the results for the West Dam is presented in Table 1.

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2180	13.0	1930	88.3	92.1
Min.:	2126	10.3%	1842	84.3	81.1
Max.:	2224	15.4%	1983	90.7	99.0
Stdev.:	26.8	1.4	43.5	2.0	4.9

Table 1 West Dam Saturation Summary

Three core samples were taken from the lifts placed at the West Dam during the report period. Grain size analysis were performed on all three cores. The average saturation of the cores was 95.2% with all three cores meeting the minimum saturation of 80%.

No quality assurance testing was required at the East Dam while liner installation took place.

8.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material at West Dam;
- Complete placement of liner cover at East Dam;
- Commence placement of till zone at East Dam;
- Continue C1 Diversion Channel snow removal and construction of Reach A;
- Continue C1 Diversion Channel construction of Reach B.

9.0 SAFETY

There were no safety concerns during this report period.

10.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.
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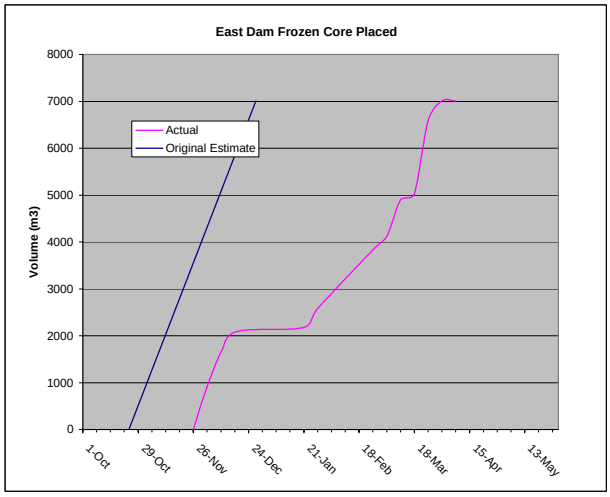
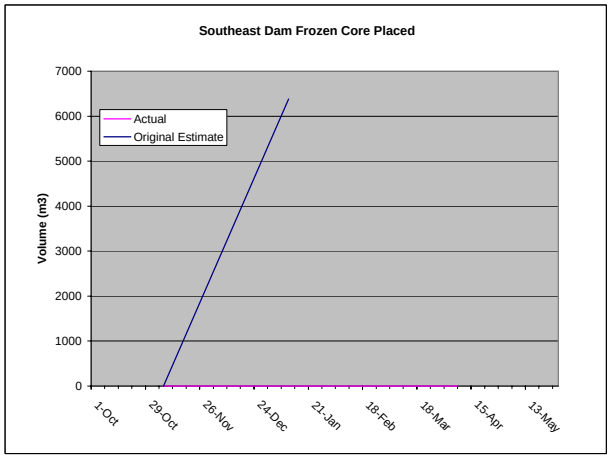
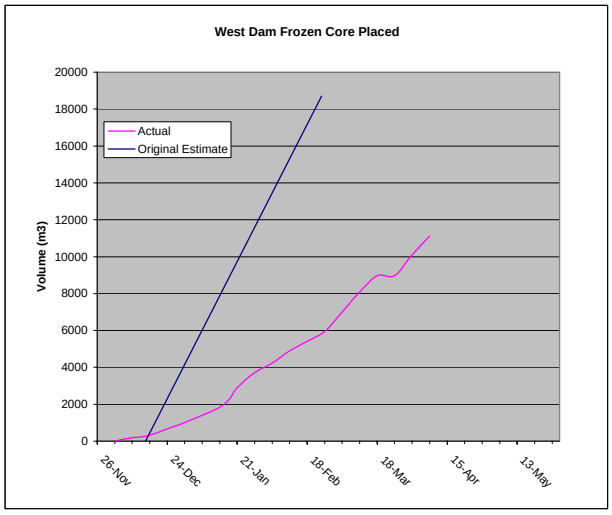
Mike Monk, P.Eng.
Project Engineer
mmonk@eba.ca

PKCA DAM CONSTRUCTION PROGRESS

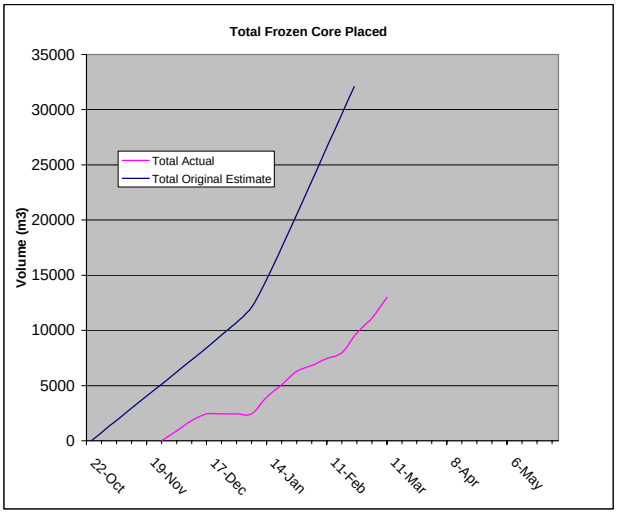
25-Mar-06







	Total Quantity	Complete	Percent Complete
Material Production - Crushing			
150 mm Production	15510	9000	58%
20 mm Production	32560	21000	64%
Filter Production	1980	2000	101%
EAST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			95%
20 mm Material Placement	7009	7009	100%
Liner System Placement (HDPE & Geotextile)			100%
Instrumentation Installations			30%
SOUTHEAST DAM			
Foundation Preparation			
Key Trench Excavation			95%
Key Trench Cleaning			0%
20 mm Material Placement	6380	0	0%
150 mm Material Placement	2860	0	0%
Run-of-Mine Material Placement	15400	5000	32%
Till Material Placement	9460	4000	42%
Liner System Placement (HDPE & Geotextile)			0%
Instrumentation Installations			0%
WEST DAM			
Key Trench Excavation			100%
Key Trench Cleaning			100%
20 mm Material Placement	18700	11116	59%
150 mm Material Placement	8360	1146	14%
Run-of-Mine Material Placement	57200	10950	19%
Till Material Placement	3410	5000	147%
Liner System Placement (GCL)			50%
Instrumentation Installations			80%
DIVIDER DYKE "A" (2005 Construction - Elev. 521 m)			
Foundation Preparation			100%
Run-of-Mine Material Placement			
Superstructure - Downstream of Filter Zone			75%
Rip-Rap - Upstream of Filter Zone			75%
Transition (150 mm) Material Placement			
Superstructure - Downstream of Filter Zone			75%
Filter (20 mm) Material Placement			
Superstructure - Upstream of Transition Zone			75%



PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: April 15, 2006

On-Site EBA Personnel:	Jason Porter	(Apr. 9 - Apr. 12)
	Paul Paquet	(Apr. 9 - Apr. 15)
	Jon Dixon	(Apr. 9 - Apr. 15)
	Mike Monk	(Apr. 12 - Apr. 15)

Weather:	Apr 9 (Sun.)	@ 12:00 hrs.	-9°C, wind 5km/hr SE, Sun/Clear.
	Apr 10 (Mon.)	@ 12:00 hrs.	-18°C, wind 35km/hr NNE, Sun/Clear.
	Apr 11 (Tues.)	@ 12:00 hrs.	-10°C, wind 5km/hr S, Sun/Clear.
	Apr 12 (Wed.)	@ 12:00 hrs.	-12°C, wind 3km/hr NE, Sun, some cloud.
	Apr 13 (Thurs.)	@ 12:00 hrs.	-7°C, wind 5 km/hr NE, Sun/Clear.
	Apr 14 (Fri.)	@ 12:00 hrs.	-10°C, wind 6 km/hr NNE, Scattered Clouds.
	Apr 15 (Sat.)	@ 12:00 hrs.	-13°C, wind 24km/hr NE, Sun

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction took place at the West Dam as well as the C1 Diversion Channel during the report period. Snow removal, core placement, geosynthetic clay liner (GCL) placement and liner cover placement continued at the West Dam throughout the week. Snow removal, drill and blast and excavation of blast muck within Reach A as well as construction of Reach B of the C1 Diversion Channel continued intermittently during the first half of the report period.

A summary of the dam construction progress to date has been prepared and is attached to the weekly report.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Core placement continued at the West Dam during the report period. Lifts 19 through 22 were placed during the report period. Currently lifts are being placed from the north end to the south end with the material day lighting in at Elev. 519 m. Saturated 20 mm fill was processed in the batch plant using the Reimer truck and hauled to site in a Cat D300 articulating haul truck and a Cat 769 haul truck. The fill was placed using a Cat D4 Dozer and compacted with the Cat 573 grooved drum compactor. Quality Assurance testing was

performed on the fill during placement. A summary of test results can be found in Section 7.0. Freezeback of individual lifts was monitored using single bead thermistors (SBT's). The freezeback of the lifts has been taking longer than usual due to the warm weather and increasing daylight hours. One to two more shifts of batching 20 mm with the Riemer truck will be required to complete the north end of the frozen core to Elev. 519 m. During nightshift on April 13th, the upstream slope of the core was shaped using the Cat 345 excavator and moisture conditioned 20 mm material produced from the Riemer truck.

On April 14th, Phase II of the GCL liner placement started placed over the upstream slope of the core and was completed the following day. The GCL was placed using the Grove crane up to the existing top of core elevation. The existing elevation of the core varies throughout the length of the dam with the minimum being approximately 519 m at the north abutment area. The GCL panels were placed perpendicular to the dam alignment and each panel was overlapped by 0.5 m along the slope and overlapped by 1.0 m along the liner hinge. Bentonite powder was placed within all seams.

Placement of GCL cover material started in the PM on April 15th and was completed during nightshift. Coarse PK tailings were used as liner cover and was placed using both the Cat 345 excavator and the Cat D4 dozer.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

No significant activity took place at the East Dam during the report period while work focused on the West Dam and the C1 Diversion Channel.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No significant activity took place at the South East Dam during the report period while work focused on the West Dam and the C1 Diversion Channel.

5.0 C1 DIVERSION CHANNEL CONSTRUCTION ACTIVITIES

On April 12th, the remaining section of the cut-off trench at the inlet of Reach A was drilled and blasted. Snow removal and excavation of blast muck continued intermittently during the report period along Reach A. Visually, it is anticipated that some steep side slopes and high points within Reach A will require additional drill and blast work to facilitate the installation of the HDPE liner. It is recommended that someone from A&A Technical be mobilized to site to assess the section of Reach A requiring the HDPE liner. The filter cloth required for Reach A is not expected to arrive on site until late next week.

Snow removal and excavation was carried out in Reach B during the report period. Filter cloth was installed from the existing culvert to the fish pond. Rip-rap was placed over the filter cloth and the first three ditch stops were constructed in Reach B. The fish pond was ripped using the Cat D9 dozer and shaped using the Cat 345 excavator. The fish pond was not completed due to the unavailability of any 150 mm minus material on site.

6.0 MATERIAL PRODUCTION

Nuna's Clemro crusher primarily produced 50 mm minus kimberlite for the process plant along with some 20 mm minus material for the dams during the report period. From April 9th through 11th and April 14th and 15th the crusher produced 50 mm kimberlite material. During April 12th and 13th the crusher produced 20 mm minus material.

7.0 QUALITY ASSURANCE TESTING

Quality assurance testing was conducted on the core material produced by the Riemer truck. Ten (10) moisture content measurements were made on the material during placement at the West Dam. The average moisture content was 9.1%.

Using a nuclear densometer, twelve (12) moisture-density tests were conducted on fill placed at the West Dam. A summary of the results for the West Dam is presented in Table 1.

	Wet Density (kg/m3)	Moisture (%)	Dry Density (kg/m^3)	Compaction (%)	Degree of Saturation (%)
Avg.:	2221	11.3%	1996	91.3	91.4
Min.:	2178	8.1%	1935	88.6	71.6
Max.:	2295	13.1%	2060	94.3	105.5
Stdev.:	35.5	1.3	43.8	2.0	7.8

Table 1 West Dam Saturation Summary

Several core samples were taken from the lifts placed at the West Dam during the report period. Two of the cores were tested thus far with both cores meeting the minimum saturation of 80%. Grain size analyses were performed on each core.

8.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material at West Dam;
- Continue Phase II of GCL placement at West Dam;
- Continue placement of coarse PK liner cover material at West Dam;
- Continue placement of till material at West Dam;
- Continue placement of ROM material at West Dam;

- Continue placement of till zone at East Dam;
- Continue C1 Diversion Channel snow removal and construction of Reach A;
- Complete C1 Diversion Channel construction of Reach B.

9.0 SAFETY

There were no safety concerns during this report period.

10.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Mike Monk, P.Eng.
Project Engineer
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Jason Porter, P.Eng.
Project Engineer
jporter@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: May 6, 2006

On-Site EBA Personnel:	Mike Monk	(Apr. 30 – May 3)
	Gary Koop	(May 3 – May 6)

Weather:	Apr. 30 (Sun.)	@ 12:00 hrs.	-6°C, wind 18 km/hr SW, Overcast, blowing snow.
	May 1 (Mon.)	@ 12:00 hrs.	-1°C, wind 4 km/hr SW, Sun/Clear.
	May 2 (Tues.)	@ 12:00 hrs.	+3°C, no wind, Sunny/clear
	May 3 (Wed.)	@ 12:00 hrs.	~0°C, no wind data, overcast, snow in morning
	May 4 (Thurs.)	@ 12:00 hrs.	+10°C, wind 6 km/hr SW, Overcast.
	May 5 (Fri.)	@ 12:00 hrs.	+2°C, wind 13 km/hr SSE, Overcast.
	May 6 (Sat.)	@ 12:00 hrs.	+8°C, wind 13 km/hr S, Overcast.

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction activity was undertaken this week at the West Dam, East Dam and C1 Diversion; however, construction at the East and West Dams was not continuous during the week.

Waste rock was hauled and placed on the upstream side of the till berm at the West Dam. The waste rock was near the till crest elevation at week's end.

Limited quantities of till were placed at the East Dam on May 1. No other till was placed during the reporting period. Coarse processed kimberlite was placed upstream of the till for most of the week.

Activity at Reach A of the C1 diversion included liner cover and rip-rap placement, geotextile installation and liner key trench backfill. Two lifts of till were placed on the north berm in Reach C.

Haul trucks were diverted from construction several times during the week to haul kimberlite. This resulted in delays at the dams and C1 Diversion.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Construction activity at the West Dam comprised waste rock placement on the upstream side of the till berm. Material was hauled with 777 haul trucks and spread with the D9 dozer, in lifts typically 1 m thick. The waste rock was compacted by the D9 during spreading and by the haul traffic.

Placement was limited to two days (May 3 and May 6) due to equipment demand from other projects. A total of 84 truck loads were hauled to the dam during these days. The waste rock was near the till crest elevation (520 m) at the end of the reporting period.

Waste rock placement is still required at the north abutment to provide thermal cover over the core material. Further waste rock placement is also required over the till berm to bring it to the design elevation of 524 m.

3.0 EAST DAM CONSTRUCTION ACTIVITIES

Work at the East Dam included limited till placement on the upstream dam face on April 30. Material was hauled with 777 haul trucks and spread with a D9 dozer, and the slopes shaped with the 345 excavator. The till material was compacted using the 573 grooved drum compactor. A total of 4 truck loads were hauled on April 30.

Coarse processed kimberlite was also placed on the upstream side of the till using a D9 dozer and the 980 loader. Material was either hauled with 769 haul trucks or trammed directly from the coarse reject belt using the loader. The material was compacted under wheel load.

Futher till and coarse processed kimberlite placement is required to bring these materials to design elevation.

4.0 SOUTH EAST CONSTRUCTION ACTIVITIES

No activity took place at the South East Dam during the report period.

5.0 C1 DIVERSION CHANNEL CONSTRUCTION ACTIVITIES

5.1 REACH A

Poor weather at the start of the week resulted in drifting snow within the inlet structure. This delayed geotextile placement and backfilling while snow was excavated and the liner cleaned off. Delays were also incurred by melt water which ponded in the Reach A key trench and froze overnight. The trench was hoarded and heated, and the water pumped out; however, this, combined with the earlier snow, ultimately delayed completion of the geotextile and subsequent backfilling until May 5.

Geotextile placement was started on May 2 and completed on May 5. Two days were lost due to the drifting snow and key trench ice as discussed above. The geotextile was lapped a minimum 0.6 m but was not welded.

Placement of 20 mm liner cover was started on May 2. Cover material was placed along the channel floor and approximately 1 m up the embankment slope. Material shortage, at the time, necessitated placing some 50 mm material as liner cover. This material was isolated to the south embankment and to the area approximately 1 m above the channel bed. No liner cover was placed on the north embankment.

The geotextile and liner was covered with 50 mm material as opposed to 20 mm material due to availability of material. The liner should perform adequately given the lack of traffic over the area and the geotextile cushion.

Some 150 mm rip-rap was placed at the downstream end of the Reach A inlet structure. The rip-rap was placed over the liner bedding using the 345 excavator.

Key trench backfill started on May 6. Some 20 mm crush was salvaged from the old batch plant area and used as liner cover in the key trench. The 20 mm material was placed with the excavator and by hand labour, approximately 300 mm thick. Cover material was placed from the top of the slope because the excavator reach was too short to reach the trench bottom. To prevent moving the liner, a sheet of HDPE was draped over the geotexile to chute cover material to the slope bottom.

The base of the key trench was backfilled with 20 mm crush mixed with cement. This leancrete material was placed in the bottom of the key trench to provide good anchorage and a barrier for any seepage. Above this, trench backfilled progressed with 50 mm crush. Both the 20 mm and 50 mm materials were placed in lifts and compacted with a 1000 pound plate tamper.

5.2 REACH B

No work was completed on Reach B this week.

5.3 REACH C

The fish pool at the start of Reach C was covered with 150 mm material this week. Material was placed with the 345 excavator and bucket tamped.

Berm construction also continued this week. Till was hauled using 777 haul trucks and spread using the D9 dozer. The material was compacted under wheel load and using the 573 compactor.

The berm design was modified to construct the berms with till to within 1 – 1.5 m of the design crest elevation. The berm would then be capped with waste rock on the top and north embankment slope to provide erosion protection. The south embankment slope, facing the channel, would be covered with 150 mm rip-rap.

6.0 MATERIAL PRODUCTION

The crusher produced 50 mm minus kimberlite for the process plant throughout the report period; however, the process plant sizer is scheduled to come on-line early next week. This will free up the crusher for granular material production.

There is an immediate need for 20 mm and 150 mm material to complete the Reach A inlet structure and Reach C berm.

7.0 NEXT WEEK'S ACTIVITIES

Above average temperatures have resulted in considerable melting over the last several days. As such, it is imperative that thermally sensitive work, such as constructing the Reach C north berm (C1 Diversion) and capping the West Dam, north abutment, be completely as soon as possible. Tahera and Nuna are aware of these priorities; however, equipment and material shortages may delay completion of these tasks into next week or the week following.

The following activity is planned for the next report period:

- Continue placement of ROM material at West Dam;
- Continue placement of till and coarse processed kimberlite zones at East Dam;
- Complete of Reach A inlet structure at the C1 Diversion;
- Complete C1 Diversion Channel construction of Reach B.
- Continue placement of till and ROM for the north berm adjacent to Reach B & C.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Gary Koop, P.Eng.
Project Engineer
gkoop@eba.ca

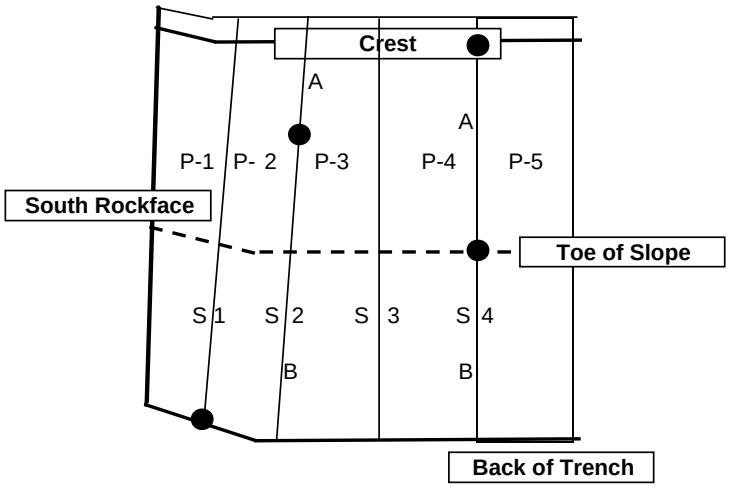
APPENDIX

APPENDIX G EAST DAM LINER INSTALLATION REPORT (A & A TECHNICAL)

PROJECT NAME: West Dam
LOCATION: Tahera
CLIENT: Tahera/Nuna
DATE: Jan 20, 06

N

A&A TECHNICAL SERVICES



LEGEND:

P-1 Panel Number
S-1 Seam Number
Destruct Sample
Patch

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT LOG FOR ROLL ID AND DIMENSIONS

Bituminous Panel Placement Log

Date: 20-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	136,138	78
2)	129,161	78
3)	158,145	78

Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	206	120
2)	239	120
3)	242	120

Welder Settings

Temperature: 356 Degrees F **Speed:** 4.5 ft/min

Installation Temperature, -28, -38 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

Bituminous Panel Placement Log

Date Installed: 20-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Date Tested	Seam Number	Pressure (psi)			Time of Test		Pass/Fail	Comments
		Start	End	Change	Start	End		
Jan 21 06	3	35	35	0	5:12pm	5:17pm	Pass	
Jan 21 06	4b	35	0	35			Fail	Extrude Seam, VAC Test Pass
Jan 22 06	1	35	35	0	9:36am	9:41am	Pass	
Jan 22 06	2a	35	35	0	10:30am	10:35am	Pass	
Jan 22 06	2b	35	35	0	10:41am	10:46am	Pass	
Jan 22 06	4a	35	35	0	11:00am	11:05am	Pass	

Patch Vacum Test			
Date Tested	Seam Number	Patch	VAC Test
Jan 21 06	4	A	Pass
Jan 21 06	4	B	Pass

Bituminous Panel Placement Log

Date: 20-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Panel Number	Roll Number	Deployment Date	Top Width (m)	Bottom Width (m)	Roll Width (m)	Approx. Length (m)	Area of Liner Total Ground Cover (m^2)	Area of Liner with 2% Overlap (m^2)
1	103132228	Jan 18,06	3.10	5.80		18.20	80.99	83.42
2	103132228	Jan 18,06	5.80	5.90		21.60	126.36	130.15
3	103132228	Jan 18,06	6.60	5.70		21.30	131.00	134.92
4	103132228	Jan 18,06	6.50	6.60		18.70	122.49	126.16
5	103132228	Jan 18,06	6.75	6.75		16.30	110.03	113.33
						TOTAL	**570.86**	**587.98**

Installation Temperature, -28, -38 wind chill in Celsius
Note: Geotextile is placed under and ontop of HDPE Liner.

Bituminous Panel Placement Log

Date: 21-Jan-05
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	140,154	78
2)	171,171	78
3)	187,147	78

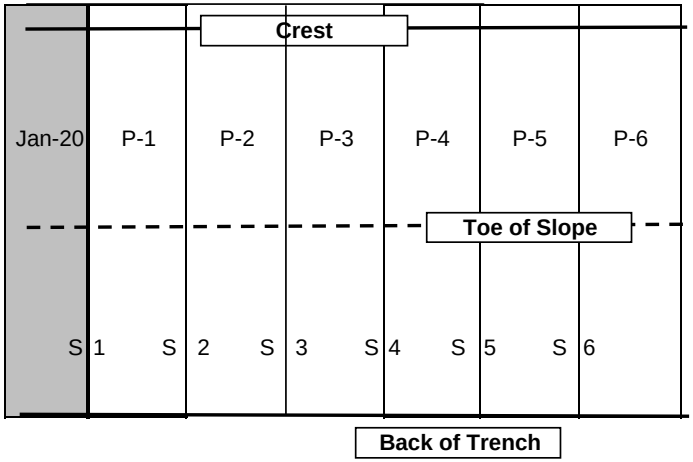
Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	171	120
2)	187	120
3)	191	120

Installation Temperature, -27, -48 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

PROJECT NAME: West Dam
LOCATION: Tahera
CLIENT: Tahera/Nuna
DATE: Jan 22, 06

N

A&A TECHNICAL SERVICES



LEGEND:

P-1 Panel Number
S-1 Seam Number
Destruct Sample
Patch

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT LOG FOR ROLL ID AND DIMENSIONS

Bituminous Panel Placement Log

Date: 22-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	131,131	78
2)	136,136	78
3)	133,144	78

Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	151	120
2)	160	120
3)	159	120

Welder Settings

Temperature: 356 Degrees F **Speed:** 4.8 ft/min

Installation Temperature, -28, -38 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

Bituminous Panel Placement Log

Date Installed: 22-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Date Tested	Seam Number	Pressure (psi)			Time of Test		Pass/Fail
		Start	End	Change	Start	End	
Jan 22 06	1	35	35	0	11:37am	11:42am	Pass
Jan 22 06	2	35	35	0	11:45am	11:50am	Pass
Jan 22 06	3	35	35	0	1:07pm	1:12pm	Pass
Jan 23 06	4	35	35	0	7:33am	7:38am	Pass
Jan 23 06	5	35	34	1	8:00am	8:05am	Pass

Patch Vacum Test			
Date Tested	Seam Number	Patch	VAC Test

Bituminous Panel Placement Log

Date: 22-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

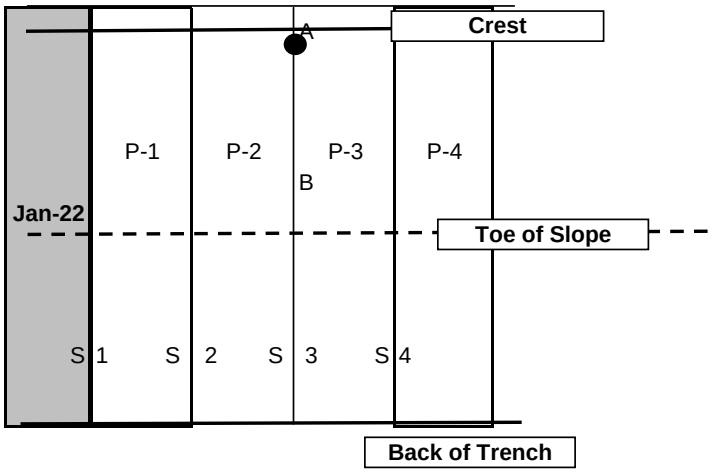
Panel Number	Roll Number	Deployment Date	Top Width (m)	Bottom Width (m)	Roll Width (m)	Approx. Length (m)	Area of Liner Total Ground Cover (m^2)	Area of Liner with 2% Overlap (m^2)
1	103132228	Jan 22 06	6.60	6.60	6.80	15.90	104.94	107.04
2	103132222	Jan 22 06	6.60	6.60	6.80	17.50	115.50	117.81
3	103132222	Jan 22 06	6.60	6.60	6.80	17.40	114.84	117.14
4	103132222	Jan 22 06	6.60	6.60	6.80	17.00	112.20	114.44
5	103132222	Jan 22 06	6.60	6.60	6.80	16.90	111.54	113.77
6	103132222	Jan 22 06	6.60	6.60	6.80	16.90	111.54	113.77
						TOTAL	**670.56**	**683.97**

Installation Temperature, -20, -36 wind chill in Celsius
Note: Base layer of geotextile is placed, then another layer ontop of HDPE.

PROJECT NAME: West Dam
LOCATION: Tahera
CLIENT: Tahera/Nuna
DATE: Jan 23, 06

N

A&A TECHNICAL SERVICES



LEGEND:

P-1 Panel Number
S-1 Seam Number
Destruct Sample
Patch

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT LOG FOR ROLL ID AND DIMENSIONS

Bituminous Panel Placement Log

Date: 23-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	132,128	78
2)	140,138	78
3)	147,139	78

Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	146	120
2)	171	120
3)	149	120

Welder Settings

Temperature: 356 Degrees F **Speed:** 4.7 ft/min

Installation Temperature, -24, -27 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

Bituminous Panel Placement Log

Date Installed: 23-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

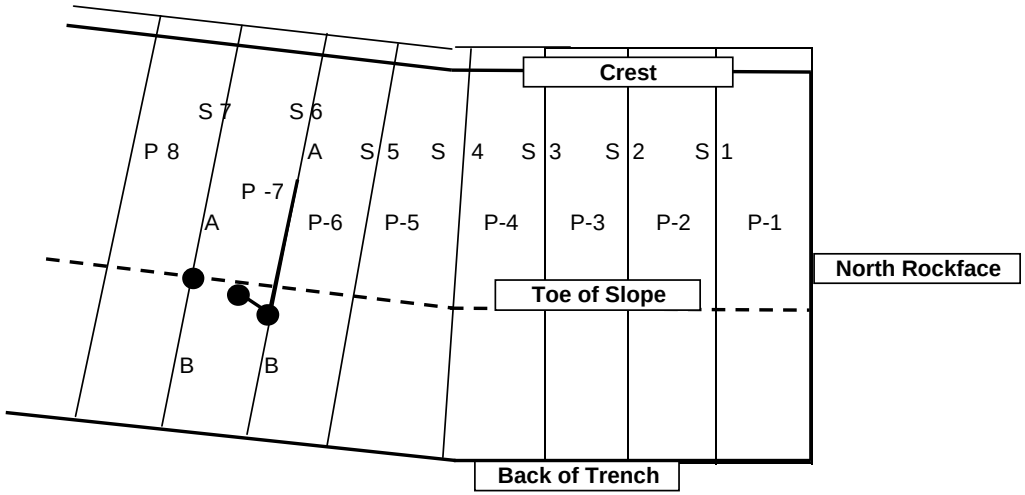
Date Tested	Seam Number	Pressure (psi)			Time of Test		Pass/Fail
		Start	End	Change	Start	End	
Jan 23 06	1	35	35	0	11:20am	11:25	Pass
Jan 23 06	2	35	34	1	1:08pm	1:13pm	Pass
Jan 23 06	3	35	0	35	2:00pm	2:05pm	Fail
Jan 23 06	3a	35	35	0	2:45pm	2:50pm	Pass
Jan 23 06	3b	35	35	0	2:53pm	2:57pm	Pass
Jan 23 06	4	35	35	0	3:00pm	3:05pm	Pass

Patch Vacum Test			
Date Tested	Seam Number	Patch	VAC Test
Jan 23 06	3	A	Pass

PROJECT NAME: West Dam
LOCATION: Tahera
CLIENT: Tahera/Nuna
DATE: Jan 24, 06

N

A&A TECHNICAL SERVICES



LEGEND:

P-1 Panel Number
S-1 Seam Number
Destruct Sample
Patch

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT LOG FOR ROLL ID AND DIMENSIONS

Bituminous Panel Placement Log

Date: 24-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	125,127	78
2)	135,143	78
3)	139,134	78

Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	162	120
2)	173	120
3)	153	120

Welder Settings

Temperature: 356 Degrees F **Speed:** 5.1 ft/min

Installation Temperature, -30, -33 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

Bituminous Panel Placement Log

Date Installed: 24-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Date Tested	Seam Number	Pressure (psi)			Time of Test		Pass/Fail	Comments
		Start	End	Change	Start	End		
Jan 24 06	1	35	35	0	1:25pm	1:45pm	Pass	
Jan 24 06	2	35	35	0	1:42pm	1:47pm	Pass	
Jan 24 06	3	35	35	0	2:05pm	2:10pm	Pass	
Jan 24 06	4	35	35	0	2:20pm	2:25pm	Pass	
Jan 24 06	5	35	35	0	1:54pm	1:59pm	Pass	
Jan 24 06	6a	35	0	35			Fail	Extrude Seam, Vac Test
Jan 25 06	6b	35	35	0	8:15am	8:20am	Pass	
Jan 25 06	7a	35	35	0	8:00am	8:05am	Pass	
Jan 25 06	7b	35	35	0	7:34am	7:39am	Pass	
Jan 25 06	6a Retested	35	35	0	10:12am	10:17am	Pass	

Patch Vacum Test			
Date Tested	Seam Number	Patch	VAC Test
Jan 24 06	6	A	Pass
Jan 24 06	7	A	Pass

Bituminous Panel Placement Log

Date: 24-Jan-05
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Panel Number	Roll Number	Deployment Date	Top Width (m)	Bottom Width (m)	Roll Width (m)	Approx. Length (m)	Area of Liner Total Ground Cover (m^2)	Area of Liner with 2% Overlap (m^2)
1	103132224	Jan 24 06	6.60	6.60	6.80	13.50	89.10	90.88
2	103132224	Jan 24 06	6.50	6.50	6.80	13.40	87.10	88.84
3	103132224	Jan 24 06	6.50	6.60	6.80	13.60	89.08	90.86
4	103132224	Jan 24 06	4.90	6.60	6.80	13.50	77.63	79.18
5	103132224	Jan 24 06	3.60	6.50	6.80	14.50	73.23	74.69
6	103132224	Jan 24 06	5.70	6.70	6.80	15.50	96.10	98.02
7	102112555	Jan 24 06	6.40	6.60	6.80	17.50	113.75	116.03
8	102112555	Jan 24 06	6.60	6.60	6.80	17.70	116.82	119.16
						TOTAL	**742.80**	**757.66**

Installation Temperature, -30, -33 wind chill in Celsius
Note: Base layer of geotextile is placed, then another layer ontop of HDPE.

Bituminous Panel Placement Log

Date: 23-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

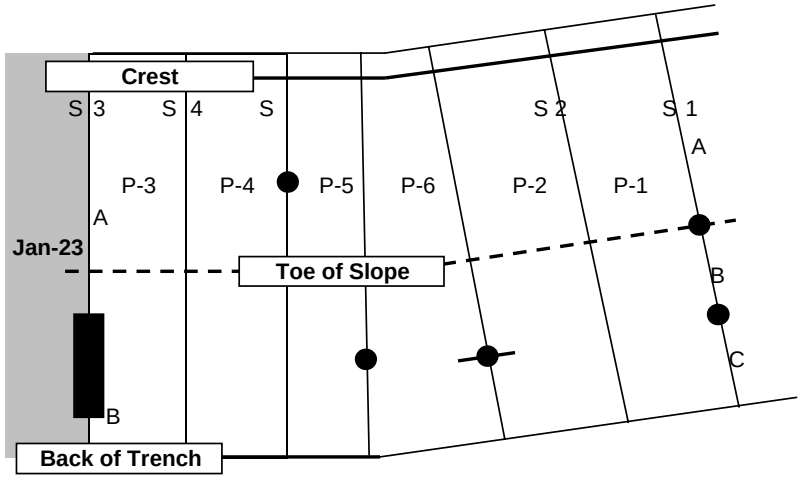
Panel Number	Roll Number	Deployment Date	Top Width (m)	Bottom Width (m)	Roll Width (m)	Approx. Length (m)	Area of Liner Total Ground Cover (m^2)	Area of Liner with 2% Overlap (m^2)
1	103132222	Jan 23 06	6.60	6.60	6.80	16.80	110.88	113.10
2	103132222	Jan 23 06	6.60	6.60	6.80	17.10	112.86	115.12
3	103132224	Jan 23 06	6.60	6.60	6.80	17.60	116.16	118.48
4	103132224	Jan 23 06	6.60	6.60	6.80	18.10	119.46	121.85
						TOTAL	**459.36**	**468.55**

Installation Temperature, -24, -27 wind chill in Celsius
Note: Base layer of geotextile is placed, then another layer ontop of HDPE.

PROJECT NAME: West Dam
LOCATION: Tahera
CLIENT: Tahera/Nuna
DATE: Jan 25, 06

N

A&A TECHNICAL SERVICES



LEGEND:

P-1 Panel Number
S-1 Seam Number
Destruct Sample
Patch

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT LOG FOR ROLL ID AND DIMENSIONS

Bituminous Panel Placement Log

Date: 25-Jan-05
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	158,160	78
2)	150,163	78
3)	169,160	78

Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	211	120
2)	217	120
3)	207	120

Welder Settings

Temperature: 356 Degrees F **Speed:** 4.9 ft/min

Installation Temperature, -33, -33 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

Bituminous Panel Placement Log

Date Installed: 25-Jan-06
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Date Tested	Seam Number	Pressure (psi)			Time of Test		Pass/Fail
		Start	End	Change	Start	End	
Jan 25 06	1a	35	35	0	1:00pm	1:05pm	Pass
Jan 25 06	1b	35	35	0	1:13pm	1:17pm	Pass
Jan 25 06	1c	35	35	0	1:21pm	1:36pm	Pass
Jan 25 06	2	35	35	0	3:31pm	3:36pm	Pass
Jan 25 06	3a	35	35	0	5:47pm	5:52pm	Pass
Jan 25 06	3b	35	35	0	5:57pm	6:02pm	Pass
Jan 26 06	4	35	35	0	9:06am	9:11am	Pass
Jan 26 06	5a	35	35	0	11:28am	11:33am	Pass
Jan 26 06	5b	35	35	0	11:37am	11:41am	Pass
Jan 26 06	6a	35	35	0	1:50pm	1:55pm	Pass
Jan 26 06	6b	35	35	0	2:02pm	2:07pm	Pass
Jan 26 06	6c	35	35	0	2:10pm	2:15pm	Pass (MJ)
Jan 26 06	7a	35	35	0	5:49pm	5:54pm	Pass
Jan 26 06	7b	35	35	0	6:06pm	6:11pm	Pass

Patch Vacum Test			
Date Tested	Seam Number	Patch	VAC Test
Jan 25 06	1	A	Pass
Jan 25 06	1	B	Pass

Bituminous Panel Placement Log

Date: 25-Jan-05
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Panel Number	Roll Number	Deployment Date	Top Width (m)	Bottom Width (m)	Roll Width (m)	Approx. Length (m)	Area of Liner Total Ground Cover (m^2)	Area of Liner with 2% Overlap (m^2)
1	102112555	Jan 25 06	5.00	4.90	6.80	16.40	81.18	82.80
2	102112555	Jan 25 06	6.30	6.30	6.80	16.30	102.69	104.74
3	102112555	Jan 25 06	6.30	6.30	6.80	18.80	118.44	120.81
4	102112555	Jan 25 06	5.40	5.20	6.80	19.70	104.41	106.50
5	103132226	Jan 25 06	4.90	3.60	6.80	20.20	85.85	87.57
6	103132226	Jan 25 06	6.60	6.60	6.80	17.30	114.18	116.46
						TOTAL	**606.75**	**618.89**

Installation Temperature, -33, -33 wind chill in Celsius
Note: Base layer of geotextile is placed, then another layer ontop of HDPE.

Bituminous Panel Placement Log

Date: 26-Jan-05
Project Name: East Dam
Location: Tahera
Job Number:
Q.A Technician: Jordan Magnan

Client: Tahera/Nuna
Liner Type: HDPE
Sheet Thickness: 60 MIL

Peel Test	Results (Test 1,Test 2) lbs/inch	ASTM Minimum lbs/inch
1)	144,140	78
2)	137,145	78
3)	151,151	78

Shear Test	Results lbs/inch	ASTM Minimum lbs/inch
1)	154	120
2)	175	120
3)	179	120

Welder Settings

Temperature: 356 Degrees F **Speed:** 4.9 ft/min

Installation Temperature, -31, -56 wind chill in Celsius
Note: Base layer of Geotextile is placed under and ontop of the HDPE liner.

APPENDIX

APPENDIX H EAST DAM STABILITY ANALYSIS UPDATE

EAST DAM – AS-BUILT SLOPE STABILITY

Additional rockfill was placed on the crest of the East Dam for an access road to the Southeast Dam. The dam was overbuilt by extending the upstream zone of Coarse Processed Kimberlite, and placing additional run-of-mine rockfill on the dam crest. A small rockfill berm was also constructed at the downstream dam toe for access during construction. Stability analyses were carried out to determine if the changes to the dam geometry had an impact on the dam stability. The parameters for the stability analysis were the same as those assumed for the dam design stability analysis (EBA, 2006b).

Limit equilibrium analyses were carried out to determine the factors of safety for slope stability. All analyses were conducted using the commercial, two-dimensional, slope stability numerical code, SLOPE-W. The factors of safety have been computed using the Morgenstern-Price Method. The computed factors of safety were compared with Canadian Dam Association guidelines (CDA, 1999) listed in Table H1. The dams were designed to meet these guidelines.

TABLE H1: SLOPE STABILITY DESIGN CRITERIA

Loading Conditions	Minimum Factor of Safety	Slope
Static Loading, full reservoir	1.5	Downstream and Upstream
Full or partial rapid drawdown	1.2 to 1.3	Upstream
Earthquake, full reservoir	1.1	Downstream and Upstream

The material properties are summarized in Table H2. The explanation why these properties were selected is included in the memo (EBA, 2006b).

TABLE H2: MATERIAL PROPERTIES USED IN STABILITY ANALYSES

Material	Angle of Internal Friction (º)	Cohesion (kPa)	Unit Weight (kN/m³)
Run-of-Mine	42	--	20
200 mm Material	35	--	21
20 mm Material	32	--	20
Composite Liner System (Interface)	8	--	18
Ice-Poor Till Foundation	30	--	18.5
Ice-Rich Till Foundation	0	75	16.5
Upstream Till Fill	30	0	18.5
Coarse Processed Kimberlite	30	--	18.5
Fine Processed Kimberlite	0	0	15.0

The pore water pressure conditions considered for the previous slope stability analysis at the design stage are described in detail in the memo (EBA, 2006b). The present analyses assumed the as-built level of tailings to be near the maximum design tailings elevation of 523 m (1 m below the Coarse

Processed Kimberlite zone). This assumption was made because the tailings level was near the level at the time the stability analysis was carried out. Rapid Drawdown and End of Construction cases were not modelled.

The area seismicity is discussed in detail in the memo (EBA, 2006b). The performance of the dam was evaluated for a peak ground acceleration of 0.06g.

Table H3 summarizes the factors of safety under static and seismic conditions for different failure surfaces on the upstream and downstream slopes. Slope stability analyses are illustrated in Figures H1 through H9.

TABLE H3: SUMMARY OF STABILITY ANALYSIS RESULTS

Slip Surface	Location	Factors of Safety			
		Calculated		CDA Guidelines	
		Static	Seismic	Static	Seismic
1	Upstream, rotational	2.2	1.7	1.5	1.1
2	Upstream, along liner	6.9	3.5	1.5	1.1
3	Downstream rotational	2.0	1.6	1.5	1.1
4	Downstream along the liner	2.1	1.6	1.5	1.1
5	Downstream Overall Stability – Full Tailings Level	2.9	Not analyzed	-	-

The computed minimum factors of safety exceeded the design criteria of 1.5 and 1.1 for static and seismic conditions, respectively, in accordance with the CDA Dam Safety Guidelines (CDA 1999).

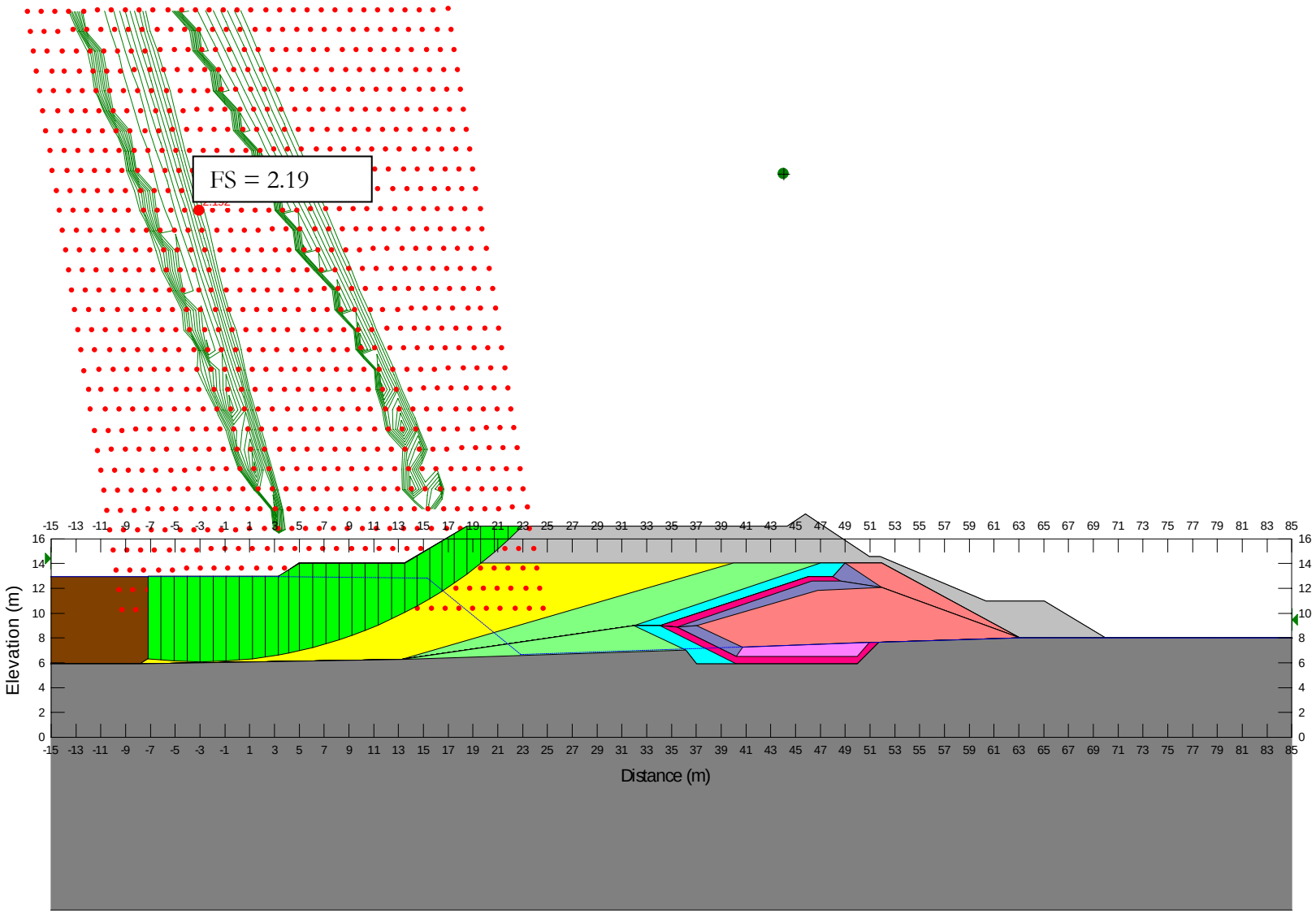


FIGURE H1

As-Built Stability Analysis - Upstream, Static – Rotational Slip Surface

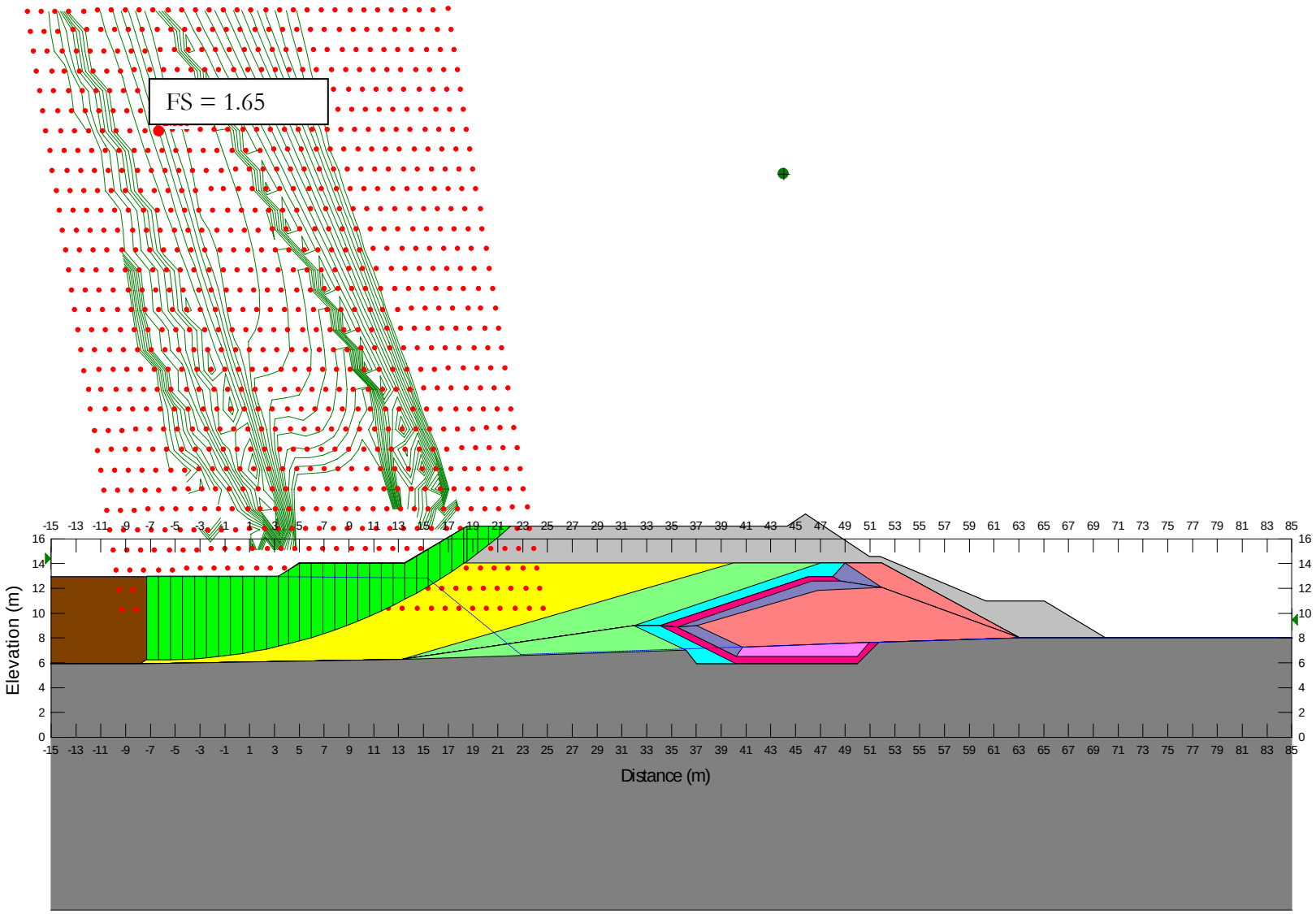


FIGURE H2

As-Built Stability Analysis - Upstream, Seismic Analysis – Rotational Slip Surface

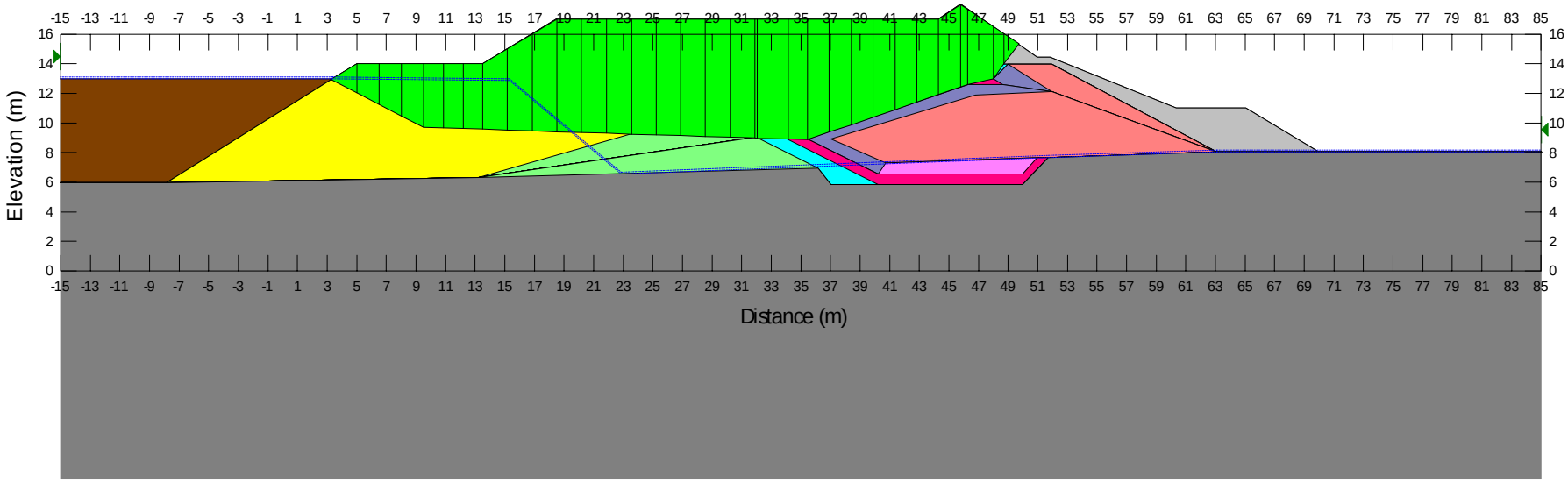


FIGURE H3

As-Built Stability Analysis - Upstream, Static – Slip Surface along Liner

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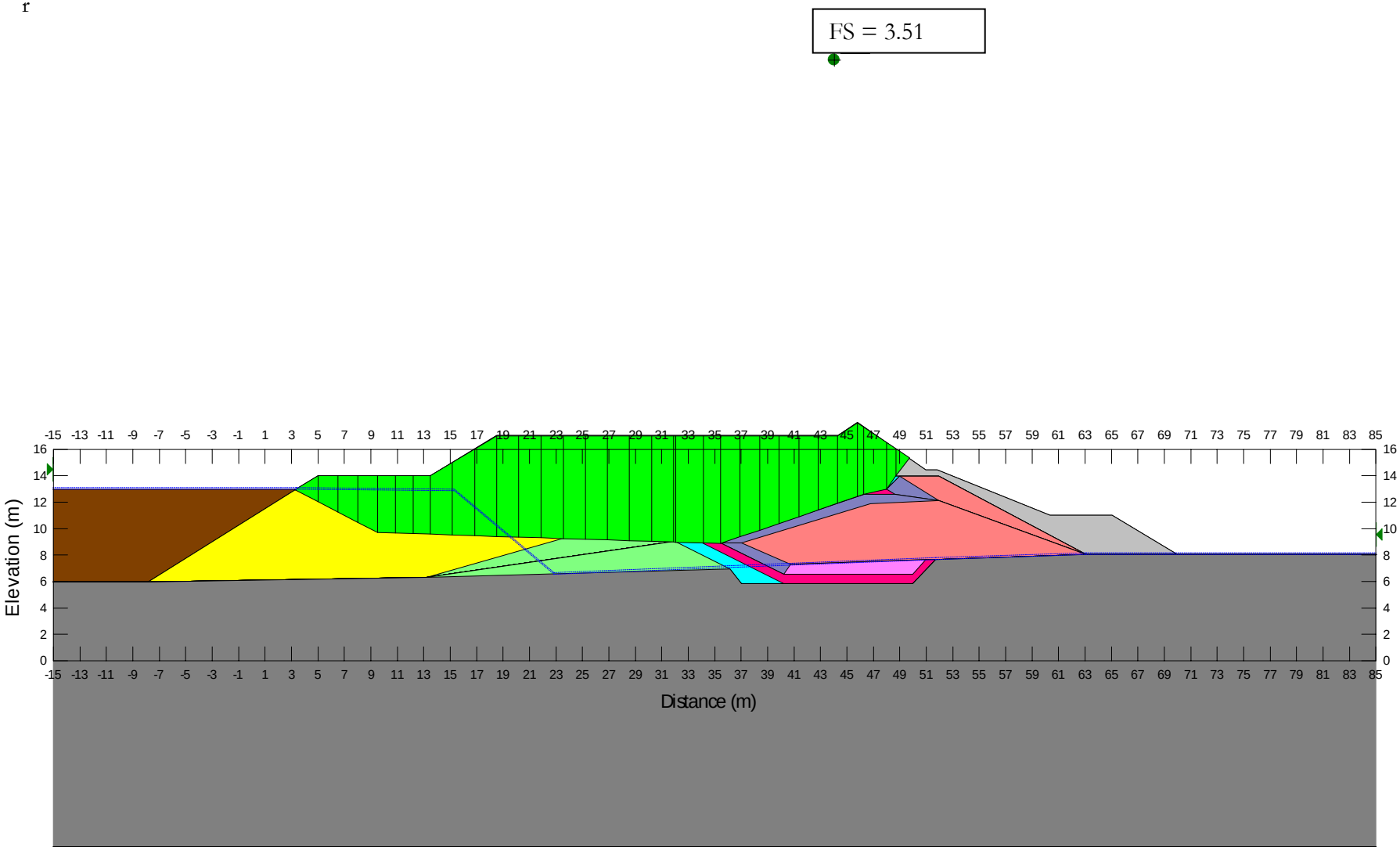


