

RIO ALGOM MINING CORP.

40-8084

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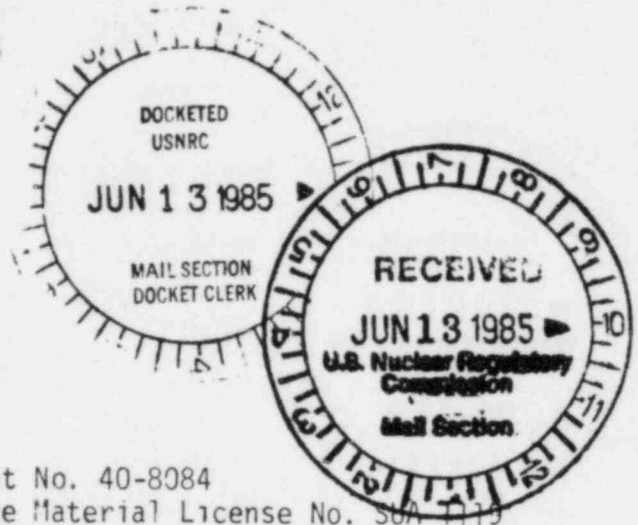
La Sal Route
MOAB, UTAH 84532

RETURN ORIGINAL TO PDR. HQ.

Phone: (801) 259-5904

June 6, 1985

Mr. R. Dale Smith, Director
Uranium Recovery Field Office, Region IV
U. S. Nuclear Regulatory Commission
P. O. Box 25325
Denver, Colo. 80225



Docket No. 40-8084
Source Material License No. 50A 1119

Dear Mr. Smith:

- Re: (1) Accounting for Empty Contaminated Barrels and
(2) Disposal of Non-Tailing Material in Mill Tailings Impoundments

In a telephone conversation on May 3, 1985, Mr. Mike Shopenn of your staff informed me of several inconsistencies and omissions in our RSO's March 27, 1985 letter to you in regard to the above referenced. We agree with Mr. Shopenn's comments and accordingly hope that this letter will clarify those inconsistencies and provide the additional information needed by NRC to evaluate Rio Algom Mining Corporation's (RAIC) situation.

Amendments to our previous license in 1982 and 1983 authorized RAIC to receive waste materials from Allied Chemical Corporation (ACC) and Mallinckrodt, Inc. (MI), respectively, for the purpose of recovering uranium by processing the materials in the Lisbon Mill. Byproduct materials from those wastes are disposed of, together with our own byproduct material, in Lisbon's tailings impoundments. To-date, all such waste material has been shipped to RAIC in barrels via road transport: ACC's material since October 1, 1982 and MI's since November 22, 1983. Although RAIC is authorized by new license condition 37 to release contaminated barrels to a State licensed facility and may use the barrels to ship yellowcake, relatively few barrels are used in this way and the problem of storage continues to worsen. In addition, RAIC has tried, by different methods, to economically decontaminate the barrels for unrestricted use and resale; unfortunately, without success because of our inability to adequately remove fixed alpha contamination in many cases. Therefore, as an experiment to find a solution to the storage problem, no more than one hundred barrels were flattened and placed on top of the tailings at location #1 (Attachment A) in the upper tailings impoundment area together with approximately two hundred similarly flattened, non-radioactively-contaminated, empty, used oil barrels (we have a storage problem here too) and partially covered them with mine waste rock. All three hundred barrels that were "buried" in January 1985, are contained within an 8m by 50m area and, with the exception of Westinghouse Electric Corporation's Bingham Canyon ion exchange waste, are the only barrels buried in RAIC's tailings impoundments.

