

40-8084

X61274

Rio Algom Mining Corp.

04008084740R

December 13, 1993

Certified Mail
Return Receipt Requested P 176 737 768

Mr. Ramon Hall, Director
U. S. Nuclear Regulatory Commission
Uranium Recovery Field Office
Box 25325
Denver, Colorado 80225

Re: Lisbon Facility
License SUA-1119, Docket No. 40-8084
Settlement Monitoring Program



93 DEC 15 09:45

URFO
RECEIVED

Dear Mr. Hall:

Please find enclosed Rio Algom's submittal to amend its present settlement monitoring program. This submittal addresses both the tailings impoundments and the evaporation cells. If you have any questions or need further information in this regards, please call at (405) 842-1773.

Sincerely,

Bill Ferdinand, Manager
Radiation Safety, Licensing &
Regulatory Compliance

Attachments: as stated (3 copies)

xc: F. Fossey
M. Freeman
file

040084

9405050276 931213
PDR ADOCK 04008084
C PDR

OFFICIAL DOCKET USE

F013
11
94-0117

RIO ALGOM MINING CORP.
LISBON FACILITY
AMENDED SETTLEMENT MONITORING PROGRAM

Rio Algom proposes to modify the present Lisbon facility settlement monitoring program. The modifications to the program encompasses both the upper and lower tailings impoundments in addition to the upper and lower tailings evaporation cells.

Rio Algom proposes to first modify the settlement monuments. Presently the monuments are to be constructed of aluminum. Due to concerns by NRC staff regarding aluminum, Rio Algom proposes to replace the aluminum with steel. The settlement monuments will be constructed with a steel 18 inch square base with a minimum plate thickness of at least 1/4 inch. The riser or staff of the monument will be steel pipe with a minimum diameter of at least 1 1/2 inch. The height of the staff will be approximately 4 feet and welded to the base plate as shown in Figure 1.

As indicated in Figure 1, the diagram depicts the settlement monument placement on relatively flat surfaces. Settlement monuments associated with the upper and lower tailings evaporation cells will also be constructed in the same manner, but will be placed on the inside slopes of the cell embankments as shown in Figure 2.

The markers will be installed by excavating an area slightly larger than the base plate to a depth of no less than 12 inches below the surface. To the extent possible, the bottom of the excavated area shall be compacted and will be smooth and free of loose debris. The settlement monument will be installed within the excavated area such that the base plate sets firmly on the compacted soils. The area above the base plate will then be backfilled and compacted.

If difficulty is encountered in obtaining a flat smooth surface on which to install the base plate, a cement slurry will be prepared and poured in the bottom of the excavation and the settlement marker plate shall be placed in the wet cement slurry so that the dried material will provide a solid base for the marker. The settlement monuments after installation will be allowed

to set 2-4 weeks prior to the baseline elevation survey. Upon initiation of the monitoring, the monuments will be surveyed at a minimum of semi-annually.