FIGURE H4

As-Built Stability Analysis - Upstream, Seismic Analysis – Slip Surface along Liner

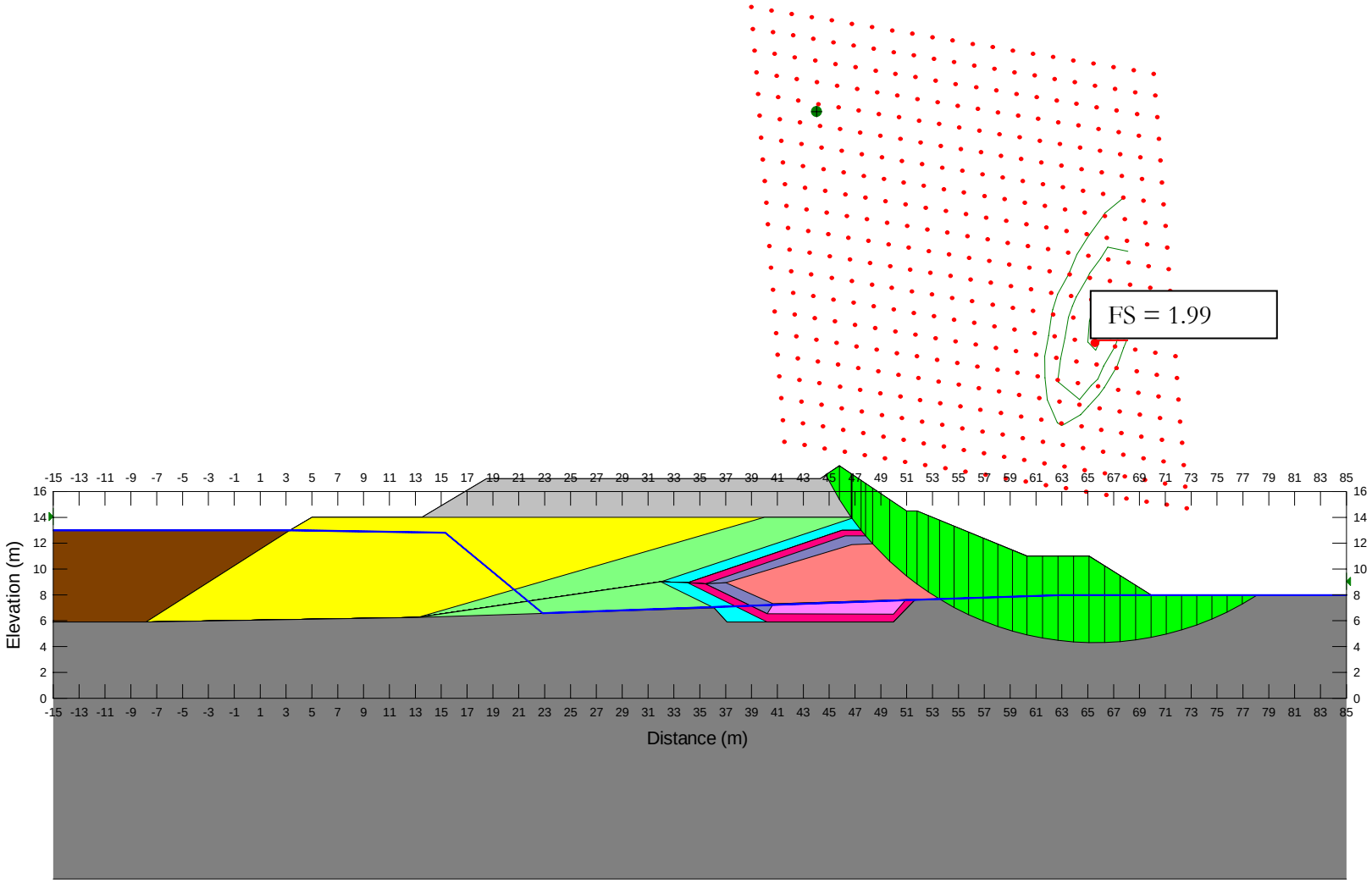


FIGURE H5
As-Built Stability Analysis - Downstream, Static – Rotational Slip Surface

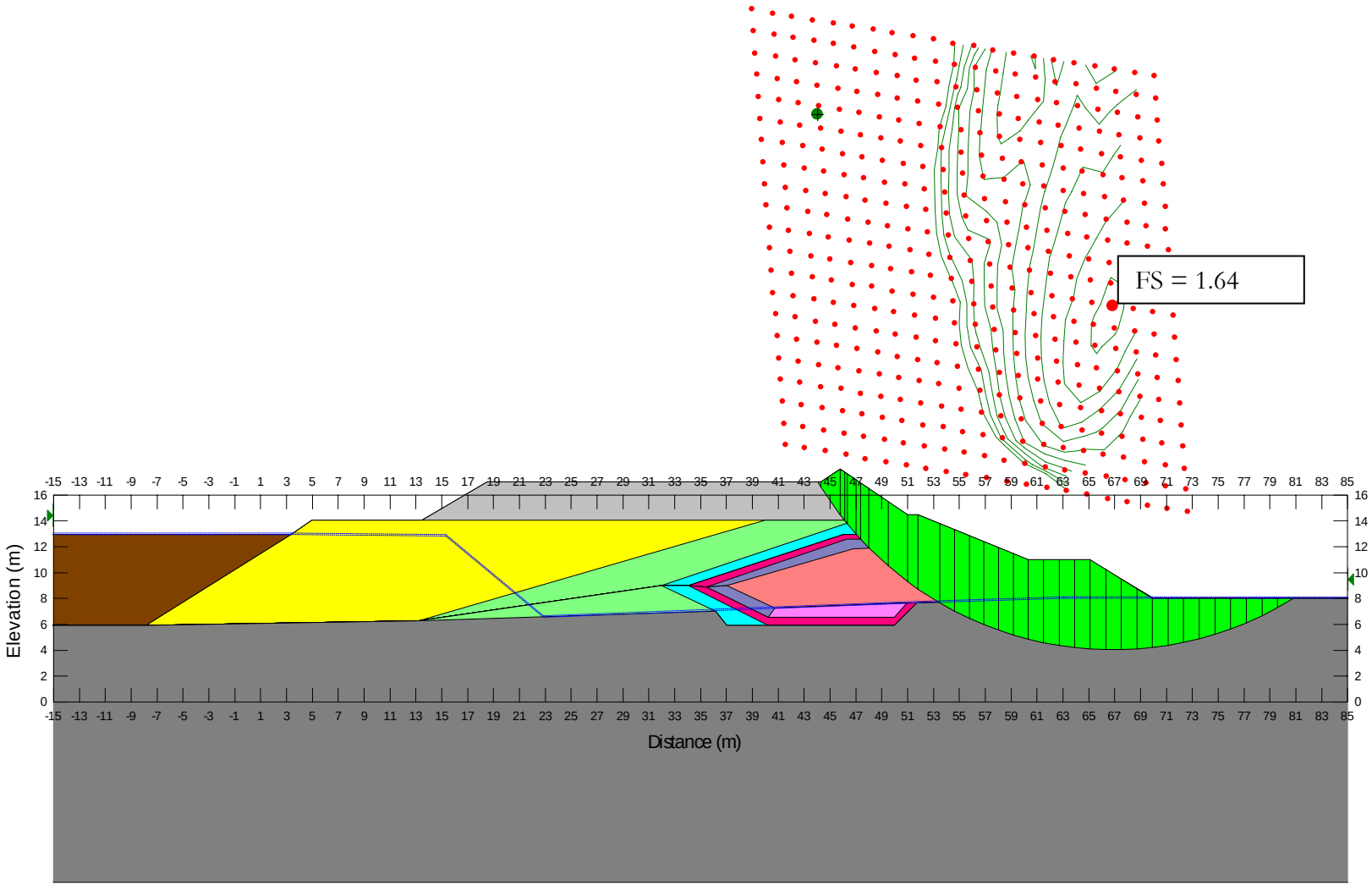


FIGURE H6

As Built Stability Analysis - Downstream, Seismic – Rotational Slip Surface

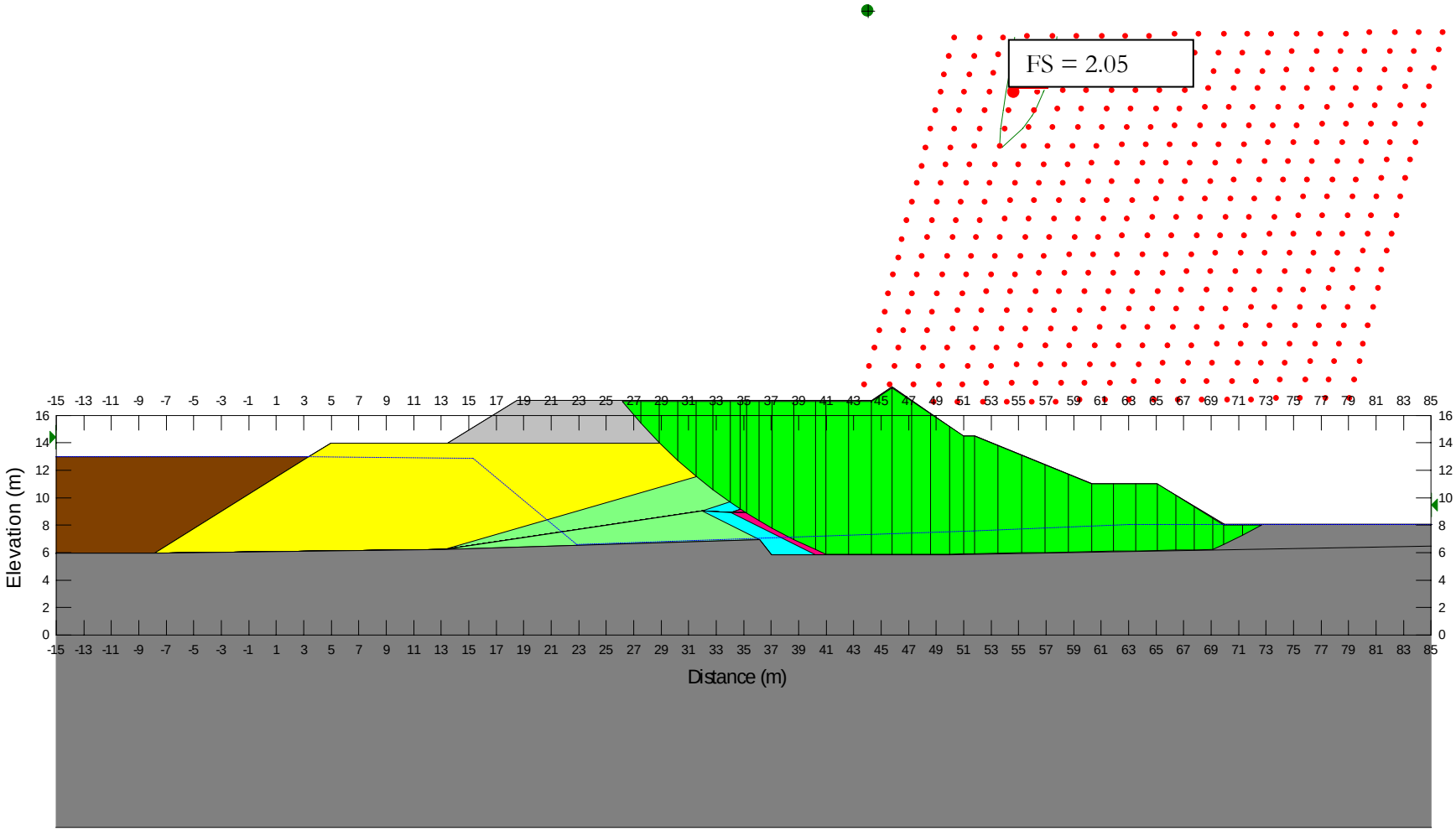


FIGURE H7

As Built Stability Analysis - Downstream, Static Analysis –Slip Surface along Liner

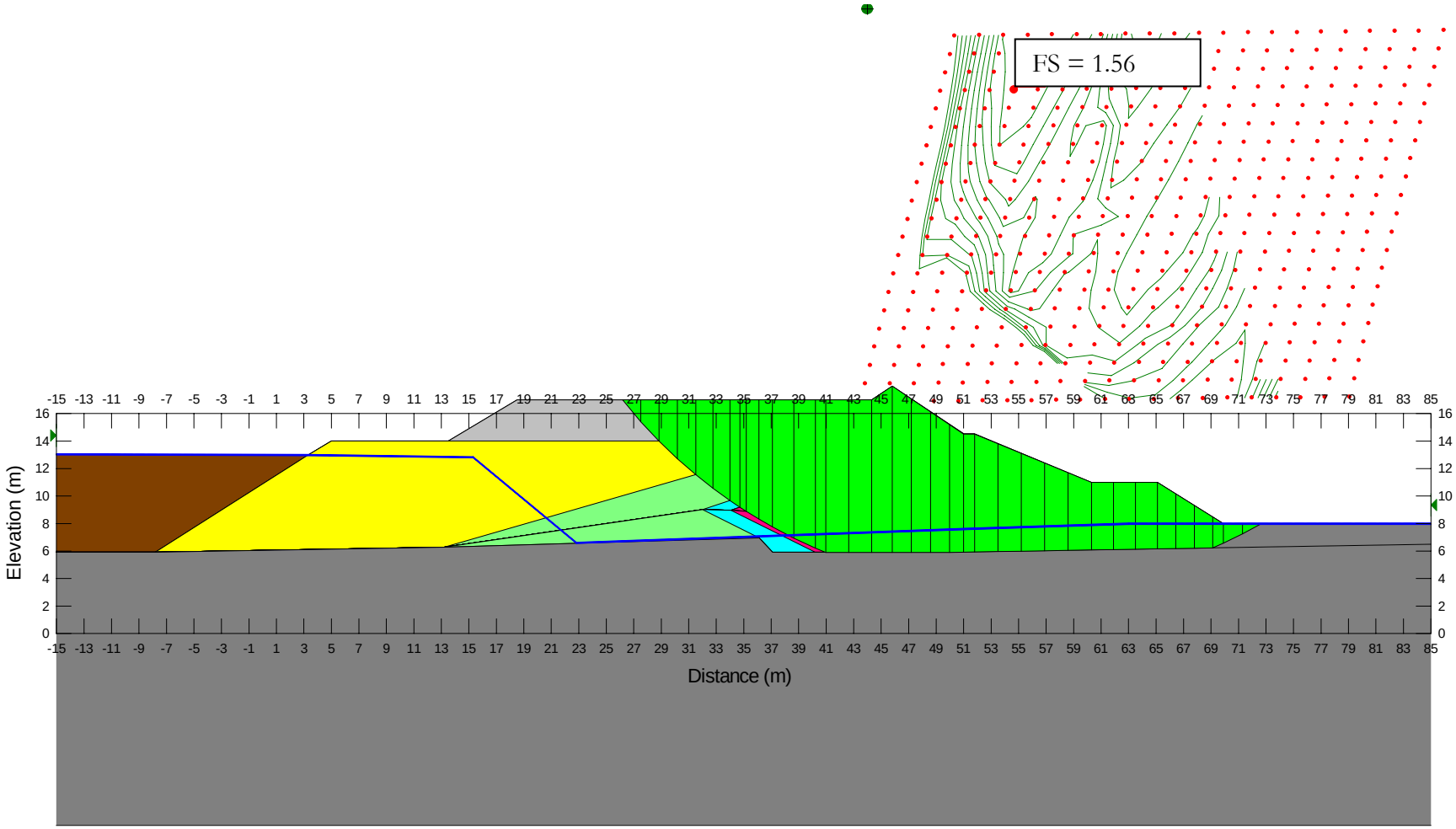


FIGURE H8

As Built Stability Analysis - Downstream, Seismic Analysis –Slip Surface along Liner

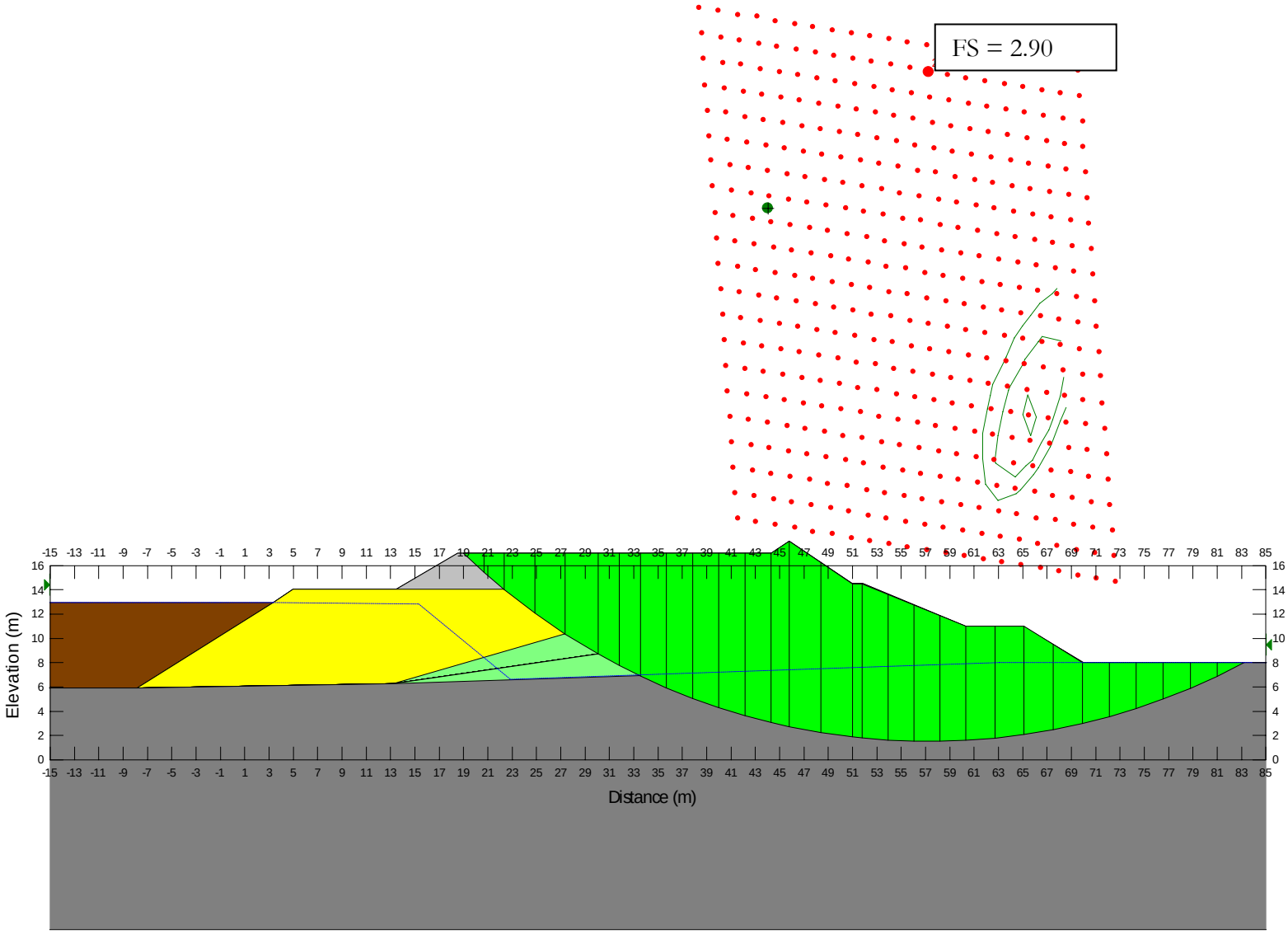


FIGURE H9

As Built Stability Analysis - Downstream, Full Tailings –Overall Stability – Ice Poor Foundation

APPENDIX

APPENDIX I SOUTHEAST DAM PARTICLE SIZE ANALYSIS RESULTS

EBA ENGINEERING CONSULTANTS LTD.

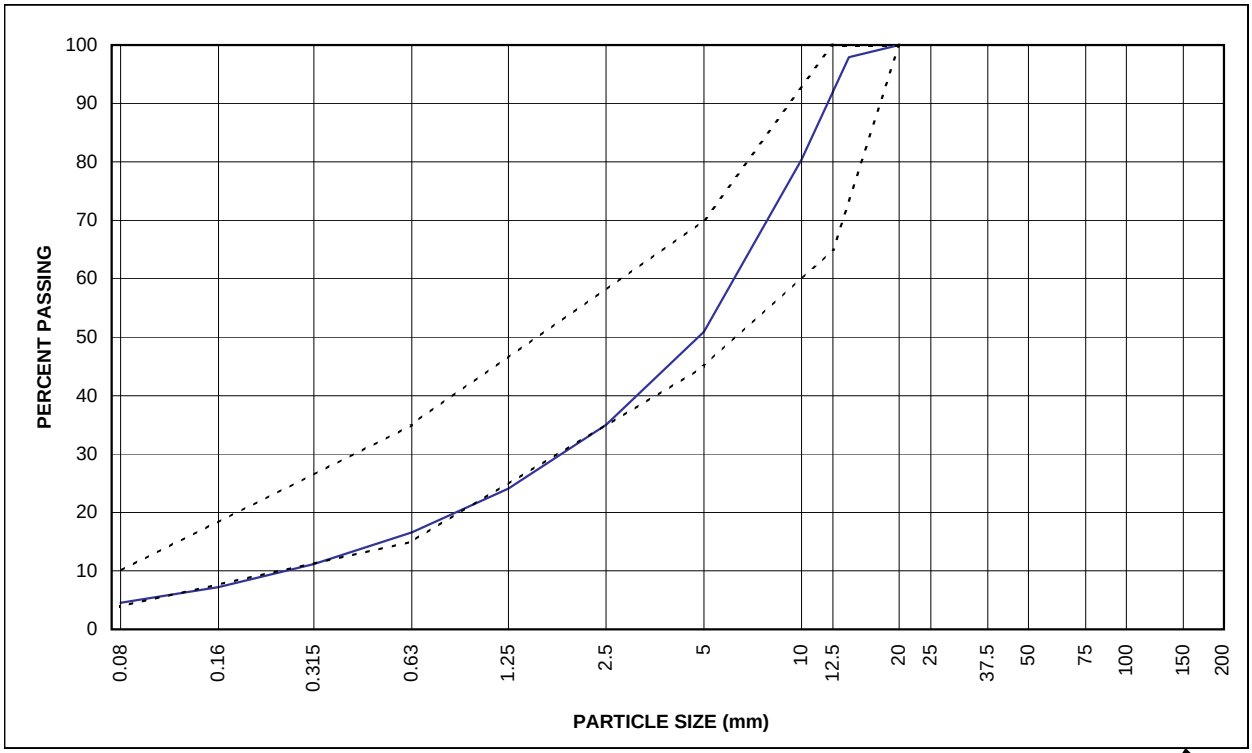
FIGURE I-1: PARTICLE SIZE SUMMARY REPORT - 2007 CRUSHER

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
20 mm Crush for Dam Construction
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO'S: 20W07-001 to 20W07-020

USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 1.2%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Average for all Crusher Samples

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	97.9
10	80.4
5	50.9
2.5	35.0
1.25	24.1
0.63	16.6
0.315	11.1
0.16	7.2
0.08	4.5

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

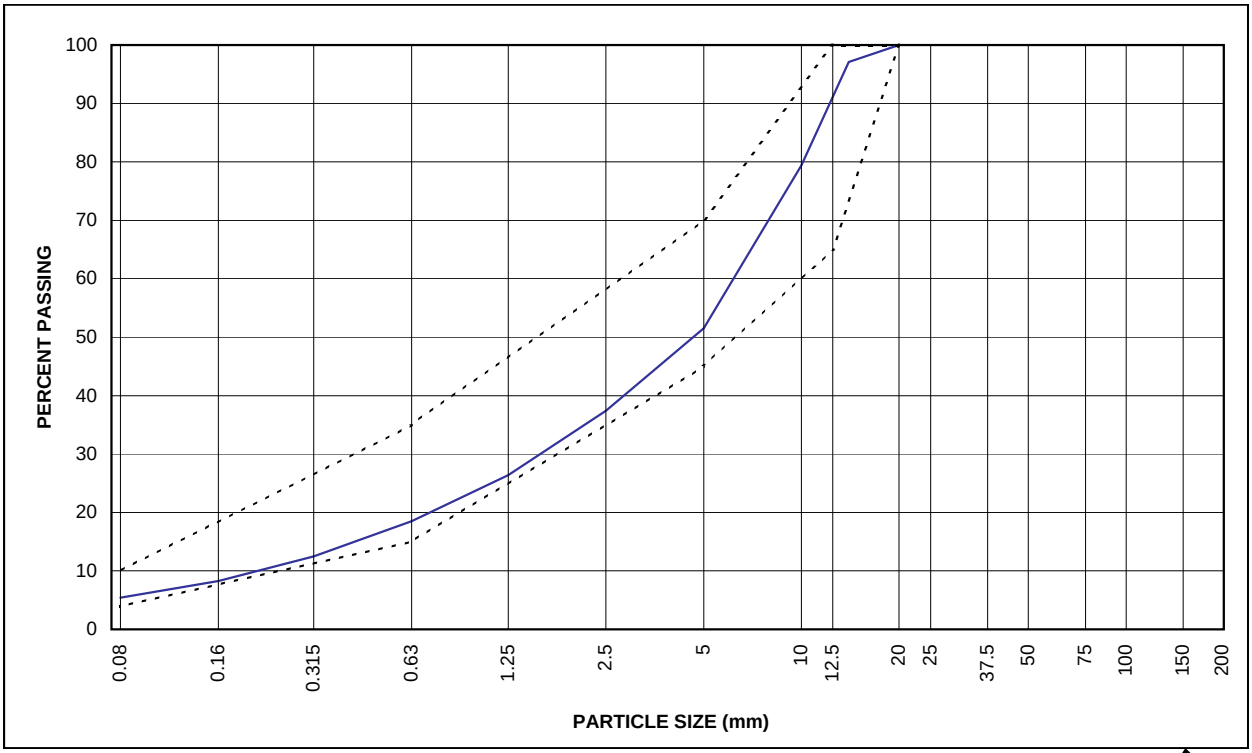
FIGURE I-2: PARTICLE SIZE SUMMARY REPORT - 2007 PLANT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
20 mm Crush for Dam Construction
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO'S: 20W07-021 to 20W07-061

USC CLASSIFICATION:
PROCESSED MOISTURE CONTENT: 8.8%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Average for all Plant Production Samples

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	97.1
10	79.4
5	51.5
2.5	37.4
1.25	26.4
0.63	18.5
0.315	12.5
0.16	8.3
0.08	5.4

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

20 mm PARTICLE SIZE SUMMARY SHEET - ALL SAMPLES

Project: PKCA Dam Construction
Project No: 1100060.007
Address: Jericho Diamond Mine
Client: Tahera Diamond Corporation
Attention: Mr. Tony Loschiavo

Sample Description: 20 mm minus material
Plant and Crusher Production

OVERALL SUMMARY:

Sieve Size (mm)	20.0	14.0	10.0	5.0	2.5	1.250	0.630	0.315	0.160	0.080	M.C.
Specified Maximum	100	100		70			35			10	--
Overall Mat'l Avg. - All Samples	**100.0**	**97.3**	**79.7**	**51.3**	**36.6**	**25.7**	**17.9**	**12.1**	**7.9**	**5.1**	**6.3%**
Overall Mat'l Avg. - Crusher	**100.0**	**97.9**	**80.4**	**50.9**	**35.0**	**24.1**	**16.6**	**11.1**	**7.2**	**4.5**	**1.2%**
Overall Mat'l Avg. - Plant	**100.0**	**97.1**	**79.4**	**51.5**	**37.4**	**26.4**	**18.5**	**12.5**	**8.3**	**5.4**	**8.8%**
Specified Minimum	100	65		45			15			4	--

Sample Number	Date Produced	Sample Location	Percent Passing Sieve Sizes (mm)										Moist. Cont.
			20.0	14.0	10.0	5.0	2.5	1.25	0.63	0.315	0.16	0.08	
20W07-001	2007.1.10	Crusher.	100.0	98.8	80.3	49.4	33.2	22.1	14.9	10.1	6.7	4.3	0.9%
20W07-002	2007.1.11	Crusher.	100.0	97.4	77.6	49.6	35.5	24.8	17.7	12.5	8.5	5.7	1.4%
20W07-003	2007.1.11	Crusher.	100.0	99.4	82.0	54.7	39.0	27.6	19.2	12.8	8.1	5.0	1.7%
20W07-004	2007.1.11	Crusher.	100.0	99.2	86.6	58.5	41.2	28.9	20.3	14.1	9.5	6.2	2.2%
20W07-005	2007.1.13	Crusher.	100.0	99.1	83.1	51.6	34.1	23.1	15.7	10.5	6.7	4.2	1.4%
20W07-006	2007.1.13	Crusher.	100.0	99.7	83.4	52.0	34.0	22.9	15.8	10.8	7.2	4.7	2.0%
20W07-007	2007.1.13	Crusher.	100.0	99.2	83.4	56.0	38.3	26.5	18.3	12.4	8.1	5.1	1.9%
20W07-008	2007.1.14	Crusher.	100.0	98.7	77.1	47.1	32.5	22.8	16.1	11.0	7.2	4.4	1.2%
20W07-009	2007.1.15	Crusher.	100.0	96.8	77.1	48.0	32.5	22.6	15.7	10.7	6.9	4.3	0.5%
20W07-010	2007.1.20	Crusher.	100.0	99.2	81.3	51.9	35.7	25.6	18.4	13.2	9.2	6.1	1.3%
20W07-011	2007.2.4	Crusher.	100.0	93.8	70.9	45.6	33.5	24.0	16.5	10.7	6.1	3.2	0.5%
20W07-012	2007.2.4	Crusher.	100.0	96.8	77.1	48.0	32.5	22.6	15.7	10.7	6.9	4.3	0.5%
20W07-013	2006.2.4	Crusher.	100.0	95.9	76.8	44.9	30.4	21.3	14.9	10.2	6.6	4.1	0.9%
20W07-014	2007.2.5	Crusher.	100.0	97.7	81.9	54.6	39.4	27.2	18.6	12.2	7.6	4.5	1.1%
20W07-015	2007.2.6	Crusher.	100.0	96.1	79.2	46.7	30.9	20.6	14.4	10.0	6.8	4.6	1.2%
20W07-016	2007.2.7	Crusher.	100.0	95.6	78.4	47.4	30.4	21.0	14.6	9.9	6.6	4.2	1.4%
20W07-017	2007.2.7	Crusher.	100.0	97.0	75.4	44.3	30.5	21.7	15.4	10.4	6.5	3.9	1.4%
20W07-018	2007.2.8	Crusher.	100.0	99.8	88.5	61.0	42.5	28.1	17.6	10.6	6.2	3.6	1.1%
20W07-019		Crusher.	100.0	99.1	86.3	57.2	41.2	27.4	17.4	10.6	6.4	3.9	1.3%
20W07-020	2007.2.11	Crusher.	100.0	98.9	81.2	49.7	32.5	21.7	14.5	9.7	6.4	4.1	1.0%
20W07-021	18-Mar-03	Batch Plant	100.0	100.0	88.4	63.3	47.8	35.5	24.3	15.6	9.6	6.1	1.4%
20W07-022	18-Mar-03	Batch Plant	100.0	99.1	83.0	55.5	40.3	28.9	19.6	12.4	7.6	4.5	10.6%
20W07-023	19-Mar-03	Batch Plant	100.0	99.2	86.3	64.1	50.9	34.0	23.3	15.3	10.0	6.8	9.2%
20W07-024	19-Mar-03	Batch Plant	100.0	99.0	86.8	62.0	44.7	31.7	21.6	14.2	9.2	6.0	8.6%
20W07-025	21-Mar-03	Batch Plant	100.0	98.9	86.2	62.0	45.7	33.3	23.3	15.6	10.2	6.8	11.6%
20W07-026	21-Mar-03	Batch Plant	100.0	97.9	81.2	51.8	33.0	21.7	14.3	9.5	6.6	4.8	9.7%
20W07-027	25-Mar-03	Batch Plant	100.0	98.6	88.0	63.3	48.1	33.1	22.4	14.8	9.7	6.4	11.0%
20W07-028	25-Mar-03	Batch Plant	100.0	98.1	81.1	51.8	38.0	27.8	19.6	13.0	8.2	5.1	8.1%
20W07-029	26-Mar-03	Batch Plant	99.5	98.5	89.6	68.2	54.9	41.6	29.4	19.6	12.5	7.8	9.2%
20W07-030	28-Mar-03	Batch Plant	100.0	91.9	64.3	32.0	22.6	16.0	11.5	7.8	5.0	3.1	4.7%
20W07-031	28-Mar-03	Batch Plant	100.0	93.1	70.4	42.5	30.7	21.7	15.3	10.4	6.9	4.5	6.6%
20W07-032	30-Mar-03	Batch Plant	100.0	97.3	82.4	58.4	46.1	33.0	22.6	14.5	8.6	4.9	6.3%
20W07-033	30-Mar-03	nsitu sampling	100.0	95.5	82.0	56.9	41.8	29.9	20.5	13.1	8.0	4.9	7.7%
20W07-034	30-Mar-03	Batch Plant	100.0	96.4	85.2	59.6	47.4	34.6	24.1	15.8	9.8	5.8	9.9%
20W07-035	31-Mar-03	Batch Plant	100.0	96.2	82.6	56.6	45.0	32.7	22.1	13.5	7.7	4.4	10.4%
20W07-036	31-Mar-03	Batch Plant	100.0	95.6	83.2	58.6	43.0	31.3	21.9	14.4	9.1	5.6	10.0%

EBA ENGINEERING CONSULTANTS LTD.

20 mm PARTICLE SIZE SUMMARY SHEET - ALL SAMPLES

Project: PKCA Dam Construction
Project No: 1100060.007
Address: Jericho Diamond Mine
Client: Tahera Diamond Corporation
Attention: Mr. Tony Loschiavo

Sample Description: 20 mm minus material
Plant and Crusher Production

OVERALL SUMMARY:

Sieve Size (mm)	20.0	14.0	10.0	5.0	2.5	1.250	0.630	0.315	0.160	0.080	M.C.
Specified Maximum	100	100		70			35			10	--
Overall Mat'l Avg. - All Samples	**100.0**	**97.3**	**79.7**	**51.3**	**36.6**	**25.7**	**17.9**	**12.1**	**7.9**	**5.1**	**6.3%**
Overall Mat'l Avg. - Crusher	**100.0**	**97.9**	**80.4**	**50.9**	**35.0**	**24.1**	**16.6**	**11.1**	**7.2**	**4.5**	**1.2%**
Overall Mat'l Avg. - Plant	**100.0**	**97.1**	**79.4**	**51.5**	**37.4**	**26.4**	**18.5**	**12.5**	**8.3**	**5.4**	**8.8%**
Specified Minimum	100	65		45			15			4	--

Sample Number	Date Produced	Sample Location	Percent Passing Sieve Sizes (mm)										Moist. Cont.
			20.0	14.0	10.0	5.0	2.5	1.25	0.63	0.315	0.16	0.08	
20W07-037	1-Apr-03	Batch Plant	100.0	95.6	75.1	48.3	36.0	26.5	19.7	14.1	9.7	6.5	8.3%
20W07-038	2-Apr-03	Batch Plant	100.0	97.5	79.2	49.4	34.1	23.3	16.3	11.4	8.1	5.8	7.5%
20W07-039	3-Apr-03	Batch Plant	100.0	96.5	78.9	52.0	36.1	24.9	17.3	12.0	8.4	5.9	8.9%
20W07-040	3-Apr-03	Batch Plant	100.0	98.8	82.2	53.8	37.4	25.5	18.0	12.8	9.2	6.6	9.4%
20W07-041	4-Apr-03	Batch Plant	100.0	97.8	82.7	52.8	37.9	26.2	18.9	13.7	9.7	6.8	8.0%
20W07-042	4-Apr-03	Batch Plant	100.0	98.0	74.7	41.3	27.5	18.4	12.4	8.2	5.1	3.1	8.7%
20W07-043	5-Apr-03	Batch Plant	100.0	96.7	74.1	46.8	33.3	23.5	16.7	11.6	7.8	5.1	8.7%
20W07-044	6-Apr-03	Batch Plant	100.0	95.9	75.2	48.0	35.3	25.2	18.1	12.5	8.4	5.5	8.8%
20W07-045	7-Apr-03	Batch Plant	100.0	97.9	76.9	44.7	29.4	19.2	12.4	7.8	4.9	3.1	9.8%
20W07-046	7-Apr-03	Batch Plant	100.0	96.2	83.0	51.0	36.1	25.5	18.4	13.2	9.4	6.6	10.5%
20W07-047	8-Apr-03	Batch Plant	99.4	95.2	69.9	41.5	30.4	21.4	15.5	10.9	7.5	5.1	6.7%
20W07-048	9-Apr-03	Batch Plant	100.0	96.1	73.9	45.6	34.1	24.5	17.6	12.2	8.0	5.1	10.3%
20W07-049	9-Apr-03	Batch Plant	100.0	96.5	73.5	42.4	28.9	20.3	14.1	9.2	5.6	3.3	9.4%
20W07-050	10-Apr-03	Batch Plant	100.0	97.4	73.7	40.3	25.3	17.2	12.4	8.9	6.4	4.8	7.1%
20W07-051	11-Apr-03	Batch Plant	100.0	97.3	70.6	40.0	27.6	19.4	13.7	9.4	6.3	4.1	7.5%
20W07-052	11-Apr-03	Batch Plant	100.0	96.4	72.3	42.6	29.7	21.7	16.0	11.5	8.0	5.5	7.7%
20W07-053	14-Apr-03	Batch Plant	100.0	97.0	72.4	39.9	26.2	17.5	11.8	7.8	5.0	3.0	9.2%
20W07-054	14-Apr-03	Batch Plant	100.0	97.0	72.4	39.9	26.2	17.5	11.8	7.8	5.0	3.0	10.2%
20W07-055	16-Apr-03	Batch Plant	100.0	97.1	83.3	59.2	43.8	30.4	21.1	14.4	9.9	6.7	9.1%
20W07-056	17-Apr-03	Batch Plant	100.0	97.2	78.7	52.6	39.8	29.3	21.6	15.5	10.9	7.6	8.7%
20W07-057	18-Apr-03	Batch Plant	100.0	98.0	81.4	56.0	41.9	29.3	20.8	14.3	9.6	6.5	10.4%
20W07-058	20-Apr-03	Batch Plant	100.0	97.9	84.0	58.8	45.0	32.3	22.9	15.8	10.7	7.3	10.4%
20W07-059	21-Apr-03	Batch Plant	100.0	98.0	84.6	56.0	39.9	27.8	19.7	13.8	9.4	6.4	9.9%
20W07-060	23-Apr-03	Batch Plant	100.0	94.4	77.8	47.3	31.4	21.5	15.3	10.8	7.4	5.0	9.5%
20W07-061	23-Apr-03	Batch Plant	100.0	98.1	84.7	55.6	39.5	27.5	19.2	13.2	9.0	6.1	9.7%

EBA ENGINEERING CONSULTANTS LTD.

FIGURE I-3 PARTICLE SIZE SUMMARY REPORT - 200 mm

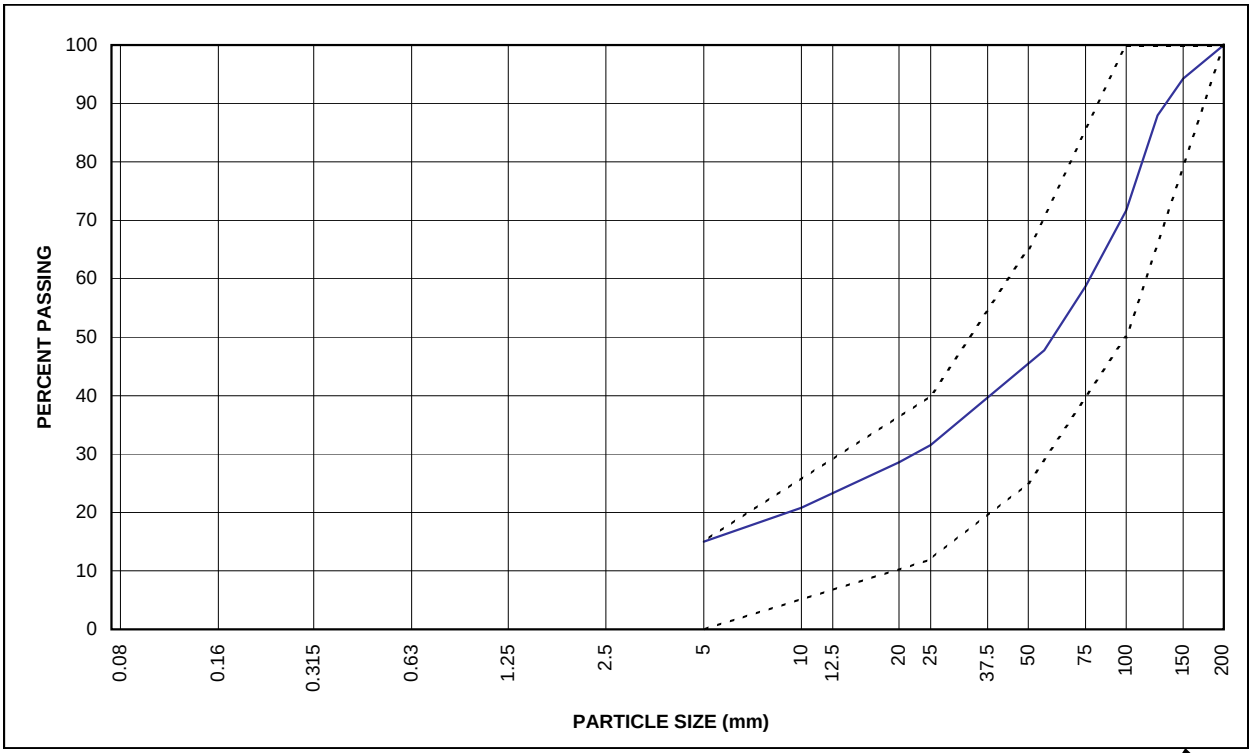
PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Loschiavo

SAMPLE DESCRIPTION:
200 mm minus material
AVERAGE OF ALL TESTS

SAMPLE NO'S: 200W07-005 to 200W07-010
NATURAL MOISTURE CONTENT: n/a
SPECIFICATION BAND PLOTTED: 200mm (Dam)
REMARKS: Gradation limits as per specifications

PARTICLE SIZE	AVERAGE % PASSING
200.0	100.0
150.0	94.3
125.0	88.0
100.0	71.7
75.0	58.7
56.0	47.8
25.0	31.6
20.0	28.6
14.0	24.6
10.0	20.8
5.0	15.0

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

200mm PARTICLE SIZE SUMMARY SHEET

Project: PKCA Dam Construction
Project No: 1100060.007

Address: Jericho Diamond Mine
Client: Tahera Diamond Corporation
Attention: Mr. Tony Loschiavo

Sample Description: 200 mm minus material
Summary of all Southeast Dam samples

OVERALL SUMMARY:

Sieve Size (mm)	200	150	125	100	75	56	25	20	14	10	5
Specified Maximum	100			100		65	40				15
Average of ALL Tests	**100.0**	**94.3**	**88.0**	**71.7**	**58.7**	**47.8**	**31.6**	**28.6**	**24.6**	**20.8**	**15.0**
Specified Minimum	100			50		25	12				0

DETAILED SUMMARY:

Sample Number	Date Produced	Percent Passing Sieve Sizes (mm)										
		200	**150**	**125**	**100**	**75**	**56**	**25**	**20**	**14**	**10**	**5**
200W07-005	15-May-07		100.0	88.4	68.9	56.2	43.6	25.0	21.6	18.0	14.4	9.8
200W07-006	15-May-07		100.0	92.3	80.4	55.1	45.7	22.0	19.3	15.7	12.8	8.6
200W07-007	15-May-07		100.0	93.9	65.8	52.7	42.2	29.0	25.6	21.8	18.5	13.3
200W07-008	16-May-07		100.0	100.0	87.8	74.0	63.1	46.7	44.6	39.3	35.1	27.3
200W07-009	17-May-07	100.0	65.6	53.2	45.9	42.8	34.6	27.0	24.0	20.5	17.5	12.5
200W07-010	17-May-07	100.0	100.0	100.0	81.2	71.4	57.4	39.8	36.5	32.2	26.4	18.5
Specified Maximum		100			100		65	40				15
Average of ALL Tests		**100.0**	**76.1**	**51.0**	**71.7**	**38.4**	**28.9**	**10.7**	**7.6**	**5.5**	**2.8**	**1.4**
Specified Minimum		100			50		25	12				0

APPENDIX

APPENDIX J SOUTHEAST DAM FIELD DENSITY, MOISTURE AND DEGREE OF SATURATION RESULTS

Compaction and Saturation Summary

Moisture Content Summary – Levelling Course and Key Trench Backfill

Moisture Content Summary – Fillet Zone

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm Material; Granite Blast Rock
Project Number: 1100060.007
Compaction Standard: ASTM D 698
Maximum Dry Density: 2100 kg/m3

Machine No: 31494
Specified Compaction: -
Specified Saturation: 90%
Optimum Moisture Content: 7.3%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
1	07/03/22	150	0+180	1 LC	3m NW	2176	1858	318	17.1	-1.6	100.0	88.5
2	07/03/22	150	0+190	1 LC	4m SE	2172	1859	313	16.8	-1.2	100.0	88.5
3	07/03/22	150	0+195	1 LC	8m SE	2168	1868	300	16.1	-0.2	100.0	89.0
4	07/03/22	150	0+197	1 LC	5m SE	2193	1873	320	17.1	-2.4	100.0	89.2
5	07/03/22	150	0+210	1 LC	2m NW	2214	1933	281	14.5	-0.8	100.0	92.0
6	07/03/26	150	0+150	1 LC	4m R of U/S	2191	1949	242	12.4	2.5	90.5	92.8
7	07/03/26	150	0+110	1 LC	CL	2218	1974	244	12.4	1.4	94.6	94.0
8	07/03/26	150	0+125	1 LC	?	2194	1949	245	12.6	2.2	91.7	92.8
9	07/03/28	150	0+135	1 LC	2m R of U/S	2186	1960	226	11.5	3.7	85.9	93.3
10	07/03/28	150	0+137	1 LC	5m R of U/S	2190	1930	260	13.5	1.4	94.7	91.9
11	07/03/28	150	0+090	1 LC	4m L of D/S	2193	1977	216	10.9	4.1	84.1	94.1
12	07/03/28	150	0+150	F1	CL Fillet	2277	2115	162		4.3		100.7
13	07/03/28	150	0+170	F1	CL Fillet	2220	2063	157		6.7		98.2
14	07/03/29	200	0+180	F1	CL Fillet	2232	2120	112		9.1		101.0
15	07/03/29	150	0+200	F1	CL Fillet	2117	2018	99		14.2		96.1
16	07/03/29	150	0+170	F2	CL Fillet	2219	2109	110		9.7		100.4
17	07/03/29	150	0+128	F1	CL Fillet	2192	2083	109		10.8		99.2
18	07/03/29	200	0+085	1 LC	2m R of CL	2210	1956	254	13.0	1.1	96.0	93.1
19	07/03/30	200	0+172	F3	CL Fillet	2166	2046	120		11.1		97.4
20	07/03/30	200	0+200	F3	CL Fillet	2150	2014	136		10.7		95.9
21	07/03/31	150	0+150	F3	CL Fillet	2188	2009	179		6.6		95.7
22	07/03/31	150	0+140	F2	CL Fillet	2136	2007	129		11.6		95.6
23	07/03/31	200	0+120	F2	CL Fillet	2182	1997	185		6.4		95.1
24	07/03/31	200	0+100	F2	CL Fillet	2197	2030	167		7.0		96.7
25	07/03/31	200	0+200	F4	CL Fillet	2155	2026	129		10.9		96.5

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm Material; Granite Blast Rock
Project Number: 1100060.007
Compaction Standard: ASTM D 698
Maximum Dry Density: 2100 kg/m3

Machine No: 31494
Specified Compaction: -
Specified Saturation: 90%
Optimum Moisture Content: 7.3%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
26	07/03/31	200	0+180	F4	CL Fillet	2198	2038	160		7.4		97.0
27	07/03/31	200	0+160	F4	CL Fillet	2158	2001	157		9.1		95.3
28	07/03/31	200	0+150	F4	CL Fillet	2195	2072	123		9.8		98.7
29	07/03/31	250	0+140	F3	CL Fillet	2171	1960	211		5.2		93.3
30	07/03/31	250	0+130	F3	CL Fillet	2160	2014	146		9.7		95.9
31	07/03/31	250	0+110	F3	CL Fillet	2136	1997	139		11.0		95.1
32	07/03/31	250	0+090	F3	CL Fillet	2230	1998	232		1.7		95.1
33	07/03/31	150	0+070	1 LC	CL Key Trench	2233	1999	234	11.7	1.4	94.2	95.2
34	07/03/31	150	0+060	1 LC	CL Key Trench	2219	2015	204	10.1	3.8	84.1	96.0
35	07/04/01	250	0+098	F3	CL Fillet	2253	2085	168		4.8		99.3
36	07/04/01	200	0+220	1 LC	1 m R of CL	2259	2029	230	11.3	0.7	97.0	96.6
37	07/04/02	200	0+060	1 LC	adj. to ramp	2236	2019	217	10.7	2.4	90.0	96.1
38	07/04/02	250	0+058	F1	u./s of fillet	2224	2010	214		3.0		95.7
39	07/04/02	250	0+080	F1	CL Fillet	2210	2026	184		5.4		96.5
40	07/04/02	300	0+055	F2	u/s of fillet	2235	2023	212		2.7		96.3
41	07/04/03	200	0+080	F2	CL Fillet	2257	2041	216		1.7		97.2
42	07/04/03	200	0+085	F2	CL Fillet	2197	2003	194		5.3		95.4
43	07/04/03	200	0+05	F2	CL Fillet	2274	2091	183		3.1		99.6
44	07/04/03	200	0+070	F2	CL Fillet	2288	2095	193		1.9		99.8
45	07/04/03	200	0+090	F3	CL Fillet	2272	2131	141		5.8		101.5
46	07/04/03	200	0+080	F3	CL Fillet	2248	2054	194		3.4		97.8
47	07/04/03	200	0+220	F1	CL Fillet	2186	2058	128		9.8		98.0
48	07/04/03	200	0+230	F1	CL Fillet	2166	2019	147		9.4		96.1
49	07/04/03	200	0+065	F2	CL Fillet	2205	2051	154		7.5		97.7
50	07/04/03	200	0+058	F2	CL Fillet	2249	2081	168		5.0		99.1

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm Material; Granite Blast Rock
Project Number: 1100060.007
Compaction Standard: ASTM D 698
Maximum Dry Density: 2100 kg/m3