DESIGNATED ORIGINAL

FEE EXEMPT Add'l Info 00662

Certified By Mary C. Hood

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PDR

Because of the decontamination and storage problems RAMC has also been actively trying to find buyers at other licensed facilities that are authorized to receive contaminated barrels and our RSO, Mr. Larry Perkins, has now managed to organize a sale of some 6,500 barrels to Energy Fuel's plant at Blanding, Utah. During testing and selection of barrels for this sale we will be able to accurately account for ACC and MI barrels. A search will be made of RAMC's property for any other contaminated barrels that may not be stored in designated locations (Attachment B); all barrels not so stored, shall be. In addition, although RAMC permits its employees to take uncontaminated barrels home for their personal use, there is still a possibility that some workers may take unclean barrels without authorization; to try to eliminate this possibility RAMC has posted a notice to employees (Attachment C) on all its bulletin boards. RAMC will then be able to accurately account for all ACC and MI barrels with the exception of those already disposed of at the mine waste rock pile; records will be kept up-to-date and held on file for NRC's inspection. The handling procedure for Allied Chemical and Mallinckrodt barrels is included in Attachment D.

During the years since plant startup in 1972 RAMC has taken the practical approach with respect to disposal of contaminated waste materials. The only convenient place available was used which did not require extensive preparation: the mine waste rock pile, or "garbage dump". As with the rest of the plant and the tailings impoundments, the waste rock pile will be reclaimed for unrestricted use after final mill closure. The plan is to either cover the waste rock pile in place or to spread the mine waste rock over the upper tailings impoundment prior to final cover material placement. In the latter case, contaminated materials contained within part of the mine waste rock pile will be bulldozed together with the waste rock and compacted as well as possible at the time of placement, including flattening of barrels. "Clean" waste rock will then be used to cover the garbage-contaminated waste rock before the final reclamation cover is placed. A tentative location for this material is the eastern third area of the upper tailings impoundment; a distant, and therefore safe, location from the upper tailings embankment. The final decision on disposal locations for all non-tailing, contaminated materials shall be made by RAMC after further study and submitted with its detailed reclamation plan (required by license condition 53) to the USNRC for approval.

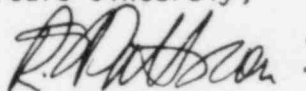
In addition to the foregoing, RAMC disassembled DOE's Grand Junction falling stream uranium sampling plant in July 1982 and brought the materials to Lisbon minesite for temporary storage, prior to possible re-use, re-sale, or final disposal. After removing as much as possible of the yellowcake from it, a damaged dust collector baghouse from DOE's plant was flattened and placed on top of the tailings at location #2 (Attachment A) in July 1983 and approximately 20m length of 6 inch to 10 inch diameter dust collector ducting was flattened and buried together with about 100m length each of 3/4 inch electrical conduit and 1 1/4 inch piping (old handrails) at location #3 in June 1983. The remainder of DOE's sampling plant equipment was stored on top of a 1m layer of mine waste rock at location #4 within the upper tailings impoundment area in January 1985. Average contamination levels of all DOE equipment at the

time of removal from Grand Junction were 30dpm/100cm² removable alpha, 1,800dpm/100cm² fixed alpha, and 0.2 mR/hr gamma radiation; individual equipment contamination levels are on record at RAMC for NRC's inspection. If it is decided by RAMC (or NRC) in the future that any of the aforementioned equipment within the upper tailings impoundment need to be re-located it would be a simple matter to do so, but we do not foresee that this would be necessary since the natural place for final storage of such equipment is in the tailings impoundment.

Because we want to tidy-up the contaminated barrel situation and assure the final containment of other radioactive waste materials, we request the Commission's approval to dispose of these wastes within the eastern third area of the upper tailings impoundment. The wastes are contaminated solely from uranium and its decay products, are of low specific activity, and none shall be buried without full consideration of the final reclamation cover design and flood protection plan. A standard procedure for the disposal of non-tailing material in mill tailings impoundments is included in Attachment E.

The foregoing letter was discussed over the telephone on May 13, 1985 with Dr. Harry Pettengill of your staff and he agreed that it be submitted to replace our March 27, 1985 letter. If you have any further questions, please call or otherwise communicate.