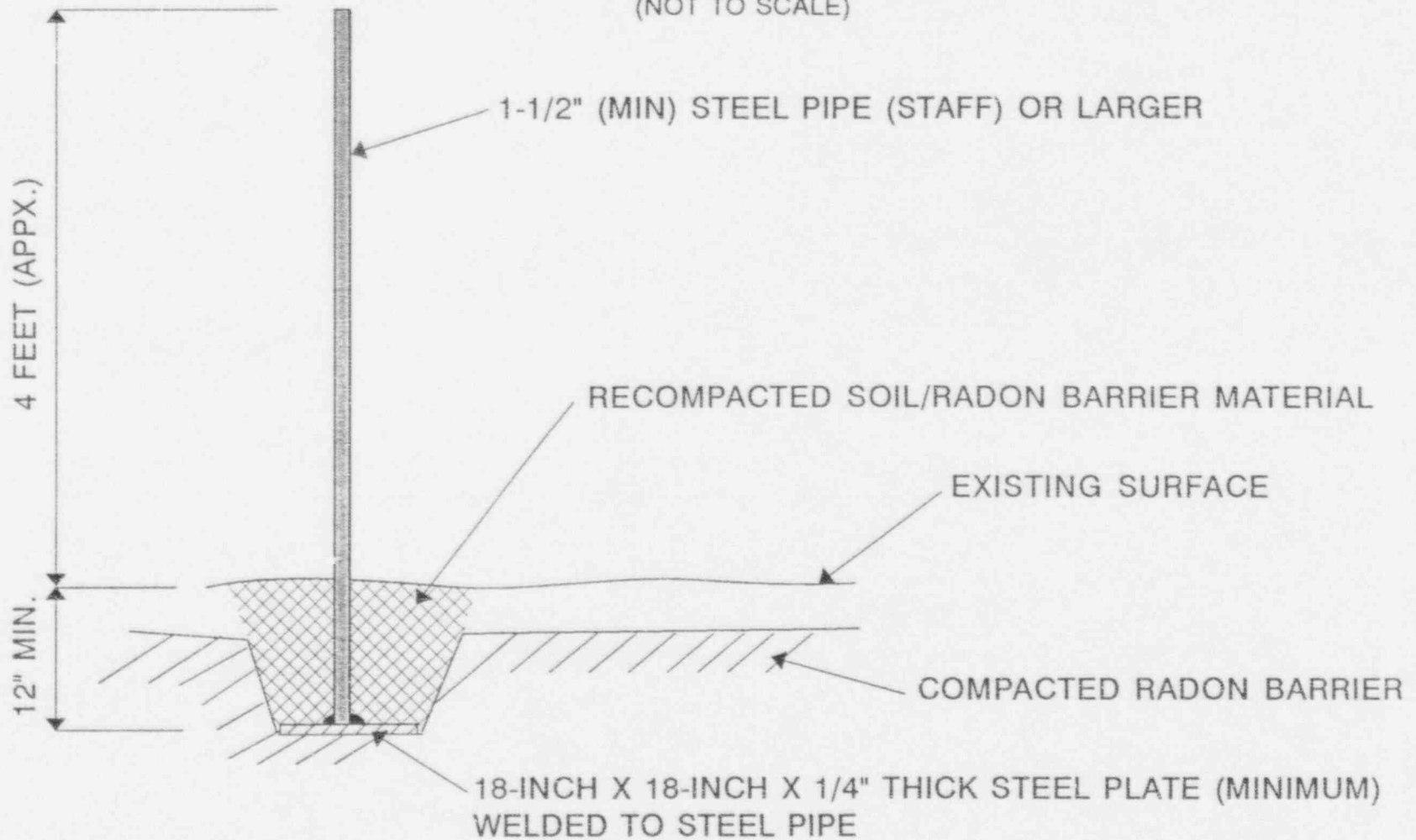
The approximate location of the settlement monuments are shown in Figure 3. Rio Algom proposes to increase the number of monuments associated with the lower tailings area from five (5) to thirteen (13). Eight (8) of the monuments will be utilized to monitor the lower tailings evaporation cell with six (6) of these monuments to be located on the inside of the evaporation cell berms as shown in Figure 2. On the upper tailings area, Rio Algom proposes to increase the number of monuments from five (5) to thirteen (13). Seven (7) of the monuments will be utilized to monitor the upper tailings evaporation cell. Six (6) of these monuments for the upper tailings evaporation cell will be installed on the inside slopes of the cell embankment.

Rio Algom will implement the provisions of the settlement monitoring plan within 90 days upon NRC's final approval of the plan.