Machine No: 31494
Specified Compaction: -
Specified Saturation: 90%
Optimum Moisture Content: 7.3%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
51	07/04/03	300	0+060	F-final	CL Fillet	2251	2086	165		5.1		99.3
52	07/04/03	350	0+220	F-final	CL Fillet	2130	2015	115		12.7		96.0
53	07/04/03	300	0+235	F-final	CL Fillet	2144	2039	105		12.8		97.1
54	07/04/06	150	0+155	KTB 1	?	2268	2039	229	11.2	0.4	98.1	97.1
55	07/04/06	150	0+195	KTB 1	4 m L of D/S	2251	1995	256	12.8	-0.6	100.0	95.0
56	07/04/06	150	0+230	KTB 1	2 m L of D/S	2254	1992	262	13.2	-1.1	100.0	94.9
57	07/04/07	150	0+145	KTB 1	5 m R of U/S	2300	2084	216	10.4	0.1	99.8	99.2
58	07/04/07	150	0+140	KTB 1	6 m R of U/S	2240	2011	229	11.4	1.5	93.9	95.8
59	07/04/07	150	0+120	KTB 1	2 m R of U/S	2237	1967	270	13.7	-0.9	100.0	93.7
60	07/04/09	150	0+015	LC 1	5 m R of U/S	2257	2011	246	12.2	-0.2	100.0	95.8
61	07/04/09	150	0+010	LC 1	9 m R of U/S	2255	2014	241	12.0	0.2	99.2	95.9
62	07/04/10	150	0+015	F1	CL Fillet	2171	2036	135		10.0		97.0
63	07/04/10	150	0+005	F1	CL Fillet	2218	2056	162		6.5		97.9
64	07/04/10	150	0+001	F1	CL Fillet	2291	2114	177		2.8		100.7
65	07/04/10	150	0+017	F2	CL Fillet	2260	2080	180		3.8		99.0
66	07/04/10	150	0+007	F2	CL Fillet	2272	2071	201		2.0		98.6
67	07/04/10	150	0+005	F2	CL Fillet	2240	2050	190		3.9		97.6
68	07/04/10	150	0+012	F3	CL Fillet	2256	2065	191		3.3		98.3
69	07/04/10	150	0+005	F3	CL Fillet	2274	2086	188		2.8		99.3
70	07/04/10	150	0+007	F4	CL Fillet	2268	2051	217		1.2		97.7
71	07/04/10	150	0+012	F4	CL Fillet	2219	2065	154		7.0		98.3
72	07/04/10	150	0+001	F5	CL Fillet	2248	2086	162		5.4		99.3
73	07/04/10	150	0+010	F5	CL Fillet	2247	2054	193		3.5		97.8
74	07/04/10	150	0+007	F6	CL Fillet	2184	2041	143		9.0		97.2
75	07/04/10	150	0+011	F6	CL Fillet	2250	2075	175		4.5		98.8

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm Material; Granite Blast Rock
Project Number: 1100060.007
Compaction Standard: ASTM D 698
Maximum Dry Density: 2100 kg/m3

Machine No: 31494
Specified Compaction: -
Specified Saturation: 90%
Optimum Moisture Content: 7.3%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
76	07/04/10	150	0+085	KTB 1	4 m R of U/S	2269	2049	220	10.7	1.0	95.8	97.6
77	07/04/10	100	0+105	KTB 1	1 m R of U/S	2258	2016	242	12.0	0.0	100.0	96.0
78	07/04/10	150	0+070	KTB 1	3m R of U/S	2285	2075	210	10.1	1.0	95.5	98.8
79	07/04/10	150	0+015	KTB 1	5m L of D/S	2264	2005	259	12.9	-1.3	100.0	95.5
80	07/04/10	150	0+210	KTB 2	3m L of D/S	2251	1973	278	14.1	-2.0	100.0	94.0
81	07/04/11	150	0+193	KTB 2	2.0 from fillet	2303	2090	213	10.2	0.1	99.4	99.5
82	07/04/11	150	0+215	KTB 2	3.5 from fillet	2254	1987	267	13.4	-1.4	100.0	94.6
83	07/04/14	150	0+145	KTB 2	4 m W of D/S	2267	2055	212	10.3	1.5	93.2	97.9
84	07/04/14	150	0+090	KTB 2	3 m W of D/S	2249	1971	278	14.1	-1.9	100.0	93.9
85	07/04/14	150	0+070	KTB 2	4 m W of D/S	2278	2073	205	9.9	1.6	92.9	98.7
86	07/04/16	150	0+048	KTB 3	4.0 from fillet	2249	2035	214	10.5	2.1	91.1	96.9
87	07/04/16	150	0+238	KTB 3	3.0 from fillet	2265	2036	229	11.2	0.6	97.6	97.0
88	07/04/16	150	0+220	KTB 3	3.0 from fillet	2225	2022	203	10.0	3.7	84.6	96.3
89	07/04/16	150	0+218	KTB 3	3.0 from fillet	2227	1996	231	11.6	1.9	92.5	95.0
90	07/04/16	150	0+200	KTB 3	3.0 from fillet	2274	2044	230	11.3	0.2	99.3	97.3
91	07/04/16	150	0+140	KTB 3	4 m L of U/S	2216	1918	298	15.5	-1.9	100.0	91.3
92	07/04/16	150	0+145	KTB 3	9 m L of U/S	2252	1988	264	13.3	-1.1	100.0	94.7
93	07/04/16	150	0+150	KTB 3	7 m L of U/S	2228	2017	211	10.5	3.1	87.3	96.0
94	07/04/16	150	0+100	KTB 3	2 m L of U/S	2284	2014	270	13.4	-2.7	100.0	95.9
95	07/04/18	150	0+220	KTB 4	2 m from fillet	2260	2025	235	11.6	0.4	98.4	96.4
96	07/04/18	150	0+180	KTB 4	2 m from fillet	2223	1957	266	13.6	-0.2	100.0	93.2
97	07/04/19	150	0+230	KTB 5	2.5 m W of D/S	2273	2000	273	13.7	-2.5	100.0	95.2
98	07/04/19	150	0+210	KTB 5	2.5 m E of U/S	2189	1908	281	14.7	0.2	99.4	90.9
99	07/04/19	150	0+180	KTB 5	4.0 m E of U/S	2273	1995	278	13.9	-2.8	100.0	95.0
100	07/04/19	150	0+200	KTB 5	3.0 m W of D/S	2241	1950	291	14.9	-2.4	100.0	92.9

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Test Apparatus: Nuclear
Soil Description: 20 mm Material; Granite Blast Rock
Project Number: 1100060.007
Compaction Standard: ASTM D 698
Maximum Dry Density: 2100 kg/m3

Machine No: 31494
Specified Compaction: -
Specified Saturation: 90%
Optimum Moisture Content: 7.3%

Test Number	Test Date	Test Depth (mm)	Station (m)	Elevation or Lift #	Offset (m)	Wet Density (kg/m^3)	Dry Density (kg/m^3)	Moisture (kg/m^3)	Moisture Content (%)	Air Voids (%)	Saturation (%)	Compaction (%)
101	07/04/19	150	0+150	KTB 4	4 m E of fillet	2304	2083	221	10.6	-0.4	100.0	99.2
102	07/04/19	150	0+140	KTB 4	4 m E of fillet	2229	1969	260	13.2	0.0	100.0	93.8
103	07/04/19	150	0+120	KTB 4	4 m E of fillet	2210	1931	279	14.4	-0.5	100.0	92.0
104	07/04/19	150	0+110	KTB 4	4 m E of fillet	2244	1982	262	13.2	-0.7	100.0	94.4
105	07/04/22	150	0+141	KTB 5	5 m R of U/S	2229	1965	264	13.4	-0.3	100.0	93.6
106	07/04/22	150	0+120	KTB 5	5 m R of U/S	2212	1927	285	14.8	-0.9	100.0	91.8
107	07/04/22	150	0+030	KTB 5	1.5 m R of U/S	2235	1985	250	12.6	0.4	98.5	94.5
108	07/04/22	150	0+050	KTB 5	2.0 m R of U/S	2240	1967	273	13.9	-1.2	100.0	93.7
109	07/04/22	150	0+070	KTB 5	1.5 m R of U/S	2275	2028	247	12.2	-0.9	100.0	96.6
110	07/04/22	150	0+095	KTB 5	2.5 m R of U/S	2266	2003	263	13.1	-1.6	100.0	95.4
111	07/04/22	150	0+220	KTB 5	1.5 R of U/S	2259	2056	203	9.9	2.4	89.4	97.9
112	07/04/22	150	0+200	KTB 5	2.0 R of U/S	2273	2032	241	11.9	-0.5	100.0	96.8
113	07/04/22	150	0+180	KTB 5	1.5 R of U/S	2215	1941	274	14.1	-0.4	100.0	92.4
114	07/04/22	150	0+160	KTB 5	1.5 R of U/S	2193	1969	224	11.4	3.6	86.2	93.8
115	07/04/24	150	0+030	KTB final	1.0 R of U/S	2220	1959	261	13.3	0.3	99.0	93.3
116	07/04/24	150	0+050	KTB final	1.0 R of U/S	2252	1994	258	12.9	-0.8	100.0	95.0
117	07/04/24	150	0+090	KTB final	1.0 R of U/S	2263	2025	238	11.8	0.1	99.7	96.4
118	07/04/24	150	0+110	KTB final	2.0 R of U/S	2242	2028	214	10.6	2.4	90.1	96.6
119	07/04/24	150	0+220	KTB final	2.5 R of U/S	2202	1944	258	13.3	1.1	95.8	92.6
120	07/04/24	150	0+200	KTB final	4.0 R of U/S	2228	1941	287	14.8	-1.7	100.0	92.4
121	07/04/24	150	0+175	KTB final	5.0 R of U/S	2274	2010	264	13.1	-2.0	100.0	95.7

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Modified Asphalt Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Leveling Course and Key Trench Backfill

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
1	07/03/19	19:15	30	LC 1	4		25.4	RAK	1300.0	1177.5	1152.1	10.6
2	07/03/19	10:45	45	LC 1	4		49.0	CJD	1265.4	1163.4	1114.4	9.2
3	07/03/22	20:45	45	LC 1	3		49.3	RAK	1019.8	934.0	884.7	9.7
4	07/03/22	22:25	41	LC 1	8		49.0	RAK	1008.7	936.0	887.0	8.2
5	07/03/22	23:35	-	LC 1	-		48.6	RAK	994.9	888.5	839.9	12.7
6	07/03/23	0:00	39	LC 1	12		48.0	RAK	941.8	866.4	818.4	9.2
7	07/03/23	1:00	-	LC 1	-		48.6	RAK	1086.1	971.0	922.4	12.5
8	07/03/26	5:07	41	LC 1	2		49.5	RAK	1013.9	914.0	864.5	11.6
9	07/03/26	6:15	-	LC 1	7		48.8	RAK	965.0	880.7	831.9	10.1
10	07/03/26	9:00	45	LC 1	5	0+110	51.3	CJD	1261.9	1141.0	1089.7	11.1
11	07/03/26	10:00	23	LC 1	7	0+125	50.4	CJD	1520.0	1394.0	1343.6	9.4
12	07/03/28	2:15	44	LC 1	2	0+130	48.5	RAK	911.4	825.9	777.4	11.0
13	07/03/28	4:10	48	LC 1	7	0+140	48.0	RAK	950.0	871.5	823.5	9.5
14	07/03/30	2:00	30	LC 1	1	0+090	24.9	GDK	1772.2	1570.9	1546.0	13.0
15	07/03/31	19:45	40	LC 1	1	0+080	22.2	GDK	1036.2	960.9	938.7	8.0
16	07/03/31	20:15	-	LC 1	3	0+080	21.9	GDK	1357.8	1243.8	1221.9	9.3
17	07/03/31	21:15	36	LC 1	7	0+060	22.7	GDK	1212.4	1114.6	1091.9	9.0
18	07/04/01	0:00	41	LC 1	?	0+060	22.6	GDK	1399.7	1273.1	1250.5	10.1
19	07/04/02	3:30	40	LC 1	1	0+200	23.9	GDK	1471.6	1355.2	1331.3	8.7
20	07/04/02	4:20	44	LC 1	4	0+210	23.8	GDK	1567.8	1442.2	1418.4	8.9
21	07/04/02	5:15	36	LC 1	7	0+220	24.2	GDK	1359.3	1258.1	1233.9	8.2
22	07/04/02	23:45	42	LC 1	1	0+060	24.3	GDK	1471.9	1338.9	1314.6	10.1
23	07/04/06	21:50	20	LC 1	4	0+170	50.2	RAK	1062.6	978.5	928.3	9.1
24	07/04/06	22:45	25	LC 1	8	0+170	49.4	RAK	1058.0	977.4	928.0	8.7
25	07/04/07	0:40	26	LC 1	13	0+180	49.5	RAK	1053.8	969.6	920.1	9.2

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Modified Asphalt Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Leveling Course and Key Trench Backfill

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
26	07/04/07	21:00	32	LC 1	1	0+150	49.2	RAK	1043.9	962.5	913.3	8.9
27	07/04/07	21:50	25	LC 1	4	0+145	49.2	RAK	1033.2	945.2	896.0	9.8
28	07/04/08	0:30	18	LC 1	10	0+120	49.8	RAK	1027.7	950.8	901.0	8.5
29	07/04/08	20:00	20	LC 1	2	0+010	50.6	RAK	1037.7	951.0	900.4	9.6
30	07/04/08	21:45		LC 1	6	0+010	49.6	RAK	1071.2	974.5	924.9	10.5
31	07/04/09	20:50	27	LC 1	2	0+010	50.3	RAK	1064.1	984.2	933.9	8.6
32	07/04/10	4:45	25	KTB 1	10	0+115	50.1	RAK	1043.5	953.9	903.8	9.9
33	07/04/10	5:30	21	KTB 1	13	0+110	50.5	RAK	1085.1	988.6	938.1	10.3
34	07/04/10	19:45	20	KTB 1	1	0+080	51.2	RAK	1093.4	1017.5	966.3	7.9
35	07/04/10	20:30	20	KTB 1	5	0+070	50.1	RAK	1105.6	1014.6	964.5	9.4
36	07/04/11	4:40	21	KTB 2	13	0+250	50.4	RAK	1098.3	1014.6	964.2	8.7
37	07/04/11	6:02	N/A	KTB 2	?	0+240	50.6	RAK	1054.7	960.0	909.4	10.4
38	07/04/11	6:15	20	KTB 2	16	0+250	49.3	RAK	1076.7	1002.0	952.7	7.8
39	07/04/11	8:00	21	KTB 2	2	0+230	50.9	PMC	1047.5	981.7	930.8	7.1
40	07/04/14	21:50	26	KTB 2	1	0+150	50.7	RAK	1035.0	970.0	919.3	7.1
41	07/04/14	22:56	22	KTB 2	2	0+150	49.6	RAK	1066.1	999.0	949.4	7.1
42	07/04/15	0:00	20	KTB 2	4	0+140	50.1	RAK	1082.7	995.8	945.7	9.2
43	07/04/15	1:20	20	KTB 2	6	0+130	49.3	RAK	1096.8	1015.5	966.2	8.4
44	07/04/15	4:20	19	KTB 2	18	0+080	50.0	RAK	1092.9	1030.4	980.4	6.4
45	07/04/16	12:40	11	KTB 3	2	0+240	49.6	PMC	1127.0	1027.7	978.1	10.2
46	07/04/16	13:40	5	KTB 3	5	0+230	24.2	PMC	1141.5	1056.7	1032.5	8.2
47	07/04/16	15:30	7	KTB 3	9	0+215	24.3	PMC	1196.8	1082.5	1058.2	10.8
48	07/04/16	17:24	4	KTB 3	15	0+200	24.8	PMC	1089.1	1006.2	981.4	8.4
49	07/04/16	18:20	5	KTB 3	19	0+180	24.7	PMC	918.1	836.2	811.5	10.1
50	07/04/16	20:10	24	KTB 3	4	0+160	48.7	RAK	1015.7	938.9	890.2	8.6

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Modified Asphalt Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Leveling Course and Key Trench Backfill

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
50	07/04/16	20:10	24	KTB 3	4	0+160	48.7	RAK	1015.7	938.9	890.2	8.6
51	07/04/17	0:24	20	KTB 3	6	0+150	48.5	RAK	1063.3	981.2	932.7	8.8
52	07/04/17	3:58	19	KTB 3	19	0+130	48.8	RAK	1098.7	1029.9	981.1	7.0
53	07/04/18	13:20	7	KTB 4	1	0+240	25.8	PMC	1209.1	1113.9	1088.1	8.7
54	07/04/18	14:55	8	KTB 4	6	NR	26.0	PMC	1251.8	1135.0	1109.0	10.5
55	07/04/18	16:15	8	KTB 4	10	NR	26.7	PMC	1176.8	1065.6	1038.9	10.7
56	07/04/19	8:45	5	KTB 5	4	0+230	25.6	PMC	1188.6	1079.0	1053.4	10.4
57	07/04/19	10:15	4	KTB 5	10	0+175	26.0	PMC	1177.7	1065.5	1039.5	10.8
58	07/04/19	10:40	5	KTB 5	11	0+170	24.3	PMC	1197.4	1077.2	1052.9	11.4
59	07/04/19	12:40	5	KTB 4	16	0+165	26.5	PMC	1050.7	950.7	924.2	10.8
60	07/04/19	13:30	5	KTB 4	19	0+160	26.9	PMC	1067.3	971.3	944.4	10.2
61	07/04/19	17:00	5	KTB 4	30	0+130	24.5	PMC	1121.1	1028.4	1003.9	9.2
62	07/04/22	8:10	9	KTB 5	2	0+150	26.4	PMC	715.1	653.1	626.7	9.9
63	07/04/22	9:00	8	KTB 5	6	0+135	25.9	PMC	978.0	892.7	866.8	9.8
64	07/04/22	11:50	12	KTB 5	16	0+105	25.6	PMC	999.6	926.9	901.3	8.1
65	07/04/22	13:00	7	KTB 5	21	0+080	26.2	PMC	915.3	836.8	810.6	9.7
66	07/04/22	13:40	3	KTB 5	NA	0+120	2689.6	PMC	9939.4	9157.7	6468.1	12.1
67	07/04/22	15:50	10	KTB 5	30	0+230	26.4	PMC	1074.3	977.6	951.2	10.2
68	07/04/22	17:10	5	KTB 5	36	0+200	26.5	PMC	938.2	856.6	830.1	9.8
69	07/04/24	8:55	6	KTB 6	3	0+160	24.3	PMC	1252.4	1143.8	1119.5	9.7
70	07/04/24	9:50	4	KTB 6	7	0+150	24.8	PMC	897.7	823.1	798.3	9.3
71	07/04/24	10:50	4	KTB 6	11	0+140	24.8	PMC	931.3	852.3	827.5	9.5
72	07/04/24	12:30	9	KTB 6	15	0+080	25.1	PMC	1114.0	1021.8	996.7	9.3
73	07/04/24	13:55	6	KTB 6	21	0+040	25.7	PMC	768.2	707.5	681.8	8.9
74	07/04/24	18:20	7	KTB 6	29	0+175	25.2	PMC	1203.4	1109.4	1084.2	8.7

EBA ENGINEERING CONSULTANTS LTD.

Project: **Southeast Dam**
Address: **Jericho Diamond Mine**
Client: **Tahera Diamonds Corporation**
Attention: **H. Gates/R. Jones/T. Loschiavo**

Production Method: Modified Asphalt Plant
Soil Description: 20 mm Material
Project Number: 1100060.007
Material Zone: Fillet

Test Number	Test Date	Time	Mix Temp. (°C)	Elevation or Lift #	Load Number	Station	Tare (g)	Test By	D+T (g)	Dry Soil (g)	Water (g)	Moisture Content (%)
1	07/03/28	13:45	22	1	-	0+160	47.0	CJD	949.3	892.4	845.4	6.7
2	07/03/28	23:00	25	1	2	0+200	22.6	GDK	1184.6	1129.8	1107.2	4.9
3	07/03/29	20:30	26	2	2	0+160	24.8	GDK	1403.1	1341.2	1316.4	4.7
4	07/03/29	23:30	26	2	8	0+140	24.9	GDK	1335.4	1259.0	1234.1	6.2
5	07/03/31	3:45	22	3	1	0+160	25.3	GDK	1104.9	1038.8	1013.5	6.5
6	07/03/31	5:45	24	3	5	0+200	25.3	GDK	1185.5	1110.6	1085.3	6.9
7	07/03/31	9:30	20	2	6	0+100	25.2	PC	1095.8	1021.5	996.3	7.5
8	07/03/31	13:00	27	3	13	0+100	25.2	PC	1105.6	1037.5	1012.3	6.7
9	07/03/31	14:30	24	3	18	0+090	22.3	PC	1115.8	1034.5	1012.2	8.0
10	07/03/31	15:45	19	4	20	0+100	22.6	PC	1168.1	1092.9	1070.3	7.0
11	07/04/01	17:50	22	4	29		24.5	PC	1053.2	992.5	968.0	6.3
12	07/04/01	18:25	21	4	?		23.1	PC	1065.2	998.1	975.0	6.9
13	07/04/03	2:30	38	1	1	0+050	24.2	GDK	1461.2	1361.9	1337.7	7.4
14	07/04/03	6:00	20	2	7	0+080	25.2	GDK	1413.9	1320.8	1295.6	7.2
15	07/04/03	8:30	18	3	3	0+070	22.6	PC	1397.2	1301.4	1278.8	7.5
16	07/04/03	13:15	32	3	15	0+080	23.6	PC	1089.5	1023.2	999.6	6.6
17	07/04/03	16:30	26	2	16		24.7	PC	1033.8	974.6	949.9	6.2
18	07/04/03	17:10	28	2	19		24.4	PC	1032.0	981.5	957.1	5.3
19	07/04/03	19:45	24	3	1	0+060	25.3	GDK	1376.3	1279.3	1254.0	7.7
20	07/04/04	2:30	24	3	3	0+200	25.8	GDK	1251.6	1187.6	1161.8	5.5
21	07/04/05	3:15	32	4	1	0+240	50.0	RAK	1004.0	951.0	901.0	5.9
22	07/04/05	5:50		4	3	0+210	49.7	RAK	990.6	935.7	886.0	6.2
23	07/04/05	9:45	23		2	0+150	25.1	PC	1050.9	975.9	950.8	7.9
24	07/04/09	22:20	25		4	0+010	50.7	RAK	1130.1	1055.2	1004.5	7.5

EBA ENGINEERING CONSULTANTS LTD.

Project	**Southeast Dam**	Production Method:	Reimer Truck Batch Plant
Address:	**Jericho Diamond Mine**	Soil Description:	20 mm Material
Client:	**Tahera Diamonds Corporation**	Project Number:	1100060.007
Attention:	**H. Gates/R. Jones/T. Loschiavo**		

Core Samples

Lab Number	**001**	**002**	**003**	**004**	**005**	**006**
Placement Date						
Cored By	PC	PC	PC			
Date	Apr 04/07	April 1/07	Apr 03/07			
Cored Length (mm)	150	250	200			
Location: Station	0+154	0+084	0+123			
Offset	3 m R of fillet toe	2 m R of fillet toe	1 m R of fillet toe			
Location: Northing						
Easting						
Elevation	Levelling Course	Levelling Course	Levelling Course			
Test by	PC	PC	PC			
Photo: Roll No.						
Frame No.(s)						
Trimmed Core (Frozen)						
Average Length (mm)	155	214	186			
Average Ø (mm)	97	101	101			
Mass in air (g)	1859.1	3340.3	2622.8			
Mass in water (g)	995.0	1791.0	1486.7			
Mass with ice coating (g)	1898.6	3390.2	2666.1			
Moisture Content						
Tare wt. (g)	2427.3	2423.3	791.2			
Wet wt. + tare (g)	4286.4	5763.6	3414.0			
Dry wt. + tare (g)	4097.0	5385.6	3221.5			
Wt. Water (g)	189.4	378.0	192.5			
Dry Wt. (g)	1669.7	2962.3	2430.3			
Moist. Cont.	11.3%	12.8%	7.9%			
Volume (cm^3), by mass	867	1553	1140			
Volume (cm^3), by dimensions	1134	1715	1490			
Frozen Bulk Density (kg/m^3)	2144	2150	2301			
Frozen Dry Density (kg/m3)	1925	1907	2133			
Ice Saturation	**80.4%**	**87.0%**	**86.2%**			
Comments:						

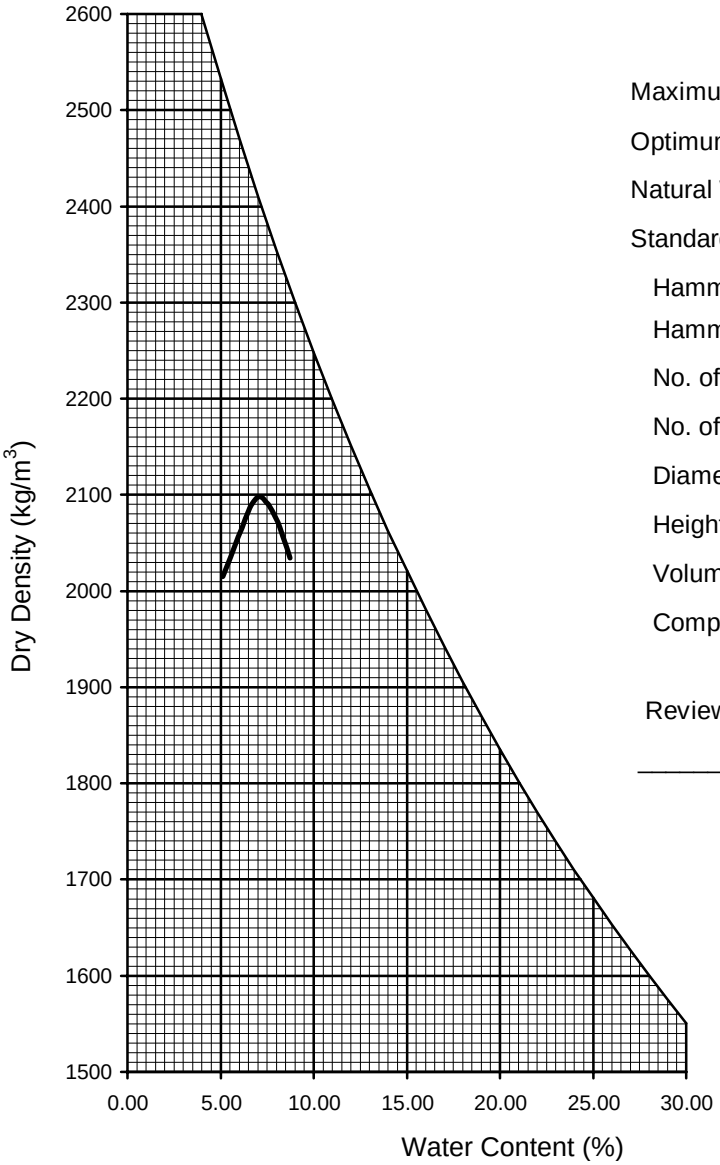
APPENDIX

APPENDIX K SOUTHEAST DAM MOISTURE DENSITY RELATIONSHIP

EBA ENGINEERING CONSULTANTS LTD.

MOISTURE-DENSITY RELATIONSHIP

Project:	Jericho Diamond Project	Sample No.:	4367-4
Address:	Jericho Diamond Mine, NU	Date Sampled:	n/a
		Sample ID:	20W07-005 to 20W07-008
Project No.:	0101-04-1100060.007		
Date Tested:	26-Feb-07 By: ZB	Sample Description:	-16 mm crush
Client:	Tahera Diamond Corp.		
Attention			



Maximum Dry Density:	2100 kg/m^3
Optimum Water Content:	7.2%
Natural Water Content:	1.2%

Standard Proctor (ASTM D 698) Part D

Hammer Weight:	2.5 kg
Hammer Drop:	305 mm
No. of Layers:	3
No. of Blows / Layer:	56
Diameter of Mould:	152 mm
Height of Mould:	116 mm
Volume Mould:	2124 cm^3
Compactive Effort:	600 kJ/m^3

Reviewed By:

_____ P. Eng.

APPENDIX

APPENDIX L SOUTHEAST DAM GROUND TEMPERATURE PROFILES

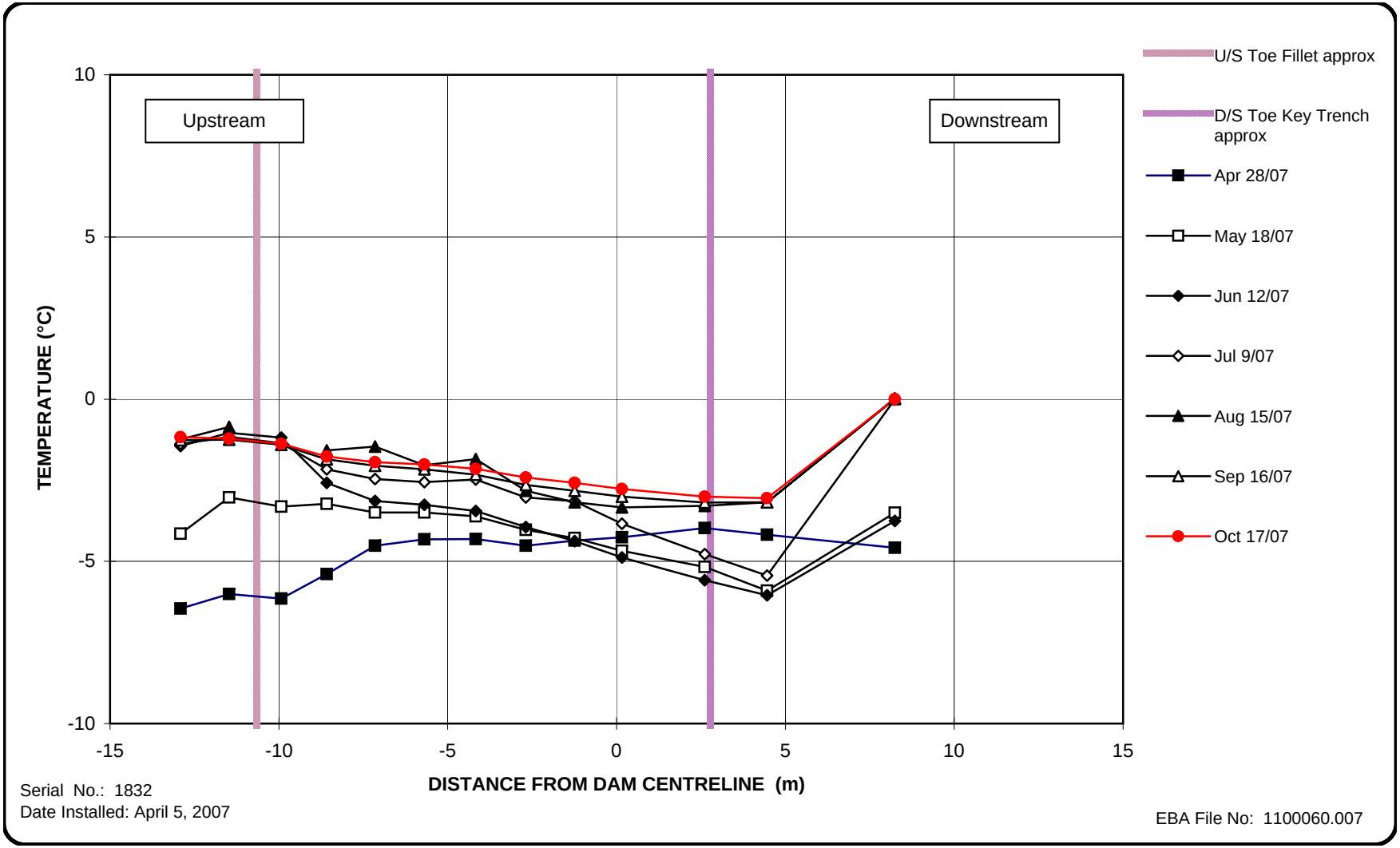
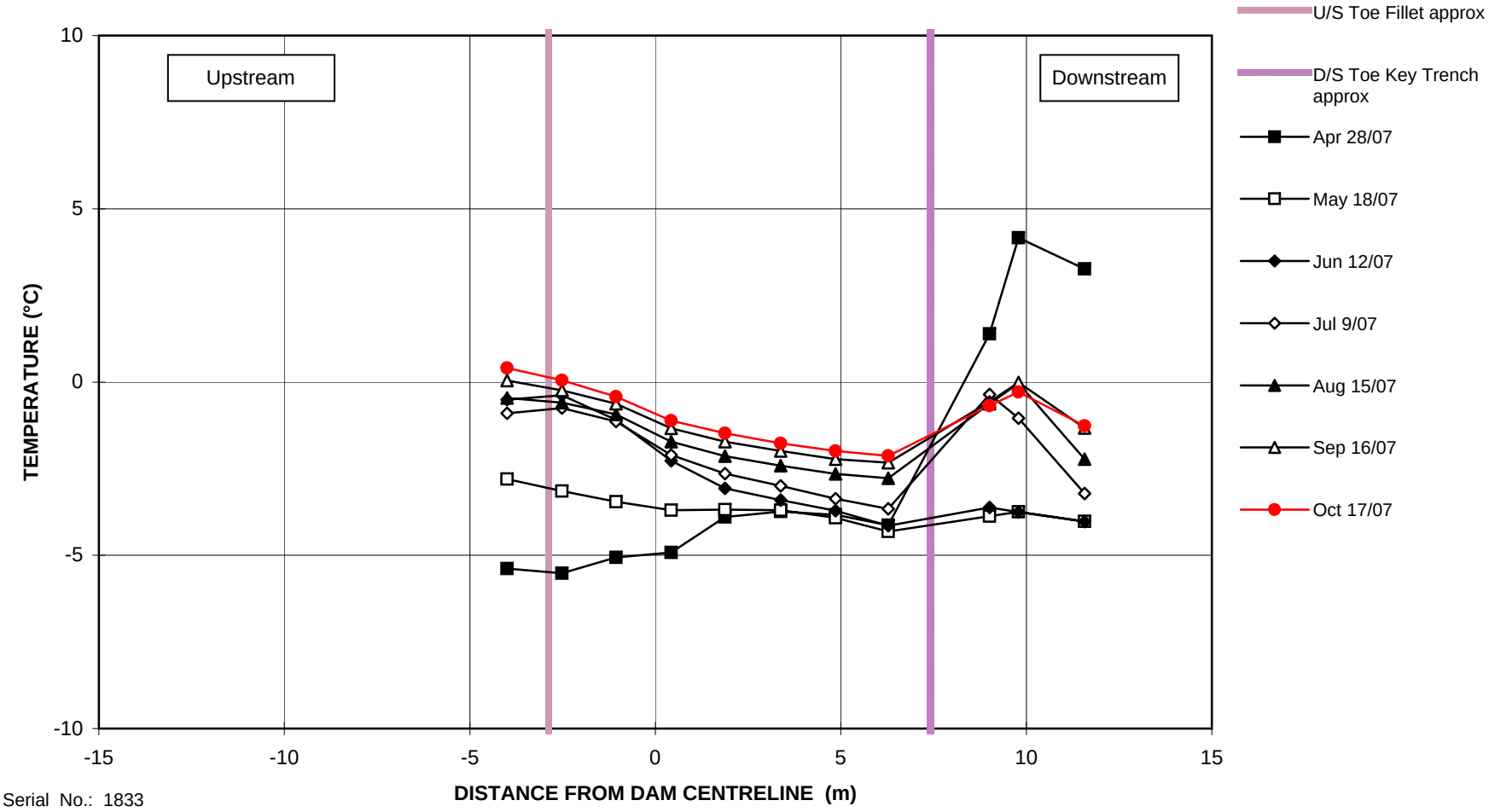


Figure L-1
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+150, Trench Elevation 516 m



Serial No.: 1833
Date Installed: April 5, 2007

EBA File No: 1100060.007

Figure L-2
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+200, Trench Elevation 516 m

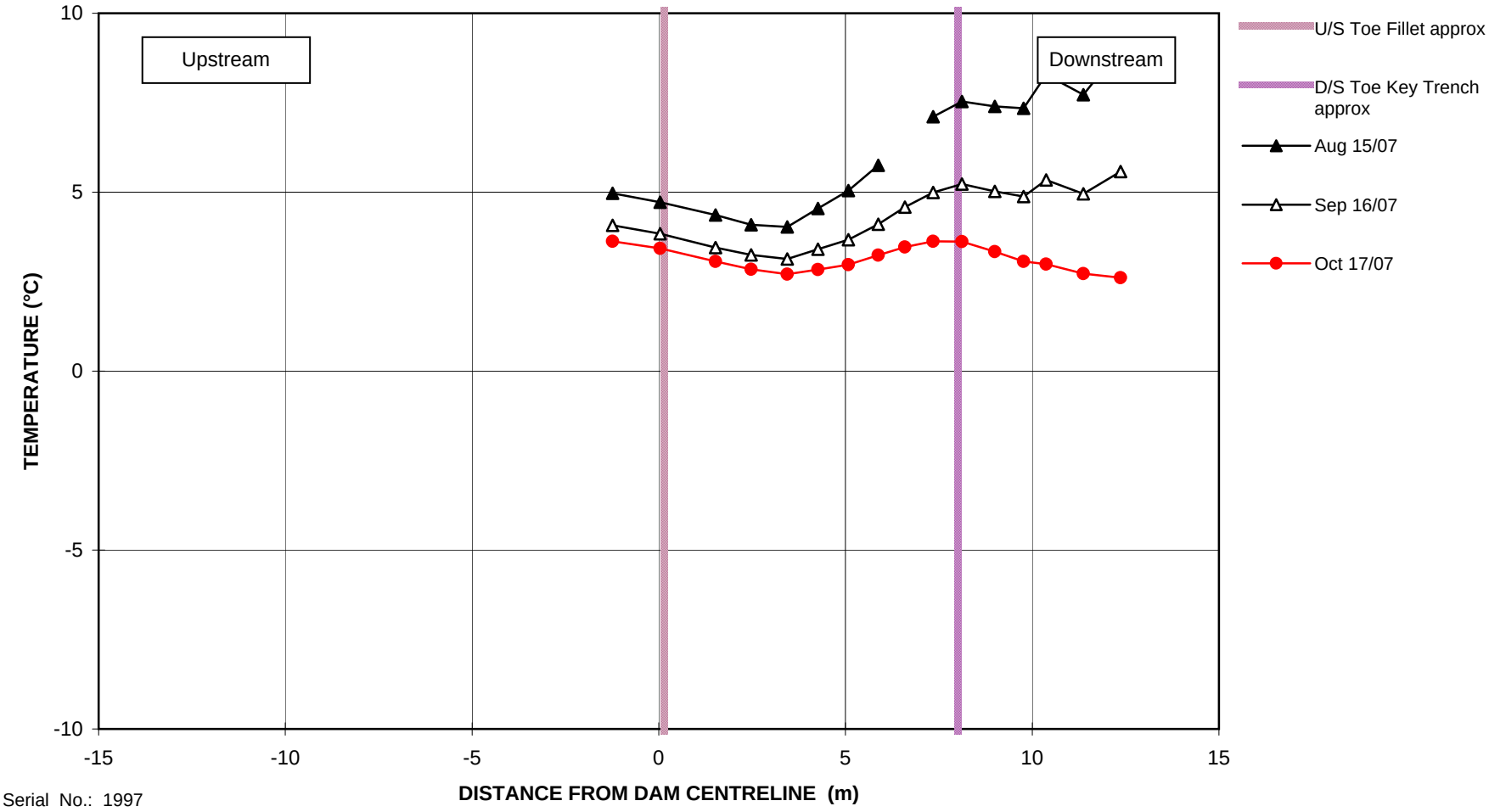


Figure L-3
Horizontal Ground Temperature Distribution
Southeast Dam
Station 0+240, Trench Elevation 520 m

APPENDIX

APPENDIX M SOUTHEAST DAM WEEKLY REPORTS

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT

Ending: September 30, 2006

On-Site EBA Personnel: Jason Porter (Sept. 27 – Sept. 30)

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

EBA mobilized to site during the report period. A meeting between Tahera (Roland Jones), Nuna (Dave Sherlock) and EBA (Jason Porter) was held on September 28th to develop a work plan and to discuss scheduling. Issues discussed during the meeting are presented in the construction section of each structure.

2.0 WEST DAM CONSTRUCTION

The run-of-mine thermal cover needs to be removed from the West Dam once freezing conditions begin. Currently dewatering lines from Long Lake are running over the crest of the dam. Nuna has requested permission to place the stripped thermal cover on the downstream side of the dam to reduce haul distance. Water is currently pumped from Long Lake over the dam.

3.0 EAST DAM CONSTRUCTION

EBA is investigating the possibility of any stability or liner related issues on the East Dam that may be caused by Nuna's proposed Southeast Dam access road. Sub-Arctic Surveys (SAS) surveyed the coarse tailings stockpiles that lay against the west side of the East Dam. The data was sent to EBA's office for analysis.

The D4 dozer and 769 haul truck began construction of the road by levelling the coarse tailings stockpiles and extending a road north towards the Southeast Dam.

4.0 SOUTH EAST CONSTRUCTION

The slopes of the keytrench need to be pulled back and any loose material removed. The base of the keytrench requires cleaning prior to levelling course placement. Percolation testing will be required in the bedrock portions of the keytrench to determine if the summer thaw penetration has affected its permeability.

These issues were discussed during the aforementioned meeting. Nuna currently lacks the labour manpower to commence cleaning of the keytrench. Drilling of the percolation testing holes will commence once the road to the dam is complete and the drill becomes available.

5.0 DIVIDER DYKE CONSTRUCTION

SAS survey the coarse tailings adjacent to the East Dam and the fine tailings in the Long Lake Basin. Suitable till was not available for the production of Filter material during the report period. Currently, the moisture content of the till is too high for crusher use.

6.0 MATERIAL PRODUCTION

Nuna's Clemro crusher did not produce granular material for the dam during the report period. Nuna collected samples of the 20 mm crush produced while EBA was not on site.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Source suitable till for the production of Filter material;
- Complete access road and begin cleaning of Southeast Dam keytrench.

8.0 SAFETY

There were no safety concerns during this report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.

Project Engineer

jporter@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT # 2

Ending: October 7, 2006

On-Site EBA Personnel: Jason Porter (Oct. 1 – Oct. 7)

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

No construction took place on any of the dam structures. Planning meetings between Tahera, Nuna and EBA were held throughout the week. Methods of producing saturated fill for the dams were the prime focus. A preliminary schedule for the winter work was produced.

2.0 DIVIDER DYKE CONSTRUCTION

Samples of till material were taken from the pit. Grain size analysis was performed to determine the material's suitability for the production of filter material. The samples had 20% to 23% passing the 0.080 mm sieve and moisture contents from 9.2% to 12.7%. A significant amount of large oversize rock is present in the till. Much of this rock may have to be removed to prevent the filter material from falling outside the specification once the rock is crushed.

3.0 MATERIAL PRODUCTION

Nuna's Clemro crusher did not produce granular material for the dam during the report period. Nuna collected samples of the 20 mm crush produced while EBA was not on site. The samples were tested and met the specified requirements.

4.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Source suitable till for the production of Filter material;
- Complete access road and begin cleaning of Southeast Dam keytrench.

5.0 SAFETY

There were no safety concerns during this report period.

6.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.

Project Engineer

jporter@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT # 3

Ending: October 14, 2006

On-Site EBA Personnel: Jason Porter (Oct. 8 – Oct. 14)

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Production of 200 mm crush commenced during the report period. No construction took place on any of the dam structures. Planning meetings between Tahera, Nuna and EBA continued during the report period.

2.0 SOUTHEAST DAM CONSTRUCTION

The locations of the holes for percolation testing were located in the keytrench. The holes were based on previous percolation testing though were adjusted slightly for the convenience of the drill rig. Exact locations of the holes will be surveyed once the drilling is complete. Drilling was delayed during the report period due to pit operations requirements.

3.0 DIVIDER DYKE CONSTRUCTION

Cleaning of the ROM surface on the Divider Dyke took place during the report period. The Cat 16H grader removed snow in preparation for placement of additional ROM. The Cat 345 excavator removed the culvert that was placed across the access road for the plant water reclaim line. Samples of till material were taken from the crusher stockpile. Grain size analysis was performed to determine the material's suitability for the production of filter material.

4.0 MATERIAL PRODUCTION

Nuna's Clemro crusher produced 200 mm transition material during the report period. Four samples of the crush were taken. Three of the samples met the specified requirements (Dyke Spec.) while one sample had an elevated sand fraction of 20% passing the 5 mm. The specification as an upper limit of 15% passing the 5 mm.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Begin crushing Filter material;
- Complete percolation testing at the Southeast Dam;
- Begin cleaning the Southeast Dam keytrench; and
- Place ROM material at the Divider Dyke.

6.0 SAFETY

There were no safety concerns during this report period.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.

Project Engineer

jporter@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT # 4

Ending: October 21, 2006

On-Site EBA Personnel:	Jason Porter	(Oct. 15 – Oct. 18)
	Scott Dimitroff	(Oct. 16 – Oct. 21)

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Production of 200 mm crush commenced during the report period. No construction took place on any of the dam structures. Planning meetings between Tahera, Nuna and EBA continued during the report period.

2.0 SOUTHEAST DAM CONSTRUCTION

The percolation test holes were drilled in the keytrench. Percolation testing was completed. Test hole locations were surveyed. As a result of percolation test results, it was decided that the key trench will have to be lowered. Design

3.0 DIVIDER DYKE CONSTRUCTION

Cleaning of the ROM surface on the Divider Dyke took place during the report period. The Cat 16H grader removed snow in preparation for placement of additional ROM. The Cat 345 excavator removed the culvert that was placed across the access road for the plant water reclaim line. Samples of till material were taken from the crusher stockpile. Grain size analysis was performed to determine the material's suitability for the production of filter material.

4.0 MATERIAL PRODUCTION

Nuna's Clemro crusher produced 200 mm transition material during the report period. Four samples of the crush were taken. Three of the samples met the specified requirements (Dyke Spec.) while one sample had an elevated sand fraction of 20% passing the 5 mm. The specification as an upper limit of 15% passing the 5 mm.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Begin crushing Filter material;
- Complete percolation testing at the Southeast Dam;
- Begin cleaning the Southeast Dam keytrench; and
- Place ROM material at the Divider Dyke.

6.0 SAFETY

There were no safety concerns during this report period.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.

Project Engineer

jporter@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT # 1

Ending: March 10, 2007

On-Site EBA Personnel: Jason Porter (Mar 4 – Mar. 10)

Weather:

Mar 3 (Sat)	@ 12:00 hrs.	-36°C, wind 5 knots NW, clear.
Mar 4 (Sun.)	@ 12:00 hrs.	-38°C, wind 8 knots WNW, clear.
Mar 5 (Mon.)	@ 12:00 hrs.	-31°C, wind 18 knots W, blowing snow.
Mar 6 (Tues.)	@ 12:00 hrs.	-31°C, wind 5 knots W, sunny.
Mar 7 (Wed.)	@ 12:00 hrs.	-24°C, wind 18-23 knots E, blowing snow.
Mar 8 (Thurs.)	@ 12:00 hrs.	-31°C, wind 10 knots N, clear.
Mar 9 (Fri.)	@ 12:00 hrs.	-36°C, wind 7 knots N, clear.
Mar 10 (Sat.)	@ 12:00 hrs.	-36°C, wind 0 knots, sunny.

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction commenced at the Southeast Dam on March 3, 2007. Nuna began to clean the key trench using an excavator, compressed air and labourers with hand tools. Work was concentrated on the till zone in the between approximately 0+130 and 0+190. There was no significant construction activity at the West Dam during the report period. Assembly of Nuna's processed fill batch plant continued throughout the report period. Currently the dams are behind schedule by at least as two weeks. It is imperative that fill placement commence soon or the dams will not be completed during the winter season.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

No significant activity took place at the West Dam during the report period while work focused on the Southeast Dam.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Cleaning of the key trench commenced during the report period. Nuna used a 345 excavator with either a toothed or cleaning bucket to remove material from the trench. The toothed bucket was used to loosen ice lenses and friable material from the till zone. A ripper tooth attachment was equipped with a blowpipe adapter to allow the excavator to

scratch the surface and use compressed air for cleaning. McCaws' Ingersol-Rand 900 with 50 mm airline supplied the compressed air but the unit had cooling problems resulting in periodic downtime. A labour crew equipped with hand tools worked areas that were inaccessible for the excavator and provided support for the air compressor. By the end of the report period there were no sections that were approved for fill placement.

A fillet zone, which is smaller than show in the design drawings, is being planned for the key trench. Construction of the fillet can be very time consuming and minimizing the size of the zone will accelerate the project schedule. A pair of small compactors, a double drum walk-behind and a plate tamper, were mobilized to site by Tahera for fillet construction.

A&A Technical Services are scheduled to mobilize to site on March 26th to place the first phase of the HDPE liner system in the Southeast Dam.

4.0 MATERIAL PRODUCTION

All processed materials for dam construction have been crushed previously. Nuna's Clemro crusher was used to produce kimberlite for process plant operations. The crusher is scheduled for disassembly and will be trucked off site prior to the closure of the winter road.

The assembly of Nuna's batch plant for producing saturated core material continued throughout the report period. At the start of the report period the building structure had been erected and the mixing drum and control tower were in place. Nuna millwright Mr. Jim Dureen arrived on site on March 5th to complete the assembly. Snow had in-filled portions of the electrical wiring which required the use of a "hot-box" to thaw and dry the system. The plant was initially scheduled to be operating and commissioned by March 4th. The operating date was pushed back in February to between March 7th and 10th. The change was in part due to the late opening of the winter road. Currently the plant is not expected to be running until midway through the next report period. This delay represents a significant setback and it will be very difficult to finish the dams during the 2007 winter season.

5.0 QUALITY ASSURANCE TESTING

No quality assurance testing was required during the report period.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Commission the saturated fill batch plant;
- Continue cleaning the key trench of the Southeast Dam;

- Begin preparation and cleaning of the West Dam core to prepare for saturated fill placement.

7.0 SAFETY

No safety issues were encountered during the report period. EBA discussed the need for improved access and lines of sight to the Southeast Dam when travelling through the ROM Pad area. Tahera and Nuna will address this in the near future prior to fill placement at the Southeast Dam.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason Porter, P.Eng.

Project Engineer

jporter@eba.ca

PKCA DAM & DYKE CONSTRUCTION

WEEKLY REPORT # 3

Ending: March 24, 2006

On-Site EBA Personnel:	Jason Porter	(Mar 18 - Mar. 24)
	Chris Dixon	(Mar 19 – Mar 24)
	Renata Klassan	(Mar 18 – Mar 24)

Weather:

Mar 19 (Sun)	@ 12:00 hrs.	-31°C, wind 5 knots SW, clear, sun.
Mar 20(Mon)	@ 12:00 hrs.	-27°C, wind 10 knots NE, clear, sun.
Mar 21 (Tues)	@ 12:00 hrs.	-26°C, winds 6 knots SE, blowing snow.
Mar 22 (Wed.)	@ 12:00 hrs.	-31°C, wind 6 knots W, clear.
Mar 23 (Thu)	@ 12:00 hrs.	-17°C, wind 3 knots S, Sun.
Mar 24 (Fri)	@ 12:00 hrs.	-17°C, wind 10 knots SE, overcast.
Mar 25 (Sat.)	@ 12:00 hrs.	-12°C, wind 15 knots E, blowing snow.

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Placement of saturated fill commenced during the report period. The batch plant was commissioned on March 18th and began producing fill on March 19th. Three partial lifts of core were placed at the West Dam and a partial lift of levelling course was placed at the Southeast Dam. Cleaning continued at both dams using heavy equipment, compressed air and hand tools. Exposing the Geo-synthetic Clay Liner (GCL) at the West Dam was a major focus during the report period.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of core material commenced at the West Dam on March 19th. Partial lifts of saturated 20 mm material were placed over the downstream half of the core zone. Labour crews continue to expose the GCL liner along the length of the dam therefore placement on the upstream half of the core was not possible. By the end of the report period three lifts of material were placed along the downstream portion of the core from 0+025 to 0+130. The placement of additional lifts was halted until fill can be placed on the upstream portion of the core. A lift of Type C transition material was also placed downstream of the core. Material volumes were estimated from the as-built survey and truck box volumes. In the future Sub Arctic Survey will produce detailed weekly survey volumes. Approximately

675m^3 of 20 mm Type D material and 180m^3 of 200 mm Type C material was placed at the West Dam during the report period.

A combination of heavy equipment and hand tools were used to expose the GCL liner which was covered with plywood and coarse processed kimberlite (PK). Sections of the frozen PK were broken up by hand using a Hilti drill and prybars. A Bobcat Skid Steer Loader with a breaker attachment was also used but was ineffective at breaking up the material. On March 20th McCaws Cat 330 excavator with hoe-ram attachment was brought to the dam and proved very effective at breaking up the frozen PK. The labour crew removed the majority of the broken fill and plywood and EBA examined the GCL for damage. Several incidences were noted and Nuna began to make the repairs. Damage that was found near the hinge required the use of indirect fired heaters to remove frozen cover material so sufficient overlap of the repair could be achieved.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Cleaning of the key trench continued during the report period. The parts for McCaws' Ingersol-Rand 900 air compressor arrived on site and the unit was put back in service on March 22nd. Due to the breakdown of the air compressor, the cleaning progressed slower than expected therefore the mobilization of A&A Technical Services was postponed by a week to April 2.

Placement of the levelling course commenced on March 19th. A lift of saturated 20 mm fill was placed over the till zone in the key trench from approximately 0+145 to 0+195. A second section of the levelling course was placed on March 22nd from 0+195 to 0+220. Approximately 190m^3 of 20 mm Type D material was placed during the report period.

