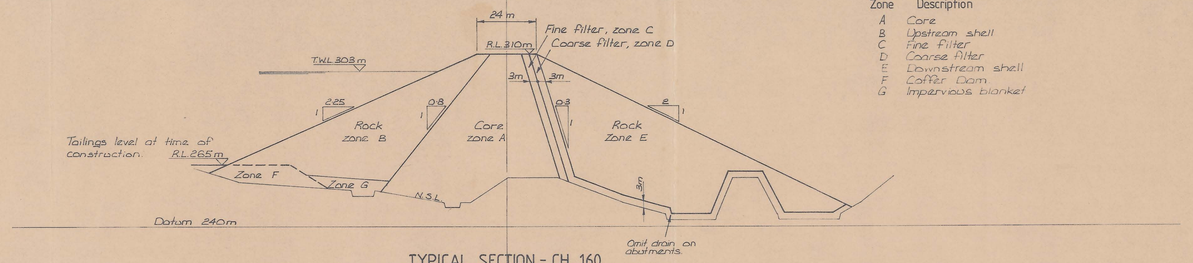
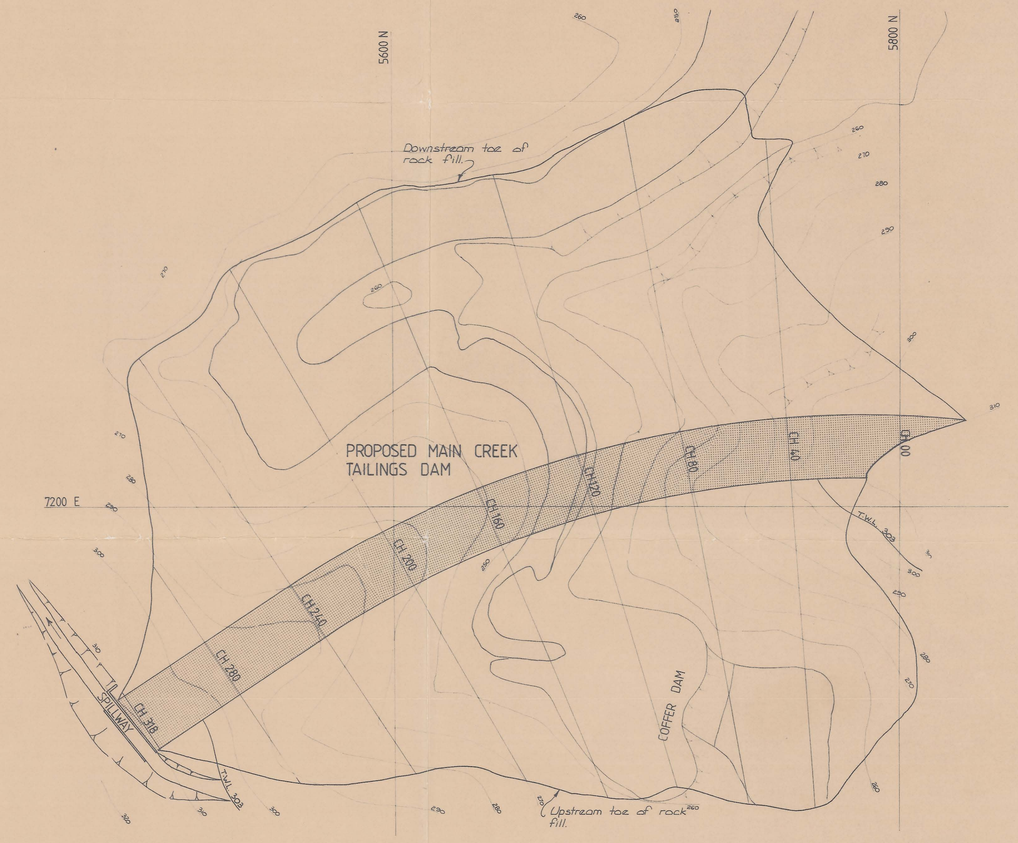
DO NOT SCALE

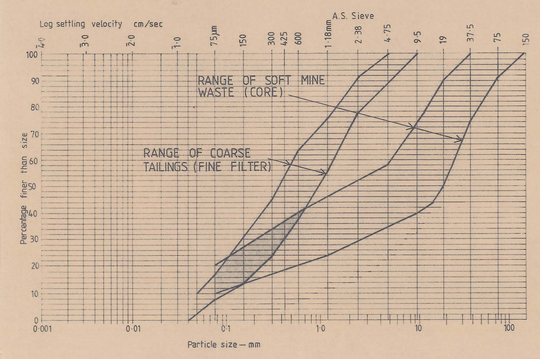


TYPICAL SECTION - CH. 160

Zone	Description
A	Core
B	Upstream shell
C	Fine filter
D	Coarse filter
E	Downstream shell
F	Coffer Dam
G	Impervious blanket



PLAN



PARTICLE SIZE DISTRIBUTION
GRADING ENVELOPE

NOTES

1. Foundations (Except for coffer dam already constructed).

Site to be stripped of all vegetation and topsoil prior to placing any embankment material.

