

Fig 2-1



Geoffrey Kyle on 09/09/98 01:33:47 PM

Sent by: Geoffrey Kyle

To: David Toohey/ERA/North/AU,

cc:

Subject: TAILING SPILL CLEAN-UP

David,

In December of last year there was a spill of tailings slurry on Corridor Road, adjacent to what we call the Corridor Road Sump, CRS, and production people refer to as the Turkeys' Nest. The spill occurred when a tailings line flange burst.

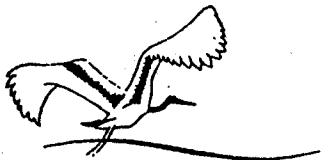
Tailings material filled both north and south drains feeding the sump, covered part of the road and extended east almost to the creek. On the Monday after the incident, I saw wet tailings material half a metre high against the MC station which controls the pontoon pump. The mess was dealt with by hosing the material into the drains and thence into the sump. It was intended to drain the sump and dig out the offending material in order that water filling the sump in the following wet season would be of suitable quality to store in RP2.

This plan was not carried out in full. The sump was allowed to dry out, allowing the tailings material to blow around all over the place. Nothing was done about the drains. Although the material was not very mobile in the wet season conditions then prevailing, I felt that a health hazard would be present for people in the vicinity in the dry season when the wind stirs up this very finely divided and toxic material, I brought the matter to the attention of Allan Ryan. That person agreed that the potential for a hazard existed, and undertook to raise the matter with the Mine Department. When no action was forthcoming, I again referred the matter to AJR. I have also mentioned the matter to Peter Woods, Andrew Jackson, and, most recently, to Ken Lonie. All of those persons promised to look into the matter and get back to me. None has.

Today I noticed that the floor of the sump has been scraped by a machine of some sort, but most of the tailings material is still there. Again, nothing has been done to clean the drains. It is hot and windy today, and a considerable amount of material is becoming airborne each time a vehicle passes the drains and with each gust of natural wind.

David, I wish to report this once again, and ask that action be taken to remove the hazard. I think you will agree that nine months should be adequate time for action in respect of something like this, especially when such senior people are aware of it. I am concerned that, if nothing is done soon, the problem will be conveniently obscured by the coming rains, only to raise its head in the next dry. During the wet, some of the material could be mobilised by the mechanical processes of water flows, and individual chemical species could be mobilised by dissolution. This could cause problems in other environmental contexts, as well as constituting a hazard for our staff.

Geoffrey Kyle.

**ERA****Energy Resources of Australia Ltd – Ranger Mine**

ACN 008 550 885

Fig 2.2

MEMORANDUM

TO : Peter Woods
COPIES : Allan Wade, Holger Topp, David Toohey
FROM : Paul Bryers
SUBJECT : RP2 Water Quality
DATE : 09 November 1998
REF :

Gentlemen,

Following is a summary of all the information I have to date on the increase in uranium in RP2.

On the 28 October it was noted that the U level in RP2 had increased substantially and a sample was taken and analysed on the 29th to confirm the high value. This was confirmed and subsequently the samples were assayed by a different technique for further confirmation which did further qualify the results.

Water resources were then contacted and conducted a water balance on RP2 and calculated a 340 Kg load of U which could not be accounted for.

A meeting was conducted with Allan Wade, Geoff McKenzie, Paul Bryers, Steve Abbott, Jacqui McGill and Ray Anderson. This outcome of this meeting was that it was unlikely that any uranium had been added from the mill area.

After inspecting the RP2 area samples were taken from sites 1, 3 and 4. It was decided that after a 30mm rainfall event that more samples would be taken. This occurred on 30th and only two samples were taken due to safety considerations.