4.0 MATERIAL PRODUCTION

Nuna's batch plant for producing saturated core material was commissioned on March 18th and became fully operational on March 19th. The plant was used to produce saturated 20 mm fill for the core of the West Dam and the levelling course of the Southeast Dam. The plant was down on March 21st due to problems with the drive for the mixing drum. Parts were sourced from Tahera's Process Plant and the plant was back in operation by March 22nd. The plant performed well during its first week of operation. A total of 94 loads were produced during 31 operating hours. A maximum production of 27 loads in a shift was achieved. The plant is producing consistent material but fine-tuning of moisture content is difficult as the electronic control valve for water addition was malfunctioning and was replaced with a manual valve.

5.0 QUALITY ASSURANCE TESTING

EBA provided quality assurance testing during the construction of the West and Southeast Dams.

During processed fill placement, samples were taken from the discharge of the batch plant mixing drum. The samples were tested for moisture content, mix temperature and grain size to ensure adherence to the construction specifications.

The freezeback of the 20 mm core material was monitored using single bead thermistors (SBT's). The lifts were cooled to a maximum temperature of -2°C prior to placement of subsequent lifts.

Compaction and saturation of the placed 20 mm material was monitored using a Troxler moisture-density. To confirm the saturation of the 20 mm material, core samples will be taken from the lifts. Currently Tahera is working on sourcing a generator to provide power for the coring rig. No core samples were taken during the report period.

The material testing performed during the report period indicates that the material is being produced and placed in manner that meets the design intent.

6.0 CONSTRUCTION SCHEDULE

The dams continue to be several weeks behind schedule. Though some progress was made during the report period, there is still much work to be completed in the next few weeks. During the 2006 winter construction season the placement of frozen material ceased in mid April because freezeback was not longer possible.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue exposing and repairing GCL liner at the West Dam;
- Continue placement of 20 mm core material and 200 mm transition material at the West Dam;
- Continue cleaning of the key trench and placement of levelling course material at the Southeast Dam;
- Commence construction of fillet zone at Southeast Dam.

8.0 SAFETY

No safety issues were encountered during the report period. Access to the Southeast Dam through the ROM area was improved by the addition of an additional ramp at the north end of the East Dam.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
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jporter@eba.ca

Christopher J. Dixon, P.Eng.
Project Engineer
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EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #4
ENDING: MARCH 31, 2007

EBA Personnel:		
	Chris Dixon	Mar 25 – Mar 31
	Jason Porter	Mar 25 – Mar 28
	Renata Klassen	Mar 25 – Mar 28
	Gary Koop	Mar 28 – Mar 31
	Paul Christman	Mar 28 – Mar 31

WEATHER			
Mar 25 (Sun)	@ 12:00 hrs.	-19°C	wind calm, partially cloudy
Mar 26(Mon)	@ 12:00 hrs.	-22°C	wind 15 knots SE, overcast
Mar 27 (Tues)	@ 12:00 hrs.	-12°C	wind 8 knots SW, sunny
Mar 28 (Wed.)	@ 12:00 hrs.	-22°C	wind 5 knots SW, sunny
Mar 29 (Thu)	@ 12:00 hrs.	-22°C	wind 10 knots SE, sunny
Mar 30 (Fri)	@ 12:00 hrs.	-21°C	wind 5 knots NE, sunny
Mar 31 (Sat.)	@ 12:00 hrs.	-21°C	wind 8 knots NE, sunny

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna continued to heat and hoard the upstream slope of the West Dam to expose the Geo-synthetic Clay Liner (GCL) placed in 2006. The GCL was exposed, cleaned off and a new piece of GCL was placed from Station 0+018 to Station 0+095. Nuna placed three lifts of saturated fill on the upstream side of the West Dam core zone, bringing the upstream side of the core level with the downstream side. Nuna also placed an additional two lifts of saturated fill across the entire width of the West Dam.

Nuna continued to clean the key trench at the Southeast Dam. The key trench was cleaned and levelling course fill was placed between Station 0+055 and Station 0+150. Nuna placed four lifts of fillet material from Station 0+080 to Station 0+200. Nuna removed the access ramp on the upstream side of the dam at Station 0+130 to allow levelling course material to be placed. Nuna constructed two access ramps during the week at the Southeast Dam one of transition material and one of levelling course material, at Stations 0+150 and 0+055, respectively.

Nuna had a safety incident during the report period. A CAT D300E haul truck was hauling saturated core material from the batch plant to the West Dam and lost control on the south side of the Divider Dyke, skidded off the haul road onto the snow covered tundra and tipped the box over. The cab remained upright and the driver was not injured. The truck sustained minor damage and was taken out of service until inspected by a mechanic.

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2.0 WEST DAM CONSTRUCTION ACTIVITIES

Hand tools were used to expose the GCL liner, which was covered with plywood and coarse processed kimberlite (PK). McCaws Cat 330 excavator with hoe-ram attachment previously broke up sections of the frozen PK. Nuna set up indirect fired heaters and hoarding over the exposed sections of GCL to thaw the frozen PK adjacent to the GCL. Once thawed, Nuna removed the PK with hand tools to obtain the best possible contact between the 2006 GCL and the GCL being placed this year. Nuna excavated additional PK where a continuous 200 mm space was interrupted by GCL damage. All visible damage in the 2006 GCL was patched with a combination of bentonite and GCL. The total overlap (including patched GCL) was at least 1.5 m. The overlap between the 2006 GCL and the new GCL contains a continuous 200 mm seam of bentonite paste (mixed at 6 parts water to 1 part bentonite). The bentonite seam was placed in such a manner that there was no visible damage to the 2006 GCL in the footprint of nor below the seam. The new GCL extends at least 2.5 m beyond the toe of the core material. This 2.5 m section of new GCL will be folded up onto the core slope once it is constructed and properly shaped.

Placement of saturated core material continued at the West Dam throughout the report period. Nuna placed three partial lifts of saturated core material on the upstream side of the dam after the GCL liner was exposed, bringing the upstream and downstream sides of the core even. Subsequent to the three partial lifts, Nuna placed one complete lift and one partial lift (Station 0+030 to Station 0+050) of saturated core material across the entire width of the Dam. The core material is constructed approximately to elevation 523.4 from approximately Station 0+140 to the south extent.

Sub-Arctic Surveys (SAS) have not yet prepared material volumes for the project. SAS reports the volumes should be submitted sometime this week. When the volumes are reported an e-mail will follow summarizing the volume of materials placed to date, volume of materials remaining to be placed and the estimated amount of 20 mm material remaining on site.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Nuna continued cleaning the key trench continued during the report period. Levelling course material was placed as a section of the key trench was cleaned to EBA's satisfaction. Nuna completed key trench cleaning and levelling course placement from Station 0+085 to Station 0+150 during the report period. Nuna removed the access ramp at Station 0+130 to clean the key trench and placed levelling course in that area. Nuna constructed two new ramps at Station 0+150 and Station 0+055 to access the key trench. The ramps were constructed of 200 mm minus and levelling course material, respectively.

Nuna commenced construction of the fillet during the report period. The fillet zone constructed differs from that shown in the Construction Drawings. The Construction Drawings show the fillet zone extending 1 m above the upstream side of the key trench. To

save time and 20 mm material, the fillet will be constructed so that the hinge point of the liner is 1 m above the surface of the levelling course material. This will shift the position of dam downstream of its design location. The approximate length of the shift is 6.5 m. The fillet was constructed to final grade during the report period from Station 0+080 to Station 0+210.

SAS have not yet prepared material volumes for the project. SAS reports the volumes should be submitted sometime this week. When the volumes are reported an e-mail will follow summarizing the volume of materials placed to date, volume of materials remaining to be placed and the estimated amount of 20 mm material remaining on site.

4.0 MATERIAL PRODUCTION

During the report period, Nuna operated the batch plant for a total of 74 hours, producing 189 loads of material. The aforementioned load count is a combination of saturated core material placed at the West Dam and levelling course and fillet material placed at the Southeast Dam. Nuna achieved a maximum production of 32 loads in a shift. The batch plant has operated for a total of 105 hours producing 283 loads to date in 2007.

5.0 QUALITY ASSURANCE TESTING

EBA provided quality assurance testing during the construction of the West and Southeast dams.

EBA obtained samples of the 20 mm minus material placed in core, levelling course and fillet zones of the West and Southeast dams during the report period. EBA obtained the samples from both the plant discharge belt while the batch plant was operational and from the location of placement. EBA conducted mix temperature, moisture content and grain size analysis testing on the samples. Testing results for the report period are summarized in Table 1.

Compaction and saturation of the placed levelling course, fillet and core materials were monitored using a Troxler moisture-density gauge; results are summarized in Table 1.

To confirm the saturation of the 20 mm material, one core sample was obtained from the 4th lift placed on the West Dam this year. Test results indicate that the core had a bulk density of 2197 kg/m^3, a moisture content of 11.5% and a saturation of 88.3%.

TABLE 1: QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Fillet	10	6.5	20	2036	N/A	96.9
Southeast Dam levelling course	11	10.2	6	1973	89.8	N/A
West Dam core	16	8.5	14	1984	93.1	N/A

The freeze-back of the 20 mm core material and levelling course was monitored using single bead thermistors (SBT's). The lifts were cooled to a maximum temperature of -2°C prior to placement of subsequent lifts.

EBA conducted a total of 10 particle size distribution tests on the 20 mm material placed throughout the week. The average particle size distribution of the samples tested this week and the average particle size distribution of the samples tests for the project are attached.

The material testing performed during the report period indicates that the material is being produced and placed in manner that meets the design intent.

6.0 CONSTRUCTION SCHEDULE

The dams continue to be several weeks behind schedule. Though some progress was made during the report period, there is still much work to be completed in the next few weeks. During the 2006 winter construction season, the placement of frozen material ceased in mid-April because freezeback was no longer possible.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material, 200 mm transition material, and run-of-mine fill at the West Dam;
- Complete cleaning of the key trench and placement of levelling course material at the Southeast Dam;
- Complete construction of fillet zone at Southeast Dam.
- Install the composite liner system at the Southeast Dam.

8.0 SAFETY

While hauling core material to the West Dam on March 30, 2007, a loaded D300E operated by Nuna lost control on the south side of the Divider Dyke and slide off the haul road and the box of the truck tipped over. The cab of the truck remained upright and truck skidded approximately 15 m past the windrow of snow on the side of the road. The operator was not injured and immediately returned to work. The truck sustained minor damage and was immediately taken out of service pending an inspection by Nuna's mechanic.

The spilt core material was cleaned off the snow-covered tundra and placed on the surface of the haul road in the vicinity of the incident location. The road was later graded with 50 mm minus material. Excessive speed and human error are the initial root causes of the incident. For further information, please refer to Nuna's incident report.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Christopher J. Dixon, P.Eng.
Project Engineer
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Jason L. Porter, P.Eng.
Project Engineer
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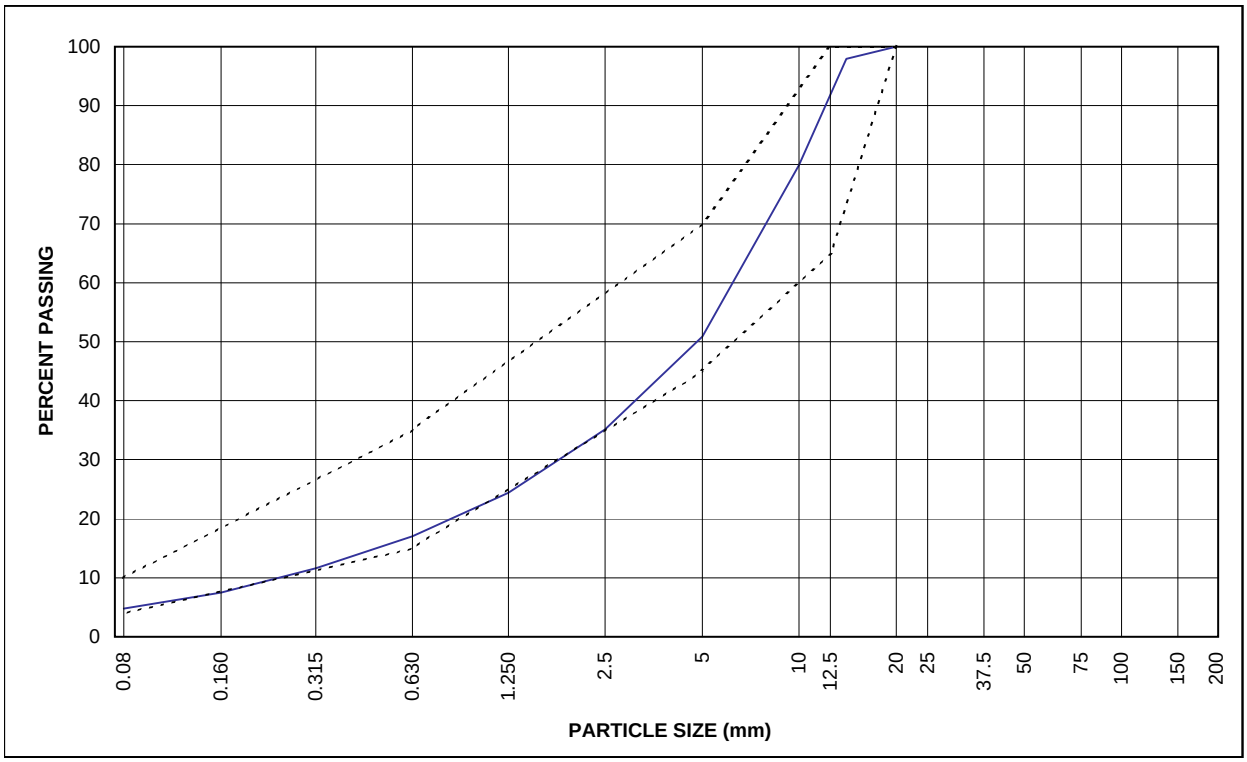
EBA ENGINEERING CONSULTANTS LTD.

PARTICLE SIZE SUMMARY REPORT

PROJECT:	**Jericho Diamond Mine**
SITE:	**Jericho, NU**
	20 mm Crush for Dam Construction
PROJECT NO:	**1100060.007**
CLIENT:	**Tahera Attention: H.Gates/R.Jones/T.Lochiavo**
SAMPLE NO'S:	**20W07-027 to 20W07-036**
WEEK ENDING:	**2007.03.31**
USC CLASSIFICATION:	
NATURAL MOISTURE CONTENT:	**8.4%**
SPECIFICATION BAND PLOTTED:	**20mm**
REMARKS:	

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	96.2
10	81.4
5	55.9
2.5	42.6
1.25	30.8
0.63	21.4
0.315	13.9
0.16	8.7
0.08	5.3

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



Test Status: **PASS**

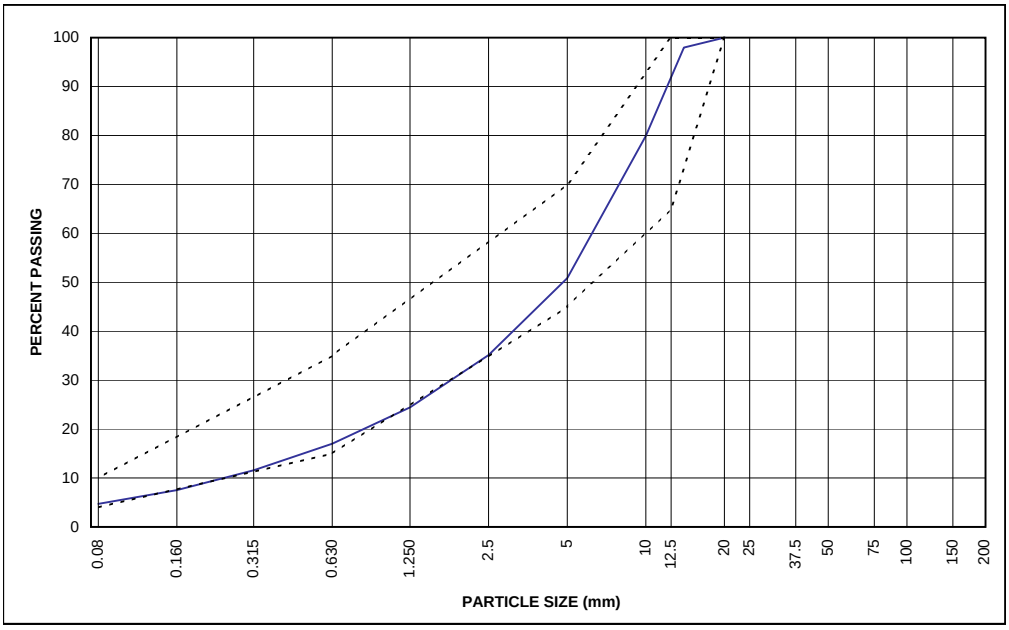
EBA ENGINEERING CONSULTANTS LTD.

PARTICLE SIZE SUMMARY REPORT

PROJECT:	Jericho Diamond Mine
SITE:	Jericho, NU
	20 mm Crush for Dam Construction
PROJECT NO:	1100060.007
CLIENT:	Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO'S:	20W07-001 to 20W07-036
WEEK ENDING:	2007.03.31
USC CLASSIFICATION:	
NATURAL MOISTURE CONTENT:	8.4%
SPECIFICATION BAND PLOTTED:	20mm
REMARKS:	

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	97.6
10	81.3
5	53.6
2.5	38.5
1.25	27.1
0.63	18.7
0.315	12.4
0.16	7.9
0.08	5.0

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



Test Status: PASS

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #5
ENDING: APRIL 7, 2007

EBA Personnel:

Chris Dixon	Apr 1 – Apr 7
Paul Christman	Apr 1 – Apr 7
Gary Koop	Apr 1 – Apr 4
Renata Klassen	Apr 4 – Apr 7

WEATHER			
Apr 1 (Sun)	@ 12:00 hrs.	-32°C	wind calm, sunny
Apr 2 (Mon)	@ 12:00 hrs.	-30°C	wind 5 knots SE, sunny
Apr 3 (Tues)	@ 12:00 hrs.	-24°C	wind 7 knots SW, sunny
Apr 4 (Wed.)	@ 12:00 hrs.	-21°C	wind 6 knots SW, sunny
Apr 5 (Thu)	@ 12:00 hrs.	-21°C	wind 7 knots SW, sunny
Apr 6 (Fri)	@ 12:00 hrs.	-15°C	wind 15 knots SE, sunny
Apr 7 (Sat.)	@ 12:00 hrs.	-13°C	wind 16 knots SE, sunny

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna continued to heat and hoard the upstream slope of the West Dam to expose the Geo-synthetic Clay Liner (GCL) placed in 2006. The GCL was exposed and cleaned off from Station 0+010 to Station 0+018. Nuna placed five lifts of saturated fill across the entire width of the West Dam. Nuna placed three lifts of transition material and two lifts of run-of-mine rockfill downstream of the core at the West Dam. EBA installed one ground temperature cable (GTC) (#1922) on the West Dam at Station 0+120 and elevation 522 m.

Nuna completed cleaning of the key trench and placed levelling course and fillet material from Sta. 0+055 to the north abutment rock-face of the Southeast Dam. Nuna began to clean the liner key from Station 0+055 to Station 0+030 to ensure the Southeast Dam is properly keyed into elevation 524 m. EBA installed two GTCs on the Southeast Dam, #1832 and #1833, at Station 0+150 and 0+200, respectively.

A&A Technical mobilized to site on Wednesday April 4. At the end of the report period A&A Technical had installed the liner system (60 mil HDPE between two layers of 540g/m^2 non-woven geotextile) from the north abutment to Station 0+100 on the Southeast Dam.

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2.0 WEST DAM CONSTRUCTION ACTIVITIES

Nuna cleaned frozen core material from the 2006 GCL at the north abutment, from Station 0+010 to Station 0+018. Hand tools were used to expose the GCL liner, which was covered with 20 mm minus core material. McCaws Cat 330 excavator with hoe-ram attachment previously broke up sections of the frozen core material. Nuna set-up indirect fired heaters and hoarding over the exposed sections of GCL to thaw the frozen PK adjacent to the GCL. Once thawed, Nuna removed the core material with hand tools to obtain the best possible contact between the 2006 GCL and the GCL being placed this year. Nuna excavated additional core material where a continuous 200 mm space was interrupted by GCL damage. Nuna did not place any new GCL this week.

Placement of saturated core material continued at the West Dam throughout the report period. Nuna placed five complete lifts of saturated core material across the entire width of the Dam. The core material is constructed approximately to elevation 523.4 from approximately Station 0+120 to the south extent. The low point of the core is in the vicinity of Station 0+020 and is at elevation 520.0 m.

Nuna placed the 5th lift of core material thicker than the requested 200 mm by 25 to 75 mm. The material required more than 48 hours to cool to below -2^{o}C. The experience on the project this year is a lift thickness of 200 mm will cool to below -2^{o}C in 24 hours or less. The additional lift thickness requires a significant amount of extra time to freeze to below -2^{o}C. In the future the lift thickness should be 200 mm or less to minimize the amount of freeze-back time required.

Nuna trafficked over the 5th lift while the material was still freezing. The D4 bulldozer left track marks and the 573C packer left ridges in the surface of the core material lift. The D4 bulldozer was required, after freeze-back was obtained, to clean the surface to a continuous solid lift to ensure a good bond between 5th and 6th lifts.

Nuna placed three 0.5 m lifts of transition material on the downstream side of the core material. Nuna used the CATD4 bulldozer to push the 200 mm minus material into the transition zone limits, the material was packed with the CAT 573C packer, but not moisture conditioned. Sub-Arctic Surveys (SAS) staked out the toe of the transition material prior to placement of the lift to help control the volume of 200 mm minus material used.

Nuna placed two 1 m lifts of run-of-mine rockfill on the downstream side of the transition material. Nuna used the CAT 345 excavator to place the material and the CAT 573C packer to compact the material. Nuna obtained the material from the downstream side of the dam, where the thermal cover placed in 2006 was stockpiled when the core material was uncovered earlier this winter. The run-of-mine material placed from Station 0+020 to Station 0+080 is contaminated with snow and ice chunks. This material must be removed prior to placement of additional run-of-mine material in the area.

Nuna began to excavate the run-of-mine material placed on the downstream side of the dam during the report period. The run-of-mine material was placed on the downstream

side during the uncovering of the core material earlier this winter. The material was excavated, sorted, and the material acceptable for re-use was stockpiled near the stockpile of 200 mm material at the south end of the dam. The material must be removed to construct the design 3H:1V downstream slope. The material will be used in the run-of-mine material zone as it is constructed.

Sub-Arctic Surveys (SAS) have not yet prepared material volumes for the project. SAS reports the volumes should be submitted sometime this week. When the volumes are reported an e-mail will follow summarizing the volume of materials placed to date, volume of materials remaining to be placed and the estimated amount of 20 mm material remaining on site.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Nuna continued cleaning the key trench continued during the report period. Levelling course material was placed as a section of the key trench was cleaned to EBA's satisfaction. Nuna completed key trench cleaning and levelling course placement from Station 0+150 to the north abutment and from Station 0+075 to Station 0+055 during the report period

Nuna completed construction of the fillet, to final grade, from Station 0+055 to the north abutment during the report period. The fillet zone constructed differs from that shown in the Construction Drawings. The Construction Drawings show the fillet zone hinge point 1 m above the upstream crest of the key trench. To save time and 20 mm material, the fillet will be constructed so that the hinge point of the liner is 1 m above the surface of the levelling course material. This will shift the position of dam downstream of its design location. The approximate length of the shift is 6.5 m.

The elevation of the base of the key trench at Station 0+055 is 521.5 m. The design crest of the Southeast Dam is 524 m. The key trench must tie into the crest elevation to ensure water does not short circuit the abutment to the south. To ensure that the key trench is properly keyed into the South abutment the key trench was extended approximately 25 m southwest. The surface organics and some glacial till was ripped with a CAT D9 bulldozer and dug out of the trench by a CAT 345B excavator. At the end of the report period the base of the key trench was not cleaned sufficiently enough for placement of levelling course material. Once the preparations are completed and levelling course is placed, the fillet zone will be placed so that A&A Technical can complete the installation of the liner system in this area. The liner at the north abutment must be covered with frozen saturated fill to elevation 524 to prevent short circuit of water around the north abutment liner.

A&A Technical was mobilized to site on Wednesday April 4, 2007 for installation of the liner system at the Southeast Dam. The geomembrane used for construction of the Southeast Dam varies from that specified in the Construction Specifications. The Construction Specifications call for a 40 mil polypropylene liner but a 60 mil HDPE is being used as an acceptable alternate material. A&A Technical is installing the HDPE

geomembrane between two pieces of 540 g/m^3 non-woven geotextile, as per the Construction Specifications. At the end of the report period A&A Technical had installed the liner system from the north abutment to approximately Station 0+100.

Subsequent to the placement of the liner system Nuna began placement of the 1st lift of key trench backfill (liner cover material). The first lift of liner cover was placed in a 250 mm thick lift, to protect the underlying liner, and static-rolled with a 573C compactor. At the end of the report period Nuna had placed liner cover from the north abutment to Station 0+110.

SAS have not yet prepared material volumes for the project. SAS reports the volumes should be submitted sometime this week. When the volumes are reported an e-mail will follow summarizing the volume of materials placed to date, volume of materials remaining to be placed and the estimated amount of 20 mm material remaining on site.

4.0 MATERIAL PRODUCTION

Nuna had intermittent problems with the batch plant burner throughout the report period. It seems that that source of the problem is with a sensor, which regulates the amount of fuel being sent to the burner. At first the sensor was by-passed removing the ability to control the temperature of the burner from the control tower. Later Nuna repaired the burner was properly and it was functioning properly at the end of the report period.

During the report period, Nuna operated the batch plant for a total of 70 hours, producing 251 loads of material. The aforementioned load count is a combination of saturated core material placed at the West Dam and levelling course, liner cover and fillet material placed at the Southeast Dam. Nuna achieved a maximum production of 43 loads in a shift. The batch plant has operated for a total of 175 hours producing 534 loads to date in 2007.

5.0 QUALITY ASSURANCE TESTING

EBA provided quality assurance testing during the construction of the West and Southeast dams.

EBA obtained samples of the 20 mm minus material placed in core, levelling course, fillet, and key trench backfill zones of the West and Southeast dams during the report period. EBA obtained the samples from both the plant discharge belt while the batch plant was operational and from the location of placement. EBA conducted mix temperature, moisture content and grain size analysis testing on the samples. Testing results for the report period and overall results for the project are summarized in Table 1 and 2, respectively.

Compaction and saturation of the placed levelling course, fillet and core materials were monitored using a Troxler moisture-density gauge; weekly results are summarized in Table 1. The average overall results are summarized in Table 2.

To confirm the saturation of the 20 mm material, EBA obtained four core samples the 5th and two core samples from the 7th lifts placed at the West Dam this year. Test results indicate that the 5th lift core had an average bulk density of 2213 kg/m^3, an average moisture content of 10.0% and a saturation of 83.4%. Test results also indicate that the 7th lift core had an average bulk density of 2266 kg/m^3, an average moisture content of 9.8% and a saturation of 90.6%.

TABLE 1: WEEKLY AVERAGE - QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam fillet	13	6.7	17	2053	N/A	97.8
Southeast Dam levelling course	6	9.3	2	2024	93.5	N/A
Southeast Dam key trench backfill	7	9.1	6	2015	100	N/A
West Dam core	29	9.2	26	2016	95.2	N/A

TABLE 2: OVERALL AVERAGE - QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Fillet	23	6.6	37	2044	N/A	97.3
Southeast Dam levelling course	24	10.0	16	1947	95.2	N/A
Southeast Dam key trench backfill	7	9.1	6	2015	100	N/A
West Dam core	58	9.3	50	1993	94.1	N/A

The freeze-back of the 20 mm core material, levelling course, and key trench backfill was monitored using single bead thermistors (SBT's). Each lift was cooled to at least -2°C prior to placement of subsequent lift. EBA installed three permanent ground temperature cables (GTC) during the report period. EBA installed two GTCs in the Southeast Dam key trench, #1832 and #1833 at Stations 0+150 and 0+200, respectively. EBA installed one GTC at the West Dam, #1922 at Station 0+120 (Elev 522 m). All three cables were covered with saturated 20 mm minus material for protection.

EBA conducted a total of 8 particle size distribution tests on the 20 mm material placed throughout the week. The average particle size distribution of the samples tested this week and the average particle size distribution of the samples tests for the project are attached.

The material testing performed during the report period indicates that the 20 mm minus stockpile occasionally becomes segregated. It is imperative that the operator of the loader feeding the batch plant is constantly mixing the stockpile to minimize the amount of material segregation.

6.0 CONSTRUCTION SCHEDULE

The dams continue to be several weeks behind schedule. Though some progress was made during the report period, there is still much work to be completed in the next few weeks. During the 2006 winter construction season, the placement of frozen material ceased in mid-April because freezeback was no longer possible.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material, 200 mm transition material, and run-of-mine fill at the West Dam;
- Remove the run-of-mine material overbuild at the West Dam
- Complete cleaning of the key trench and placement of levelling course material at the Southeast Dam south abutment;
- Complete construction of fillet zone at Southeast Dam south abutment.
- Complete installation the composite liner system at the Southeast Dam.
- Continue liner cover material placement at the Southeast Dam.

8.0 SAFETY

There were no safety incidents during the report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

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Project Engineer
cdixon@eba.ca

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

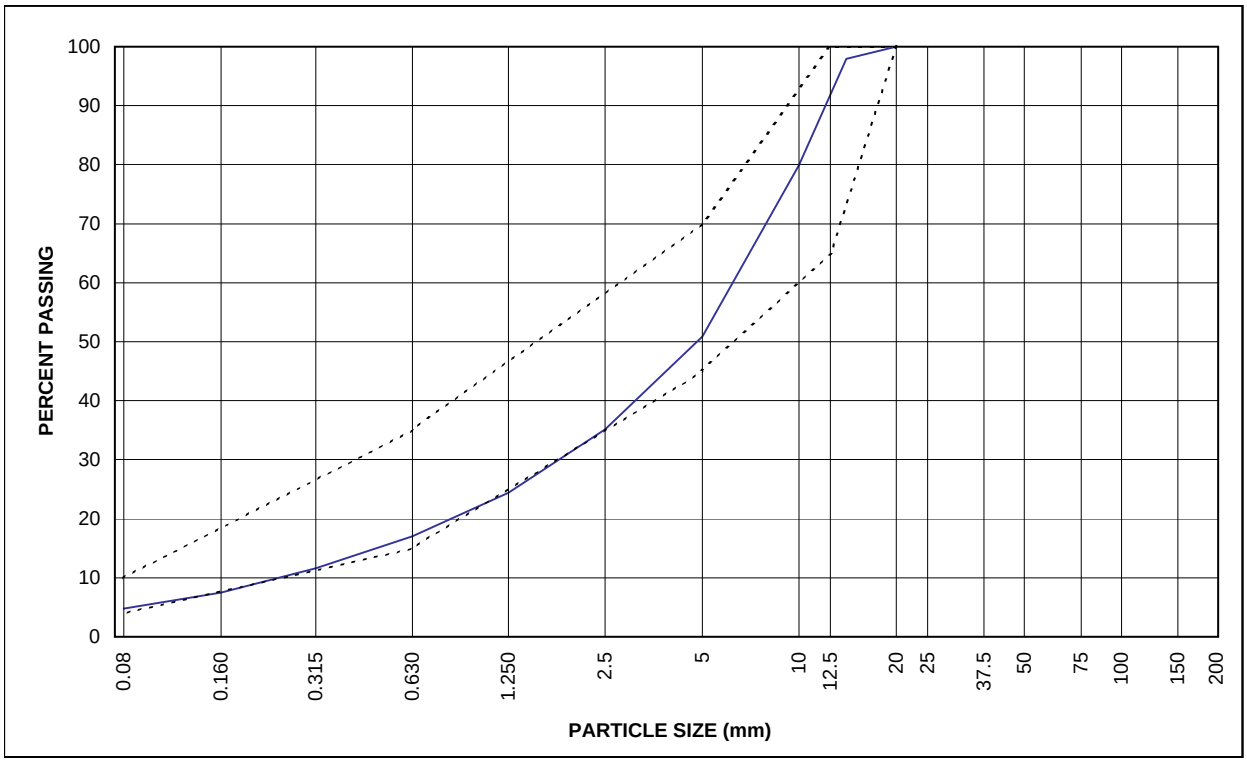
EBA ENGINEERING CONSULTANTS LTD.

PARTICLE SIZE SUMMARY REPORT

PROJECT:	**Jericho Diamond Mine**
SITE:	**Jericho, NU**
	20 mm Crush for Dam Construction
PROJECT NO:	**1100060.007**
CLIENT:	**Tahera Attention: H.Gates/R.Jones/T.Lochiavo**
SAMPLE NO'S:	**20W07-037 to 20W07-044**
WEEK ENDING:	**2007.04.07**
USC CLASSIFICATION:	
NATURAL MOISTURE CONTENT:	**8.5%**
SPECIFICATION BAND PLOTTED:	**20mm**
REMARKS:	

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	97.1
10	77.8
5	49.0
2.5	34.7
1.25	24.2
0.63	17.2
0.315	12.0
0.16	8.3
0.08	5.7

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



Test Status: **PASS**

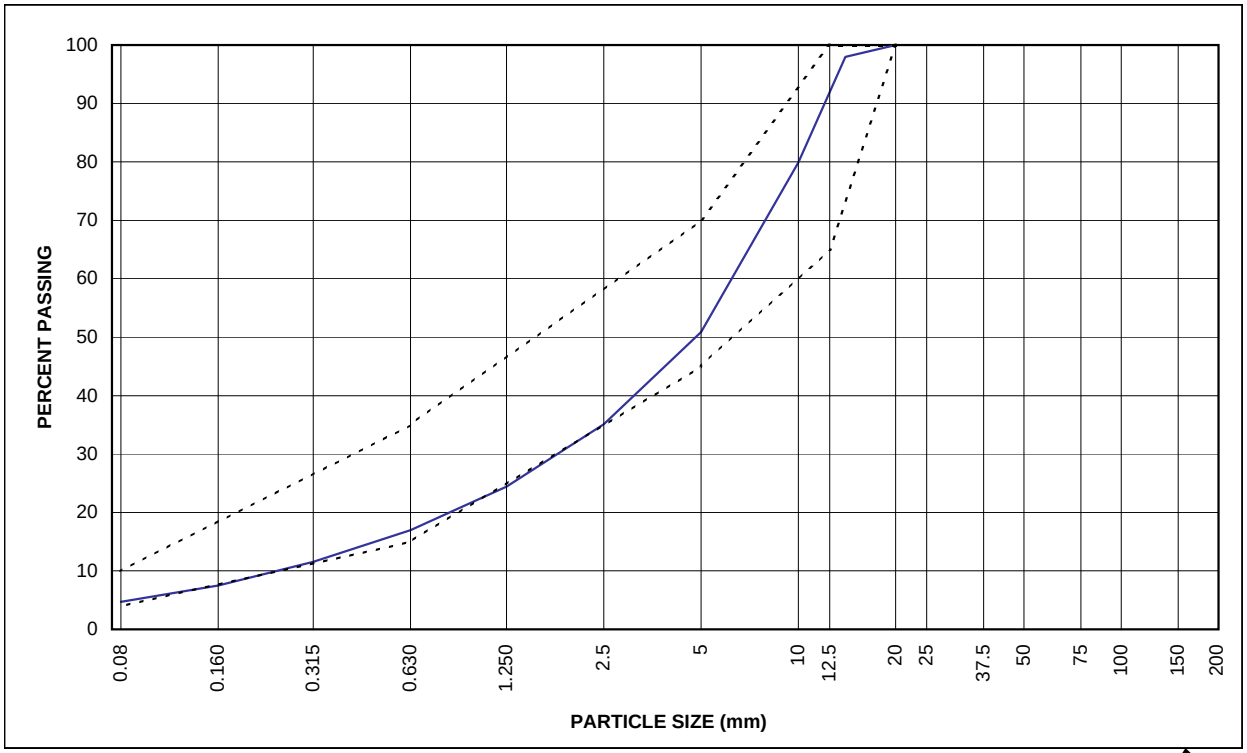
EBA ENGINEERING CONSULTANTS LTD.

PARTICLE SIZE SUMMARY REPORT

PROJECT:	**Jericho Diamond Mine**
SITE:	**Jericho, NU**
	20 mm Crush for Dam Construction
PROJECT NO:	**1100060.007**
CLIENT:	**Tahera Attention: H.Gates/R.Jones/T.Lochiavo**
SAMPLE NO'S:	**20W07-001 to 20W07-044**
WEEK ENDING:	**2007.04.07**
USC CLASSIFICATION:	
NATURAL MOISTURE CONTENT:	**8.5%**
SPECIFICATION BAND PLOTTED:	**20mm**
REMARKS:	

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	97.5
10	80.8
5	52.9
2.5	37.9
1.25	26.6
0.63	18.4
0.315	12.3
0.16	8.0
0.08	5.1

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



Test Status: **PASS**

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #6
ENDING: APRIL 14, 2007

EBA Personnel:

Jason Porter	Apr 11 – Apr 14
Chris Dixon	Apr 8 – Apr 11
Paul Christman	Apr 18 – Apr 14
Renata Klassen	Apr 8 – Apr 14

WEATHER			
Apr 8 (Sun)	@ 12:00 hrs.	-4°C	wind 20 knots S, freezing rain
Apr 9 (Mon)	@ 12:00 hrs.	-7°C	wind 15 knots SE, foggy
Apr 10 (Tues)	@ 12:00 hrs.	-9°C	wind 10 knots SW, clear
Apr 11 (Wed.)	@ 12:00 hrs.	-3°C	wind 3 knots N, overcast
Apr 12 (Thu)	@ 12:00 hrs.	-2°C	wind calm, clear
Apr 13 (Fri)	@ 12:00 hrs.	-10°C	wind 3 knots E, clear
Apr 14 (Sat.)	@ 12:00 hrs.	-12°C	wind calm, clear

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna placed one lift of saturated fill across the entire width of the West Dam. Warm weather during the report period slowed freezeback resulting in reduced frozen fill placement. A snow lens was found in downstream run-of-mine zone and required excavation and re-placement of the material.

Nuna completed placement of the levelling course and fillet material while, A&A Technical completed the first phase of the liner during the report period. A single lift of key trench backfill was placed over the entire length of the liner.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of saturated core material continued at the West Dam during the report period. Nuna placed one complete lift of saturated core material across the entire width of the Dam. The core material is constructed approximately to elevation 523.5 from approximately Station 0+135 to the south extent. No 150 mm transition material was placed during the report period.

While excavating the run-of-mine material placed on the downstream side of the dam a large seam of snow was discovered within the material. Nuna removed the thermal cover from the dam core in late 2006 and failed to remove the snow from the downstream run-of-mine zone before casting the material on the downstream slope. The material was

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excavated, sorted, and the material acceptable for re-use was stockpiled near the stockpile of 200 mm material at the south end of the dam. Material that was contaminated with significant amounts of snow was sorted out and will not be used in dam construction.

Sub-Arctic Surveys (SAS) have not yet prepared material volumes for the project. SAS reports the volumes should be submitted sometime this week. When the volumes are reported an e-mail will follow summarizing the volume of materials placed to date, volume of materials remaining to be placed and the estimated amount of 20 mm material remaining on site.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Nuna completed key trench cleaning and levelling course placement during the report period. The key trench was cleaned to EBA's satisfaction and two lifts of levelling course material was placed from 0+000 to 0+020.

Nuna completed fillet zone construction during the report period. The final length of fillet was placed to final grade from Station 0+000 to 0+025. The fillet zone constructed differs from that shown in the Construction Drawings. The Construction Drawings show the fillet zone hinge point 1 m above the upstream crest of the key trench. To save time and 20 mm material, the fillet will be constructed so that the hinge point of the liner is 1 m above the surface of the levelling course material. This will shift the position of dam downstream of its design location. The approximate length of the shift is 6.5 m.

A&A Technical completed installation of the liner system at the Southeast Dam during the report period. The geomembrane used for construction of the Southeast Dam varies from that specified in the Construction Specifications. The Construction Specifications call for a 40 mil polypropylene liner but a 60 mil HDPE is being used as an acceptable alternate material. A&A Technical is installing the HDPE geomembrane between two pieces of 540 g/m^3 non-woven geotextile, as per the Construction Specifications. At the end of the report period A&A Technical had installed first phase of the liner system along the entire length of the key trench. The second phase of the liner will be installed once the superstructure of the dam is complete.

Nuna continued placement key trench backfill (liner cover material) throughout the report period. The first lift of liner cover was placed in a 250 mm thick lift, to protect the underlying liner, and static-rolled with a 573C compactor. At the end of the report period the first lift of liner cover extended the entire length of key trench and a second lift had been placed from 0+060 to the north abutment (0+220).

SAS have not yet prepared material volumes for the project. SAS reports the volumes should be submitted during the next report period.

4.0 MATERIAL PRODUCTION

During the report period, Nuna operated the batch plant for a total of 27 hours, producing 76 loads of material. The aforementioned load count is a combination of saturated core material placed at the West Dam and levelling course, liner cover and fillet material placed at the Southeast Dam. The batch plant has operated for a total of 202 hours producing 610 loads to date in 2007.

5.0 QUALITY ASSURANCE TESTING

EBA provided quality assurance testing during the construction of the West and Southeast dams.

EBA obtained samples of the 20 mm minus material placed in core, fillet, and key trench backfill zones of the West and Southeast dams during the report period. EBA obtained the samples from both the plant discharge belt while the batch plant was operational and from the location of placement. EBA conducted mix temperature, moisture content and grain size analysis testing on the samples. Testing results for the report period and overall results for the project are summarized in Table 1 and 2, respectively.

Compaction and saturation of the placed levelling course, fillet and core materials were monitored using a Troxler moisture-density gauge; weekly results are summarized in Table 1. The average overall results are summarized in Table 2.

TABLE 1: WEEKLY AVERAGE - QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam fillet	1	7.5	14	2066	N/A	98.4
Southeast Dam Key trench fill	14	8.8	12	2027	98.0	96.5
West Dam core	7	7.8	7	2034	95.8	96.9

TABLE 2: OVERALL AVERAGE - QUALITY ASSURANCE TEST RESULTS						
	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Fillet	24	6.6	51	2050	N/A	97.6
Southeast Dam levelling course	31	9.8	18	1954	94.6	93.1
Southeast Dam key trench backfill	10	8.6	16	2024	98	96.4
West Dam core	68	9.2	57	1998	93.5	95.1

TThe freezeback of the 20 mm core material, leveling course, and key trench backfill was monitored using single bead thermistors (SBT's). Each lift was cooled to at least -2°C prior to placement of subsequent lift.

EBA conducted a total of 8 particle size distribution tests on the 20 mm material placed throughout the week. The average particle size distribution of the samples tested this week and the average particle size distribution of the samples tests for the project are attached.

The material testing performed during the report period indicates that the 20 mm minus stockpile occasionally becomes segregated. It is imperative that the operator of the loader feeding the batch plant is constantly mixing the stockpile to minimize the amount of material segregation.

6.0 CONSTRUCTION SCHEDULE

The dams continue to be several weeks behind schedule. Some progress was made during the report period, however the warm weather has severely restricted the placement of frozen material. Temperatures began to drop later in the week but clear skies and longer days mean that the sun is offsetting much of the cooling effect from the lower temperature.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material, 200 mm transition material, and run-of-mine fill at the West Dam;
- Remove snow contaminated run-of-mine material overbuild at the West Dam

- Complete installation the first phase of the composite liner system at the Southeast Dam.
- Continue key trench backfill placement at the Southeast Dam.

8.0 SAFETY

There were no safety incidents during the report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

Christopher J. Dixon, P.Eng.
Project Engineer
cdixon@eba.ca

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #7
ENDING: APRIL 21, 2007

EBA Personnel:

Jason Porter	Apr 15 – Apr 21
Paul Christman	Apr 15 – Apr 21
Renata Klassen	Apr 15 – Apr 18

WEATHER			
Apr 15 (Sun)	@ 12:00 hrs.	-10°C	wind 3 knots E, clear
Apr 16 (Mon)	@ 12:00 hrs.	-18°C	winds calm, cleat
Apr 17 (Tues)	@ 12:00 hrs.	-18°C	wind 3 knots N, clear
Apr 18 (Wed.)	@ 12:00 hrs.	-15°C	wind 6 knots SE, clear
Apr 19 (Thu)	@ 12:00 hrs.	-15°C	wind 8 knots SE, overcast
Apr 20 (Fri)	@ 12:00 hrs.	-9°C	wind 7 knots SE, snow
Apr 21 (Sat.)	@ 12:00 hrs.	-8°C	wind 12 knots NE, clear

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna continued placement of saturated 20 mm fill throughout the report period. On April 18th the nightshift operators of Nuna's batch plant departed site and were not replaced. Saturated fill placement continued on dayshift at both the West and Southeast Dams.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of saturated core material continued at the West Dam during the report period. During dayshift on April 15th the generator, which powered Nuna's batch plant, went down with a serious mechanical problem. The generator was not repairable in the short term so a spare generator was sourced. The unit was commissioned and wired into the plant and the plant was once again operational on April 16th.

Nuna placed two complete lifts of saturated core material across the entire width of the Dam. The core material is constructed approximately to elevation 523.5 from approximately Station 0+145 to the south extent. Nuna began to dress the upstream slope of the dam to prepare it for GCL liner placement. Loads of moisture conditioned material were spread across the face to provide a smooth surface. Labours, using hand tools, prepared the toe of the slope. The surface was allowed to freeze and then any remaining ridges or irregularities were scraped with the excavator to provide the final surface. A single lift of 200 mm transition material was placed during the report period bringing the material

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to the elevation of the core. SAS provided grade control and as-built survey during the placement of fill materials.

A ground temperature cable (GTC) was installed at station 0+080 at elevation 522 m. The location of the cable and the individual temperature beads was surveyed during installation. The cable was extended to the downstream edge of the core and will be extended across the transition and run-of-mine zones at a later date.

Dam construction is several weeks behind schedule and the West Dam will not be completed during the Winter 2007 season. The thermosyphon loops adjacent to the north abutment were to be extended to their design position followed by the completion of the core to final elevation. However, since the core will not be completed, EBA decided to delay the extension of the loops until construction resumes because of the chance of pipework damage while placing the thermal cover. The ends pipes will be covered and their location surveyed for easy access when construction resumes. The pipes will need to be extended prior to the placement of additional saturated fill.

Sub-Arctic Surveys (SAS) have not yet prepared material volumes for the project. When the volumes are reported an e-mail will follow summarizing the volume of materials placed to date, volume of materials remaining to be placed and the estimated amount of 20 mm material remaining on site.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Nuna continued to place key trench backfill during the report period. Three lifts of fill were placed along the entire length of the dam. When the fill reached the hinge elevation the fill was sloped downstream at the design slope of 3:1. SAS provided grade control and as-built survey during the placement of the backfill.

The Southeast Dam is currently several weeks behind schedule and the onset of warmer weather has necessitated a design change for liner tie-in at the north abutment of the dam. The design called for the use of frozen saturated fill to be placed adjacent to the abutment to attach the liner up to the final elevation. The warmer weather will not allow freezeback to occur quick enough to place the multiple lifts of saturated fill required. The alternative design calls for a mechanical connection point extending across the abutment. The design of the connection will be developed once the condition of the abutment rock it determined.

SAS have not yet prepared material volumes for the project.

4.0 MATERIAL PRODUCTION

During the report period, Nuna operated the batch plant for a total of 30.5 hours, producing 105 loads of material. The aforementioned load count is a combination of

saturated core material placed at the West Dam and key trench backfill placed at the Southeast Dam. The batch plant has operated for a total of 232.5 hours producing 715 loads to date in 2007.

5.0 QUALITY ASSURANCE TESTING

EBA provided quality assurance testing during the construction of the West and Southeast dams.

EBA obtained samples of the 20 mm minus material placed in core and key trench backfill zones of the West and Southeast dams during the report period. EBA obtained the samples from both the plant discharge belt while the batch plant was operational and from the location of placement. EBA conducted mix temperature, moisture content and grain size analysis testing on the samples. Testing results for the report period and overall results for the project are summarized in Table 1 and 2, respectively.

Compaction and saturation of the placed core and key trench backfill materials were monitored using a Troxler moisture-density gauge; weekly results are summarized in Table 1. The average overall results are summarized in Table 2.

TABLE 1: WEEKLY AVERAGE - QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Key trench fill	20	9.4	19	1993	97	95
West Dam core	7	9.8	12	1985	99	95

TABLE 2: OVERALL AVERAGE - QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Fillet	24	6.6	51	2050	N/A	97.6
Southeast Dam levelling course	31	9.8	18	1954	94.6	93.1
Southeast Dam key trench backfill	30	9.2	51	2024	93	96
West Dam core	73	9.2	69	1996	95	95

The freezeback of the 20 mm core material, leveling course, and key trench backfill was monitored using single bead thermistors (SBT's). The freezeback criterion was reduced by EBA from -2°C to -1°C to shorten the time between lift placements.

EBA conducted a total of 5 particle size distribution tests on the 20 mm material placed throughout the week. The average particle size distribution of the samples tested this week and the average particle size distribution of the samples tests for the project are attached.

6.0 CONSTRUCTION SCHEDULE

The dams continue to be several weeks behind schedule. The weather during the report period was cooler than the previous report period allowing frozen fill placement to continue. The elimination of the batch plant nightshift had little impact on the schedule due to the long freezeback times. The plant is to be shutdown in the middle of the next report period when the dayshift crew is scheduled to depart site. Currently the focus is on obtaining the required 1.5 m of key trench backfill at the Southeast Dam. If current weather conditions prevail, the key trench backfill should be completed prior to the shutdown. When possible, placement of core material will continue at the West Dam.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of 20 mm core material, 200 mm transition material, and run-of-mine fill at the West Dam;
- Complete preparation of downstream core slope at the West Dam;
- Continue key trench backfill, placement and footprint grubbing at the Southeast Dam;

- Commence placement of 200 mm transition and run-of-mine fill at the Southeast Dam.

8.0 SAFETY

There were no safety incidents during the report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

Christopher J. Dixon, P.Eng.
Project Engineer
cdixon@eba.ca

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #8
ENDING: APRIL 28, 2007

EBA Personnel:

Jason Porter	Apr 22 – Apr 28
Paul Christman	Apr 22 – Apr 25
Renata Klassen	Apr 25 – Apr 28

WEATHER			
Apr 22 (Sun)	@ 12:00 hrs.	-12°C	wind 4 knots SE, clear
Apr 23 (Mon)	@ 12:00 hrs.	-17°C	winds calm, clear
Apr 24 (Tues)	@ 12:00 hrs.	-6°C	wind 16 knots E, partly cloudy
Apr 25 (Wed.)	@ 12:00 hrs.	-4°C	wind 10 knots SE, cloudy, fog
Apr 26 (Thu)	@ 12:00 hrs.	-12°C	wind 12 knots N, overcast
Apr 27 (Fri)	@ 12:00 hrs.	-12°C	wind 6 knots E, cloudy/snow
Apr 28 (Sat.)	@ 12:00 hrs.	-17°C	wind 6 knots NE, sunny

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna concluded placement of saturated 20 mm fill for the season on April 25th. The remaining operators of the batch plant departed site and were not replaced. Placement of 20 mm key trench backfill at the Southeast Dam was completed and placement of the 200 mm transition and run-of mine shell commenced. A single lift of core was placed at the West Dam and dressing of the upstream slope of the core with 20 mm saturated material was also completed.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Placement of saturated core material concluded at the West Dam during the report period. The final lift was placed on April 24th and the plant operators departed site the following day. Nuna placed a single lift of saturated core material across the entire dam. The core material is constructed approximately to elevation 523.5 from approximately Station 0+116 to the south extent. Nuna completed the dressing the upstream slope of the dam for GCL liner placement. Loads of moisture-conditioned material were spread across the face to provide a smooth surface. Labours, using hand tools, prepared the toe of the slope. The surface was allowed to freeze and then any remaining ridges or irregularities were scraped with the excavator to provide the final surface. A single lift of 200 mm transition material was placed during the report period bringing the material to the elevation of the core. ROM rock fill was placed along the downstream side of the dam to bring the zone to the same

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elevation as the core and transition zones. SAS provided grade control and as-built survey during the placement of fill materials.

Sub-Arctic Surveys (SAS) have not yet prepared material volumes for the project.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Nuna completed the 20 mm key trench backfill during the report period. Two lifts of fill were placed along the entire length of the dam from 0+025 to 0+240. Fill that was above the elevation of the liner hinge was sloped at 3:1 (H:V) towards the downstream side as specified in the design. SAS provided grade control and as-built survey during the placement of the backfill. The key trench backfill was allowed to freezeback prior to the commencement additional cover materials. A single 0.5 m lift of 200 mm transition materials was placed over the entire length of key trench backfill. The end of the key trench at approximately 0+020 was not filled with key trench backfill or 200 mm transition because the liner is not at the final elevation of 524 m. When A&A Technical returns to site the liner will be extended and the adjacent area will be backfilled.

Run-of-mine rock fill was placed over the 200 mm transition material and downstream dam footprint. The material was hauled from Jericho pit by Cat 777 trucks and placed using a Cat D9 dozer. The Cat 345 excavator and 730 trucks placed 200 mm transition and coarse processed kimberlite (CPK) liner bedding along the upstream slope of the dam. CPK was substituted for 20 mm crushed granite so the bedding could be placed without the use of Nuna's batch plant. The CPK was assessed by EBA and found to meet the filter criteria for use adjacent to the 200 mm transition fill. The excavator was used to place and shape the slopes to the design 3:1 (H:V) slope. The Cat 573 was used to compact the 200 mm and CPK materials.