Yours sincerely,



R. S. Pattison
Plant Superintendent

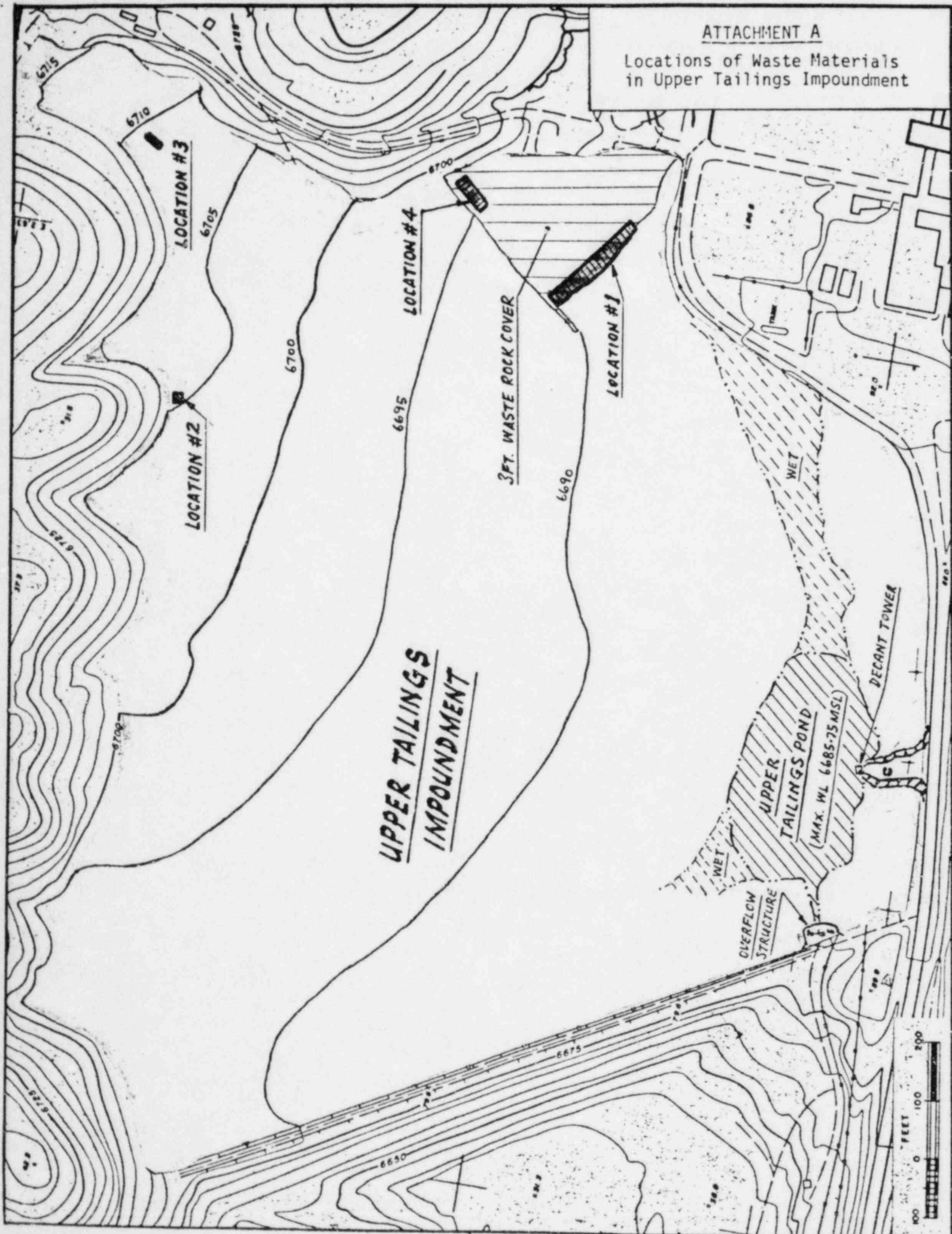
RSP:pa

Enclosures:

- A. Locations of waste materials in upper tailings impoundment.
- B. Designated barrel storage locations.
- C. Notice to employees
- D. Handling procedure for Allied Chemical and Mallinckrodt barrels.
- E. Standard Procedure: Disposal of Non-Tailing Material in Mill Tailings Impoundments.