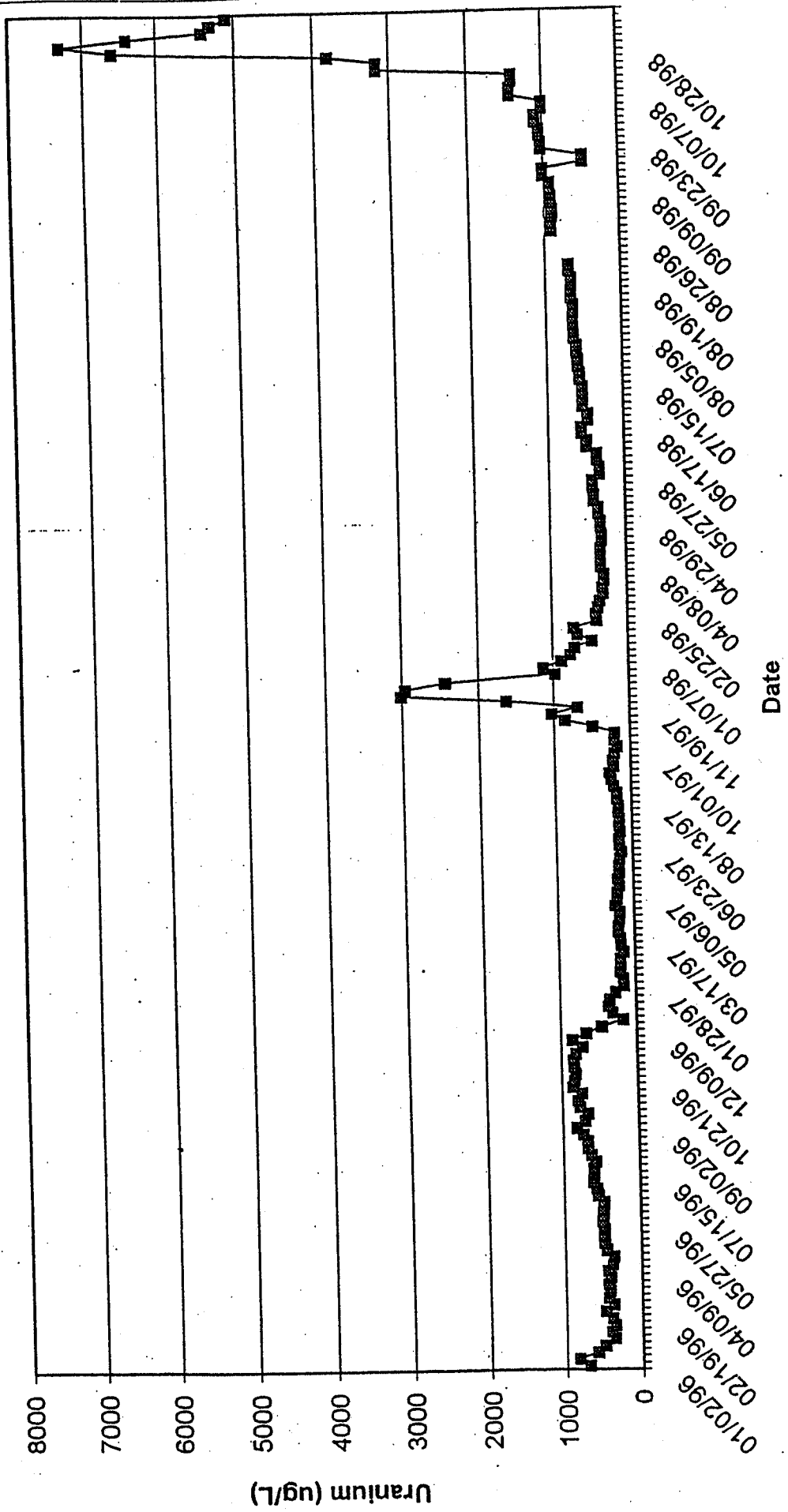
Other trace element concentrations have not yet been analysed and should be available by 16 November.

It has been suggested that uranium solubility in the presence of bicarbonate may be responsible for the increased uranium concentration. To measure the maximum available uranium, acid digestion on RP2, Pit 3, and the ore stockpile sump sites from before and after the uranium increase are underway and should be available 10th November. This will also detect an increase in the percentage of dissolved uranium.

The diagram on the following page shows sample sites and corresponding U concentrations.

Fig 2.3

Retention Pond 2 Water Quality



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Fig 2-4

FACSIMILE TRANSMISSION

TO : Mr Tony McGill (Director Of Mines) **FAX NO :** 8999 6527
 Mr Peter Waggitt (SSG Darwin) 8981 4316
 Mr Stewart Needham (SSG Canberra) 02 6217 2060
 Mr Steve Roeger (NLC Darwin) 8920 5177
 Director, Uranium Industry Section, (DPIE) 02 6272 4309
 Canberra)

COPIES : K Lonie, A Jackson, A Wade, P Bryers, H Topp, S Walker, P McNally

FROM : Peter Woods (Acting Manager -TEL. NO : (08) 8938 1228
 Environment, Safety And Health)

REF : I25-0001 **FAX NO :** (08) 8938 1203

SUBJECT : Notification (Non-Infringement)

DATE : 02 November 1998 **NUMBER OF PAGES:** 3 (including this page)

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I write to inform you of a small quantity of tailings material that reported to the tailings corridor drain on Saturday 31 October.

This occurred at two locations (see attached figure) during clearing of the tailings lines which had become bogged. Neither tailings nor process water left the drain, which is RRZ and present for such events. Nevertheless, ERA committed in 1996 to advise the main stakeholders should tailings enter the tailings corridor catchment, given its preference to transfer water to RP2 rather than the tailings dam as was the earlier practice. The ESH and mill departments have held initial discussions as to possible improvements to the protocol for clearing blocked lines with a view to reduce the likelihood of adverse effects on water quality in the tailings corridor sump.

Whilst most tailings material can be cleaned quickly, it is possible that some has entered the tailings corridor sump, and a small quantity of process water has been washed into the sump. As a result water in the sump will be allowed to overflow into Pit #1 for the time being. Routine and additional monitoring of water in the sump will continue until it is established if there is an effect on water quality. Water quality data will be provided to the Minesite Technical Committee, and if water quality is suitable endorsement sought from DME to recommence pumping to RP2.

Due to the locations of the tailings both east and west of the sump it is not possible to construct a temporary sump as was done last year.

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A Member of the **NORTH** Group

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this has
 been
 Dec 97 No
 improvement
 since then
 (gt)

MTC
 due
 24/11
 please call
 & discuss
 Peter

3 Sump is
 dry!!

It took 3 months to clear the sump and the
 drain was never fully cleared after Dec 97