The two ground temperature cables (#1832 and #1833) were extended from the downstream crest of the key trench to the downstream slope of the rock fill shell. A design change to the dam required the additional cable extensions for the GTC's. A trench was dug through the ROM and lined with 200 mm transition and CPK bedding material. The cable was placed on the bedding material and the location surveyed by SAS. Additional bedding material was placed over the cable and then the trench was backfilled with 200 mm material. The connector between the original cable and the extension was wrapped in waterproof tape and then covered in bentonite paste. The design drawings call for the use of steel pipe to extend the cables to the downstream toe. The installation of the pipe was judged to be impractical by the EBA site representative and the aforementioned method was deemed to be an acceptable alternative.

Snow and snow contaminated rockfill was removed from the downstream side of the dam. The material was removed to extend the rockfill shell to the design footprint and to remove snow that contained foreign material that may be released when melted. The snow was hauled from the area and placed in the PKCA or the rock dump.

SAS have not yet prepared material volumes for the project.

4.0 MATERIAL PRODUCTION

During the report period, Nuna operated the batch plant for a total of 27 hours, producing 101 loads of material. The aforementioned load count is a combination of saturated core material placed at the West Dam and key trench backfill placed at the Southeast Dam. The batch plant has operated for a total of 259.5 hours producing 816 loads to date in 2007. The plant ceased operations for the season on April 24th.

5.0 QUALITY ASSURANCE TESTING

EBA provided quality assurance testing during the construction of the West and Southeast dams.

EBA obtained samples of the 20 mm minus material placed in core and key trench backfill zones of the West and Southeast dams during the report period. EBA obtained the samples from both the plant discharge belt while the batch plant was operational and from the location of placement. EBA conducted mix temperature, moisture content and grain size analysis testing on the samples. Testing results for the report period and overall results for the project are summarized in Table 1 and 2, respectively.

Compaction and saturation of the placed core and key trench backfill materials were monitored using a Troxler moisture-density gauge; weekly results are summarized in Table 1. The average overall results are summarized in Table 2.

TABLE 1: WEEKLY AVERAGE - QUALITY ASSURANCE TEST RESULTS

	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Key trench fill	13	9.6	17	1987	98.0	95
West Dam core	3	9.0	6	1995	97	95

TABLE 2: OVERALL AVERAGE - QUALITY ASSURANCE TEST RESULTS						
	Moisture Content Testing		Compaction Testing			
Location	Number of Tests	Average Moisture Content (%)	Number of Tests	Average Dry Density (kg/m^3)	Average Saturation (%)	Average Compaction (%)
Southeast Dam Fillet	24	6.6	51	2050	N/A	97.6
Southeast Dam levelling course	31	9.8	18	1954	94.6	93.1
Southeast Dam key trench backfill	43	9.3	68	2014	94	96
West Dam core	76	9.2	75	1996	95	95

The freezeback of the 20 mm core material, leveling course, and key trench backfill was monitored using single bead thermistors (SBT's).

EBA conducted a total of 2 particle size distribution tests on the 20 mm material placed throughout the week. The average particle size distribution of the samples tested this week and the average particle size distribution of the samples tests for the project are attached.

6.0 CONSTRUCTION SCHEDULE

The departure of the operators for Nuna's batch plant and the warming weather mean that the West Dam will not be completed during this construction season. The GCL liner, liner cover , transition and ROM zones will be raised to the current elevation. The core will then be covered with ROM thermal cover for the summer months.

The completion of the 20 mm key trench backfill at the Southeast Dam will allow the dam to be finished during this year's construction season. The dam remains several weeks behind schedule and it is now estimated that it will be completed around the end of May.

7.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of liner bedding, 200 mm transition and run-of-mine fill at the Southeast Dam.
- Continue snow removal and grubbing on the downstream side of the Southeast Dam.

8.0 SAFETY

There were no safety incidents during the report period.

9.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

Christopher J. Dixon, P.Eng.
Project Engineer
cdixon@eba.ca

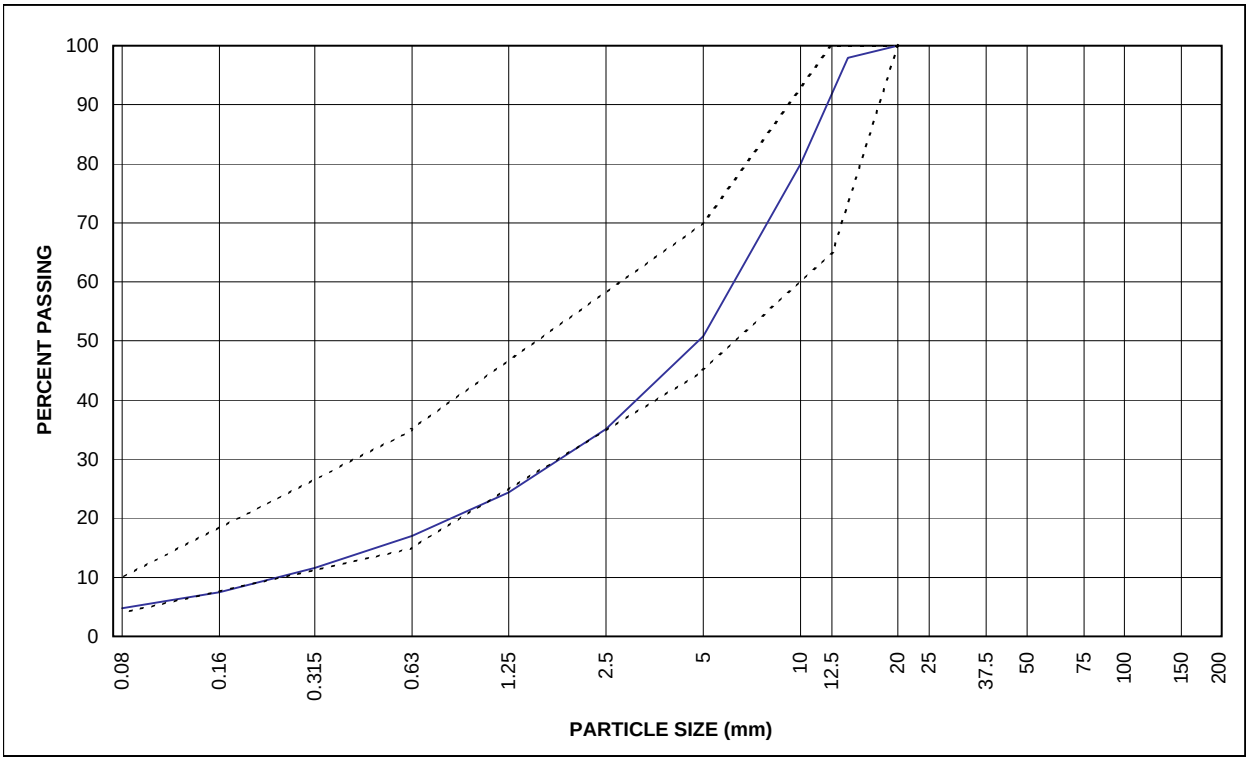
EBA ENGINEERING CONSULTANTS LTD.

PARTICLE SIZE SUMMARY REPORT

PROJECT:	**Jericho Diamond Mine**
SITE:	**Jericho, NU**
	20 mm Crush for Dam Construction
PROJECT NO:	**1100060.007**
CLIENT:	**Tahera Attention: H.Gates/R.Jones/T.Lochiavo**
SAMPLE NO'S:	**20W07-060 to 20W07-061**
WEEK ENDING:	**2007.04.28**
USC CLASSIFICATION:	
NATURAL MOISTURE CONTENT:	**9.6%**
SPECIFICATION BAND PLOTTED:	**20mm**
REMARKS:	

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	96.2
10	81.2
5	51.5
2.5	35.4
1.25	24.5
0.63	17.3
0.315	12.0
0.16	8.2
0.08	5.6

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



Test Status: **PASS**

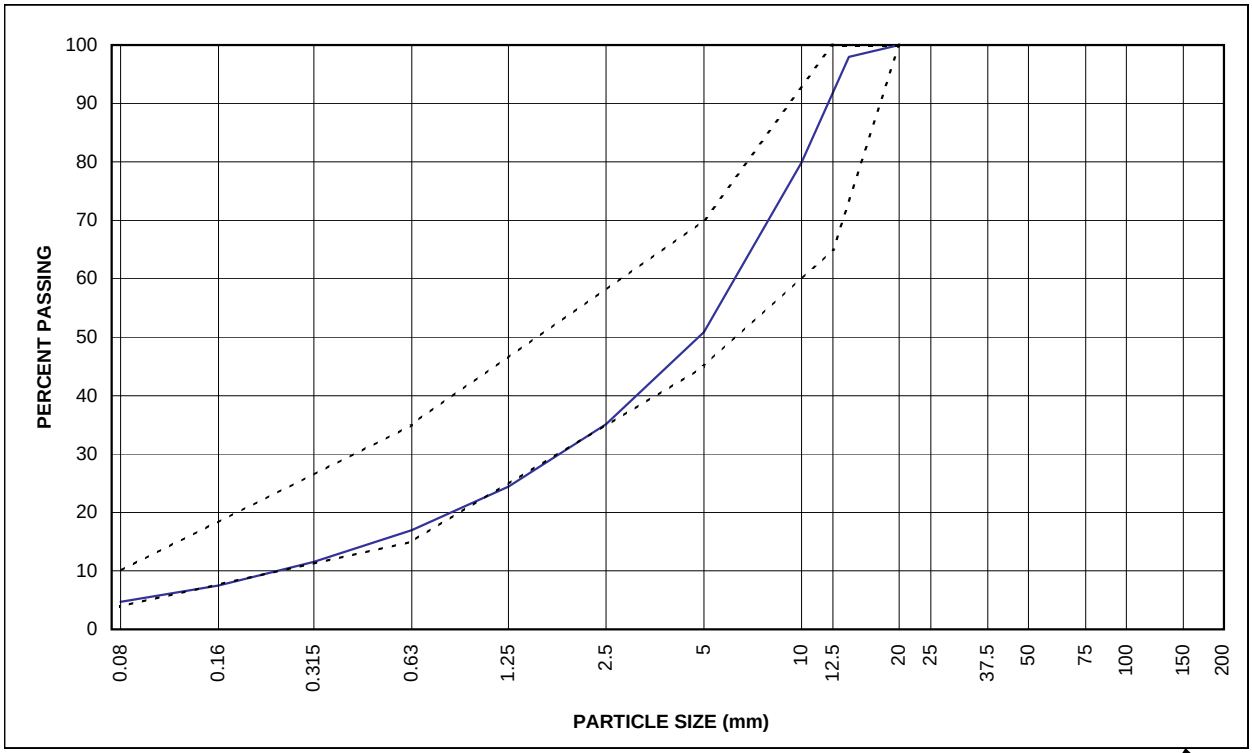
EBA ENGINEERING CONSULTANTS LTD.

PARTICLE SIZE SUMMARY REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
20 mm Crush for Dam Construction
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO'S: 20W07-001 to 20W07-061
WEEK ENDING: 2007.04.28
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 9.6%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS:

PARTICLE SIZE	AVERAGE % PASSING
20	100.0
14	97.3
10	79.7
5	51.3
2.5	36.6
1.25	25.7
0.63	17.9
0.315	12.1
0.16	7.9
0.08	5.1

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



Test Status: PASS

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #9
ENDING: MAY 05, 2007

EBA Personnel: Jason Porter Apr 29 – May 05
Renata Klassen Apr 29 – May 05

WEATHER			
Apr 29 (Sun)	@ 12:00 hrs.	-10°C	wind 10 knots E, fog
Apr 30 (Mon)	@ 12:00 hrs.	-3°C	wind 5 knots SE, partly cloudy
May 1 (Tues)	@ 12:00 hrs.	-10°C	wind 5 knots NW, sunny
May 2 (Wed.)	@ 12:00 hrs.	-8°C	wind 10 knots SE, sunny
May 3 (Thu)	@ 12:00 hrs.	-4°C	wind 13 knots S, sunny
May 4 (Fri)	@ 12:00 hrs.	0°C	wind 10 knots NE, sunny
May 5 (Sat.)	@ 12:00 hrs.	-5°C	wind 16-46 knots E, ice pellets

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Construction activities were focused at the Southeast Dam during the report period. Nuna removed snow from the downstream footprint of the dam and continued to place and shaped run-of-mine shell, 200 mm transition and liner bedding materials.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

No significant construction activity took place at the West Dam during the report period. Tahera opted to bring A&A Technical to site during the next report period to install the GCL liner because Nuna currently does not have the manpower to perform the work.

Sub-Arctic Surveys (SAS) have not yet prepared material volumes for the project.

3.0 SOUTH EAST CONSTRUCTION ACTIVITIES

Snow and snow contaminated rockfill was removed from the downstream side of the dam. The material was removed to extend the rockfill shell to the design footprint and to remove snow that contained foreign material that may be released when melted. The snow was excavated and hauled using a Cat 345 excavator and Cat 730 or 769 haul trucks and placed in the PKCA or the rock dump.

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Run-of-mine rock fill was hauled from Jericho pit to the dam site using Cat 777 haul trucks. The ROM was typically placed using a Cat D9 dozer however, the Cat D4 dozer and Cat 345 excavator were also used to place the material in areas where D9 access was not possible. The rockfill was mainly granite but a small amount of diabase was also present. A visual assessment of the rockfill indicated that the material was well graded and met the construction requirements. The rock fill was compacted by the truck and dozer traffic during placement and by the Cat 573 compactor. Additional rock fill was stockpiled on top of the East Dam for later use. The rockfill was shaped to the 3:1 (H:V) design slope using the Cat 345 excavator prior to the placement of the transition and liner bedding materials.

The 200 mm transition and liner bedding materials were placed and shaped with the Cat 345 excavator. The two zones were placed and compacted individually rather than concurrently requiring the overbuilding of the zone to provide access for the Cat 573 compactor. The overbuilt zone was then cut back to the design grade and the excess material integrated into subsequent lifts. SAS provided grade control and as-built survey during the placement of the fill zones.

4.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam is progressing well but poor weather at the end of the report period has left significant amounts of snow at the over the liner zones at both dams. Equipment access in these zones is limited therefore significant labour work will be required before liner installation can commence.

The dams remain several weeks behind schedule and it is now estimated that it will not be completed until June.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of liner bedding, 200 mm transition and run-of-mine fill at the Southeast Dam;
- Remove snow accumulation from the liner zones at both dams;
- Commence placement of GCL liner at the West Dam and HDPE liner at the Southeast Dam.

6.0 SAFETY

There were no safety incidents during the report period.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

Christopher J. Dixon, P.Eng.
Project Engineer
cdixon@eba.ca

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #9
ENDING: MAY 12, 2007

EBA Personnel:

Jason Porter	May 6 – May 9
Renata Klassen	May 6 – May 12
Chris Dixon	May 9 – May 12

WEATHER			
May 6 (Sun)	@ 12:00 hrs.	NR	Not Recorded
May 7 (Mon)	@ 12:00 hrs.	NR	Not Recorded
May 8 (Tues)	@ 12:00 hrs.	NR	Not Recorded
May 9 (Wed.)	@ 12:00 hrs.	-11°C	wind calm, sunny
May 10 (Thu)	@ 12:00 hrs.	-11°C	wind 7 knots SW, sunny
May 11 (Fri)	@ 12:00 hrs.	-1°C	wind 6 knots SW, sunny
May 12 (Sat)	@ 12:00 hrs.	-2°C	wind 25 knots SE, cloudy

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

A&A Technical (A&A) was mobilized to site on Wednesday May 9, 2007. A&A and Nuna cleared the drifted snow from the frozen core slope at the West Dam. A&A and Nuna placed GCL from Station 0+090 to Station 0+140 during the report period.

Nuna placed run-of-mine, transition, and liner bedding materials at the Southeast Dam during the report period. Nuna placed run-of-mine material to the design elevation, downstream of the liner. Nuna placed transition material to approximately 1 m below the design elevation, downstream of the liner. Nuna placed liner bedding material to approximately 2.5 m below the design elevation, downstream of the liner.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

A&A's crew of 6 labourers and 1 foreman were mobilized to site on Wednesday May 9, 2007. A&A's crew together with up to 3 of Nuna's labouers cleared the snow from slope of the frozen core material and from the surface of the GCL placed earlier this year.

The GCL liner placed earlier this year was exposed, cleaned off and pulled up the slope of the frozen core material. The existing GCL was seamed together with a bentonite bead and using a heat-gun. Once the exiting GCL was seamed together a new panel of GCL was rolled out. Adjacent panels were seamed together in the same manner, with the bentonite bead and heat-gun.

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Where the crest of the frozen core material was to the design elevation the GCL was run out 4 m across the crest. Where additional work will be required next winter the GCL was only run out 1 m.

A Herman Nelson heater was used, were required, to remove ice from the surface of the GCL. A few areas of the liner were damaged during snow removal. These areas will be repaired as the new GCL panels are placed.

3.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna placed and compacted run-of-mine material to the final design elevation, downstream of the liner. The material was loaded from a stockpile at the north end of the dam into either a CAT 730 or a CAT 769 haul truck and dumped on the downstream portion of the dam, where a CAT D4 bulldozer pushed the material into place. Run-of-mine material was placed in lifts varying from 0.5 to 1.0 m thick. The run-of-mine material was compacted using the tires of the CAT 769 haul truck and by a CAT CS-573 packer. The upstream slope (3H:1V) of the run-of-mine material zone was shaped using either a CAT 345 or a CAT 330 excavator.

Nuna placed and compacted transition (200 mm minus) material to 1 m below the final design elevation, downstream of the liner. The transition material was loaded from a stockpile at the north end of the dam into a CAT 730 haul truck and dumped on the downstream portion of the dam, where a CAT D4 bulldozer pushed the material into place. Transition material was placed in 0.5 m thick lifts and compacted with a CAT CS-573 packer. The slope (3H:1V) of the transition material zone was shaped using either a CAT 345 or a CAT 330 excavator.

Nuna placed and compacted liner bedding (coarse processed kimberlite) material to an elevation 2.5 m below the final design elevation, downstream of the liner. The liner bedding material was loaded into a CAT 730 haul truck at the discharge conveyor near the plant and dumped on the downstream portion of the dam. The liner bedding material was then placed into the liner bedding zone by a CAT 345 excavator and compacted by a CAT CS-573 packer. The downstream slope (3H:1V) of the liner bedding material was shaped using a CAT 345 excavator.

A&A and Nuna labourers were on site intermittently throughout the report period clearing snow from the liner bedding slope of the dam. A significant amount of water has ponded near Station 0+150 above the hinge of the HDPE liner. The water was pumped for two days, however some water is now frozen in place and the ice must be removed without damaging the underlying HDPE.

No work was completed on the concrete tie-in beam that is to be constructed at the north abutment. It is imperative that this beam be constructed prior to A&A demobilizing from site, otherwise they will have to be remobilized to site at a later date. EBA understands at this time that A&A is busy with other commitments for quite some time after they are demobilized from here. To facilitate construction Clark Builders should be retained to source all the materials required to construct the concrete beam, including all the pre-bent reinforcing bar. Clark Builders should also be retained to tie all the reinforcing bars, operate the Reimer truck and pour and finish the concrete. EBA understands that Clark Builders are currently scheduled off-site between May 21 and May 28, 2007. This coincides with the period of time in which the concrete beam should be poured.

4.0 QUALITY ASSURANCE TESTING

EBA continued to provide quality assurance testing, as required, during the construction of the West and Southeast dams.

EBA conducted a total of two particle size distribution tests on the liner bedding material placed at the Southeast Dam this week. The particle size distribution of the samples tested this week are attached.

5.0 CONSTRUCTION SCHEDULE

The construction of the two dams is behind schedule. Completion of the West Dam this winter construction season is not possible. The dam is to be capped with a thermal cover, and the core of the dam is to exposed next year and construction activities will continue. There is approximately 3 weeks of work required at this dam this winter construction season.

Completion of the Southeast Dam is imperative as without this dam the Processed Kimberlite Containment Area will likely overtop prior to next winter. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is approximately 4 weeks of work required at this dam to bring it to substantial completion.

There is approximately 7 weeks of work required prior to commencing work on the Divider Dyke. Estimated completion date for these two dams is June 30, 2007. This anticipated completion is well after the freshet period. Additional resources should be allocated to these projects to help reduce the overall time required for construction.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Complete placement of the GCL liner at the West Dam;
- Place the liner cover material at the West Dam;
- Cover the top 1 m of GCL liner with dry 20 mm minus material and plywood at the West Dam;
- Begin placing upstream transition material at the West Dam;
- Complete placement of the transition material downstream of the liner at the Southeast Dam;
- Complete placement of the liner bedding at the Southeast Dam;
- Begin installation of the liner system at the Southeast Dam.

7.0 SAFETY

There were no safety incidents during the report period.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Christopher J. Dixon, P.Eng.
Project Engineer
cdixon@eba.ca

EBA ENGINEERING CONSULTANTS LTD.

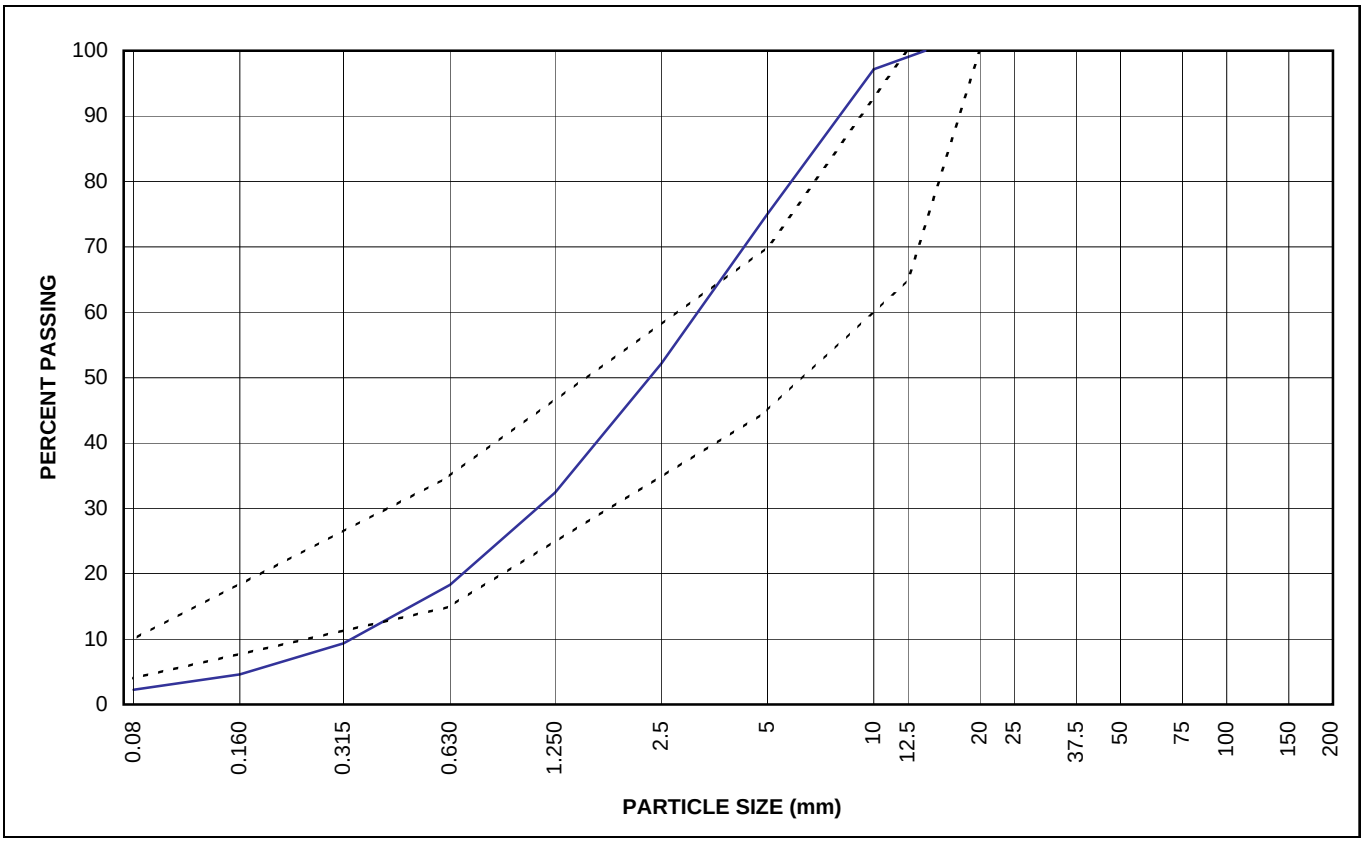
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-001
DATE TESTED: May 9,2007 **BY:** RAK
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 7.3%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 25 %Sand = 73 %Fines = 2

Sampled obtained from liner bedding zone
at Station 0+200

PARTICLE SIZE	PERCENT PASSING
20	100
20	100
10	97
5	75
2.5	52
1.25	32
0.63	18
0.315	9
0.16	5
0.08	2

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



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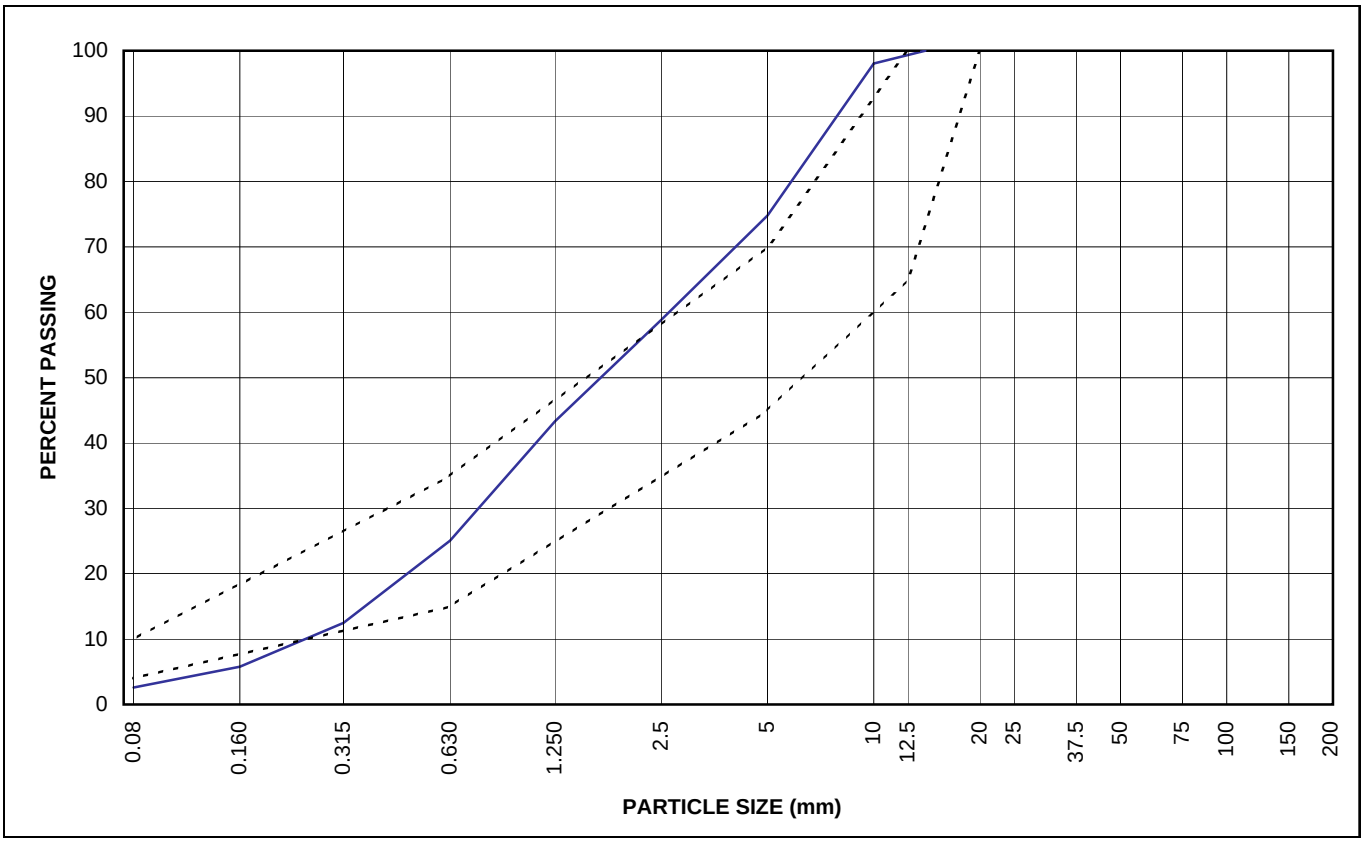
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-002
DATE TESTED: May 9,2007 **BY:** RAK
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 8.7%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 25 %Sand = 72 %Fines = 3

Sampled obtained from liner bedding zone
at Station 0+120

PARTICLE SIZE	PERCENT PASSING
20	100
20	100
10	98
5	75
2.5	59
1.25	43
0.63	25
0.315	12
0.16	6
0.08	3

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #11
ENDING: MAY 19, 2007

EBA Personnel:

Christopher Dixon	May 13 – May 19
Renata Klassen	May 13 – May 16
Jonathon Dixon	May 16 – May 19

WEATHER			
May 13 (Sun)	@ 12:00 hrs.	-2°C	Wind 16 knots N, blowing snow
May 14 (Mon)	@ 12:00 hrs.	-4°C	Wind 10 knots S, overcast
May 15 (Tues)	@ 12:00 hrs.	-12°C	Wind 13 knots W, light snow
May 16 (Wed.)	@ 12:00 hrs.	-9°C	Wind 12 knots NW, cloudy
May 17 (Thu)	@ 12:00 hrs.	-15°C	Wind 8 knots NW, sunny
May 18 (Fri)	@ 12:00 hrs.	-10°C	Wind 12 knots SW, sunny
May 19 (Sat)	@ 12:00 hrs.	-3°C	Wind 6 knots S, sunny

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

A&A and Nuna cleared the drifted snow from the toe and slope of the frozen core at the West Dam. A&A and Nuna placed GCL from Station 0+020 to Station 0+090 during the report period, completing the placement at this dam for this winter.

Nuna placed coarse processed kimberlite (CPK) liner cover, upstream transition material, dry 20 mm liner protection, Oriented Strand Board (OSB), 200 mm minus OSB protection, and run-of-mine thermal cover at the West Dam during the report period. All materials, except the run-of-mine thermal cover were placed to the grade that we will be leaving it at until next year. Run-of-mine thermal cover was placed from Station 0+140 to Station 0+085 and approximately 2 m below grade.

Nuna placed transition and liner bedding materials at the Southeast Dam during the report period. Nuna placed transition material to the design elevation, downstream of the liner. Nuna placed liner bedding to the design elevation; however the material still requires compaction.

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EBA is revising the design of the concrete tie-in beam at the north abutment of the Southeast Dam. The original design was for the concrete beam to be at a 3H:1V slope; however, this slope is not steep enough for the beam to tie-in to the rock face. In order to tie-in to the rock face at elevation 524 m, the slope of the concrete beam must be approximately 2.2H:1V.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

A&A's crew of 6 labourers and 1 foreman together with up to 3 of Nuna's labouers cleared the snow from toe and slope of the frozen core material and from the surface of the GCL placed earlier this year.

The GCL liner placed earlier this year was exposed, cleaned off and pulled up the slope of the frozen core material. The existing GCL was seamed together with a bentonite bead and using a heat-gun. Once the exiting GCL was seamed together a new panel of GCL was rolled out. Adjacent panels were seamed together in the same manner, with the bentonite bead and heat-gun. Where the crest of the frozen core material was to the design elevation the GCL was run out 4 m across the crest. Where additional work will be required next winter the GCL was only run out 1 m.

A Herman Nelson heater was used, were required, to melt ice on the surface of the GCL. A few areas of the liner were damaged during snow removal. These areas were repaired as the new GCL panels were placed. The GCL placement was completed during the report period.

Nuna placed liner cover (CPK) and upstream transition material simultaneously after the GCL placement was complete. A CAT 730 haul truck dumped CPK on the GCL slope and and a CAT D4 bulldozer spread it up the slope of the GCL. Transition material was pushed into place by a CAT D4 bulldozer upstream of the CPK. To facilitate construction the CPK was placed approximately 0.75 to 0.5 m wider than design at the toe of the GCL slope. The CPK lift was thinned out as it was placed up the slope to the design grade approximately 1 m from the constructed crest. The transition material was placed in 0.5 m thick lifts. Both the CPK and the transition materials were compacted using a CAT CS-573 packer.

Run-of-mine thermal cover was placed upstream of the transition material as it was required. The run-of-mine material was placed in a maximum 1 m thick lift by a CAT D4 bulldozer and compacted with a CAT CS-573 packer.

Subsequent to the CPK and upstream material placement a 1 m section of GCL was left exposed on the slope and a second 1 m run-out section was exposed on the crest. These sections of GCL will be used next year to connect new GCL to and continue construction of the frozen core. The exposed GCL was covered with approximately 0.3 m of dry 20 mm minus (liner protection material). The material was not compacted. On the surface of the liner protection material OSB panels were laid out over the two 1 m sections of GCL, which were buried in liner protection material. Then the OSB and liner protection material were buried by a 0.3 to 0.5 m thick lift of 200 mm minus material.

Nuna excavated two trenches, one at Station 0+080 and one at Station 0+120, to extend the ground temperature cables placed at elevation 522 m to the downstream slope of the run-of-mine material. A 0.3 m thick bedding of 20 mm minus was spread out in the trench and the cables were laid out. The cables were then backfilled with 0.6 m of dry 20 mm minus material.

Nuna began placement of the run-of-mine thermal cover during the report period. In the areas where the thermal cover will not be excavated next year (Station 0+140 to Station 0+120) the run-of-mine thermal cover was placed in 1 m thick lifts and compacted with the tires of a loaded CAT 777 haul truck. In areas where the run-of-mine material will be excavated this fall the material was placed in 2 m thick lifts and compacted with the tires of a loaded 777 haul truck. Run-of-mine material was placed in this manner from Station 0+140 to Station 0+085 and it is approximately 2 m below final grade. The material may not yet be placed wide enough and some additional work may still be required in this area to construct the zone to the proper width.

3.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna placed and compacted run-of-mine material to the final design elevation, downstream of the liner. The material was loaded from a stockpile at the north end of the dam into either a CAT 730 or a CAT 769 haul truck and dumped on the downstream portion of the dam, where a CAT D4 bulldozer pushed the material into place. Run-of-mine material was placed in lifts varying from 0.5 to 1.0 m thick. The run-of-mine material was compacted using the tires of the CAT 769 haul truck and by a CAT CS-573 packer. The upstream slope (3H:1V) of the run-of-mine material zone was shaped using either a CAT 345 or a CAT 330 excavator.

Nuna placed and compacted transition (200 mm minus) material to final design elevation, downstream of the liner. The transition material was loaded from a stockpile at the north end of the dam into a CAT 730 haul truck and dumped on the downstream portion of the dam, where a CAT D4 bulldozer pushed the material into place. Transition material was placed in 0.5 m thick lifts and compacted with a CAT CS-573 packer. The slope (3H:1V) of the transition material zone was shaped using either a CAT 345 or a CAT 330 excavator.

Nuna placed liner bedding (coarse processed kimberlite) material to an elevation 0.5 m below the final design elevation, downstream of the liner. The liner bedding material was loaded into a CAT 730 haul truck at the discharge conveyor near the process plant and dumped on the downstream portion of the dam. The liner bedding material was then placed into the liner bedding zone by a CAT 345 excavator. The downstream slope (3H:1V) of the liner bedding material was shaped using a CAT 345 excavator. The slope still requires compaction prior to placement of the liner system.

A&A and Nuna labourers were on site intermittently throughout the report period clearing snow from the liner bedding slope of the dam. A significant amount of water had ponded near Station 0+150 above the hinge of the HDPE liner. The water was intermittently pumped; however some water was frozen in place and later removed without damaging the underlying HDPE. The geotextile on the fillet crest is ready to be folded up CPK slope and the next phase of liner system installation can begin as soon as the CPK slope is prepared.

No work was completed on the concrete tie-in beam that is to be constructed at the north abutment. The concrete tie-in beam is currently be redesigned by EBA to incorporate the near vertical rock face and required slope. The original design shows the concrete tie-in beam being at a 3H:1V slope. In order for the beam to tie-in to the rock face at elevation 524 m, the beam must be constructed at 2.2H:1V slope.

It is imperative that this beam be constructed prior to A&A demobilizing from site, otherwise they will have to be remobilized to site at a later date. EBA understands at this time that A&A is busy with other commitments for quite some time after they are demobilized from here. To facilitate construction Clark Builders should be retained to source all the materials required to construct the concrete beam, including all the pre-bent reinforcing bar. Clark Builders should also be retained to tie all the reinforcing bars, provide a mobile mixer and pour and finish the concrete. EBA understands that Clark Builders are currently scheduled off-site between May 21 and May 28, 2007. This coincides with the period of time in which the concrete beam should be poured.

4.0 QUALITY ASSURANCE TESTING

EBA continued to provide quality assurance testing, as required, during the construction of the West and Southeast dams.

EBA conducted the following particle size distribution tests this week:

- One test on the transition material at the West Dam.
- Four tests on the liner cover material at the West Dam.
- Six tests on the transition material at the Southeast Dam.
- Two tests on the liner bedding material at the Southeast Dam.

The particle size distributions of the samples tested this week are attached.

EBA conducted compaction testing of the placed liner cover at the West Dam and on the liner bedding at the Southeast Dam using a Troxler moisture-density gauge. Test results indicate that the liner cover at the West Dam has an average dry density of 1766 kg/m^3 at an average moisture content of 10.5%, based on three tests. Test results indicate that the liner bedding at the Southeast Dam has an average dry density of 1799 kg/m^3 at an average moisture content of 12.2%, based on eighteen tests.

5.0 CONSTRUCTION SCHEDULE

The construction of the two dams is behind schedule. Completion of the West Dam this winter construction season is not possible. The dam is to be capped with a thermal cover, and the core of the dam is to be exposed next year and construction activities will continue. There is approximately 2 weeks of work required at this dam this winter construction season.

Completion of the Southeast Dam is imperative as without this dam the Processed Kimberlite Containment Area will likely overtop prior to next winter. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is approximately 3 weeks of work required at this dam to bring it to substantial completion.

There is approximately 5 weeks of work required prior to commencing work on the Divider Dyke. Estimated completion date for these two dams is June 23, 2007. This anticipated completion is well after the freshet period. Additional resources should be allocated to these projects to help reduce the overall time required for construction.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of the thermal cover at the West Dam;
- Complete placement of the liner bedding at the Southeast Dam;
- Begin installation of the liner system at the Southeast Dam;
- Begin installation of the concrete beam tie-in at the Southeast Dam.

7.0 SAFETY

There were no safety incidents during the report period.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Christopher J. Dixon, P.Eng.
Project Engineer
cdixon@eba.ca

EBA ENGINEERING CONSULTANTS LTD.

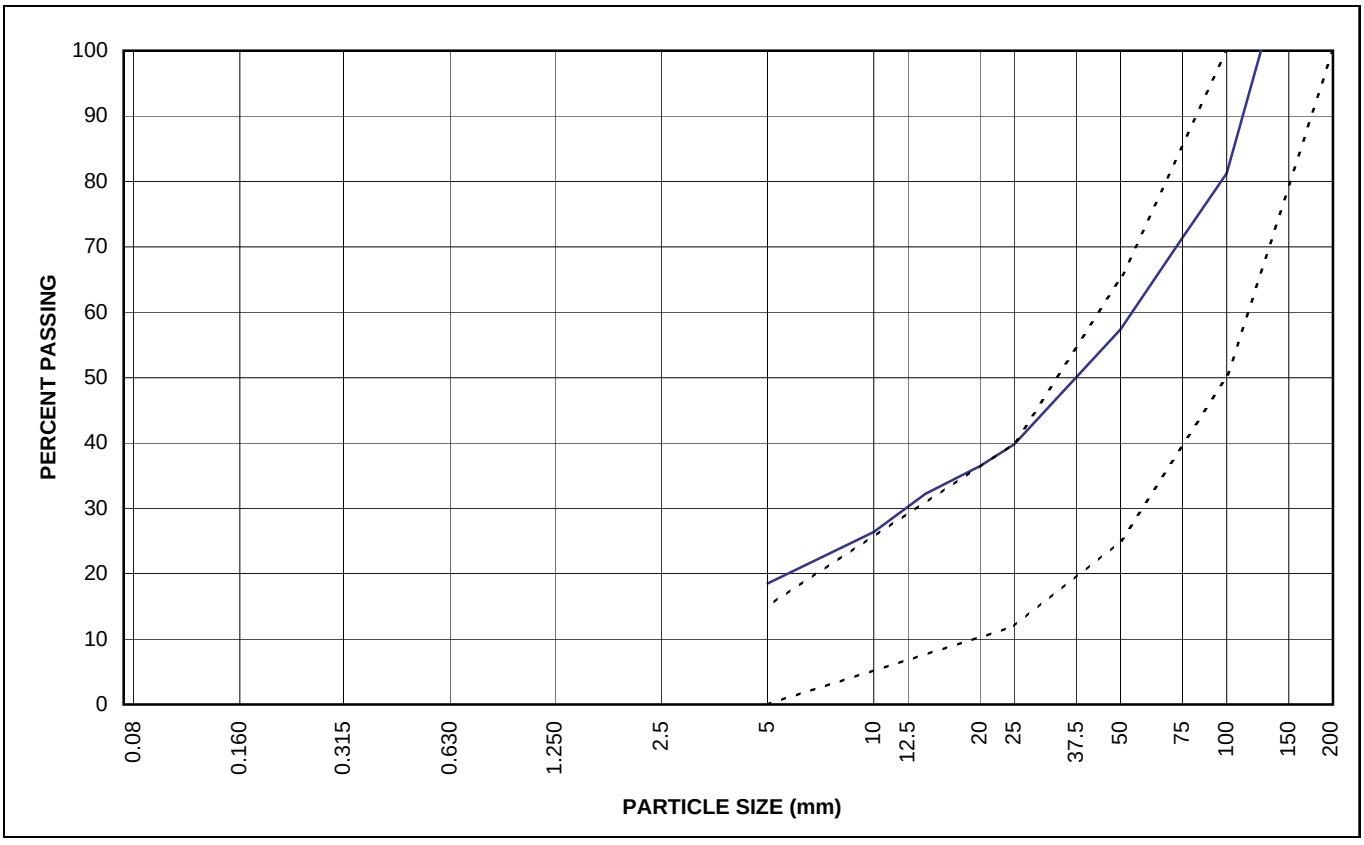
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-010
DATE SAMPLED: May 17/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from Stockpile.
%Gravel = 82 ###

Stockpile north end of Southeast Dam

PARTICLE SIZE	PERCENT PASSING
200	100
150	100
125	100
100	81
75	71
50	57
25	40
20	36
14	32
10	26
5	18

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



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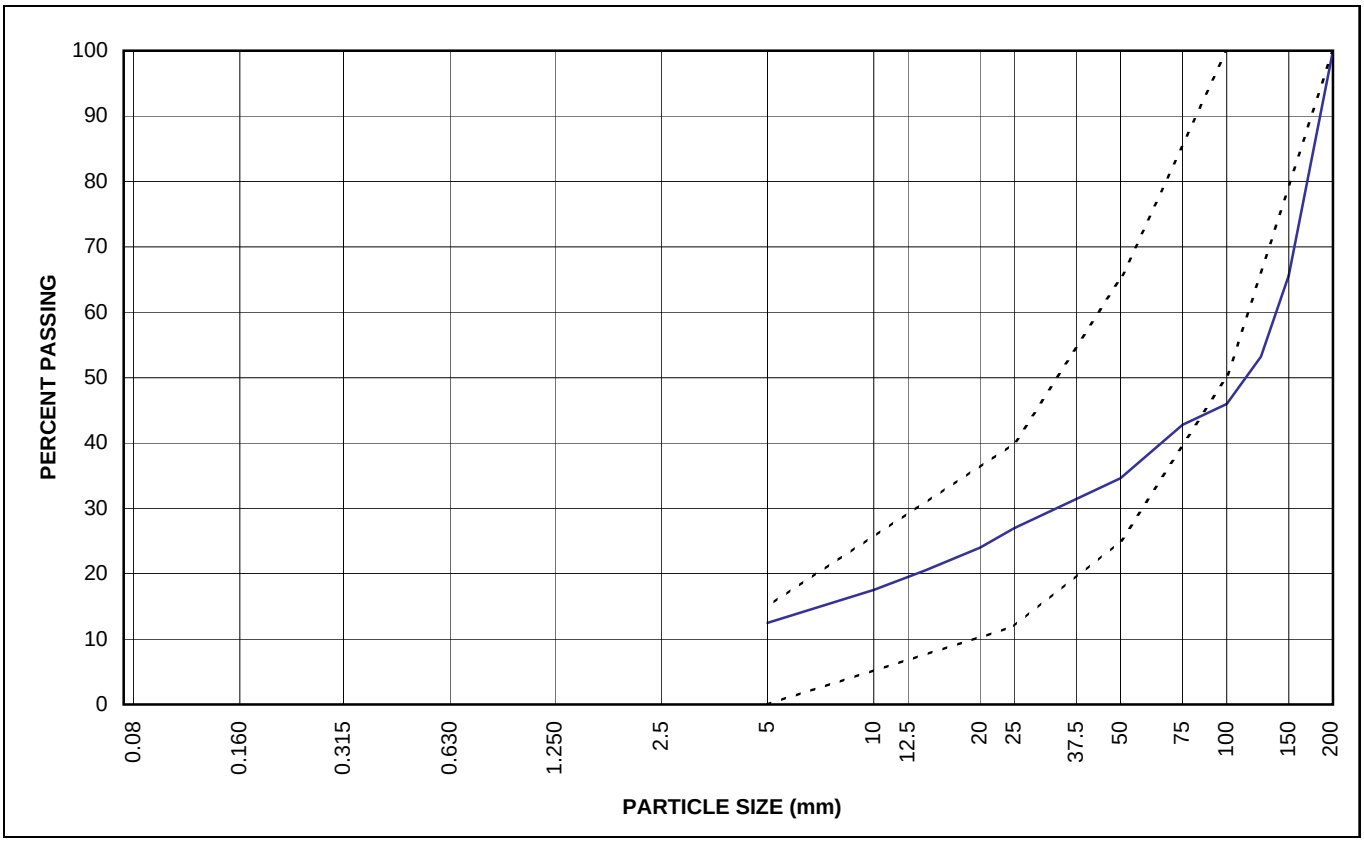
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-009
DATE SAMPLED: May 17/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from insitu sampling.
%Gravel = 88 ###

Station 0+170
1 m downstream of liner at Elev 522 m

PARTICLE SIZE	PERCENT PASSING
200	100
150	66
125	53
100	46
75	43
50	35
25	27
20	24
14	21
10	18
5	12

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

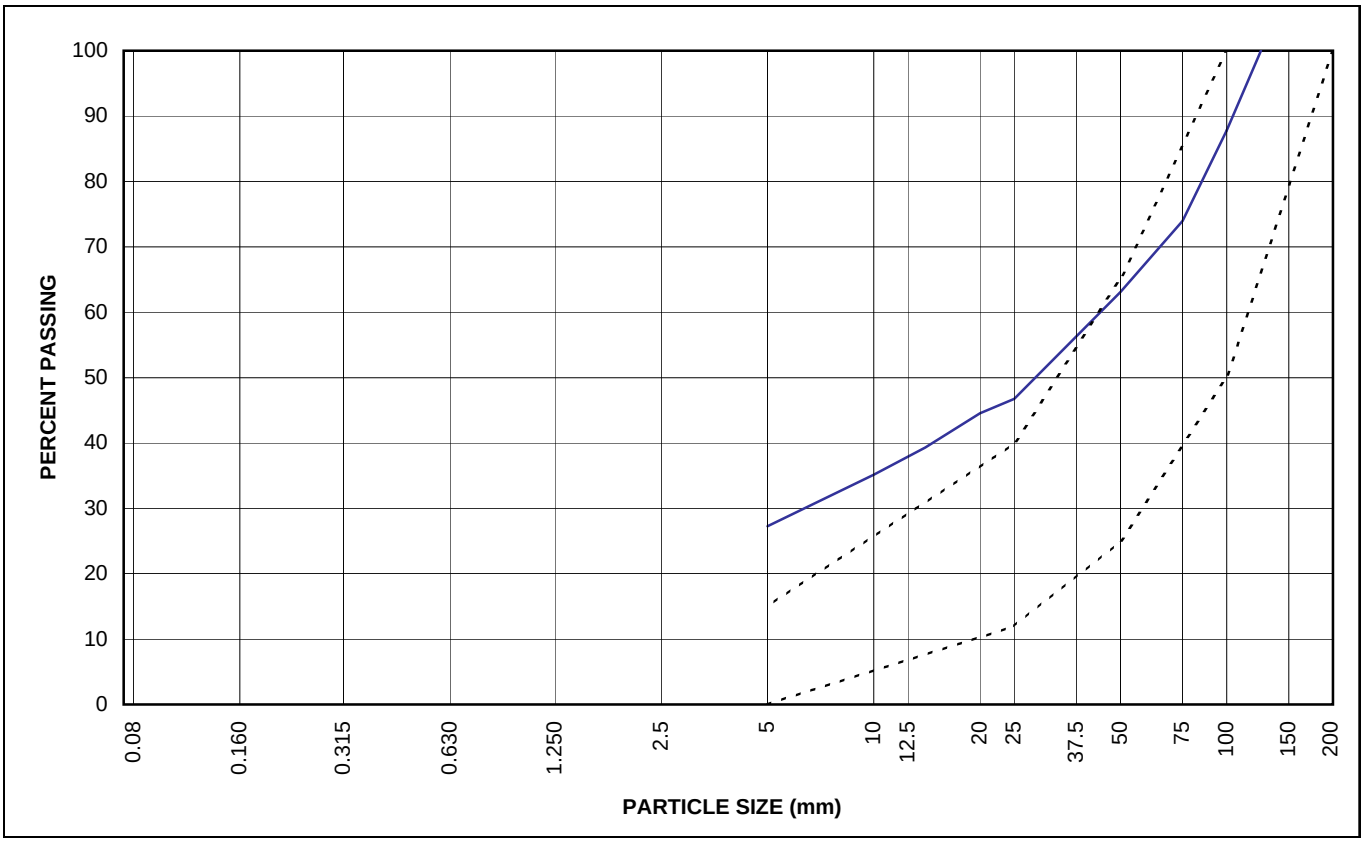
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-008
DATE SAMPLED: May 16/07 **BY:** CJD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from insitu sampling.
%Gravel = 73 ###

Station 0+230

PARTICLE SIZE	PERCENT PASSING
150	100
150	100
100	88
75	74
50	63
25	47
20	45
14	39
10	35
5	27

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

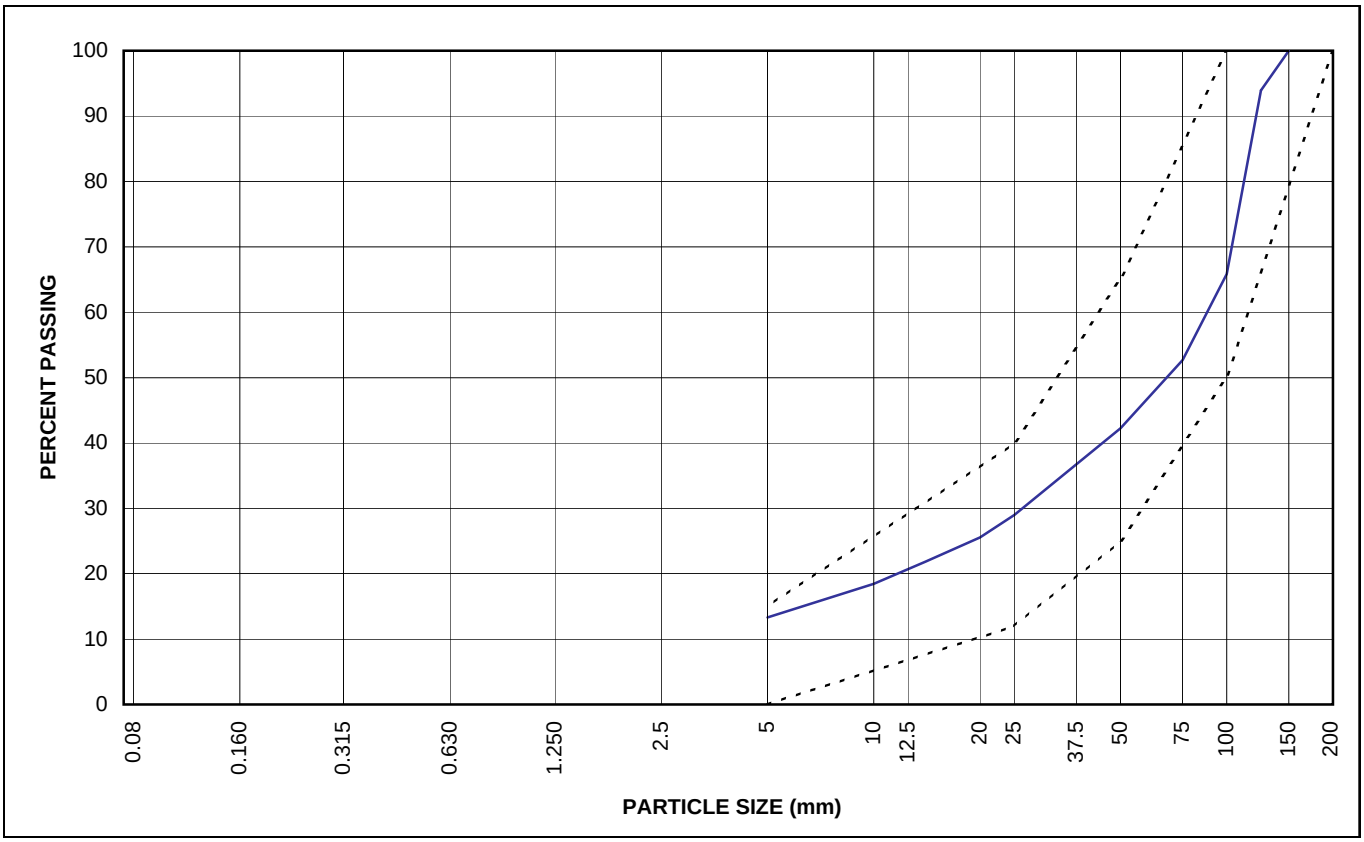
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-007
DATE SAMPLED: May 15/07 **BY:** CJD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from insitu sampling.
%Gravel = 87 ###