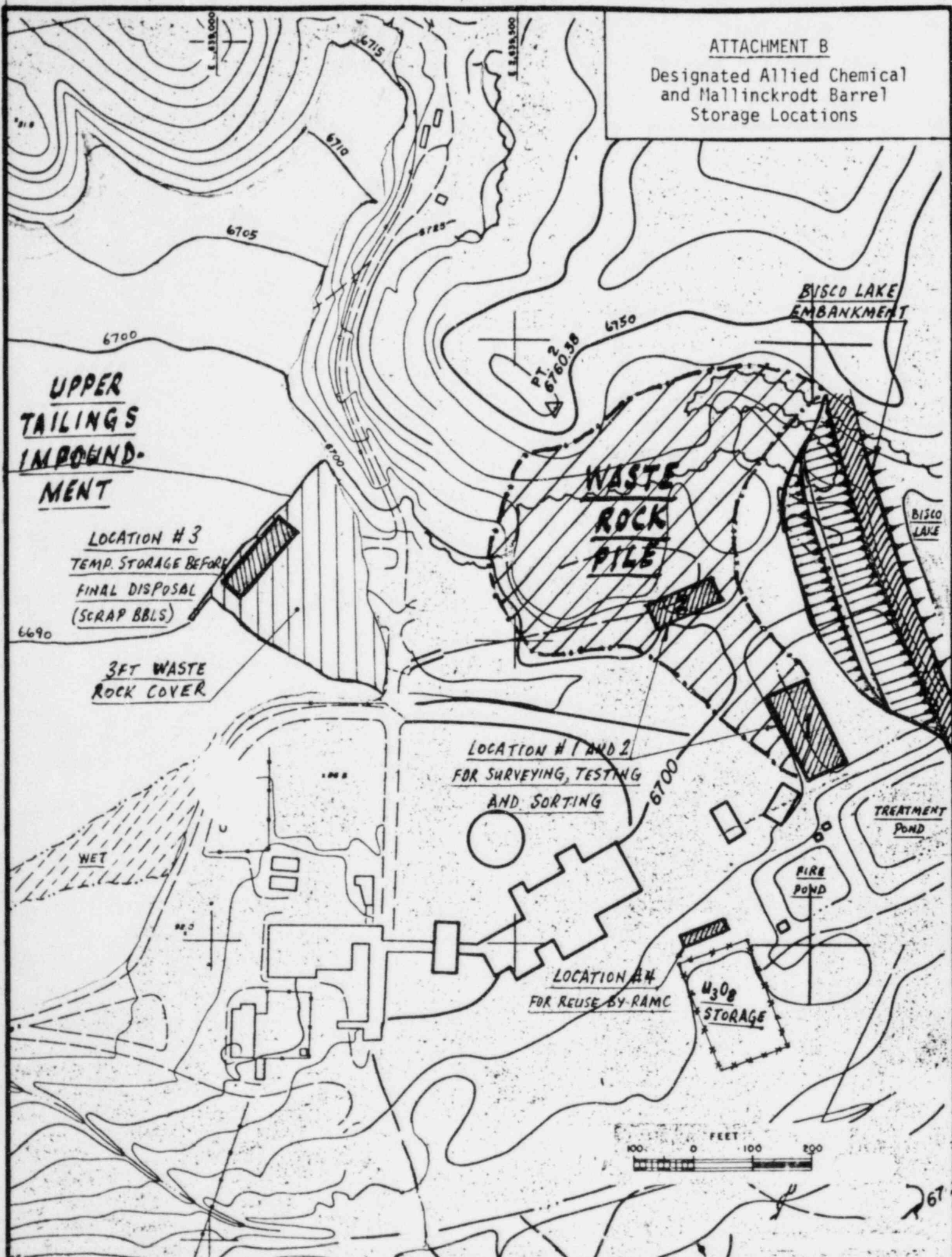
ATTACHMENT A

Locations of Waste Materials
in Upper Tailings Impoundment



ATTACHMENT B

Designated Allied Chemical
and Mallinckrodt Barrel
Storage Locations



INTER-OFFICE MEMORANDUM

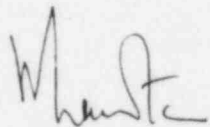
To: ALL EMPLOYEES
From: M. D. LAWTON
Subject: CONTAMINATED BARRELS

File No. _____
Date: May 13, 1985

IN THE INTERESTS OF YOUR FAMILY'S PROTECTION (AND YOUR OWN) AGAINST THE EFFECTS OF RADIATION NO MATERIAL IS TO BE REMOVED FROM THE PROPERTY WITHOUT FIRST BEING DECONTAMINATED.

SINCE IT HAS BEEN BROUGHT TO MY ATTENTION THAT CERTAIN EMPLOYEES MAY HAVE TAKEN USED, ESPECIALLY ALLIED OR MALLINCKRODT, BARRELS HOME WITHOUT FIRST HAVING THEM CHECKED FOR CONTAMINATION, I MUST INSIST THAT SUCH MATERIALS BE RETURNED TO THE COMPANY IMMEDIATELY. I HAVE NO OBJECTION TO YOU TAKING THE COMPANY'S EXCESS BARRELS FOR YOUR OWN PERSONAL USE, BUT YOU MUST HAVE THEM CLEARED THROUGH OUR RADIATION SAFETY STAFF FIRST.

IF YOU HAVE TAKEN, OR KNOW OF ANYONE WHO HAS TAKEN, AN UNCHECKED BARREL HOME, INFORM YOUR SUPERVISOR AND SEE THAT IT IS RETURNED AS SOON AS POSSIBLE.



M. D. Lawton
President

MDL:pa

HANDLING PROCEDURE: ALLIED CHEMICAL CORP. AND
MALLINCKRODT BARRELS

1. Each barrel will be identified by number when it is received; that is, as it is off-loaded from the road transport vehicle.
2. After each barrel has been emptied it will be cleaned and placed in an area immediately north of the alum treatment pond and east of the environmental laboratory to be surveyed for contamination and subsequent disposal.