Foundation beneath impervious clay blanket, core and filter (Zones A, C & D) to be stripped to competent rock. Any fissures or seams in rock-clay contact likely to carry water to be cleaned out and sealed to engineer's approval.

Prior to placing, embankment to be inspected & approved by engineer.

Initially clay placed against rock foundation is to be in layers approximately 200 thick and wetter than optimum moisture rolled to optimum density. The purpose being to ensure that there will be no seepage along the clay to rock contact. See Note 2(a).

Clay not to be placed in foundation unless rock/clay contact is dry and clean.

2. Embankment Construction

(a) Clay blanket (Zone G). Clay to be won from mine overburden and to be free of organic material or topsoil. Clay to be used against foundation rock should be medium to high plasticity.

Clay should be constructed in horizontal layers and compacted so as to achieve 95% standard compaction.

The top surface during construction should be graded so as to be free draining with no puddles or free water on the surface prior to placement of next layer.

Rolling for compaction to be by loaded rubber tyred mine vehicles. Surface of preceding layer to be scarified prior to placing.

Clay to be placed as near as practical to optimum moisture content or slightly above and to be checked at random for field density and results compared with laboratory compaction tests.

(b) Core (Zone A). The Core is to be constructed of soft mine wastes selected so as to contain material within the grading envelope shown. It is to be placed in 400mm deep horizontal layers and each layer compacted by six passes of a vibrating tamping foot roller. Until RL 265 is reached field density tests by the sand replacement method are to be taken twice from each layer and the removed material analysed for grading. If the grading is not within the envelope, the layer is to be removed and placed in the upstream or downstream rock shells. The density and gradation testing is to be reviewed when the dam has reached RL 265.

(c)(i) Fine Filter (Zone C - coarse tailings. A filter zone of coarse tailings is to be constructed 3 metres wide adjacent to the downstream side of the core. It is to comprise material graded within the envelope shown. The construction could be by spigotting tailings into the zone or other method to give equivalent result so that the coarse fraction is retained. Care should be taken during construction to avoid any drainage flowing to or through this zone. Also no construction traffic to be allowed to traverse the fine filter. A sample is to be taken for each metre lift of the dam and checked for grading.

(c)(ii) Coarse Filters (Zone D) - Cobber reject. The process waste known as "cobber reject" is to be used as coarse filter. It is to be placed in 400mm layers as for the core material although density testing is not necessary. Sampling and gradation testing shall be as for the fine filter.

(d) Rock Fill Shells. (Zone B & E). Rock fill shall be of clean hard rock mine waste (HMW) with no more than 5% of the material less than 10mm in size.

Rockfill can be placed in layers up to 1 metre thick and compaction shall be by routing loaded dump vehicles over the layers as they are placed.

A general rockfill construction path upstream and downstream should be kept up to as near the same level as practicable to the core and filter levels.

3. Spillway - See SRM drawing.

4. Programme

A construction programme to be as prepared in detail by SRM in accordance with the production of mine waste. In general it is necessary for the dam to be topped out to crest level by November 1981. Quantities in each zone are as follows:

Core SMW	392000
Clay Blanket	95000
Fine Filter - coarse tailings	35000
Coarse Filter (Cobber reject	72000
Rock shells	941500

5. This drawing has been prepared using information from SRM and the proposal has been developed to achieve the desired objectives within the limitations of practical mining operations.

6. Supervision

It is necessary that the core and filter material be carefully selected and placed so as to achieve a dam of low permeability and safe from failure by erosion of the core. The dam construction is to be under the control of a civil engineer. The staff of SRM, in addition the placing of all clay blankets, core and filter material is to be supervised on the site on each shift so that all core and filter material is correctly selected and placed at least up to RL 265. When RL 265 is reached the supervision procedures should be reviewed in accordance with results until then and in accordance with operator skills that have been developed.

GND REPORT NOV 1982

PLAN No. 5016
DRAWING No. 36026

5 cm

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SCALE 1:500 — 20 10 0 20 40m

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DRAFT CHECK D.E.S.	11/82	ENGR CHECK	/ /
APPROVED		DATE	/ /

CLIENT AND JOB: SAVAGE RIVER MINES
MAIN CREEK TAILINGS DAM

TITLE: PROPOSED DAM-PLAN AND SECTIONS
ALTERNATIVE 2

SIZE B1 DRG. NO. 4442-06-2

REVISION

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