Station 0+170

PARTICLE SIZE	PERCENT PASSING
150	100
125	94
100	66
75	53
50	42
25	29
20	26
14	22
10	18
5	13

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

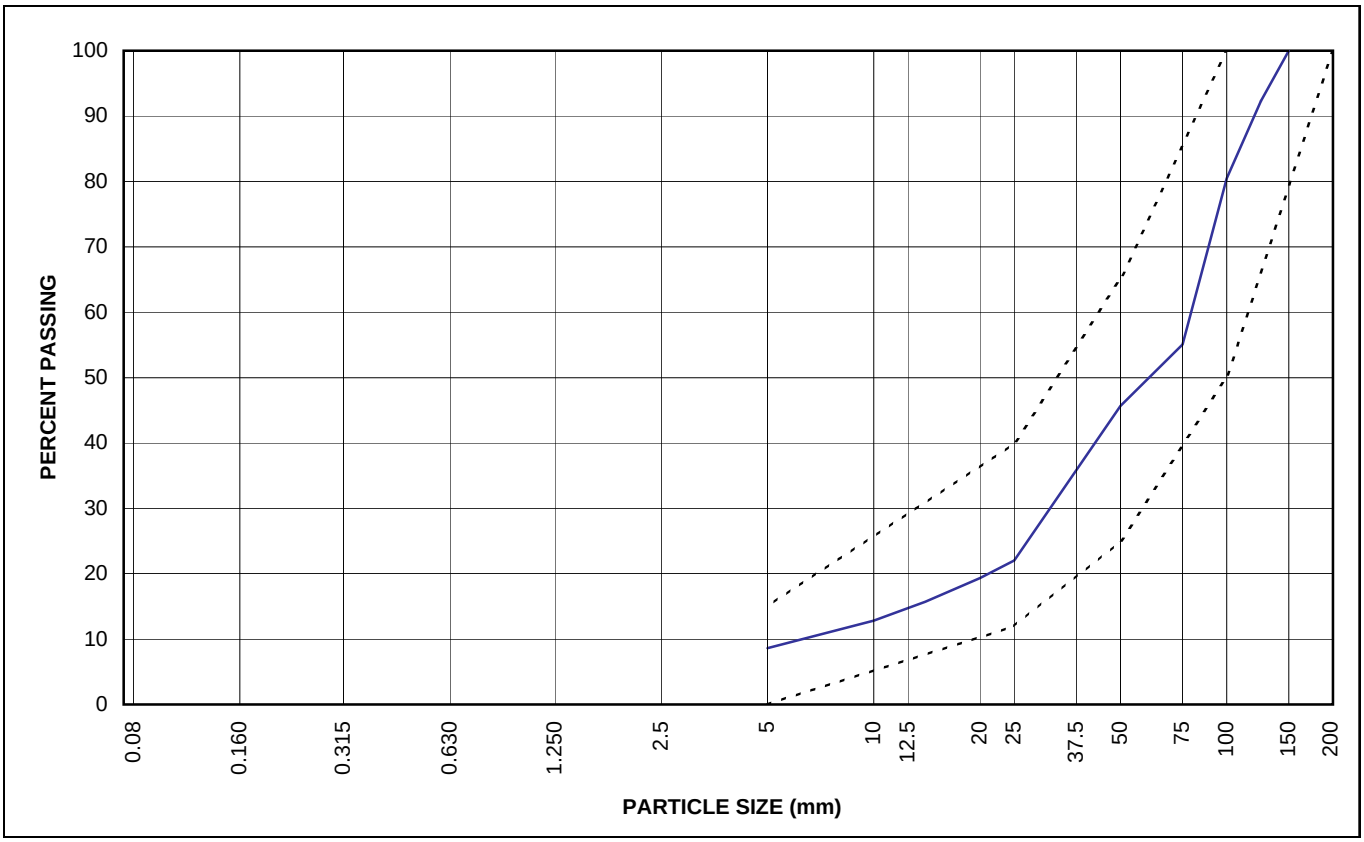
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-006
DATE SAMPLED: May 15/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from insitu sampling.
%Gravel = 91 ###

Station 0+150

PARTICLE SIZE	PERCENT PASSING
150	100
125	92
100	80
75	55
50	46
25	22
20	19
14	16
10	13
5	9

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

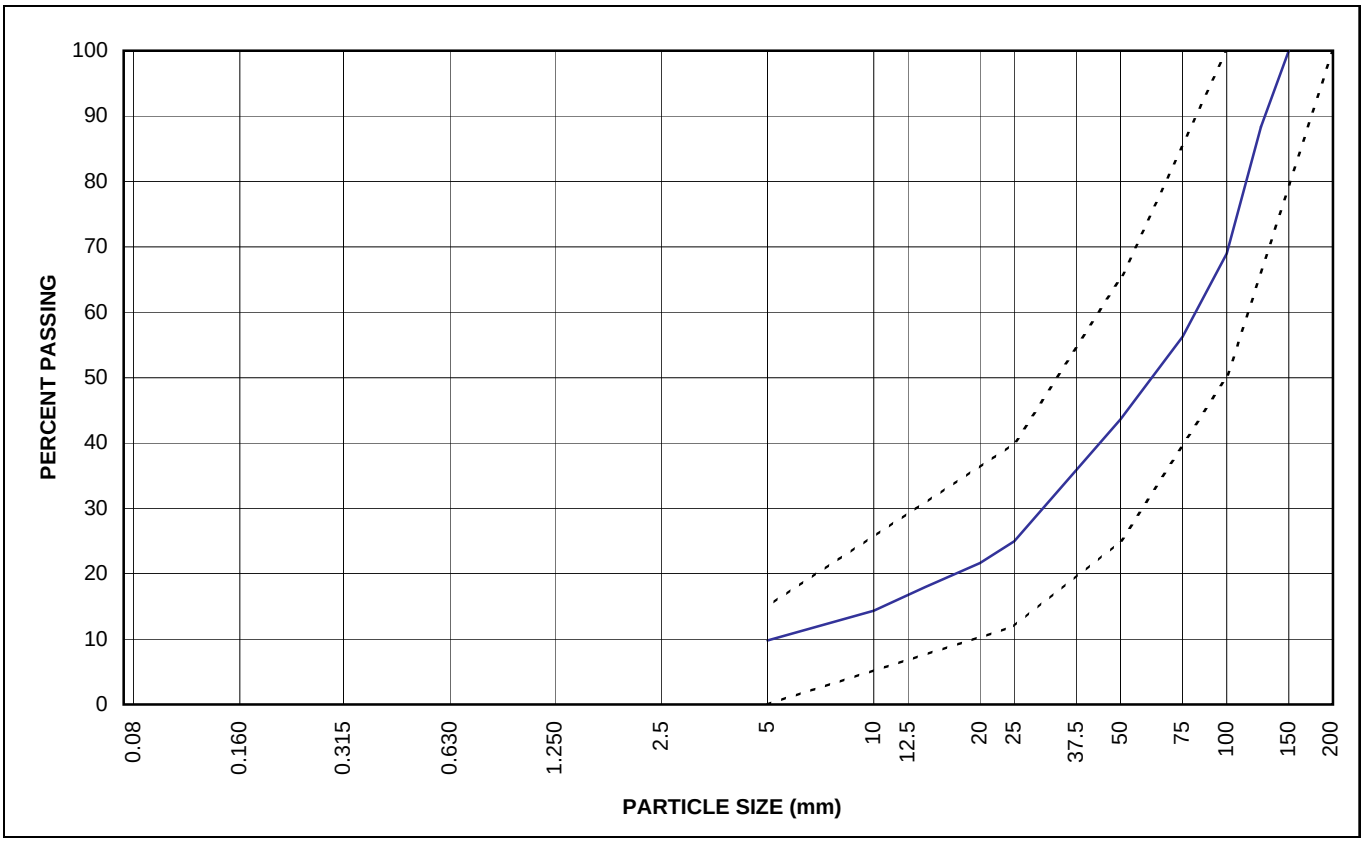
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-005
DATE SAMPLED: May 15/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from insitu sampling.
%Gravel = 90 ###

Station 0+170

PARTICLE SIZE	PERCENT PASSING
150	100
125	88
100	69
75	56
50	44
25	25
20	22
14	18
10	14
5	10

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

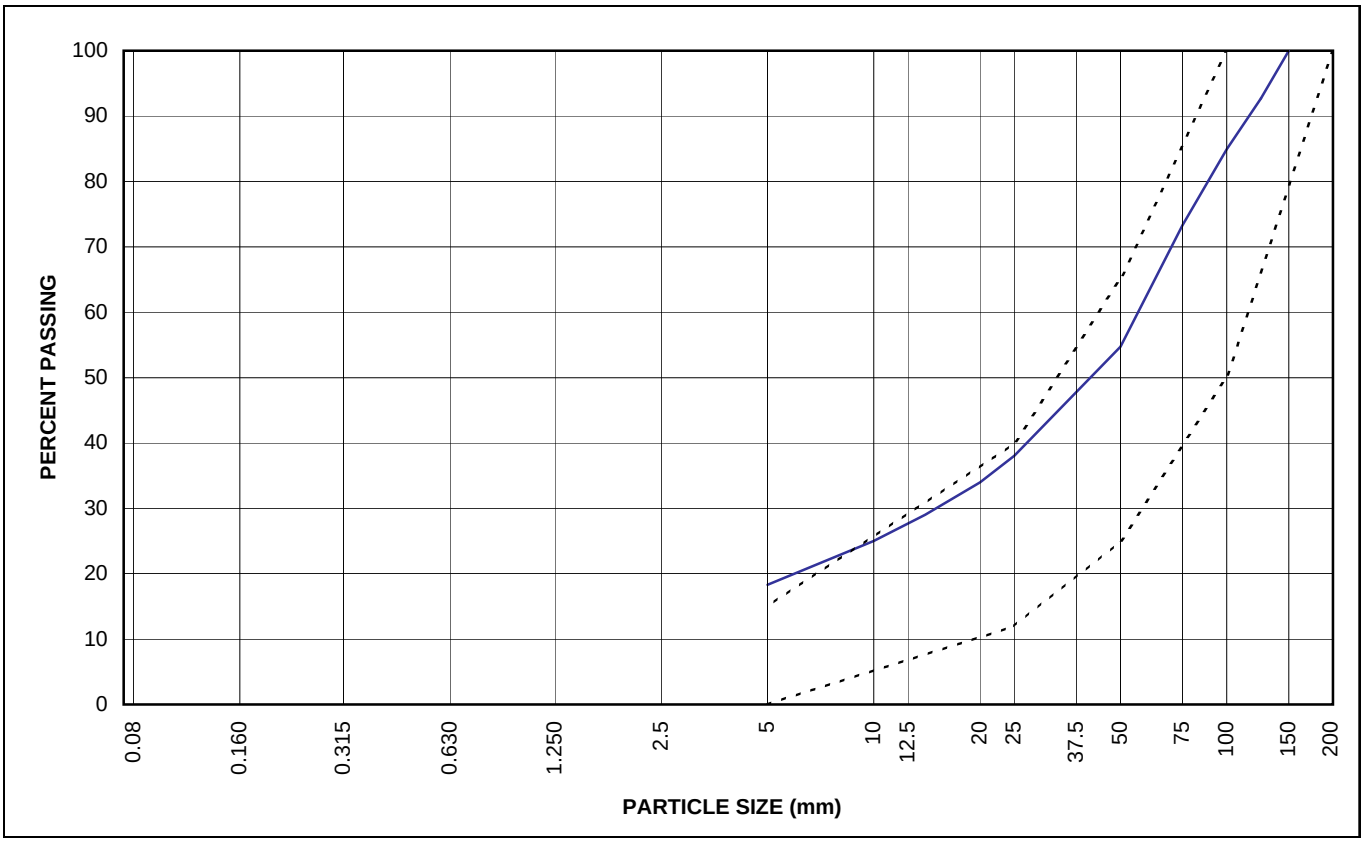
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
200 mm crush West Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: 200W07-011
DATE SAMPLED: May 19/07 **BY:** CJD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 200mm (Dyke)
REMARKS: Sample obtained from insitu sampling.
%Gravel = 82 ###

Station 0+100 upstream of liner

PARTICLE SIZE	PERCENT PASSING
200	100
150	100
125	93
100	85
75	73
50	55
25	38
20	34
14	29
10	25
5	18

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

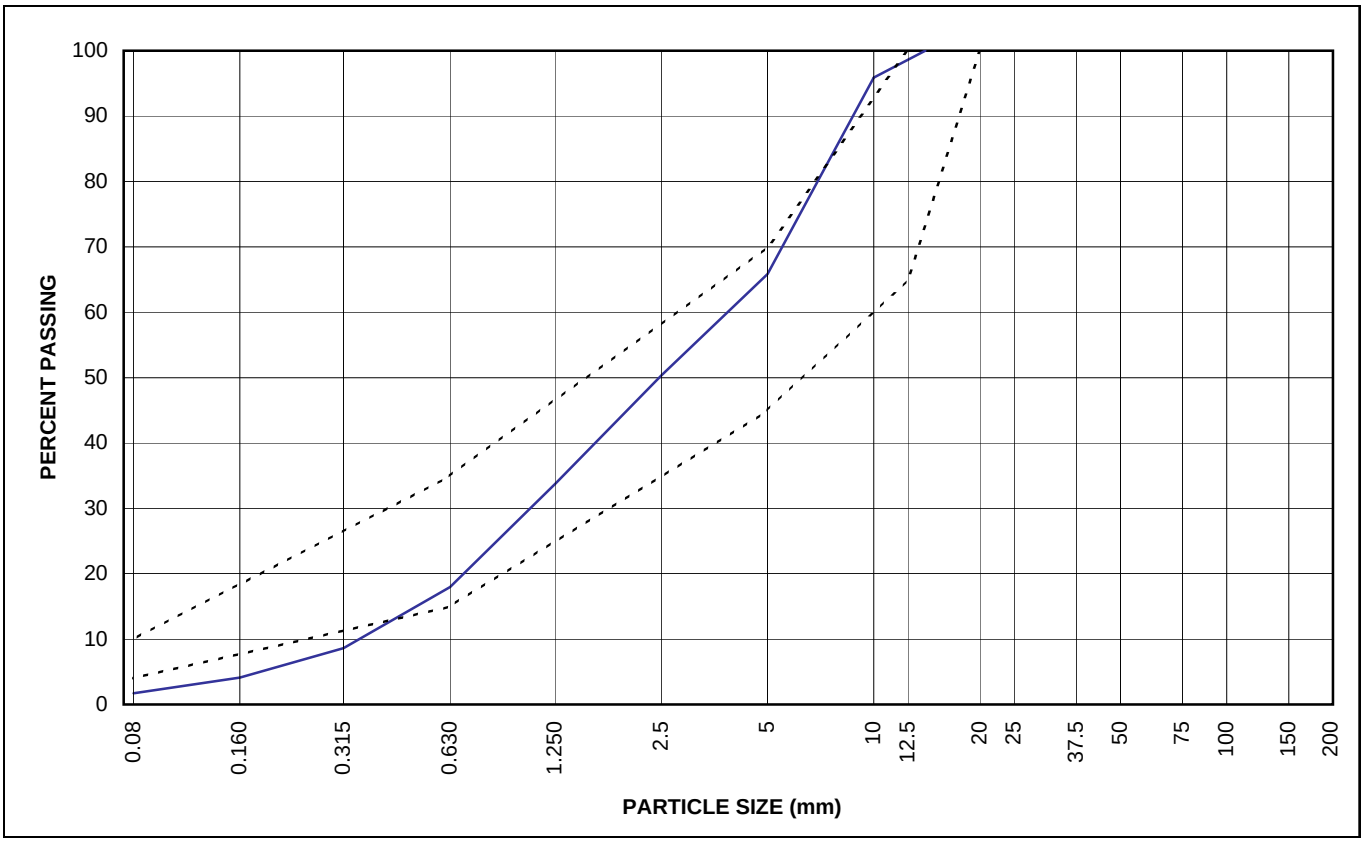
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-007
DATE TESTED: May 20/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: Not Recorded
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 34 %Sand = 64 %Fines = 2

Sampled obtained from liner bedding zone
at Station 0+080; 5 m down from crest

PARTICLE SIZE	PERCENT PASSING
20	100
20	100
10	96
5	66
2.5	50
1.25	34
0.63	18
0.315	9
0.16	4
0.08	2

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

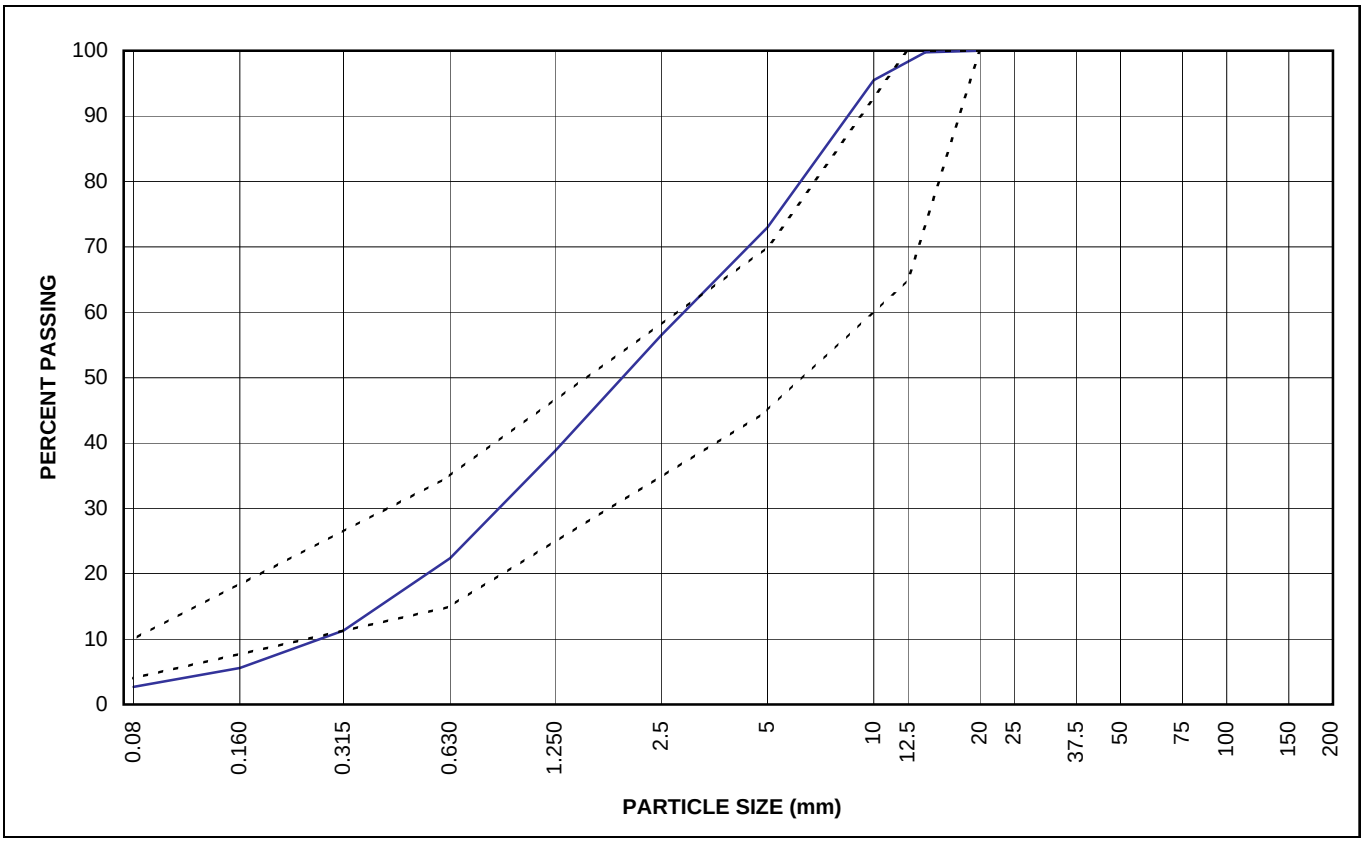
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite West Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-006
DATE TESTED: May 19/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 7.1%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 27 %Sand = 70 %Fines = 3

Sampled obtained from liner bedding zone
at Station 0+030

PARTICLE SIZE	PERCENT PASSING
20	100
14	100
10	96
5	73
2.5	56
1.25	39
0.63	22
0.315	11
0.16	6
0.08	3

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

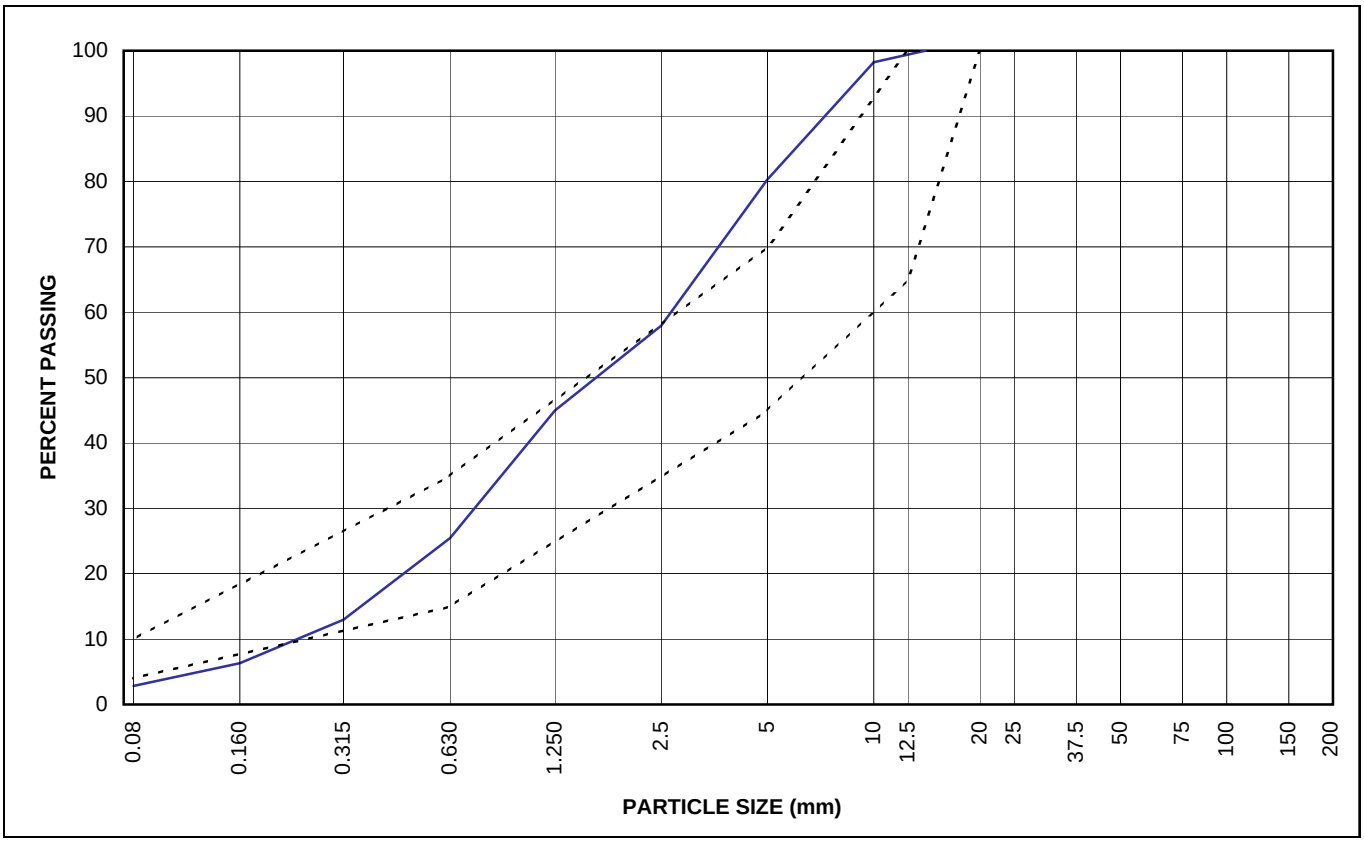
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite West Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-005
DATE TESTED: May 19/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 7.4%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 20 %Sand = 77 %Fines = 3

Sampled obtained from liner bedding zone
at Station 0+120

PARTICLE SIZE	PERCENT PASSING
20	100
20	100
10	98
5	80
2.5	58
1.25	45
0.63	25
0.315	13
0.16	6
0.08	3

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

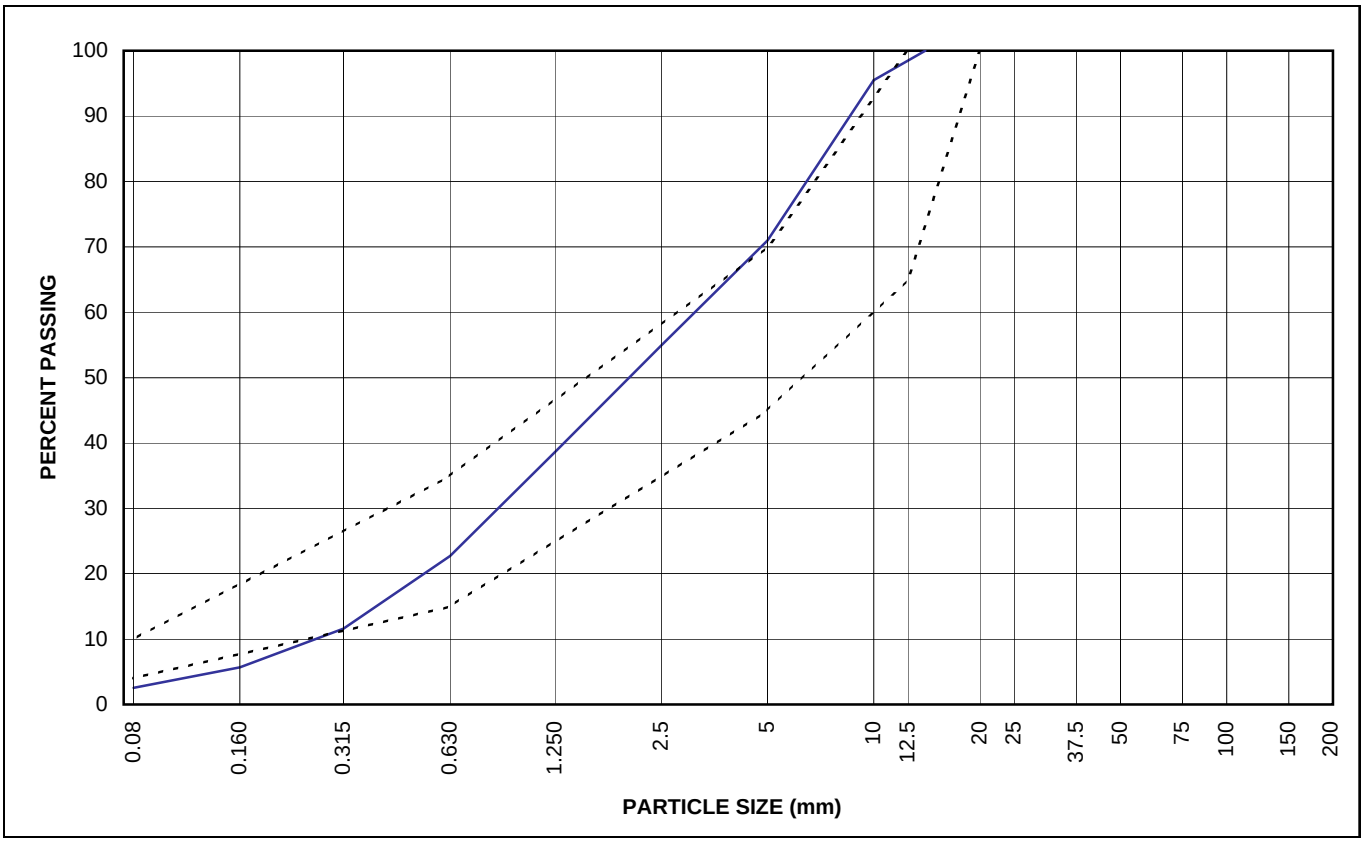
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite West Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-004
DATE TESTED: May 18,2007 **BY:** CJD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 6.0%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 29 %Sand = 68 %Fines = 3

Sampled obtained from liner bedding zone
at Station 0+075

PARTICLE SIZE	PERCENT PASSING
20	100
20	100
10	96
5	71
2.5	55
1.25	39
0.63	23
0.315	12
0.16	6
0.08	3

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

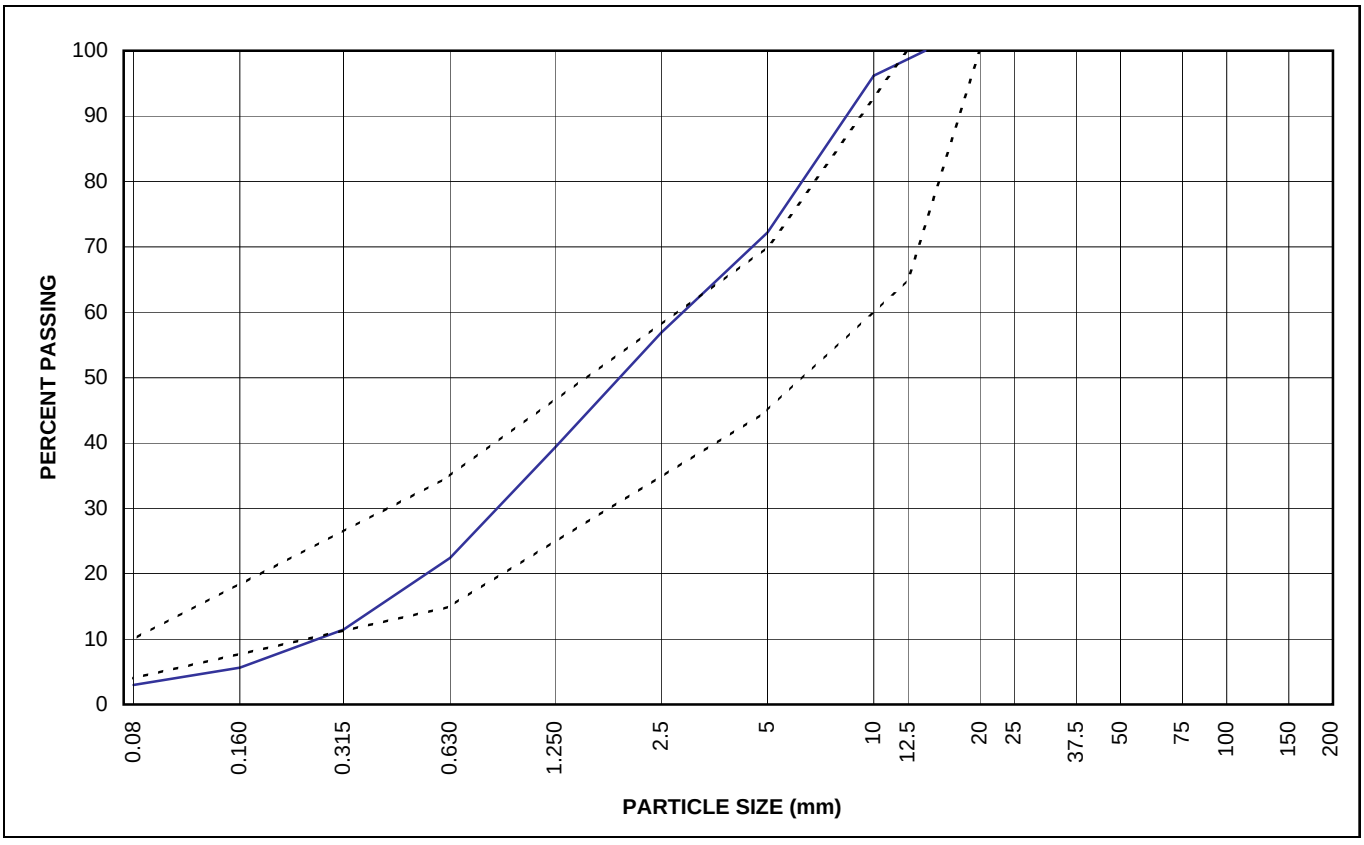
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite West Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-003
DATE TESTED: May 18,2007 **BY:** CJD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 7.6%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 28 %Sand = 69 %Fines = 3

Sampled obtained from liner bedding zone
at Station 0+055

PARTICLE SIZE	PERCENT PASSING
20	100
20	100
10	96
5	72
2.5	57
1.25	39
0.63	22
0.315	11
0.16	6
0.08	3

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA ENGINEERING CONSULTANTS LTD.

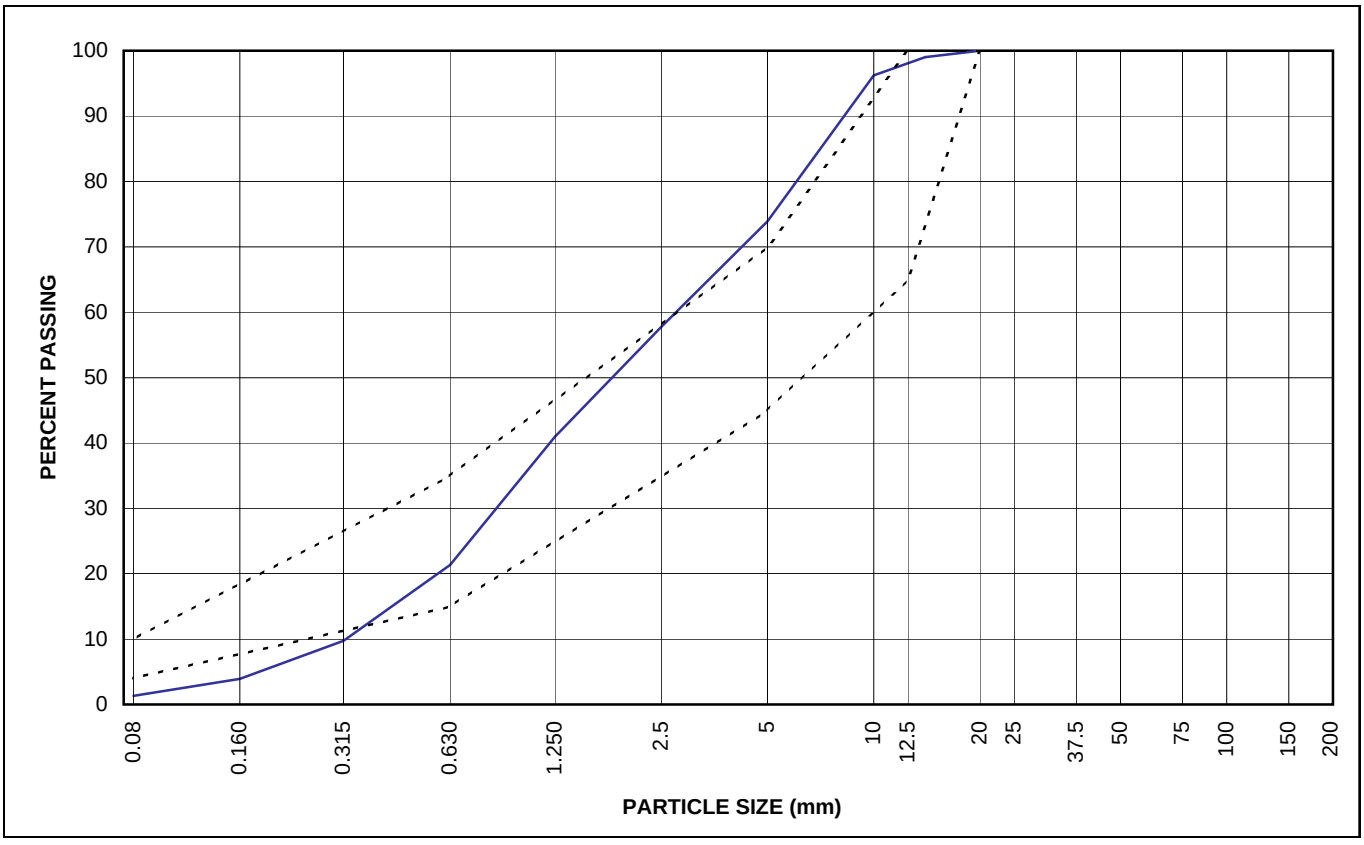
PARTICLE SIZE ANALYSIS REPORT

PROJECT: Jericho Diamond Mine
SITE: Jericho, NU
Coarse Processed Kimberlite Southeast Dam
PROJECT NO: 1100060.007
CLIENT: Tahera Attention: H.Gates/R.Jones/T.Lochiavo
SAMPLE NO: CPKW07-008
DATE TESTED: May 20/07 **BY:** JGD
USC CLASSIFICATION:
NATURAL MOISTURE CONTENT: 5.6%
SPECIFICATION BAND PLOTTED: 20mm
REMARKS: Sample obtained from insitu sampling.
%Gravel = 26 %Sand = 73 %Fines = 1

Sampled obtained from liner bedding zone
at Station 0+225; 7 m up from toe

PARTICLE SIZE	PERCENT PASSING
20	100
14	99
10	96
5	74
2.5	58
1.25	41
0.63	21
0.315	10
0.16	4
0.08	1

SAND			GRAVEL		COBBLES
FINE	MEDIUM	COARSE	FINE	COARSE	



EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #12
ENDING: MAY 26, 2007

EBA Personnel:

Christopher Dixon	May 20 – May 23
Jason Porter	May 23 – May 26
Jonathon Dixon	May 20 – May 23
Renata Klassen	May 23 – May 26

WEATHER			
May 20 (Sun)	@ 12:00 hrs.	0°C	Wind 13 knots SE, sun
May 21 (Mon)	@ 12:00 hrs.	-5°C	Wind 12 knots N, overcast
May 22 (Tues)	@ 12:00 hrs.	-9°C	Wind 8 knots W, light snow
May 23 (Wed.)	@ 12:00 hrs.	-6°C	Wind 12 knots SW, cloudy
May 24 (Thu)	@ 12:00 hrs.	+2°C	Wind 9 knots SW, clear, sun
May 25 (Fri)	@ 12:00 hrs.	+7°C	Wind 5 knots SW, clear, sun
May 26 (Sat)	@ 12:00 hrs.	-1°C	Wind 10 knots N, sunny

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna completed the placement of the liner protection materials and completed the placement of the run-of-mine temporary thermal cover. No further activity is required until construction resumes in the fall of 2007.

A&A Technical services began installing the liner membrane and non-woven geo-textile liner system at the Southeast Dam during the report period.

Nuna placed liner bedding and till materials at the Southeast Dam during the report period. Nuna completed the downstream lift of bedding to the design elevation and commenced the placement of the upstream liner bedding and the till zone at the southern end of the dam.

2.0 WEST DAM CONSTRUCTION ACTIVITIES

Construction of the West Dam was completed for the season during the report period. Caps were welded to the thermosyphon pipes to prevent water and debris infiltration. A protective metal cover

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was placed over the pipes before backfill commenced. The remaining exposed liner panels were covered with 20 mm, OSB and 200 mm materials prior to placement of the thermal cover. The placement of thermal cover continued from the last report period and was completed during the current report period. The cover was placed in 2 m lifts where the material will be removed when construction resumes in the fall. The fill was placed using a Cat D4 or D9 dozer and hauled with Cat 730, 769 or 777 haul trucks. The material was either hauled directly from Jericho pit or stockpiled adjacent to the dam and hauled to the dam as required. A minimum fill thickness of 4 m was placed upstream, downstream and above the core zone to ensure that the material remains frozen over the summer season.

3.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna completed placement of the downstream liner bedding (coarse processed kimberlite) material. The liner bedding material was loaded into a CAT 730 haul truck at the discharge conveyor near the process plant and dumped on the downstream portion of the dam. The liner bedding material was then placed into the liner bedding zone by a CAT 345 excavator or Cat D4 dozer. The downstream slope (3H:1V) of the liner bedding material was shaped using a CAT 345 excavator. Nuna compacted the slope of the CPK using a CS-573 to a CAT 345 excavator with nylon slings. The excavator pulled the packer up the slope and then the excavator gently rolled the packer back down the slope. The packer would have the vibration on for the up-slope pass the slope and off for down-slope pass. Four passes were made, and then the excavator and packer would move one drum width over and do four more passes. Due to the reach required, and length of the slings available, the packer rolled middle third (bottom third was previously packed) and then the slings were shortened and the top third was rolled. The slope was compacted in this manner from Station 0+180 to Station 0+050.

A&A began installation of the liner system during the report period. On May 23rd placement of the downstream layer of the non-woven geo-textile commenced and was placed from station 0+050 to 0+200. The geo-textile was deployed using a Cat 930 loader with a spreader bar attached to the fork attachment. The individual panels were sealed together using a heat gun and sandbags used to prevent wind damage.. An anchor trench was constructed along the crest of the dam to assist in the placement of the liner on the slope and to hold it in place during backfilling operations. Placement of the 60 mil high density polyethylene (HDPE) membrane commenced on May 23rd. Panels were welded parallel the slope using a double hot wedge fusion unit. The welded seams were pressure tested and documented by A&A. The installed panels were welded to the Phase One panels (key trench and fillet) using an extrusion welding unit. Extrusion seams and patches were tested by A&A using a vacuum box. At the end of the report period the HDPE membrane extended from 0+035 to 0+130.

A section of the Phase One liner at approximately 0+020 was extended out of the key trench by A&A to the final elevation of 524 m. The abutment was prepared using the Cat 345 and 330 excavators. The 330 breaker removed small rock outcrops and the 345 used a smooth finishing bucket to clean the surface. A lift of 20 mm bedding material was placed along the abutment and

along the original ground surface at elevation 524 m. The final section of the key trench was then backfilled with moisture conditioned 20 mm fill and compacted. The Phase 2 liner was then installed followed by placement up the upstream liner bedding.

No work was completed on the concrete tie-in beam that is to be constructed at the north abutment. A section of the rock outcrop was removed to provide a better surface for the beam. The CAT 330 excavator with breaker attachment was used to loosen the rock which will be removed by Nuna labours.

4.0 QUALITY ASSURANCE

Till material for the Southeast Dam was being sourced from the Jericho pit till dump. Grain size testing was performed on insitu material taken from the dump and the piles that were excavated and sorted for placement at the dam. The samples taken for testing had a maximum particle size of 200 mm. The quantity of oversize particles (+200 mm particles) was estimated visually. A total of 5 samples were taken during the report period and the testing indicates that they meet the design specifications.

5.0 CONSTRUCTION SCHEDULE

The construction of the two dams is behind schedule. Further work at the West Dam will not be possible until late 2007.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is still 3-4 weeks of work required at this dam to bring it to substantial completion. There is approximately 4-5 weeks of work required to complete the dam.

The timely construction of the concrete beam at the dam is essential. The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of the upstream liner bedding at the Southeast Dam;
- Complete installation of the liner system at the Southeast Dam;
- Continue liner bedding placement;
- Continue till zone and commence CPK zone placement;

- Begin installation of the concrete beam tie-in at the Southeast Dam.

7.0 SAFETY

There were no safety incidents during the report period.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #13
ENDING: JUNE 2, 2007

EBA Personnel: Jason Porter May 27 – June 2
Renata Klassen May 27 – May 30

WEATHER			
May 27 (Sun)	@ 12:00 hrs.	-5°C	Wind 18 knots NE, overcast, snow
May 28 (Mon)	@ 12:00 hrs.	-6°C	Wind 14 knots SE, sun
May 29 (Tues)	@ 12:00 hrs.	+2°C	Wind 6 knots SW, light rain
May 30 (Wed.)	@ 12:00 hrs.	-2°C	Wind 10 knots E, cloudy
May 31 (Thu)	@ 12:00 hrs.	+1°C	Wind 17 knots SE, fog
June 1 (Fri)	@ 12:00 hrs.	+7°C	Wind 7 knots NW, cloudy
June 2 (Sat)	@ 12:00 hrs.	+2°C	Wind 5 knots NW, overcast

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

A&A Technical installed the HDPE liner to Sta. 0+240.The A&A crew departed site on May 30th. The installation of the liner will need to be completed once the concrete beam is constructed on the northern abutment. Nuna commenced placement of the upstream coarse processed kimberlite (CPK) liner bedding and the till zone.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

A&A continued installation of the liner system during the report period. The 60 mil high density polyethylene (HDPE) geo-membrane liner was deployed using a Cat 930 loader with a spreader bar attached to the fork attachment. The sheets were welded parallel the slope using a double hot wedge fusion unit. The welded seams were pressure tested and documented by A&A. The installed panels were welded to the Phase One panels (key trench and fillet) using an extrusion welding unit. Extrusion seams and patches were tested by A&A using a vacuum box. At the end of the report period the HDPE membrane extended from 0+017 to 0+240. The upstream geo-textile was deployed in the same manner as the geo-membrane. The individual panels were sealed together using a heat gun and sandbags were used to prevent wind damage. The liner anchor trench, constructed along the crest of the dam was backfilled with CPK.

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There was insufficient geo-textile on site to completely cover the geo-membrane. An attempt was made to procure an additional roll from A&A however Arctic Sunwest's Buffalo was not available and is the only aircraft able to carry a roll to the site. EBA has requested that A&A cut the geo-textile to the required lengths and fold them for transport on an alternate aircraft during the next report period.

Placement of the upstream CPK liner bedding and till zones commenced during the report period. A 0.5 m lift of liner bedding was placed upstream of the liner using a Cat D4 dozer or Cat 345 excavator. The material was spread along the hinge point and then part way up the slope by the dozer. The excavator sat upstream of the key trench and placed material into narrow sections of the key trench where access by the dozer access was impractical. The 0.5 m of liner bedding was placed above the hinge was not compacted because the high probability of liner damage. The lift of liner bedding was followed by a 0.5 m lift of till material which was compacted using the Cat 573 grooved drum compactor. Once the initial lift of till was in place, the EBA site representative allowed the compactor to compact the liner bedding on the slope. The compactor operated parallel to the slope and was instructed to place only the drum on the bedding while keeping the rear tires on the till at the toe of the bedding slope. Additional compactive effort was applied to the bedding material while compacting the till which overlays the bedding. EBA increased the allowable lift thickness of till material to 500 mm from the 300 mm that was stated in the Construction Specifications. The specified maximum particle size of 300 mm and the high moisture content of the material make the placement of the thinner lifts difficult. The till is reasonably well graded and is being placed in a thawed condition which allows the application of sufficient effort during compaction. If the properties of the till change in during future placement the change to the lift thickness specification may be revisited. The Cat 345 excavator was down with mechanical problems for most of the report period. Dressing of the till slope was performed using the D4 dozer. SAS provided grade control and as-built survey during placement.

No work was completed on the concrete tie-in beam that is to be constructed at the northern abutment. Clark Builders has indicated that the fabrication of the rock anchors and reinforcing bar will not be completed until June 5th at the earliest, at which point the materials must still be transported to site. Clark Builders' carpenter crew may be mobilized during the next week to begin preparing for the beam's construction.

3.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam remains behind schedule. Material placement is progressing well but will soon be constrained by the inability to place materials in the northern abutment until the concrete beam and liner installation is complete.

EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)			
	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**-	80*
Till Zone	3300	10,500**	32
CPK Zone	0	12,000	0

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is at least 3 weeks of work required at this dam to bring it to substantial completion. There is approximately 4-5 weeks of work required to complete the dam.

The timely construction of the concrete beam at the dam is essential. The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible. . The north abutement should be insulated to minimize thaw of the frozen fill while awaiting the concrete beam construction.

4.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continue placement of the upstream liner bedding at the Southeast Dam;
- Continue till zone and commence CPK zone placement;
- Begin installation of the concrete beam tie-in at the Southeast Dam.

5.0 SAFETY

There were no safety incidents during the report period.

6.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Jason L. Porter, P.Eng.
Project Engineer
jporter@eba.ca

EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #14
ENDING: JUNE 9, 2007

EBA Personnel: Jason Porter June 03 to June 09
David Kubisheski June 06 to June 09

WEATHER			
June 03 (Sun)	@ 12:00 hrs.	-1°C	Wind 7 knots NE, clear
June 04 (Mon)	@ 12:00 hrs.	+4°C	Wind 7 knots SE, partly cloudy
June 05 (Tues)	@ 12:00 hrs.	+1°C	Wind 15knots N, sunny
June 06 (Wed.)	@ 12:00 hrs.	+4°C	Wind 9 knots NW, cloudy
June 07 (Thu)	@ 12:00 hrs.	+1°C	Wind 22 knots NW, cloudy
June 08 (Fri)	@ 12:00 hrs.	0°C	Wind 7 knots NE, cloudy
June 09 (Sat)	@ 12:00 hrs.	+1°C	Wind 8 knots NE, overcast

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna continued placing the upstream coarse processed kimberlite (CPK) liner bedding and the till zone. Nuna started placement of CPK zone along toe of slope along upstream side of Southeast Dam. The installation of the liner will need to be completed once the concrete beam is constructed on the northern abutment.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna continued placement of the upstream CPK liner bedding and till zones during this report period. A 0.5 m lift of liner bedding was placed upstream of the liner using a Cat D4 dozer or Cat 345 excavator. The material was spread along the hinge point and then part way up the slope by the dozer. The excavator sat upstream of the key trench and placed material into narrow sections of the key trench where access by the dozer access was impractical. The 0.5 m of liner bedding was placed above the hinge was not compacted because the high probability of liner damage. The lift of liner bedding was followed by a 0.5 m lift of till material which was compacted using the Cat 573 grooved drum compactor. Once the initial lift of till was in place, the EBA site representative allowed the compactor to compact the liner bedding on the slope. The compactor operated parallel to the slope and was instructed to place only the drum on the bedding while keeping the rear tires on the till at the toe of the bedding slope. Additional compactive effort was applied to the bedding material while

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compacting the till which overlays the bedding. EBA continues to allow the placement of 500 mm till lifts rather than the 300 mm thickness that was stated in the Construction Specifications.

Nuna was advised to keep the bench elevation difference between Till zone and the CPK zone placed along the upstream side of the dam to a maximum of 2.0 metres. The Cat 573 compactor was down with mechanical problems for the last two days of the report period and is awaiting parts from Yellowknife. Compaction of the material zones was achieved by staggering truck traffic over the fill as it is placed. Dressing of the till slope was performed using the D4 dozer. SAS provided grade control and as-built survey during placement.

A large volume of till and blast rock has been discovered along the upstream side of dam from approximately Sta. 0+035 to 0+075. The material appears to be from the initial grubbing and key trench excavation in 2005. The material is contaminated with snow and ice and will need to be removed to allow the proper placement of the CPK zone.

Due to aircraft restrictions, Tahera was unable to transport the required non-woven geo-textile to site in a timely manner. GCL was substituted for the geo-textile to provide protection for the HDPE membrane. Three panels of GCL were installed by Nuna using the Cat 930 loader and a spreader bar. The GCL extends from Sta. 0+220 to 0+233.

No work was completed on the concrete tie-in beam that is to be constructed at the northern abutment. Clark Builders has indicated that the fabrication of the rock anchors and reinforcing bar will not be completed until June 15th at the earliest, at which point the materials must still be transported to site. Clark Builders' carpenter crew may be mobilized during the next week to begin preparing for the beam's construction.

3.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam remains behind schedule. Material placement is progressing well but will soon be constrained by the inability to place materials in the northern abutment until the concrete beam and liner installation is complete.

EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)

	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**	95*
Till Zone	7600	10,500**	72
CPK Zone	1950*	12,000	16

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is at least 2-3 weeks of work required at this dam to bring it to substantial completion. There is approximately 4 weeks of work required to complete the dam.

The timely construction of the concrete beam at the dam is essential. The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible. . The northern abutement should be insulated to minimize thaw of the frozen fill while awaiting the concrete beam construction. EBA has requested that insulated tarps be placed on the abutment to minimize the potential for thawing.

4.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Completion of the upstream liner bedding at the Southeast Dam;
- Continue till zone and continuation of CPK zone placement;
- Begin installation of the concrete beam tie-in at the Southeast Dam.

5.0 SAFETY

There were no safety incidents during the report period.

6.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #15
ENDING: JUNE 16, 2007

EBA Personnel: Jason Porter June 10 to June 13
David Kubisheski June 10 to June 16

WEATHER			
June 10 (Sun)	@ 12:00 hrs.	+3°C	Wind 8 knots NW, sunny
June 11 (Mon)	@ 12:00 hrs.	+7°C	Wind 7 knots N, cloudy
June 12 (Tues)	@ 12:00 hrs.	+8°C	Wind 14knots SE, cloudy
June 13 (Wed.)	@ 12:00 hrs.	+6°C	Wind 6 knots SW, overcast
June 14 (Thu)	@ 12:00 hrs.	+1°C	Wind 8 knots N, overcast
June 15 (Fri)	@ 12:00 hrs.	+9°C	Wind 15 knots WNW, sunny
June 16 (Sat)	@ 12:00 hrs.	+6°C	Wind 19 knots NW, cloudy, snow showers

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna continues the placement of the upstream CPK zone of Southeast Dam. Nuna also continued placement of the Till zone along the crest at the southern end of the dam. The final installation of liner and placement of CPK cover will need to be completed once the concrete beam is constructed on the northern abutment. Due to the delays with the installation of the concrete beam Nuna has indicated that they may start work on Divider Dyke A and return to complete Southeast Dam once the concrete beam is completed. Jason Porter P. Eng (EBA) has now departed site and is being replaced by David Kubisheski C.E.T. (EBA) for duration of work being completed on Southeast Dam and Divider Dyke A.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna continued placement of the upstream CPK zone along the toe of slope and till zones during this report period. The work is typically being performed on day shift but work on night shift occurs sporadically as well. EBA continues to allow the placement of 500 mm till lifts rather than the 300 mm thickness that was stated in the Construction Specifications. Nuna was previously advised to keep the bench elevation difference between Till zone and the CPK zone placed along the upstream side of the dam to a maximum of 2.0 metres, currently the difference in elevation between

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the two zones is less than 1.0 metres. The Cat 573 compactor which was down with mechanical problems late last week is now operational and being used to compact both the CPK and Till Zones. Dressing of the till slope was performed using the D4 dozer. SAS provided grade control and as-built survey during placement.