3. Barrels which remain contaminated beyond Attachment 1, Table I contamination limits of RAMC's Source Materials License will be treated as contaminated waste material and disposed of in accordance with 49 CFR Part 173.28 or 10 CFR Part 71.
4. Barrels contaminated below those limits in Table I (item #3 above) will be disposed of as clean, or non-contaminated material. Documentation will be maintained on the manner of disposal of such barrels and will include copies of transportation documents.

STANDARD PROCEDURE: DISPOSAL OF NON-TAILING MATERIAL
IN MILL TAILINGS IMPOUNDMENTS

1. No non-tailing materials shall be buried in the tailings impoundments without the prior approval of the Plant Superintendent.
2. Non-tailing waste material shall be surveyed for contaminant levels before burial in the tailings impoundments.
3. An exact description of materials, including radioactivity levels and proposed burial location, shall be recorded in the Maintenance Planning Office before such materials are buried in the tailings impoundments.
4. Only NRC-approved burial locations shall be used for disposal of non-tailing waste materials.
5. Non-tailing waste material shall be buried in the impoundment so that it does not adversely affect the final reclamation cover or final flood protection design. For example, all attempts must be made to avoid future, long-term settlement or collapsing of waste materials, such as barrels, which may compromise the integrity of the final reclamation cover: such materials shall be flattened or filled before being finally buried.