As mentioned in last weeks report, a large volume of till and material from the key trench excavation was discovered along the upstream side of the Dam from approx Sta 0+035 to Sta 0+075. This material was contaminated with snow and ice was deemed unsuitable for the dam foundation. Nuna was instructed to remove and dispose of this material. The material was removed using a Cat 345B excavator and hauled to the waste dump. This work was completed early in the week.

To date no work has been completed on the concrete tie-in beam that is to be constructed at the northern abutment. Clark Builders indicated this week that the fabrication of the rock anchors and reinforcing bar will be completed by June 15th; the materials must still be transported to site and should arrive by June 18. Clark Builders' carpenter crew is supposed to be mobilized to site during the next week to begin preparing for the beam's construction. Secondary materials such as joint sealant compound, betonite and Sika Arctic 100 grout which are to be supplied by Tahera have been ordered.

3.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam continues to remain behind schedule. Material placement is progressing well but will soon be constrained by the inability to place materials in the northern abutment until the concrete beam and liner installation is complete.

EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)

	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**	95*
Till Zone	6300	10,500**	60
CPK Zone	6600*	12,000	55

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is at least 3 weeks of work required at this dam to bring it to substantial completion. There is approximately 4 weeks of work required to complete the dam.

The timely construction of the concrete beam at the dam is essential. The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible. The northern abutment needed to be insulated to minimize thaw of the frozen fill while awaiting the concrete beam construction, and at the request of EBA insulated tarps were placed on the abutment to minimize the potential for thawing.

4.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Commence grubbing the north end of Divider Dyke A;
- Continue till zone and CPK zone placement;
- Begin installation of the concrete beam tie-in at the Southeast Dam.

5.0 SAFETY

There were no safety incidents during the report period.

6.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #16
ENDING: JUNE 23, 2007

EBA Personnel: David Kubisheski June 17 to June 23

WEATHER			
June 17 (Sun)	@ 12:00 hrs.	+4°C	Wind 10 knots NW, cloudy
June 18 (Mon)	@ 12:00 hrs.	+2°C	Wind 9 knots W, overcast
June 19 (Tues)	@ 12:00 hrs.	+2°C	Wind 15 knots NE, cloudy
June 20 (Wed.)	@ 12:00 hrs.	+4°C	Wind 13 knots W, cloudy
June 21 (Thu)	@ 12:00 hrs.	+6°C	Wind 10 knots NW, overcast
June 22 (Fri)	@ 12:00 hrs.	+10°C	Wind 7 knots SE, sunny
June 23 (Sat)	@ 12:00 hrs.	+14°C	Wind 10 knots SE, sunny

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Nuna has completed the placement of CPK zone along upstream side of Southeast Dam at the southern end. The north end has yet to be completed pending completion of concrete beam. Nuna has also completed placing till to the crest of the dam at the southern end. The final installation of liner, placement of CPK cover and the Till zone will need to be completed once the concrete beam is constructed on the northern abutment. Due to the delays with the installation of the beam, Nuna has started work on Divider Dyke and will return to complete Southeast Dam once the concrete and liner is complete. Nuna has completed grubbing and started placing ROM on south end of Divider Dyke A.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna completed placement of the upstream CPK zone along toe of slope and till zones during this report period. Work being completed each day on day shift only. EBA continues to allow the placement of 500 mm till lifts rather than the 300 mm thickness that was stated in the Construction Specifications. Nuna was previously advised to keep the bench elevation difference between Till zone and the CPK zone placed along the upstream side of the dam to a maximum of 2.0 metres, currently the difference in elevation between the two zones is less than 1.0 metres. Dressing of the

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till slope was performed using the D4 dozer. SAS provided grade control and as-built survey during placement.

To date no work has been completed on the concrete tie-in beam that is to be constructed at the northern abutment. Clark Builders' carpenter crew is scheduled to arrive on site on Wednesday June 27 to begin preparing for the beam's construction. This schedule was confirmed by Doug Haines (Clark Builders) during a telephone conversation Friday June 22, 2007. Secondary materials such as Sikaflex Joint Sealant Compound and Sika 212 Grout are available on site, while the bentonite has been ordered by Tahera.

3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

Work commenced on Divider Dyke A during the report period. Grubbing of the south end of the dyke was performed with a 345B tracked excavator. The excavated material was stockpiled along the east side of the dyke and is to be hauled away to a waste dump at a later date. The exposed surface of the filter zone as well as the 200mm crush zone was cleared of waste material using the excavator. This waste material was hauled away and disposed of. Later in the week the north end of dyke was grubbed, both ends were reviewed by EBA's site representative who confirmed that work was performed satisfactorily. ROM material from Jericho pit was placed on the south end of dyke using a Cat 769 Haul truck and a D4 Dozer.

4.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam continues to remain behind schedule. Material placement is progressing well but is now constrained by the inability to place materials in the northern abutment until the concrete beam and liner installation is complete.

EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)

	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**	95*
Till Zone	7500*	10,500**	70
CPK Zone	8500*	12,000	70

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is at least 2-3 weeks of work required at this dam to

bring it to substantial completion. It is estimated that work on the Southeast Dam should be complete by July 20, 2007.

The timely construction of the concrete beam at the dam is essential. The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible. The northern abutment needed to be insulated to minimize thaw of the frozen fill while awaiting the concrete beam construction, and at the request of EBA insulated tarps were placed on the abutment to minimize the potential for thawing.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continuation of ROM placement at south end of Divider Dyke A;
- Commencement of placing Filter and 200mm Minus on Divider Dyke A;
- Begin installation of the concrete beam tie-in at the Southeast Dam.

6.0 SAFETY

There were no safety incidents during the report period.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #17
ENDING: JUNE 30, 2007

EBA Personnel: David Kubisheski June 24 to June 30

WEATHER			
June 24 (Sun)	@ 12:00 hrs.	+8°C	Wind 8 knots SE, sunny
June 25 (Mon)	@ 12:00 hrs.	+20°C	Wind 10 knots SE, sunny
June 26 (Tues)	@ 12:00 hrs.	+21°C	Wind 11 knots SE, sunny
June 27 (Wed.)	@ 12:00 hrs.	+18°C	Wind 10 knots SE, sunny
June 28 (Thu)	@ 12:00 hrs.	+18°C	Wind 18 knots SE, sunny
June 29 (Fri)	@ 12:00 hrs.	+19°C	Wind 20 knots SE, sunny
June 30 (Sat)	@ 12:00 hrs.	+18°C	Wind 13 knots SE, partly cloudy

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

There was only limited activity on the Southeast Dam during the report period. Clark Builders arrived on site by mid week but only minimal activity took place. Nuna did not perform any construction related activity on Southeast Dam this week. Nuna concentrated their efforts on Divider Dyke A performing grubbing, hauling of ROM and placement of both 150 mm and Filter material.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Nuna has yet to complete final placement of the Till and CPK zones. Due to delays in completing the concrete beam for the liner connection, Nuna has switched its resources from the Southeast Dam to Divider Dyke A. The dam requires further dressing and trimming of the downstream side prior to completion. Al Harmon (A&A Technical Services) indicated during a telephone conversation with EBA that they would not be able to return to site until August to complete liner installation. Tahera was informed of A&A's position by EBA and began researching alternate arrangements.

Clark Builders' carpenter crew arrived on site Wednesday June 27 and spent most of their time assembling required supplies. An Air Trac Drill mounted on 330 Cat Backhoe was used to drill holes

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for beam anchors. Drilling was not completed until Saturday due to mechanical breakdown and wait time for replacement parts. A total of 23 anchor holes were drilled and 30mm anchor bars installed. A SIKA 212 Grout was used for the anchors, a set of three (3) test cylinders were cast by EBA to determine compressive strength.

3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

Work continued on Divider Dyke A during the report period. Grubbing of both ends of Divider Dyke is now complete, the waste material is stockpiled at the South end of the Dyke and will be deposed of at a later date. The material was grubbed using of a Cat 345B tracked excavator. Nuna continued placement of ROM at south end of the dyke. The material is being hauled directly from Jericho Mine Pit by 769 Haul Truck and spread by a D4 Dozer in 800mm lifts. Due to the unavailability of the 730 Haul trucks no 150 mm or Filter material was placed until Tuesday. A full lift of 150 mm material was placed prior to hauling any Filter material. The lift thickness was 500 mm as per the construction specifications. Upon placement of the first lift of Filter material it was discovered that the material was very wet and quite unstable under wheeled loading. This slowed the placement while attempts were made to dry the material, which is approx 3 to 4 percent over an optimum moisture content. Tahera and Nuna were both informed of the need to dry the Filter material out prior to further placement. The delay is having a significant impact on the construction schedule of the Divider Dyke.

4.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam continues to remain behind schedule. Material placement is on hold until the concrete beam and liner installation is complete.

EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)

	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**	95*
Till Zone	7500*	10,500**	70
CPK Zone	8500*	12,000	70

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is at least 15 to 20 days of work required at this dam

to bring it to substantial completion. It is still estimated that work on the Southeast Dam will be complete by July 20, 2007. This is assuming that no significant delays are encountered with the final completion of the liner.

The timely construction of the concrete beam at the dam is essential. The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam, indications of thawing are already evident. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Continuation of ROM placement at south end of Divider Dyke A;
- Continuation of placing Filter and 150mm Spec on Divider Dyke A;
- Completion of installation of the concrete beam tie-in at the Southeast Dam.

6.0 SAFETY

There were no safety incidents during the report period.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

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Jason L. Porter, P.Eng.
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EBA File: 1100060.007

PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #18
ENDING: JULY 07, 2007

EBA Personnel: David Kubisheski July 01 to July 07

WEATHER			
July 01 (Sun)	@ 12:00 hrs.	+20°C	Wind 8 knots SE, clear
July 02 (Mon)	@ 12:00 hrs.	+20°C	Wind 10 knots SE, clear
July 03 (Tues)	@ 12:00 hrs.	+9°C	Wind 10 knots W, clear
July 04 (Wed.)	@ 12:00 hrs.	+9°C	Wind 13 knots SW, partly cloudy
July 05 (Thu)	@ 12:00 hrs.	+11°C	Wind 10 knots NW, partly cloudy
July 06 (Fri)	@ 12:00 hrs.	+10°C	Wind 11 knots SE, partly cloudy
July 07 (Sat)	@ 12:00 hrs.	+11°C	Wind 8 knots NW, clear

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Clark Builders installed reinforcing steel, constructed formwork and placed concrete for the beam at the Southeast Dam. Nuna concentrated on the Divider Dyke A during the report period and did not perform any construction activity at the Southeast Dam. The work at Divider Dyke A included placement of ROM, 150mm Spec. and Filter Material.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

The completion of the concrete beam and the liner connection is still behind schedule therefore Nuna has not been able to complete the Till and CPK Zones and continues to focus on Divider Dyke A. The dressing and trimming of the downstream side of the dam remains to be completed as well. TDC secured the services of Western Tank and Lining (WTL) to complete the final installation of the HDPE liner which, due to scheduling conflicts, A&A Technical Services is unable to perform. WTL submitted a list of rates for work required to complete liner which was approved by Roland Jones (TDC). WTL are to scheduled to arrive on site Wednesday July 11. Clark Builders spent the early part of week installing reinforcing steel for concrete beam and attaching it to the anchors which were installed during the last report period. Concrete for beam was placed on Friday July 6. Approximately 8 m^3 of concrete was mixed and placed on site using a portable mixer. The aggregate used in concrete was 20 mm material from the crusher stockpiles. An air entrainment agent was

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added to concrete as per mix design. Slump and air tests were performed by EBA to ensure compliance with the Construction Specifications. Two sets of three (3) compressive strength cylinders were cast of which one from each set will be broken at 7 days and the remaining two at 28 days. The strength results of the cylinders will be noted in future weekly reports. The concrete will be allowed to cure for 48 hrs before the formwork is removed. A GTC (Serial No: 1997) was installed in the concrete beam prior to placement of concrete. Anchor bolts need to be installed in the concrete beam prior to the final installation of the HDPE liner.

3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

Construction of Divider Dyke A continued during the report period. Waste material from grubbing activities is stockpiled at the South end of the Dyke and will be deposed of at a later date. Nuna continued to place ROM at south end of the dyke from Sta. 0+020 to Sta. 0+090 in early part of week. The ROM material is being hauled directly from Jericho Mine Pit by 769 and 730 haul trucks and placed with a D4 Dozer in 800mm lifts. 150mm Spec Material was placed this week from Sta 0+020 to Sta 0+080 in lifts of approx 500mm thickness. Considerable effort is required to dry the stockpile of Filter material. A 330 excavator is being used to mix the pile in order to aerate the aggregate. Near the end of the report period a small stockpile was dried sufficiently for placement on south end of Divider Dyke A. The material was placed in 250mm lifts and compacted to 95% compaction as per the Construction Specification. The last lift of Filter material placed on Saturday evening was very wet due to frost in soil. EBA instructed Nuna to remove the lift of Filter material and allow it to dry. A crew to operate asphalt plant is scheduled to arrive on site Wednesday July 11. The asphalt plant will be used to dry the existing stockpile of Filter material. Samples of both 150mm Spec and Filter Material were taken for sieve analysis throughout the report period.

4.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam continues to remain behind schedule. Material placement is on hold until the final liner installation is complete. Construction delays on Divider Dyke A are being encountered due to the high moisture content of the Filter aggregate. EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)			
	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**	95*
Till Zone	7500*	10,500**	70
CPK Zone	8500*	12,000	70

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

Completion of the Southeast Dam is essential to ensure that fine processed kimberlite can continue to be deposited in the PKCA. There is still a significant amount of work required to bring this dam to final completion. It is anticipated that there is at least 10 to 15 days of work required at this dam to bring it to substantial completion. It is still estimated that work on the Southeast Dam will be complete by July 25, 2007. This is assuming that no significant delays are encountered with the final completion of the liner.

The current construction delay of this item means that the underlying frozen fill may begin to thaw which may jeopardize the integrity of the dam, indications of thawing are already evident. Appropriate measures need to be taken to ensure that the beam is installed as soon as possible. A Vacuum truck is being utilized daily to remove water ponding at exposed end of key trench.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Completion of HDPE Liner tie in to concrete beam at Southeast Dam,
- Commence drying of 16mm Filter aggregate utilizing asphalt plant; and
- Continue placement of 150mm Spec. and Filter material at Divider Dyke A.

6.0 SAFETY

There were no safety incidents during the report period.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

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PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #19
ENDING: JULY 16, 2007

EBA Personnel: David Kubisheski July 08 to July 16
Bill Horne July 11 to July 13

WEATHER			
July 08 (Sun)	@ 12:00 hrs.	+11°C	Wind 3 knots N, clear
July 09 (Mon)	@ 12:00 hrs.	+12°C	Wind calm, clear
July 10 (Tues)	@ 12:00 hrs.	+17°C	Wind 8 knots SW, clear
July 11 (Wed.)	@ 12:00 hrs.	+17°C	Wind 8 knots SE, clear
July 12 (Thu)	@ 12:00 hrs.	+16°C	Wind 8 knots NE, clear
July 13 (Fri)	@ 12:00 hrs.	+20°C	Wind 6 knots NE, clear
July 14 (Sat)	@ 12:00 hrs.	+18°C	Wind 8 knots NE, clear
July 15 (Sun)	@ 12:00 hrs.		Not recorded
July 16 (Mon)	@ 12:00 hrs.		Not recorded

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Western Tank and Lining completed the installation of the HDPE liner this week. Clark Builders completed tie in of HDPE Liner to concrete beam. Nuna did not perform any construction related activity on Southeast Dam during the report period. Nuna concentrated on Divider Dyke A construction including hauling and placement of Rip Rap, ROM, 150mm Spec. and Filter Materials.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

There was no construction activity on Southeast Dam during early part of the report period. Western Tank and Lining arrived on site late Wednesday evening, began installation of liner on Thursday morning and completed installation by Friday noon. The HDPE liner was extended to the concrete beam that was constructed by Clark Builders. A layer of GCL liner was placed above and below the HDPE liner as a liner cushion because non-woven geotextile was not available on site. Western Tank and Liner departed site on Friday July 13. Clark Builders constructed the mechanical connection between the liner to the concrete beam. The liner was sandwiched between two layers of neoprene gasket and secured by a 50 mm(W) x 6 mm(D) steel plate. The plate was fastened to the

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beam by a series of anchored bolts drilled into the concrete beam with 150mm spacing. A lift of 20mm gravel mixed with bentonite was placed on top of the beam to prevent water infiltration between the beam and rock interface. On Sunday July 15th Nuna placed CPK liner cover at the Southeast Dam. During a meeting on Friday July 13th, Nuna was given permission to place the remaining fill materials on the Southeast Dam while EBA was off site.

3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

Work continued on Divider Dyke A during the report period. Waste material from grubbing activities is stockpiled at the south end of the dyke and will be deposed of at a later date. Nuna did not begin placement of fill materials until later in the week due to the high moisture content in the filter material. Operators for the asphalt plant arrived on Wednesday and plant production commenced on Thursday but only limited amounts of filter material were processed due to plant mechanical problems. On Saturday Tahera decided that the plant production would not resume because of the time and costs associated with the repairs. Nuna has completed the placement of all material zones on the dyke to El. 524.0 m from Sta 0+000 to 0+100. Several lifts of filter material and 150mm Spec. were placed from Sta 0+130 to 0+220 however, several meters of 150 mm and Filter material remain to be placed in this area. Samples of both materials were taken by EBA for grain size analysis. Compaction testing performed on the filter material indicated that the specified compaction of 95% (ASTM D698) was achieved. EBA's site representative is scheduled to depart site on Monday July 16 and will return on August 01. Between the aforementioned dates there will be no EBA presence on site. During a meeting on Friday morning attended by Tahera, Nuna and EBA, Nuna was informed that any material placement that took place during EBA's absence must be done in such a way that EBA is able to inspect/test it upon returning to site.

4.0 CONSTRUCTION SCHEDULE

The construction of the Southeast Dam is nearing substantial completion. The remaining fill scheduled to be completed during the next report period. Additional slope dressing and instrumentation installation is required before the dam will be complete. Schedule delays on Divider Dyke A are being encountered due to the wet stockpile of Filter aggregate. EBA has yet to receive weekly volumes from SAS. Table 1 is an estimate of the materials placed during the report period by using Nuna's truck box counts:

TABLE 1: MATERIAL QUANTITIES (m^3 IN PLACE BY TRUCK BOX VOLUME)			
	Volume Placed	Design Volume	% Compete
Liner Bedding (CPK)	-	6200**	95*
Till Zone	7500*	10,500**	70
CPK Zone	8500*	12,000	70

*Visual estimate ** Volume is a simple estimate based on the Revison 2 drawings but has not been calculated in detail.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Completion of fill placement on Southeast Dam;
- Dressing of dam slopes;
- Continue of drying of 16mm Filter Aggregate; and
- Continuation of placement of ROM at Divider Dyke A.

6.0 SAFETY

There were no safety incidents during the report period, EBA attended weekly site safety meeting.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #20
ENDING: AUGUST 04, 2007

EBA Personnel: David Kubisheski August 01 to August 04

WEATHER			
July 29 (Sun)			N/A
July 30 (Mon)			N/A
July 31 (Tue)			N/A
Aug 01 (Wed.)	@ 12:00 hrs.	+16°C	Wind 5 knots E, partly cloudy
Aug 02 (Thu)	@ 12:00 hrs.	+13°C	Wind 2 knots E, partly cloudy
Aug 03 (Fri)	@ 12:00 hrs.	+13°C	Wind 4 knots W, overcast
Aug 04 (Sat)	@ 12:00 hrs.	+11°C	Wind 7 knots N, partly cloudy

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

EBA's site representative returned to site on Wednesday August 01. No dam construction activity took place between Sunday and Wednesday of the report period. Work on Divider Dyke A resumed on Thursday and was completed on Saturday. During this reporting period there was no construction activity on Southeast Dam. Construction of the access road to the North Dam began on Saturday.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

There was no construction activity on the Southeast Dam during the report period. During EBA's absence Nuna completed the placement of the till and CPK zones. Backfill over the HDPE Liner at the north end of dam is now complete. The GTC that was installed in the concrete beam needs to be extended to the downstream side of the dam. On Thursday an inspection of the dam was made by both Nuna and EBA to review completed work. It was noted that outstanding tasks include shaping of side slope along downstream side of the dam and filling in low spots on the CPK along the top of slope on the upstream side of the dam.

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3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

On Thursday placement of both filter material and 150mm Spec material along the upstream side of the Divider Dyke commenced. The 150mm Spec material was placed in 500mm lifts as per the Construction Specifications and compacted using a Cat 573 compactor. The material was loaded using Cat 980C loader and was hauled to site by Cat 730 haul trucks and spread with a Cat D4 dozer. The 150mm Spec material was heavily segregated in the stockpile and required substantial mixing to provide the proper gradation. Three (3) samples of 150 mm material were taken for sieve analysis.

After placement of one lift of 150mm material two lifts of filter material were placed. The material was hauled to site from stockpile location by Cat 730 haul trucks and placed by Cat D4 Dozer. Lifts were placed in 250mm thickness and compacted to minimum 95% compaction. Three samples of Filter material were taken for sieve analysis. Due to a shortage of Filter material the dyke was only completed to Elevation 521.8m. No more work will be done on Divider Dyke A until the 2008 construction season. Additional filter material will have to be crushed this winter.

4.0 NORTH DAM CONSTRUCTION ACTIVITIES

A till berm is to be constructed on the upstream side of the proposed North Dam location prior to the construction of the dam. The berm is an interim measure until the dam is completed at which time the berm becomes part of the dam structure. This week Nuna completed construction of the access road to the dam site as well as a construction area for the till berm. A pad was constructed into the pond to allow for placement of a water pump used to drain the pond. Dewatering started on Saturday and is expected to take 2 to 3 days.

5.0 CONSTRUCTION SCHEDULE

The overall construction plan for the completion of both dams and the divider dyke is currently under review. Although the plan for 2007 was to complete Divider Dyke A this year it will not be completed until 2008. This is due to a shortfall in the stockpiled Filter Material.

The Southeast Dam is nearly complete and should be finished as soon as possible to ensure that As-built reports and drawings can be completed in a timely manner.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Complete construction of Southeast Dam including Liner Crest cover and side slopes,
- Complete dewatering of North Dam Pond and grubbing of the till berm footprint, and
- Construction of access road to the till berm at south end of Southeast Dam.

7.0 SAFETY

There were no safety incidents during the report period, EBA attended weekly Project safety meeting.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

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PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #21
ENDING: AUGUST 11, 2007

EBA Personnel: David Kubisheski August 05 to August 11

WEATHER			
Aug 05 (Sun)	@ 12:00 hrs	+11°C	Wind 3 knots N, clear
Aug 06 (Mon)	@ 12:00 hrs	+15°C	Wind 9 knots NE, clear
Aug 07 (Tue)	@ 12:00 hrs	+7°C	Wind 23 knots N, rain showers
Aug 08 (Wed.)	@ 12:00 hrs.	+7°C	Wind 18 knots NW, overcast
Aug 09 (Thu)	@ 12:00 hrs.	+5°C	Wind 25 knots W, overcast
Aug 10 (Fri)	@ 12:00 hrs.	+5°C	Wind 16 knots W, scattered cloud
Aug 11 (Sat)	@ 12:00 hrs.	+6°C	Wind 12 knots N, overcast

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

On the Southeast Dam the remaining grading on the downstream side of the dam was completed this week. Some minor regarding was also performed on the crest of the CPK zone. On Divider Dyke A, ROM was placed along the downstream side of the dyke to enable the construction of an access road for the new winter road realignment. The access road to the North Dam and the dewatering of the adjacent pond was completed. Nuna also commenced grubbing of the Till Berm footprint.

2.0 SOUTHEAST DAM CONSTRUCTION ACTIVITIES

Major construction the Southeast Dam is now complete. Final grading of the downstream slope was completed during the report period. The 330B excavator was used to place material and shape upper section of slope. The ROM used for construction of the slope was sourced from Jericho Pit and was hauled to site using 730 and 769 haul trucks. A lift of 150 mm material was used as cover material over the crest of the dam. The material was placed using a D4 dozer and 730 haul trucks. SAS provided survey layout during placement. Nuna performed some final grading of top of CPK zone and a few additional loads were of CPK were required to bring the zone to the design elevation. The CPK was placed with a D4 dozer and compacted by a 563 compactor. The final installation of the GTC's has not yet been completed. A third pipe casing is being manufactured by Nuna. The

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extension for GTC # 1997 has arrived on site and all final installations should be completed by the next report period.

3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

Placement of Filter and 150 mm at Divider Dyke A has been suspended for the year. A shortage of filter material meant that the Filter zone of the dyke was only completed to el 521.8m. During discussions with both Tahera and Nuna early this week it was decided that the new access for the winter road would pass over Divider Dyke A. The road extension will extend the existing structure westward, and will maintain the existing design slopes for the different zones of material that have already been placed along the east side. The design top of road elevation will be the same as finished elevation of the Divider Dyke 524.0m. The finished width of the new roadway will be approx 18 metres. Nuna began placing the additional ROM on August 9th. The material was hauled from Jericho Pit using 777D haul trucks and was placed with a D9R dozer. Material was placed in lift thicknesses less than one metre. Work on this is being performed whenever there is spare equipment not required by pit operations.

4.0 NORTH DAM CONSTRUCTION ACTIVITIES

The construction of the access road to North Dam was completed early the report period. The pond along the south side of the berm had to be dewatered prior to commencement of grubbing activities. The dewatering was completed on Wednesday August 8th. Grubbing of the berm footprint started on August 8th and continued on August 9th. Due to equipment commitments for pit operations no work was done for the rest of the report period. Grubbing was performed with a 330B excavator and 730 and 769 haul trucks were used to haul waste to dump site. Excavation was started along the west side of the berm. A considerable amount of highly fractured weathered bedrock was encountered at depths up to two metres. The exposed face of the embankment is also highly fractured and weathered rock will have to be removed by use of a breaker attachment mounted on a 330B excavator. This work will be performed during placement of the Till material. The estimated time for grubbing of the berm footprint is seven days.

5.0 CONSTRUCTION SCHEDULE

The overall construction plan for the completion and construction of the dams and divider dykes is currently under review. At the time of writing this report no updates are available. It is still anticipated that the completion of the West Dam and Divider Dyke "A" as well as construction of the North Dam will be completed during the Winter of 2008 / 2009. The work that is to be completed in 2007 includes construction of both the North and South Till Berm's which includes preparation work such as construction of access roads. The completion of the roadway widening over Divider Dyke A is to be completed this year.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Completion of grubbing on Till Berm for North Dam,
- Completion of placement of ROM for roadway widening over Divider Dyke A,
- Construction of access road to South Till Berm at south end of Southeast Dam .

7.0 SAFETY

There were no safety incidents during the report period, EBA attended weekly Project safety meeting.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #22
ENDING: AUGUST 18, 2007

EBA Personnel: David Kubisheski August 12 to August 18

WEATHER			
Aug 12 (Sun)	@ 12:00 hrs	+7°C	Wind 14 knots W, broken cloud
Aug 13 (Mon)	@ 12:00 hrs	+6°C	Wind 12 knots NW, overcast
Aug 14 (Tue)	@ 12:00 hrs	+7°C	Wind 13 knots NE, cloudy
Aug 15 (Wed.)	@ 12:00 hrs.	+10°C	Wind 15 knots N, cloudy
Aug 16 (Thu)	@ 12:00 hrs.	+10°C	Wind 11 knots N, cloudy
Aug 17 (Fri)	@ 12:00 hrs.	+13°C	Wind 7 knots SW, sunny
Aug 18 (Sat)	@ 12:00 hrs.	+10°C	Wind 12 knots S, rain showers

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Work on the Southeast Dam is complete with the exception of the final installation of the GTC housings. The Rip Rap, filter and 150 mm zones are complete to Elevation 521.8m on Divider Dyke A. The ROM zone on the downstream side of the dyke is complete. Divider Dyke A is scheduled to be completed in 2008. Construction of an access/haul road to South Saddle Dyke commenced this week but is not yet complete. Construction of the road is being performed in conjunction with the new winter road access to mine site. Work on the till berm for the North Dam is ongoing. Nuna completed grubbing of footprint and has commenced placement of till material.

2.0 SOUTH SADDLE DYKE CONSTRUCTION ACTIVITIES

The work on the South Saddle Dyke began during the report period. The access road to the berm site is to be integrated into the new winter road access. Drawings for Saddle Dyke were received on site on Friday August 17. SAS has staked out the limits for the dyke and it was noted that the limits exceeded the Lease Boundry established by the regulatory agencies. The situation was brought to the attention of Harold Gates and Tony Lochiavo (TDC) as well as Bill Horne (EBA). Work will not proceed past the Lease Limits until permission is given by Tahera. ROM placed for access road was hauled to site by 777D haul trucks and placed with a D9R dozer.

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3.0 DIVIDER DYKE "A" CONSTRUCTION ACTIVITIES

Placement of filter and 150 mm materials on the Divider Dyke is complete for 2007. A shortage of filter material during construction resulted in the dyke being completed to el.521.8 m rather than the final elevation of 524.0 m. The ROM zone along the downstream side of the Dyke was constructed to el.524.8m, exceeding the design elevation of 524.0 m, to accommodate the new winter road access. It is recommended that the existing surface of the exposed filter zone be scarified, moisture conditioned and re-compacted to a depth of 250mm prior to placement of new fill in 2008.

4.0 NORTH DAM CONSTRUCTION ACTIVITIES

The construction of the access road to North Dam as well as the dewatering of the adjacent pond is complete. Grubbing of till berm limits was completed this week. Waste material was removed using a 345B excavator and hauled to the dump site by Cat 769 and 730 haul trucks. Along the west abutment of the berm considerable amounts of highly weathered and fractured bedrock were encountered. A pneumatic breaker attached to a 330B excavator was used to remove loose pieces of rock. For safety reasons, large overhanging sections of bedrock had to be removed prior to smaller loose rock along lower levels. Approx 2.5 m of fractured bedrock was removed along the west side of the grubbing limits. Along the centre of the berm the depth of grubbing was approx 0.5m. Minimal amounts of fractured rock were removed along the east face of till berm. The rock removed during breaking operations was placed as ROM along south edge of berm. On Tuesday Nuna started hauling and placing till material. Depending on availability, the till was hauled to site by Cat 777D, 769 and 730 haul trucks and was placed in lifts not exceeding 400mm in the thickness. A Cat 573 compacter was used to compact the material. Three samples of till were taken for sieve analysis. and test results indicate that material was within the specified limits. The design of the till berm calls for a zone of 150mm material to be placed along the north side of the berm. Previous experience using this material has shown excessive segregation occurring during placement. TDC decided that the required quantity of 150mm minus for the North Till Berm would re-crushed to 100mm minus material. Tahera utilized their jaw crusher for the re-processing. Equipment demands by the mine pit resulted in no work construction activity being performed on Wednesday and Saturday of this week. Currently, it is estimated that work on the Till Berm should be complete by August 30.

5.0 CONSTRUCTION SCHEDULE

As was mentioned in the previous weekly report the overall construction plan for the completion and construction of both Dam's and Divider Dyke's is currently under review and at the time of writing this report no updates were available. After discussions with Nuna it is anticipated that completion of the till berm for the North Dam and the South Saddle Dyke will be mid September.

6.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Complete placing till material on Till Berm for North Dam and recrushing of 150mm Spec material,
- Completion of placement of ROM for access road to South Saddle Dyke,
- Completion of grubbing for South Saddle Dyke .

7.0 SAFETY

There were no safety incidents during the report period, EBA attended weekly Project safety meeting.

8.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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PKCA DAM & DYKE CONSTRUCTION
2007 CONSTRUCTION SEASON
WEEKLY REPORT #23
ENDING: AUGUST 25, 2007

EBA Personnel: David Kubisheski August 19 to August 25

WEATHER			
Aug 19 (Sun)	@ 12:00 hrs	+15°C	Wind 6 knots W, cloudy
Aug 20 (Mon)	@ 12:00 hrs	+8°C	Wind 9 knots NE, overcast
Aug 21 (Tue)	@ 12:00 hrs	+5°C	Wind 15 knots N, cloudy
Aug 22 (Wed.)	@ 12:00 hrs.	+6°C	Wind 11 knots NW, cloudy
Aug 23 (Thu)	@ 12:00 hrs.	+7°C	Wind 18 knots NW, cloudy
Aug 24 (Fri)	@ 12:00 hrs.	+10°C	Wind 16 knots NW, cloudy
Aug 25 (Sat)	@ 12:00 hrs.	+8°C	Wind 14 knots N, cloudy

1.0 OVERVIEW OF CONSTRUCTION ACTIVITIES

Work on the North Dam Till Berm was ongoing during the report period. Little progress was made in first half of week due to demand for both equipment and manpower in the mine pit. No work was performed during this reporting period on the South Saddle Dyke.

2.0 SOUTH SADDLE DYKE CONSTRUCTION ACTIVITIES

No work on the South Saddle Dyke was performed during this report period. All construction resources were focused on the Till Berm at the North Dam. Work on the South Saddle Dyke will resume once the work on the Till Berm is substantially complete.

3.0 NORTH DAM CONSTRUCTION ACTIVITIES

The construction of the Till Berm for the North Dam was ongoing throughout the report period. Little progress was made in first half of week due to the required mobile equipment being diverted to projects in Jericho Pit. Activity was focused on placing till material for core of the berm. The till

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material was sourced from the dump adjacent to Jericho pit. Oversize particles were removed using a 345B backhoe prior to material being hauled to site. The material was hauled to site by Cat 730 haul trucks exclusively as larger haul trucks unable to manoeuvre around work area. Once the material was on site it was spread out using a Cat D4 dozer and compacted by the Cat 573 drum compactor. The Till material was placed in lifts of approx 400mm in thickness. Rainfall during placement required the removal of some excessively wet material prior to placement of new lifts. The access road was extended to allow for placement of ROM along upstream side of berm using Cat 777D haul trucks and a D9R dozer. On Saturday Nuna began re-crushing the 150mm clean material to a 100mm minus material. Despite the re-processing some oversize gravel is present however, the amount is minimal. The 100 mm material was hauled to site and placed along the sideslope of the till berm. It was hauled by 730 haul trucks and placed with a 345B excavator. Prior to placement of granular fill the sideslopes were trimmed to design slopes. Progress is somewhat slow this week due to equipment demands from mine pit. It is estimated that work on the Till Berm should be completed during the report period.

4.0 CONSTRUCTION SCHEDULE

As was mentioned in the previous weekly report the overall construction plan for the completion and construction of both Dam's and Divider Dyke's is currently under review and at the time of writing this report no updates were available. It is still anticipated that completion of the till berm for the North Dam and the South Saddle Dyke will be mid September. The final installations for the three GTC's and the seven settlement plates for the Southeast Dam most likely will be completed after work on the South Saddle Dyke is complete.

5.0 NEXT WEEK'S ACTIVITIES

The following activity is planned for the next report period:

- Complete placing till material, 150mm crush and ROM on Till Berm for North Dam,
- Completion of placement of ROM for access road to South Saddle Dyke,
- Completion of grubbing for South Saddle Dyke .

6.0 SAFETY

There were no safety incidents during the report period, EBA attended weekly Project safety meeting.

7.0 CLOSURE

Should any questions arise, please contact the undersigned at EBA's Jericho Site Office or at the email address provided below.

Respectfully submitted,

EBA Engineering Consultants Ltd.

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Project Engineer
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APPENDIX

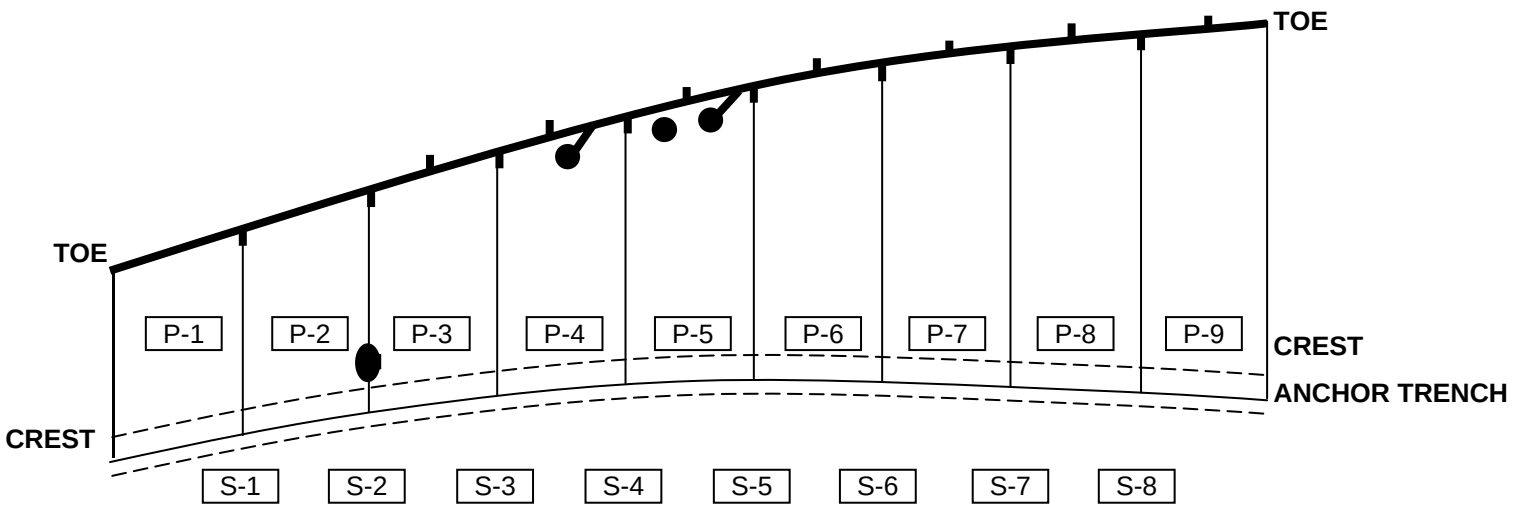
APPENDIX N SOUTHEAST DAM LINER INSTALLATION REPORT (A & A TECHNICAL)

TAHERA - YEAR 2007 CONSTRUCTION
SOUTHEAST DAM
HDPE SLOPE LINER INSTALLATION

A & A TECHNICAL SERVICES

MAY 23,2007

N



LEGEND:

- P-1 PANEL NUMBER
- S-1 SEAM NUMBER
- PATCH
- CREST
- EXTRUSION WELD
- T-WELD

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT FORM FOR ROLL ID AND DIMENSIONS

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

EXTRUSION WELDER QUALIFICATION DATA

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 23,2007
Q/C TECHNICIAN	MICHAEL JONES

EXTRUSION WELDER No.	1
PRE-HEAT TEMP.(^{o} F)	510
EXTRUDITE TEMP.(^{o} F)	475
SHEET TEMPERATURE (^{O}C)	-1
MATERIAL	60 mil S-TEX HDPE

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	166	0	All samples failed outside the weld
2	163	0	
3	147	0	
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	162	All samples failed outside the weld
2	148	
3	158	
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 78 lbs/in
Shear 121 lbs/in

NON-DESTRUCTIVE TESTING FORM

PROJECT:	**SOUTHEAST DAM SLOPE LINER**
LOCATION:	**JERICHO**
MATERIAL:	**60mil S-TEX HDPE**
CLIENT:	**TAHERA DIAMOND CORPORATION**

Date	Seam Number	Tester	TEST DATA						VAC Test	COMMENTS
			PRESSURE (psi)			TIME OF TEST		Pass/ Fail		
			Start	End	Change	Start	End			
MAY 23,07	1	GH	35.0	35.0	0.0	10:46	10:51	P		ALL T-WELDS, PATCHES AND
MAY 23,07	2	GH	35.0	35.0	0.0	11:24	11:29	P		EXTRUSION WELDS WERE
MAY 23,07	3	GH	35.0	35.0	0.0	11:44	11:49	P		VACUUM TESTED AND PASSED
MAY 23,07	4	GH	35.0	35.0	0.0	12:45	12:50	P		VACUUM TESTING WAS DONE ON
MAY 23,07	5	GH	35.0	35.0	0.0	1:05	1:10	P		MAY 25,2007
MAY 23,07	6	GH	35.0	35.0	0.0	1:10	1:15	P		
MAY 23,07	7	GH	35.0	35.0	0.0	2:43	2:48	P		
MAY 23,07	8	GH	35.0	35.0	0.0	1:20	1:25	P		
MAY 25,07									Pass	TIE IN SEAM

A & A TECHNICAL SERVICES, 327 OLD AIRPORT ROAD, PO BOX 2922 YELLOWKNIFE, NT

HDPE PANEL PLACEMENT LOG

DATE:	**MAY 23,2007**
PROJECT NAME:	**SOUTHEAST DAM SLOPE LINER**
LOCATION	**JERICHO**
CLIENT:	**TAHERA DIAMOND CORPORATION**
Q.A TECHNICIAN:	**MICHAEL JONES**

PANEL NUMBER	ROLL NUMBER	DEPLOYMENT DATE	TOP WIDTH (m)	BOTTOM WIDTH (m)	ROLL WIDTH (m)	LENGTH APPROX. (m)	AREA OF LINER GROUND COVER (m^2)	AREA OF LINER WITH OVERLAP (m^2)
1	103137415	MAY 23,07	6.85	6.85	6.90	7.00	47.95	48.91
2	103137415	MAY 23,07	6.80	6.45	6.90	7.40	49.03	50.01
3	103137415	MAY 23,07	5.50	6.45	6.90	8.25	49.29	50.28
4	103137415	MAY 23,07	6.75	6.70	6.90	9.20	61.87	63.11
5	103136158	MAY 23,07	5.40	6.35	6.90	10.60	62.28	63.52
6	103136158	MAY 23,07	6.75	6.70	6.90	11.45	77.00	78.54
7	103136158	MAY 23,07	5.65	6.55	6.90	12.80	78.08	79.64
8	103136158	MAY 23,07	5.90	6.60	6.90	14.40	90.00	91.80
9	103136158	MAY 23,07	6.85	6.85	6.90	14.60	100.01	102.01
						TOTAL	**615.51**	**627.82**

WEDGE WELDER QUALIFICATION DATA

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY23, 2007
Q/C TECHNICIAN	MICHAEL JONES

WEDGE WELDER No	XL-3003
TRAVEL SPEED (ft/min)	5.5
SHEET TEMPERATURE (^{O}C)	-1
WEDGE TEMPERATURE (^{O}C)	750
MATERIAL	60 mil S-TEX

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	137/141	0	
2	145/139	0	
3	140/144	0	All samples failed outside weld
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	162	
2	169	
3	168	All samples failed outside weld
4		
5		

Q/C TECHNICIAN _____
signature

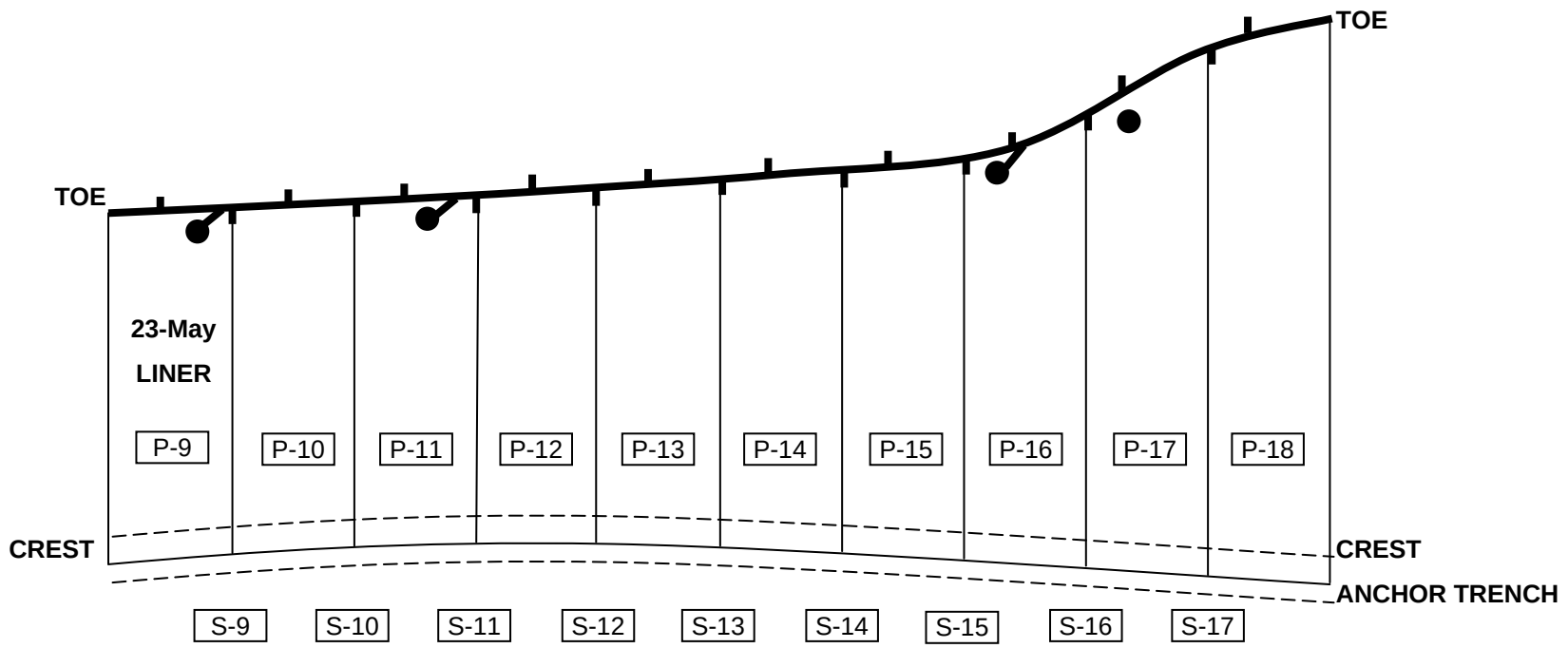
NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 98 lbs/in
Shear 120 lbs/in

TAHARA - YEAR 2007 CONSTRUCTION
SOUTHEAST DAM
HDPE SLOPE LINER INSTALLATION

A & A TECHNICAL SERVICES

MAY 24,2007

N



LEGEND:

- P-1 **PANEL NUMBER**
- S-1 **SEAM NUMBER**
- **PATCH**
- **CREST**
- **EXTRUSION WELD**
- **T-WELD**

NOTES: NOT TO SCALE
SEE PANEL PLACEMENT FORM FOR ROLL ID AND DIMENSIONS

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

EXTRUSION WELDER QUALIFICATION DATA

PROJECT NAME:	SOUTHEAST DAM
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 24,2007
Q/C TECHNICIAN	MICHAEL JONES

EXTRUSION WELDER No.	1
PRE-HEAT TEMP.(^{o} F)	475
EXTRUDITE TEMP.(^{o} F)	475
SHEET TEMPERATURE (^{O}C)	1
MATERIAL	60 mil S-TEX HDPE

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	130	0	All samples failed outside the weld
2	150	0	
3	128	0	
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	164	All samples failed outside the weld
2	164	
3	165	
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 78 lbs/in
Shear 120 lbs/in

NON-DESTRUCTIVE TESTING FORM

PROJECT:	**SOUTHEAST DAM SLOPE LINER**
LOCATION:	**JERICHO**
MATERIAL:	**60mil S-TEX HDPE**
CLIENT:	**TAHERA DIAMOND CORPORATION**

Date	Seam Number	Tester	TEST DATA						VAC Test	COMMENTS
			PRESSURE (psi)			TIME OF TEST		Pass/ Fail		
			Start	End	Change	Start	End			
MAY 23,07	9	GH	35.0	35.0	0.0	11:23	11:28	P		ALL T-WELDS, PATCHES AND
MAY 23,07	10	GH	35.0	35.0	0.0	11:30	11:35	P		EXTRUSION WELDS WERE
MAY 23,07	11	GH	35.0	35.0	0.0	11:40	11:45	P		VACUUM TESTED AND PASSED
MAY 23,07	12	GH	35.0	35.0	0.0	12:59	1:04	P		VACUUM TESTING WAS DONE ON
MAY 23,07	13	GH	35.0	35.0	0.0	1:48	1:53	P		MAY 25,2007
MAY 23,07	14	GH	35.0	35.0	0.0	2:03	2:08	P		
MAY 23,07	15	GH	35.0	35.0	0.0	2:13	2:18	P		
MAY 23,07	16	GH	35.0	35.0	0.0	2:48	2:53	P		
MAY 23,07	17	GH	35.0	35.0	0.0	3:35	3:40	P		
MAY 23,07									Pass	TIE IN SEAM

A & A TECHNICAL SERVICES, 327 OLD AIRPORT ROAD, PO BOX 2922 YELLOWKNIFE, NT

HDPE PANEL PLACEMENT LOG

DATE:	**MAY 24,2007**
PROJECT NAME:	**SOUTHEAST DAM SLOPE LINER**
LOCATION	**JERICHO**
CLIENT:	**TAHERA DIAMOND CORPORATION**
Q.A TECHNICIAN:	**MICHAEL JONES**

PANEL NUMBER	ROLL NUMBER	DEPLOYMENT DATE	TOP WIDTH (m)	BOTTOM WIDTH (m)	ROLL WIDTH (m)	LENGTH APPROX. (m)	AREA OF LINER GROUND COVER (m^2)	AREA OF LINER WITH OVERLAP (m^2)
10	103136158	MAY 24,07	6.80	6.85	6.90	15.00	102.38	104.42
11	103136158	MAY 24,07	5.80	6.85	6.90	15.00	94.88	96.77
12	103136158	MAY 24,07	6.75	6.85	6.90	15.75	107.10	109.24
13	103136169	MAY 24,07	6.80	6.80	6.90	16.60	112.88	115.14
14	103136169	MAY 24,07	6.80	6.80	6.90	17.80	121.04	123.46
15	103136169	MAY 24,07	5.80	6.70	6.90	19.75	123.44	125.91
16	103136169	MAY 24,07	6.80	6.80	6.90	23.10	157.08	160.22
17	103136160	MAY 24,07	6.80	6.80	6.90	26.00	176.80	180.34
18	103136160	MAY 24,07	6.80	6.80	6.90	28.00	190.40	194.21
						TOTAL	**1185.99**	**1209.71**

WEDGE WELDER QUALIFICATION DATA

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 24, 2007
Q/C TECHNICIAN	MICHAEL JONES

WEDGE WELDER No	XL-3003
TRAVEL SPEED (ft/min)	6.3
SHEET TEMPERATURE (^{O}C)	1
WEDGE TEMPERATURE (^{O}C)	750
MATERIAL	60 mil S-TEX

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	145/139	0	
2	154/140	0	
3	152/139	0	All samples failed outside weld
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	182	
2	179	
3	178	All samples failed outside weld
4		
5		

Q/C TECHNICIAN _____
signature

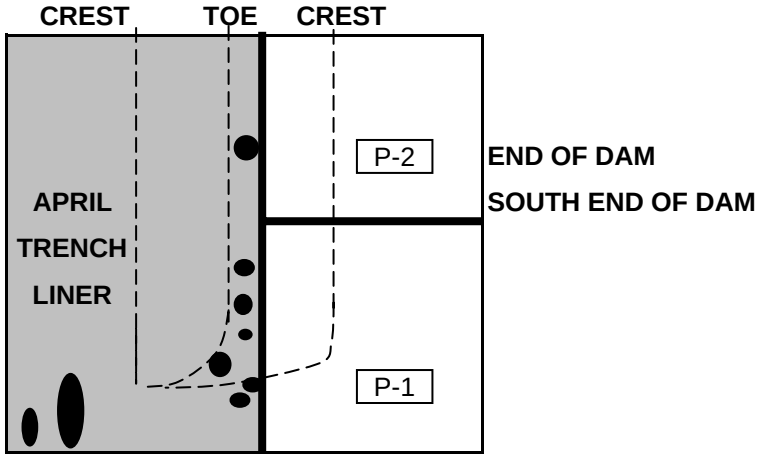
NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 98 lbs/in
Shear 120 lbs/in

TAHERA - YEAR 2007 CONSTRUCTION
SOUTHEAST DAM
HDPE TRENCH LINER INSTALLATION

A & A TECHNICAL SERVICES

MAY 25,2007

N



LEGEND:

P-1 / S-1 PANEL NUMBER

PATCH

CREST/TOE

EXTRUSION WELD

NOTES: NOT TO SCALE

SEE PANEL PLACEMENT FORM FOR ROLL ID AND DIMENSIONS

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

EXTRUSION WELDER QUALIFICATION DATA

PROJECT NAME:	SOUTHEAST DAM TRENCH LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 25,2007
Q/C TECHNICIAN	MICHAEL JONES

EXTRUSION WELDER No.	1
PRE-HEAT TEMP.(^{o} F)	475
EXTRUDITE TEMP.(^{o} F)	475
SHEET TEMPERATURE (^{O}C)	1
MATERIAL	60 mil S-TEX HDPE

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	138	0	All samples failed outside the weld
2	140	0	
3	143	0	
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	165	All samples failed outside the weld
2	174	
3	166	
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 78 lbs/in
Shear 120 lbs/in

NON-DESTRUCTIVE TESTING FORM

PROJECT:	**SOUTHEAST DAM TRENCH LINER**
LOCATION:	**JERICHO**
MATERIAL:	**60mil S-TEX HDPE**
CLIENT:	**TAHERA DIAMOND CORPORATION**

Date	Seam Number	Tester	TEST DATA						VAC Test	COMMENTS
			PRESSURE (psi)			TIME OF TEST		Pass/ Fail		
			Start	End	Change	Start	End			
										ALL T-WELDS, PATCHES AND
										EXTRUSION WELDS WERE
										VACUUM TESTED AND PASSED
										VACUUM TESTING WAS DONE ON
										MAY 25,2007
MAY 25.07									Pass	TIE IN SEAM

HDPE PANEL PLACEMENT LOG

DATE:	**MAY 25,2007**
PROJECT NAME:	**SOUTHEAST DAM TRENCH LINER**
LOCATION	**TAHERA**
CLIENT:	**TAHERA DIAMOND CORPORATION**
Q.A TECHNICIAN:	**MICHAEL JONES**

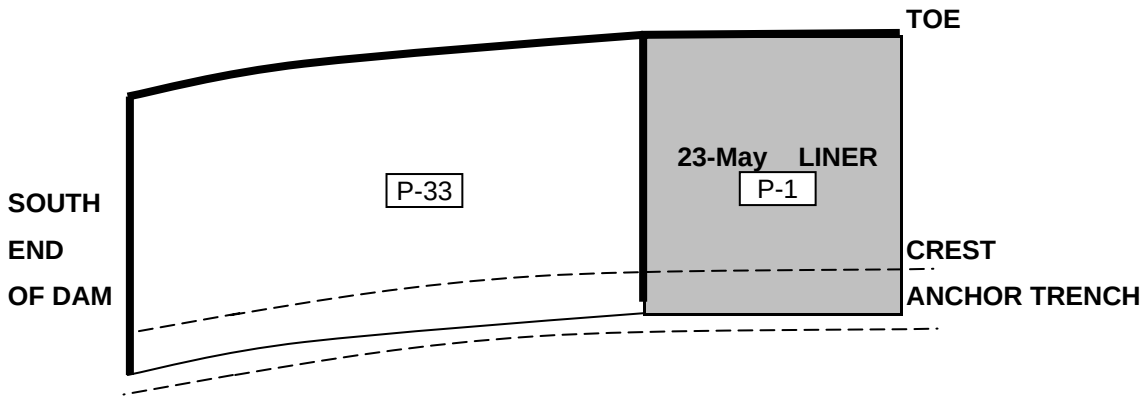
PANEL NUMBER	ROLL NUMBER	DEPLOYMENT DATE	TOP WIDTH (m)	BOTTOM WIDTH (m)	ROLL WIDTH (m)	LENGTH APPROX. (m)	AREA OF LINER GROUND COVER (m^2)	AREA OF LINER WITH OVERLAP (m^2)
1	103137415	May 25,07	4.05	3.40	6.90	6.65	24.77	25.27
2	103137415	May 25,07	3.40	3.50	6.90	4.75	16.39	16.72
						TOTAL	**41.16**	**41.98**

TAHERA - YEAR 2007 CONSTRUCTION
SOUTHEAST DAM
HDPE SLOPE LINER INSTALLATION

A & A TECHNICAL SERVICES

MAY 27,2007

N



LEGEND:

P-1 PANEL NUMBER

S-1

PATCH

CREST

EXTRUSION WELD

NOTES: NOT TO SCALE

SEE PANEL PLACEMENT FORM FOR ROLL ID AND DIMENSIONS

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

EXTRUSION WELDER QUALIFICATION DATA

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 27,2007
Q/C TECHNICIAN	MICHAEL JONES

EXTRUSION WELDER No.	1
PRE-HEAT TEMP.(^{o} F)	490
EXTRUDITE TEMP.(^{o} F)	475
SHEET TEMPERATURE (^{O}C)	1
MATERIAL	60 mil S-TEX HDPE

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	129	0	All samples failed outside the weld
2	132	0	
3	132	0	
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	164	All samples failed outside the weld
2	167	
3	166	
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 78 lbs/in
Shear 120 lbs/in

NON-DESTRUCTIVE TESTING FORM

PROJECT:	**SOUTHEAST DAM SLOPE LINER**
LOCATION:	**JERICHO**
MATERIAL:	**60mil S-TEX HDPE**
CLIENT:	**TAHERA DIAMOND CORPORATION**

Date	Seam Number	Tester	TEST DATA						VAC Test	COMMENTS
			PRESSURE (psi)			TIME OF TEST		Pass/ Fail		
			Start	End	Change	Start	End			
										ALL T-WELDS, PATCHES AND
										EXTRUSION WELDS WERE
										VACUUM TESTED AND PASSED
										VACUUM TESTING WAS DONE ON
										MAY 27,2007
MAY 27,07									Pass	TIE IN SEAM

HDPE PANEL PLACEMENT LOG

DATE:	**MAY 27,2007**
PROJECT NAME:	**SOUTHEAST DAM TRENCH LINER**
LOCATION	**TAHERA**
CLIENT:	**TAHERA DIAMOND CORPORATION**
Q.A TECHNICIAN:	**MICHAEL JONES**

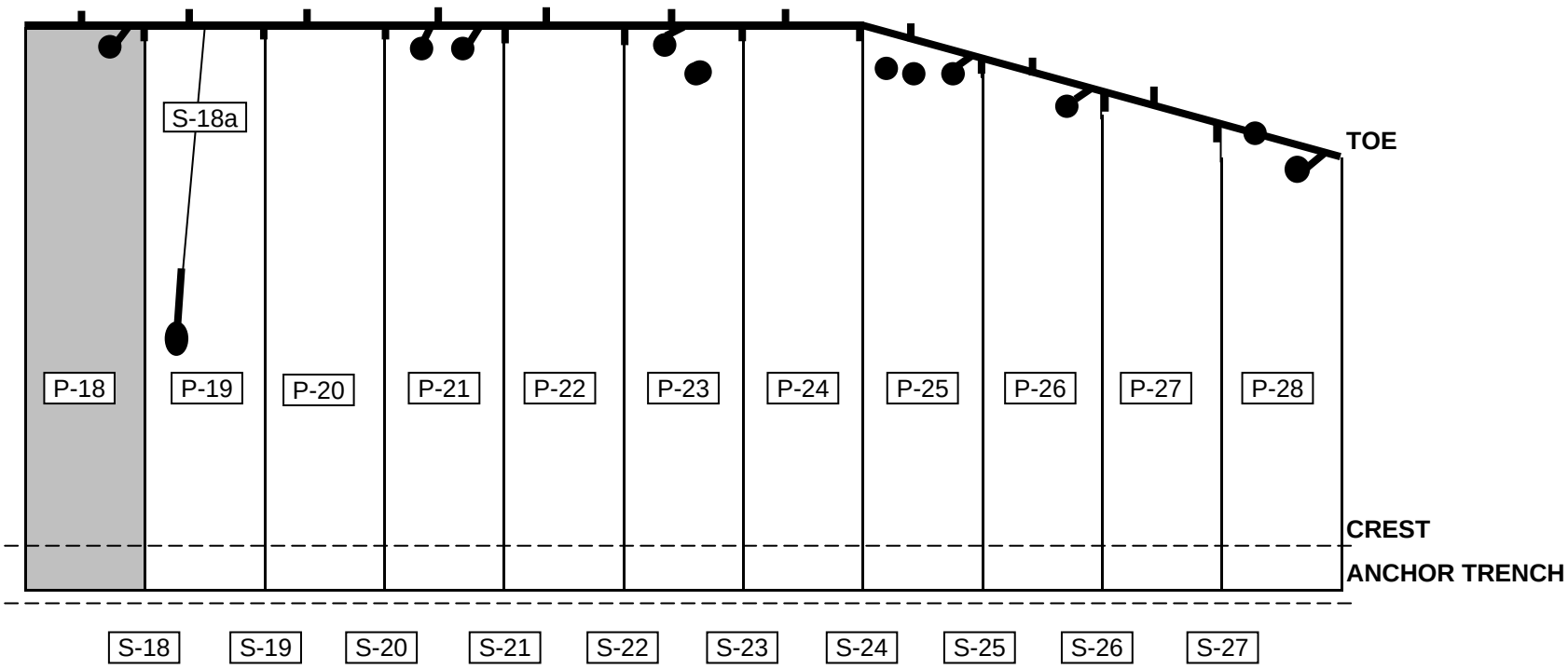
PANEL NUMBER	ROLL NUMBER	DEPLOYMENT DATE	TOP WIDTH (m)	BOTTOM WIDTH (m)	ROLL WIDTH (m)	LENGTH APPROX. (m)	AREA OF LINER GROUND COVER (m^2)	AREA OF LINER WITH OVERLAP (m^2)
33	103136169	May 27,07	6.90	6.90	6.90	12.00	82.80	84.46
						TOTAL	**82.80**	**84.46**

TAHERA - YEAR 2007 CONSTRUCTION
SOUTHEAST DAM
HDPE SLOPE LINER INSTALLATION

A & A TECHNICAL SERVICES

MAY 28,2007

N



P-1 PANEL NUMBER
S-1 SEAM NUMBER
PATCH
CREST
EXTRUSION WELD
T-WELD

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

EXTRUSION WELDER QUALIFICATION DATA

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 28,2007
Q/C TECHNICIAN	MICHAEL JONES

EXTRUSION WELDER No.	1
PRE-HEAT TEMP.(^{o} F)	540
EXTRUDITE TEMP.(^{o} F)	480
SHEET TEMPERATURE (^{O}C)	1
MATERIAL	60 mil S-TEX HDPE

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	145	0	All samples failed outside the weld
2	129	0	
3	142	0	
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	169	All samples failed outside the weld
2	166	
3	171	
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 78 lbs/in
Shear 120 lbs/in

NON-DESTRUCTIVE TESTING FORM

PROJECT:	**SOUTHEAST DAM SLOPE LINER**
LOCATION:	**JERICHO**
MATERIAL:	**60mil S-TEX HDPE**
CLIENT:	**TAHERA DIAMOND CORPORATION**

Date	Seam Number	Tester	TEST DATA						VAC Test	COMMENTS
			PRESSURE (psi)			TIME OF TEST		Pass/ Fail		
			Start	End	Change	Start	End			
MAY 29,07	18	GH	35.0	35.0	0.0	12:55	1:00	P		ALL T-WELDS, PATCHES AND
MAY 29,07	18a	GH	35.0	35.0	0.0	2:00	2:05	P		EXTRUSION WELDS WERE
MAY 29,07	19	GH	35.0	35.0	0.0	1:03	1:08	P		VACUUM TESTED AND PASSED
MAY 29,07	20	GH	35.0	35.0	0.0	1:28	1:33	P		VACUUM TESTING WAS DONE ON
MAY 29,07	21	GH	35.0	35.0	0.0	1:37	1:42	P		MAY 29,2007
MAY 29,07	22	GH	35.0	35.0	0.0	2:29	2:34	P		
MAY 29,07	23	GH	35.0	35.0	0.0	2:46	2:51	P		
MAY 28,07	24	GH	35.0	35.0	0.0	4:25	4:30	P		
MAY 28,07	25	GH	35.0	35.0	0.0	1:28	1:33	P		
MAY 28,07	26	GH	35.0	35.0	0.0	1:57	2:02	P		
MAY 28,07	27	GH	35.0	35.0	0.0	2:15	2:20	P		
									Pass	TIE IN SEAM

A & A TECHNICAL SERVICES, 327 OLD AIRPORT ROAD, PO BOX 2922 YELLOWKNIFE, NT

HDPE PANEL PLACEMENT LOG

DATE:	**MAY 28,2007**
PROJECT NAME:	**SOUTHEAST DAM SLOPE LINER**
LOCATION	**JERICHO**
CLIENT:	**TAHERA DIAMOND CORPORATION**
Q.A TECHNICIAN:	**MICHAEL JONES**

PANEL NUMBER	ROLL NUMBER	DEPLOYMENT DATE	TOP WIDTH (m)	BOTTOM WIDTH (m)	ROLL WIDTH (m)	LENGTH APPROX. (m)	AREA OF LINER GROUND COVER (m^2)	AREA OF LINER WITH OVERLAP (m^2)
19	103136160	MAY 28,07	6.85	6.75	6.90	28.15	191.42	195.25
20	103136160	MAY 28,07	6.80	6.80	6.90	28.50	193.80	197.68
21	10313615**?**	MAY 28,07	6.25	6.80	6.90	28.45	185.64	189.35
22	10313615**?**	MAY 28,07	6.80	6.80	6.90	28.40	193.12	196.98
23	10313615**?**	MAY 28,07	6.85	6.85	6.90	28.25	193.51	197.38
24	10313615**?**	MAY 28,07	5.40	6.85	6.90	27.55	168.74	172.12
25	103136144	MAY 28,07	6.80	6.80	6.90	26.00	176.80	180.34
26	103136144	MAY 28,07	6.85	6.85	6.90	24.80	169.88	173.28
27	103136144	MAY 28,07	6.85	6.85	6.90	24.65	168.85	172.23
28	103136144	MAY 28,07	6.85	6.85	6.90	23.70	162.35	165.59
? CANT MAKE OUT THE LAST NUMBER								
						TOTAL	**1804.11**	**1840.19**

WEDGE WELDER QUALIFICATION DATA

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 28, 2007
Q/C TECHNICIAN	MICHAEL JONES

WEDGE WELDER No	XL-3003
TRAVEL SPEED (ft/min)	5.5
SHEET TEMPERATURE (^{O}C)	1
WEDGE TEMPERATURE (^{O}C)	750
MATERIAL	60 mil S-TEX

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	136/134	0	
2	133/138	0	
3	144/140	0	All samples failed outside weld
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	181	
2	179	
3	181	All samples failed outside weld
4		
5		

Q/C TECHNICIAN _____
signature

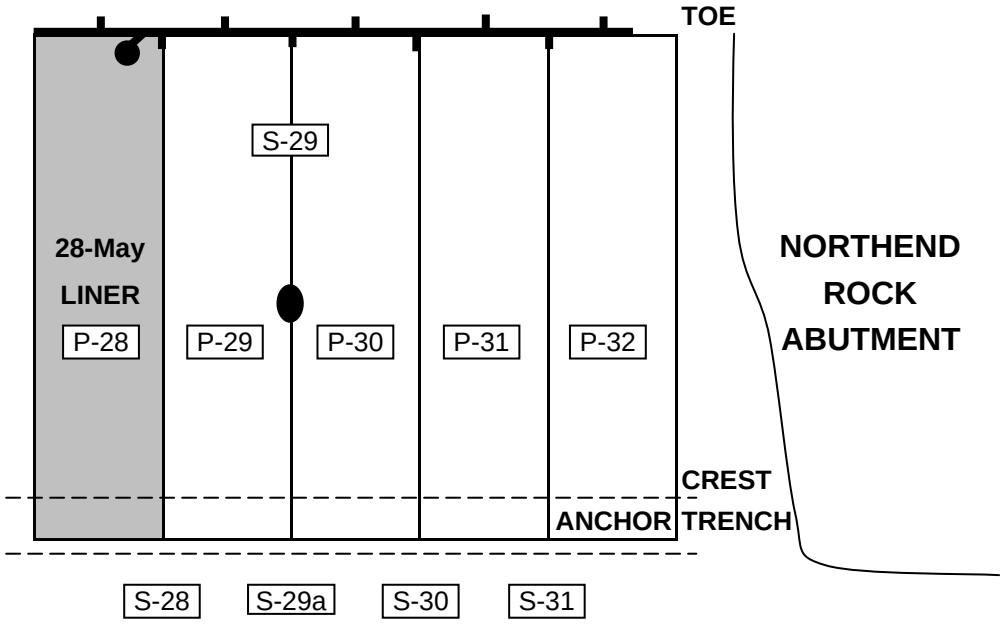
NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 98 lbs/in
Shear 120 lbs/in

TAHERA - YEAR 2007 CONSTRUCTION
SOUTHEAST DAM
HDPE SLOPE LINER INSTALLATION

A & A TECHNICAL SERVICES

MAY 29,2007

N



P-1 PANEL NUMBER
S-1 SEAM NUMBER
PATCH
CREST
EXTRUSION WELD
T-WELD

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

EXTRUSION WELDER QUALIFICATION DATA

PROJECT NAME:	SOUTHEAST DAM
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 29,2007
Q/C TECHNICIAN	MICHAEL JONES

EXTRUSION WELDER No.	1
PRE-HEAT TEMP.(^{o} F)	490
EXTRUDITE TEMP.(^{o} F)	475
SHEET TEMPERATURE (^{O}C)	1
MATERIAL	60 mil S-TEX HDPE

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	143	0	All samples failed outside the weld
2	149	0	
3	140	0	
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	166	All samples failed outside the weld
2	156	
3	157	
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 78 lbs/in
Shear 120 lbs/in

NON-DESTRUCTIVE TESTING FORM

PROJECT:	**SOUTHEAST DAM SLOPE LINER**
LOCATION:	**JERICHO**
MATERIAL:	**60mil S-TEX HDPE**
CLIENT:	**TAHERA DIAMOND CORPORATION**

Date	Seam Number	Tester	TEST DATA						VAC Test	COMMENTS
			PRESSURE (psi)			TIME OF TEST		Pass/ Fail		
			Start	End	Change	Start	End			
MAY 23,07	28	GH	35.0	35.0	0.0	4:46	4:51	P		ALL T-WELDS, PATCHES AND
MAY 23,07	29	GH	35.0	35.0	0.0	4:39	4:44	P		EXTRUSION WELDS WERE
MAY 23,07	29a	GH	35.0	35.0	0.0	4:52	4:57	P		VACUUM TESTED AND PASSED
MAY 23,07	30	GH	35.0	35.0	0.0	5:02	5:07	P		VACUUM TESTING WAS DONE ON
MAY 23,07	31	MJ	35.0	35.0	0.0	7:01	7:06	P		MAY 29,2007
									Pass	TIE-IN SEAM

A & A TECHNICAL SERVICES, 327 OLD AIRPORT ROAD, PO BOX 2922 YELLOWKNIFE, NT

HDPE PANEL PLACEMENT LOG

DATE:	**MAY 29,2007**
PROJECT NAME:	**SOUTHEAST DAM SLOPE LINER**
LOCATION	**JERICHO**
CLIENT:	**TAHERA DIAMOND CORPORATION**
Q.A TECHNICIAN:	**MICHAEL JONES**

PANEL NUMBER	ROLL NUMBER	DEPLOYMENT DATE	TOP WIDTH (m)	BOTTOM WIDTH (m)	ROLL WIDTH (m)	LENGTH APPROX. (m)	AREA OF LINER GROUND COVER (m^2)	AREA OF LINER WITH OVERLAP (m^2)
29	103136170	MAY 29,07	6.80	6.80	6.90	23.10	157.08	160.22
30	103136170	MAY 29,07	6.80	6.80	6.90	22.30	151.64	154.67
31	103136170	MAY 29,07	6.80	6.80	6.90	22.10	150.28	153.29
32	103136170	MAY 29,07	6.80	6.80	6.90	21.85	148.58	151.55
						TOTAL	**607.58**	**619.73**

WEDGE WELDER QUALIFICATION DATA

A & A
TECHNICAL SERVICES
327 OLD AIRPORT ROAD
YELLOWKNIFE, NT

PROJECT NAME:	SOUTHEAST DAM SLOPE LINER
LOCATION:	JERICHO
CLIENT:	TAHERA DIAMOND CORPORATION
DATE:	MAY 29, 2007
Q/C TECHNICIAN	MICHAEL JONES

WEDGE WELDER No	XL-3003
TRAVEL SPEED (ft/min)	6.0
SHEET TEMPERATURE (^{O}C)	1
WEDGE TEMPERATURE (^{O}C)	750
MATERIAL	60 mil S-TEX

DESTRUCTIVE TEST RESULTS

PEEL TESTS

TEST No.	lbs/in.	% Separation	Comments:
1	132/136	0	
2	135/132	0	
3	129/135	0	All samples failed outside weld
4			
5			

SHEAR TESTS

TEST No.	lbs/in.	Comments:
1	173	
2	169	
3	169	All samples failed outside weld
4		
5		

Q/C TECHNICIAN _____
signature

NOTE: ASTM Minimum weld strength for 60 mil HDPE
Peel 98 lbs/in
Shear 120 lbs/in

APPENDIX

APPENDIX O SOUTHEAST DAM CONCRETE BEAM DESIGN DOCUMENTS

May 23, 2007 EBA File: 1100060.007

Tahera Diamond Corporation

Attention: Tony Loschiavo via email: tloschi@tahera.com
Chief Mine Engineer

Subject: Southeast Dam
North Abutment Liner Tie-In Design

1.0 INTRODUCTION

This letter documents the liner system tie-in design at the north abutment of the Southeast Dam. This letter formalizes a preliminary design previously circulated to site personnel to facilitate personnel, equipment and material mobilization.

2.0 DESIGN CONCEPT

The key trench at the north end of the Southeast Dam butts into a near vertical rock face as opposed to the sloped excavation shown on the original dam design drawings. A modified tie-in design is therefore required to provide a seepage cutoff between the rock face and the liner running perpendicular to it.

The tie-in design comprises a concrete beam cast against the rock face. The beam will be supported on a rock ledge and connected to the rock face using grouted rebar anchors. The rock/concrete contact will be sealed to impede seepage. The liner will be fastened to the concrete beam using a mechanical, bolted connection.

Once the liner has been fastened to the beam, a 20 mm material/bentonite layer will be placed over the beam to provide a secondary seepage barrier.

3.0 BEAM LAYOUT AND DESIGN CROSS-SECTION

The design beam profile and cross-section are shown in Figures 1, 2 and 3, respectively. The beam has been designed with a 2H:1V slope to match the slope of the existing bedrock bearing surface.

The bedrock bearing surface is irregular, with cross slopes of up to 40° from horizontal. The precise beam layout (both horizontal and vertical) will require field fitting to accommodate the site conditions. EBA's site engineer will provide input and assistance with the beam layout at the time of construction.

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Field fabrication of some reinforcing steel will be required to accommodate actual field conditions. This will particularly be the case for stirrups, where longer or shorter stirrups may be required depending on the underlying bedrock surface and the final beam elevation.

The sloped beam may necessitate staged pours and the development of cold joints in the beam. A PVC water stop should be installed in all cold joints to impede seepage through the beam.

4.0 ANCHORS

The concrete beam is mechanically connected to the bedrock by vertical and sub-horizontal 30 mm diameter rebar anchors. Anchor spacing and alignment is detailed on Figure 1. The anchors will require bending to the shape and dimensions shown on Figures 2 and 3.

Drilled anchor holes should be a minimum 75 mm in diameter with a minimum embedment length of 1000 mm. Anchors should be grouted using Sika Arctic Grout 100 or approved equivalent, placed in accordance with the manufacturer's recommendations. Centering baskets or other device should be used to keep the anchors centered in the anchor hole.

5.0 CONCRETE MIX DESIGN

A concrete mix design has been developed based on the 20 mm material currently available on site. The design has been developed to allow mixing with either a Reimer truck or drum mixer. A copy of the mix design is included in Appendix A.

The design utilizes water soluble fritz-pak admixtures which can be added directly to the mixing water (for superplasticizer) or dissolved in the admixture tanks (for air), for use in a Reimer truck. EBA understands that these admixtures have already been delivered to site. Synthetic fibres have also been included in the mix design to improve workability on a slope and reduce shrinkage cracking.

A trial concrete batch should be completed prior to pouring the beam, in order to verify batch quantities.

6.0 CONCRETE PLACEMENT AND CURING

All concrete should be placed and cured in accordance with CSA A23.1-04. The finished beam should have smooth, level finish extending from the fillet crest (El. 519.5) to the liner crest (El. 524.0). Staged pours may be required to cast the inclined beam. The pour length should be no longer that what can be adequately finished to a 2H:1V slope.

All concrete formwork, reinforcing steel and bearing surfaces should be heated above 5°C prior to placing concrete. The rock surface should be clean and free of any loose material or other debris prior to pouring.

A concrete bonding agent should be applied to all bearing surfaces prior to concrete placement. The bonding agent should adhere to CSA A23.1-04 and consist of a sand/cement grout having a maximum water/cement ratio of 0.45. The bonding agent should be brushed on all contact surfaces ahead of concrete placement. The bonding agent must not be allowed to dry prior to concrete placement.

The concrete temperature during placing should range from 10°C to 30°C. Once placed, the concrete should be cured for a minimum of seven days, the first three of which should comprise moist curing. A minimum temperature of 10°C should be maintained during curing. Form work should be stripped after the initial three day moist cure.

7.0 LINER CONNECTION AND SEALANT

The liner should be connected to the concrete beam using the flat bar connection detail, as shown in Figure 2.

A sealant should be applied to the concrete/bedrock contact following beam construction. The sealant should comprise Sikaflex 1a or approved equivalent. The sealant should be placed and cured in accordance with the manufacturer's recommendations.

Once the liner has been connected and the sealant placed, a 200 mm thick layer of 20 mm material and bentonite mix should be placed over the concrete beam to provide a secondary seepage barrier. A saturated 20 mm material/bentonite plug should also be placed at the toe of the beam as shown in Figure 1. The 20 mm material/bentonite mix should comprise 20 mm material with a minimum 15% bentonite by mass.

8.0 QUALITY CONTROL TESTING

Quality control testing should be provided by the engineer during concrete placement. Testing and frequency should comprise the following:

- Air entrainment: An air entrainment test should be completed on each concrete batch.
- Slump: Slump tests should be completed at the same frequency as air testing.
- Concrete cylinders: A set of 3 concrete cylinders should be cast on a daily basis or for every $3m^3$ of concrete poured. The number of cylinders per set may be increased by the engineer to allow for additional breaks.

9.0 CLOSURE

We trust this satisfies your present requirements. Please contact our Edmonton office if you require clarification or additional information.

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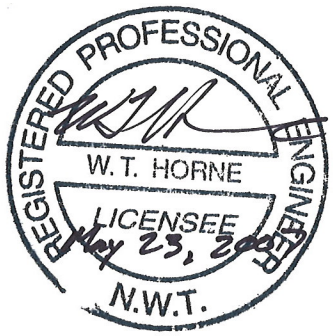

Gary Koop, P.Eng
Project Engineer, Arctic Region
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reviewed by:
Bill Horne, P.Eng.
Principal Consultant, Arctic Region
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bhorne@eb.ca

/jnc

THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
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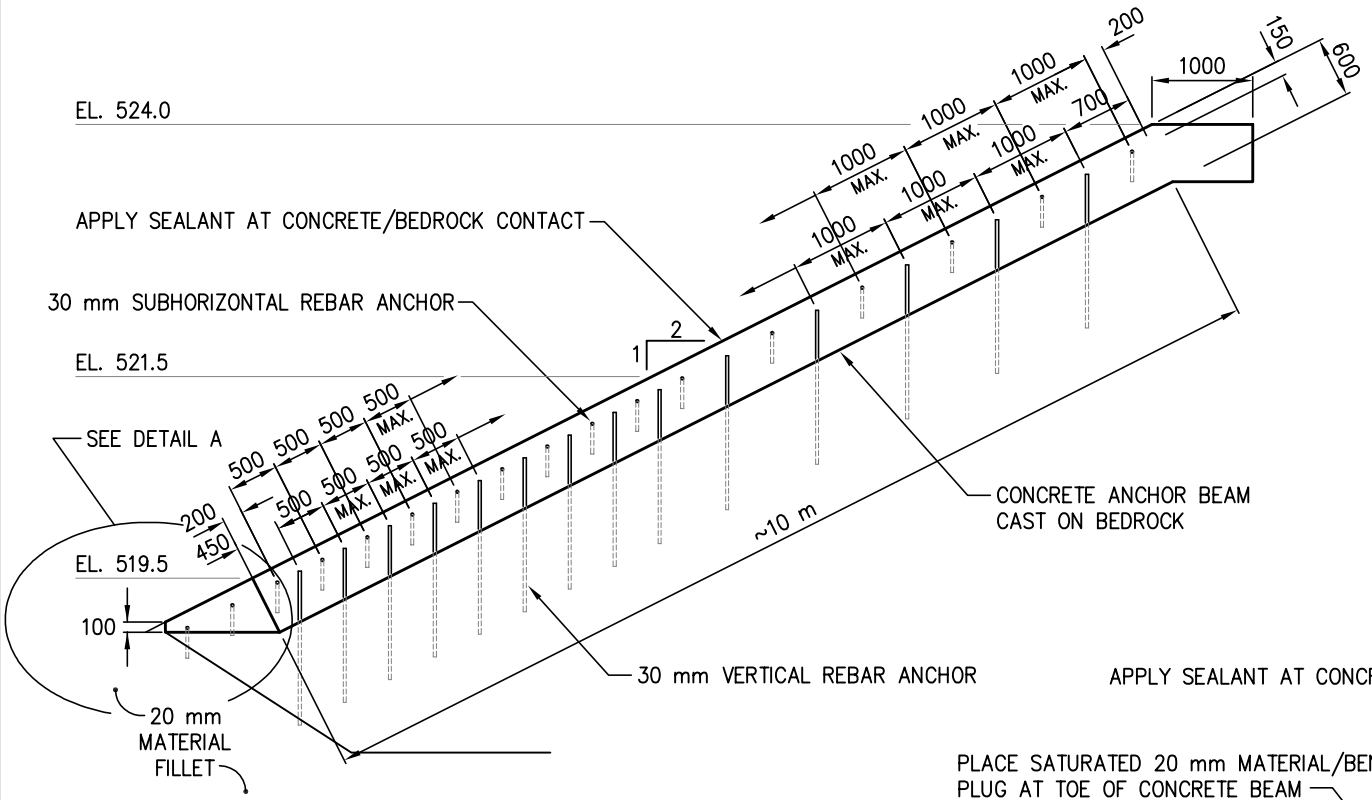
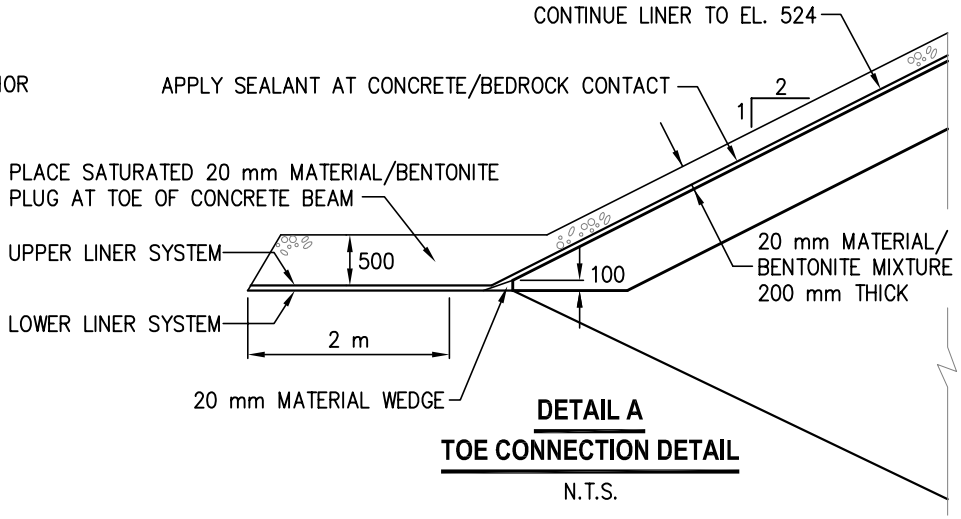
FIGURES





DETAIL A
TOE CONNECTION DETAIL
N.T.S.

NOTES:
1. ALL DIMENSIONS IN mm
2. CONCRETE SEALANT TO BE SIKAFLEX 1a OR APPROVED EQUIVALENT.
3. ANCHOR SPACING:
   FROM EL. 519.5 TO 521.5 m.
   4 PER METRE (2 VERTICAL, 2 SUBHORIZONTAL)
   FROM EL. 521.5 TO 524 m.
   2 PER METRE (1 VERTICAL, 1 SUBHORIZONTAL)
4. SEE FIGURE 2 FOR REBAR LAYOUT.

0 4m
Scale: 1: 75

CLIENT
Tahera Diamond Corporation

Jericho Project
Southeast Dam, North Abutment Tie-in
Jericho Diamond Mine, NU

Concrete Anchor Beam And Anchor Spacing

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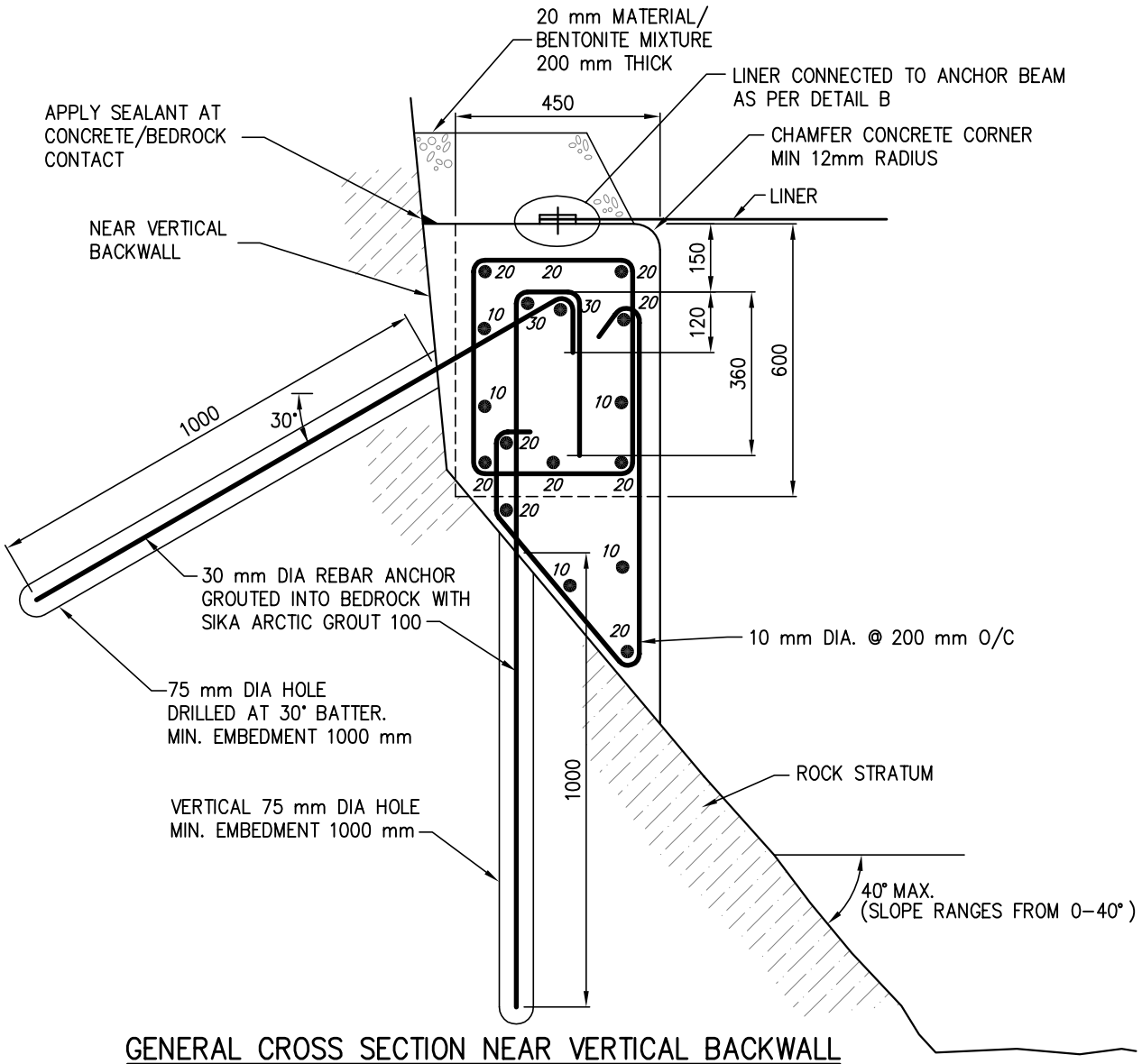
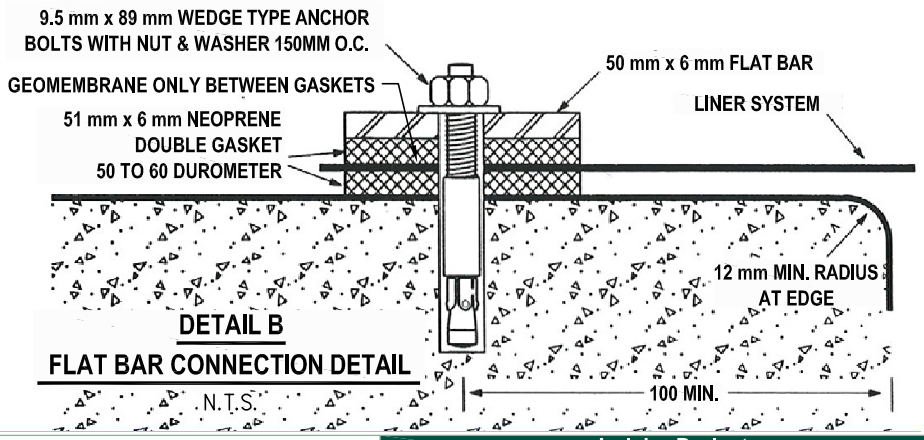
PROJECT NO./FILE NO.	DWN	CKD	REV
1100060.007 1100060007H01e.dwg	RH	GK	
OFFICE: EBA-EDM	DATE: May 2007		

Figure 1



GENERAL CROSS SECTION NEAR VERTICAL BACKWALL



DETAIL B

FLAT BAR CONNECTION DETAIL

N.T.S.

NOTES:
1. ALL DIMENSIONS IN mm.
2. ANGLE AND WIDTH OF ROCK BEARING SURFACE VARIES ALONG BEAM LENGTH. STIRRUP SIZE & SHAPE TO BE ADJUSTED TO ACCOMMODATE ACTUAL CONDITIONS.
3. NOMINAL REBAR SIZING SNOWN IN ITALICS.
4. MINIMUM 75 mm CONCRETE COVER BETWEEN REBAR AND EXPOSED CONCRETE FACE.

0 500mm

Scale: 1: 15

CLIENT

Tahera Diamond Corporation

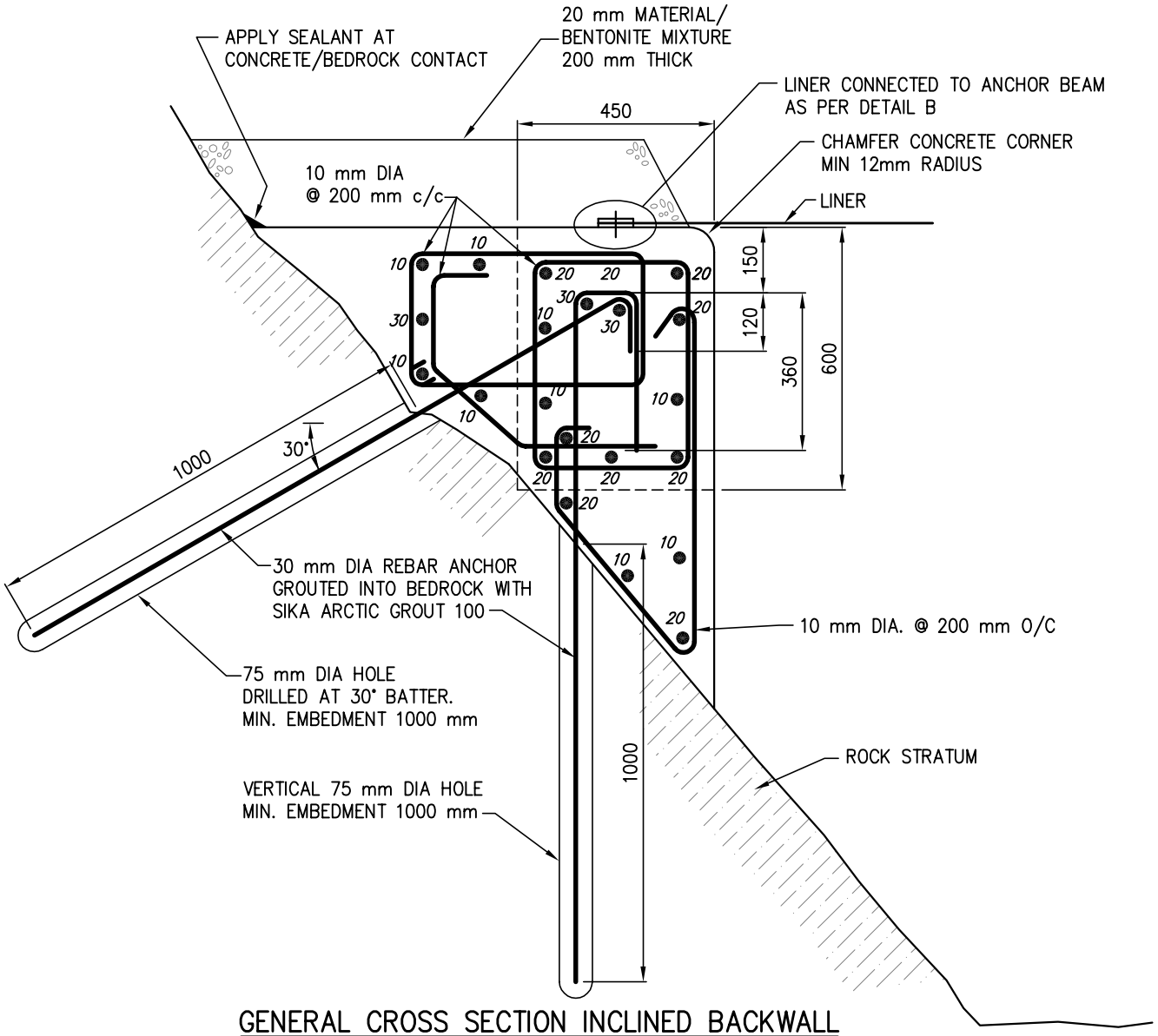
Jericho Project
Southeast Dam, North Abutment Tie-in
Jericho Diamond Mine, NU

Concrete Anchor Beam
General Cross-Section and Liner Connection

EBA Engineering Consultants Ltd.

PROJECT NO./FILE NO.	DWN	CKD	REV
1100060.007 1100060007H01a.dwg	RH	GK	
OFFICE: EBA-EDM	DATE: May 2007		

Figure 2



GENERAL CROSS SECTION INCLINED BACKWALL

NOTES:
1. ALL DIMENSIONS IN mm.
2. ANGLE AND WIDTH OF ROCK BEARING SURFACE VARIES ALONG BEAM LENGTH. STIRRUP SIZE & SHAPE TO BE ADJUSTED TO ACCOMMODATE ACTUAL CONDITIONS.
3. NOMINAL REBAR SIZING SNOWN IN ITALICS.
4. MINIMUM 75 mm CONCRETE COVER BETWEEN REBAR AND EXPOSED CONCRETE FACE.

0 500mm
Scale: 1: 15

CLIENT
Tahera Diamond Corporation

Jericho Project
Southeast Dam, North Abutment Tie-in
Jericho Diamond Mine, NU

Concrete Anchor Beam
General Cross-Section

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PROJECT NO./FILE NO.	DWN	CKD	REV
1100060.007 1100060007M01e.dwg	MM	GK	
OFFICE: EBA-EDM	DATE: May 2007		

Figure 3

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APPENDIX

APPENDIX A CONCRETE MIX DESIGN

Theoretical Concrete Mix Design
Table 1

Project Number:	1100060.007
Project:	Jericho South East Dam
Address:	Jericho Diamond Mine
Client:	Tahera Diamond Corporation
Fax:	
Attention:	Mr. Tony Losciavo

Producer:	Tahera Diamond Corporation
Mix Number:	Tie-in — Cement Type: GU (10)
Date Submitted:	May 1, 2007 — By: JDR
28-day Compressive Strength:	30 MPa
Exposure Class:	F-1 — Max. w/cm Ratio: 0.45
Fly Ash:	No — Silica Fume: No
Slump (mm):	min.: 50 — max.: 80
Air Content:	min.: 5.0% — max.: 7.0%
CC:	

Mix Proportions (SSD Aggregates)	Mass kg/m³	Density kg/m³	Volume m³
Cement: GU (10)	380	3150	0.1206
Silica Fume:	0	2250	0.0000
Fly Ash:	0	2000	0.0000
Water: Site	165	1000	0.1650
Coarse Agg. 1: 14-0 mm Crush	1760	2640	0.6667
Coarse Agg. 2: +5 mm		2640	0.0000
Fine Agg. 2: -5 mm		2640	0.0000
Air:			0.0500
Total Mass	2305	**Yield**	1.002

Mix Properties	
Slump, mm:	50 - 80
Air Content, %±%:	6 ± 1
Water/Cement (w/c) Ratio:	0.434
Water/Cementing Materials (w/cm) Ratio:	0.434
Specified Maximum w/cm Ratio:	0.45
Fine Aggregate Content:	0.0%
Fly ash content (by cementing materials):	0.0%

Admixture	Brand	Dosage	
Air Entrainer:	SuperAirPlus	"as required"	
Water Reducer:		0	ml/100 kg CM
Superplasticizer:	Supercizer 7	500	ml/100 kg CM
Accelerator:		0	ml/100 kg CM
Fibres:	Novamesh 950	3.0	kg/m³ (0.8 kg/100 kg CM)

Notes:

Prepared By: _____ P. Eng. AB
J.D. (Dave) Robson

EBA Engineering Consultants Ltd.

APPENDIX

APPENDIX P SOUTHEAST DAM CONCRETE BEAM FIELD TESTING AND COMPRESSIVE STRENGTH RESULTS

EBA Engineering Consultants Ltd.

CONCRETE STRENGTH TEST RESULTS

CSA Specification CAN3 - A23.2

Project No: 1100060.007

Project: Jericho Mine

Client: Tahera Diamond Corporation
Suite 803 - 121 Richmond Street West
Toronto, ON M5H 2K1

Attention: Tony Lochiavo

Test Location: Southeast Dam
Concrete Liner Beam
Elev: 521.0 to 521.5

Placing Method: Hand

Test No: 5156

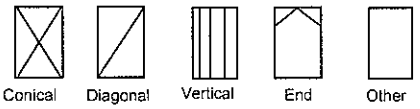
INFORMATION FROM DELIVERY SLIP

Supplier: Mixed on site
Truck No: Plant Dep:
Ticket No: Mix No.
Load Amount: m^3 Cumulative: 1.5 m^3
Admixture: Air CaCl2 Other
Specified Strength: 30 MPa Spec Air: 5-7 %
Cement Type: 10 Spec Slump: mm
Max Aggregate Size: 20 mm

Test Time: 12:30 Unit Weight kg/m^3
Temperature: Air 14 °C Concrete 10 °C
Concrete Setting Limits: (15 - 25C) Temperature Yes ☐ No ☐ Within Specification If No see remarks
Slump: 40 mm Air Content: 6.0 %
Date Cast: 07 07 06 By: DK
Date Received: 07 07 10 By: ZB

Cylinder Number	Age Days	Test Date	Test By	Comp. Strength MPa	Type of Failure	Comments
5156-1	7	07 07 13	ZB	14.8	D	Cylinder Mass = 3784 g
5156-2	28	07 08 03	NR	20.8	D	Cylinder Mass = 3778 g
5156-3	28	07 08 03	NR	21.4	D	Cylinder Mass = 3797 g

Type of Failure



Remarks: 3 - 100 mm x 200 mm diameter cylinders cast in plastic molds

Reviewed By: P.Eng.

cc
File
David Kubisheski - EBA, Edmonton
Jason Porter - EBA, Edmonton
Bill Horne - EBA, Edmonton

eba

EBA Engineering Consultants Ltd.

CONCRETE STRENGTH TEST RESULTS

CSA Specification CAN3 - A23.2

Project No: 1100060.007

Project: Jericho Mine

Client: Tahera Diamond Corporation
Suite 803 - 121 Richmond Street West
Toronto, ON M5H 2K1

Attention: Tony Lochiavo

Test Location: Southeast Dam
Concrete Liner Beam

Elev: 523.0 to 523.5

Placing Method: Hand

Test No: 5157

INFORMATION FROM DELIVERY SLIP

Supplier: Mixed on site

Truck No: _____ Plant Dep: _____

Ticket No: _____ Mix No. _____

Load Amount: _____ m^3 Cumulative: 6.5 m^3

Admixture: Air _____ CaCl2 _____ Other _____

Specified Strength: 30 MPa Spec Air: 5.7 %

Cement Type: 10 Spec Slump: _____ mm

Max Aggregate Size: 20 mm

Test Time: 17:30 Unit Weight _____ kg/m^3

Temperature: Air 14 °C Concrete 10 °C

Concrete Setting Limits: (15 - 25C) Temperature Yes [ ] No [ ] Within Specification If No see remarks

Slump: 50 mm Air Content: 6.2 %

Date Cast: 07 07 06 By: DK

Date Received: 07 07 10 By: ZB

Cylinder Number	Age Days	Test Date	Test By	Comp. Strength MPa	Type of Failure	Comments
5157-1	7	07 07 13	ZB	8.8	D	Cylinder Mass = 3535 g
5157-2	28	07 08 03	NR	9.9	D	Cylinder Mass = 3530 g
5157-3	28	07 08 03	NR	12.6	D	Cylinder Mass = 3533 g

Type of Failure

C Conical D Diagonal V Vertical E End O Other

Remarks: 3 - 100 mm x 200 mm diameter cylinders cast in plastic molds

Reviewed By: _____ P.Eng.

cc
File
David Kubisheski - EBA, Edmonton
Jason Porter - EBA, Edmonton
Bill Horne - EBA, Edmonton

eba

EBA Engineering Consultants Ltd.

CONCRETE STRENGTH TEST RESULTS

CSA Specification CAN3 - A23.2

Project No: 1100060.007

Project: Jericho Mine

Client: Tahera Diamond Corporation
Suite 803 - 121 Richmond Street West
Toronto, ON M5H 2K1

Attention:

Test Location: Trial Batch

Placing Method:

Test No: 5178

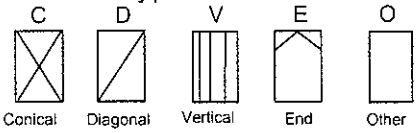
INFORMATION FROM DELIVERY SLIP

Supplier: Mixed on site
Truck No: Plant Dep:
Ticket No: Mix No.
Load Amount: m^3 Cumulative: m^3
Admixture: Air CaCl2 Other
Specified Strength: 30 MPa Spec Air: 5-7 %
Cement Type: 10 Spec Slump: mm
Max Aggregate Size: 14 mm

Test Time: Unit Weight kg/m^3
Temperature: Air °C Concrete °C
Concrete Setting Temperature Within Specification
Limits: (15 - 25C) Yes [ ] No [ ] If No see remarks
Slump: 80 mm Air Content: 0.0 %
Date Cast: 07 07 16 By: Clark B.
Date Received: 07 07 18 By: NR

Cylinder Number	Age Days	Test Date	Test By	Comp. Strength MPa	Type of Failure	Comments
5178-1	3	07 07 19	NR	13.7	E	Cylinder Mass = 3626 g
5178-2	5	07 07 21	NR	16.5	E	Cylinder Mass = 3707 g
5178-3	7	07 07 23	ZB	18.7	E	Cylinder Mass = 3671 g

Type of Failure



Remarks: 3 - 100 mm x 200 mm diameter cylinders cast in plastic molds

Reviewed By: P.Eng.

cc
File
David Kubisheski - EBA, Edmonton
Jason Porter - EBA, Edmonton
Bill Horne - EBA, Edmonton

EBA Engineering Consultants Ltd.

GROUT STRENGTH TEST RESULTS

Project No: 1100060.007
Project: Jericho Mine

Client: Tahera Diamond Corporation
Suite 803 - 121 Richmond Street West
Toronto, ON M5H 2K1

Attention: Tony Lochiavo
Test Location: Southeast Dam
Anchors for Concrete Beam
Elev 522.0 to 523.0
Placing Method: Pail
Test No: 5152

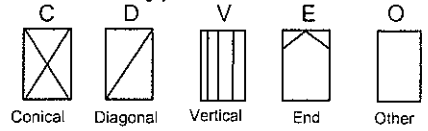
INFORMATION FROM DELIVERY SLIP

Supplier: Mixed on site
Truck No: Plant Dep:
Ticket No: Mix No. Sika 212
Load Amount: m^3 Cumulative: m^3
Admixture: Air CaCl2 Other
Specified Strength: 40 MPa Spec Air: %
Cement Type: Spec Slump: mm
Max Aggregate Size: mm

Test Time: 16:00 Unit Weight kg/m^3
Temperature: Air 9 °C Concrete °C
Concrete Setting Limits: (15 - 25C) Temperature Yes [ ] No [ ] Within Specification If No see remarks
Slump: 80 mm Air Content: 0.0 %
Date Cast: 07 06 30 By: DK
Date Received: 07 07 03 By: ZB

Cylinder Number	Age Days	Test Date	Test By	Comp. Strength MPa	Type of Failure	Comments
5152-1	7	07 07 07	ZB	30.7	E	Cylinder Mass = 3236 g
5152-2	28	07 07 28	NR	34.6	E	Cylinder Mass = 3315 g
5152-3	28	07 07 28	NR	34.3	E	Cylinder Mass = 3450 g

Type of Failure



Remarks: 3 - 100 mm x 200 mm diameter cylinders cast in plastic molds

Reviewed By: P.Eng.

cc
File
David Kubisheski - EBA, Edmonton
Jason Porter - EBA, Edmonton
Bill Horne - EBA, Edmonton

eba