FIGURE 1

TYPICAL SETTLEMENT MARKER INSTALLATION

(NOT TO SCALE)



PLAN VIEW

(NOT TO SCALE)

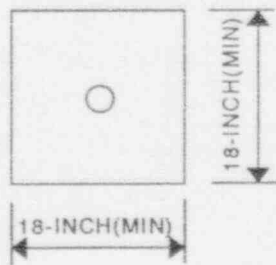
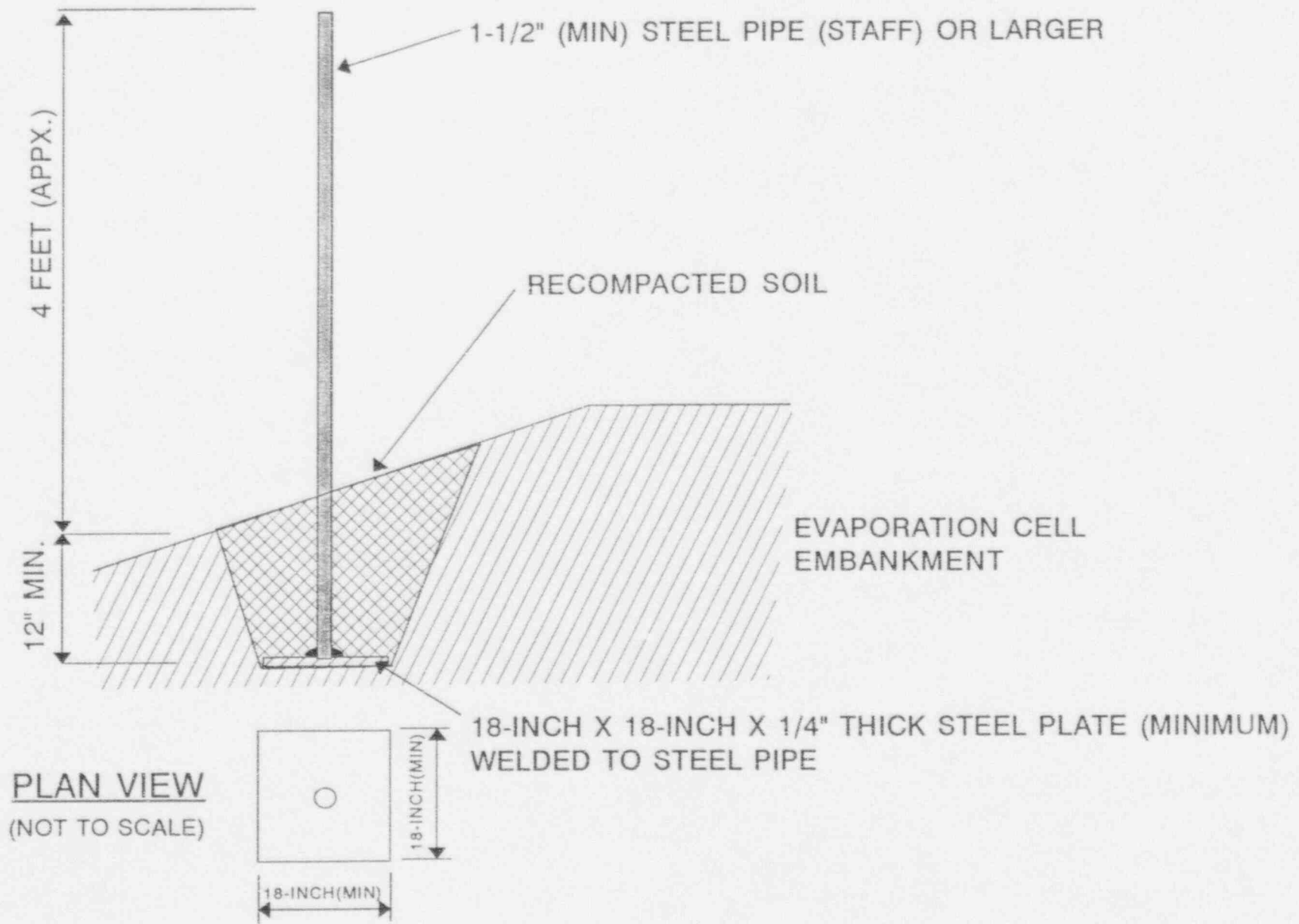


FIGURE 2

TYPICAL SETTLEMENT MARKER INSTALLATION

(NOT TO SCALE)



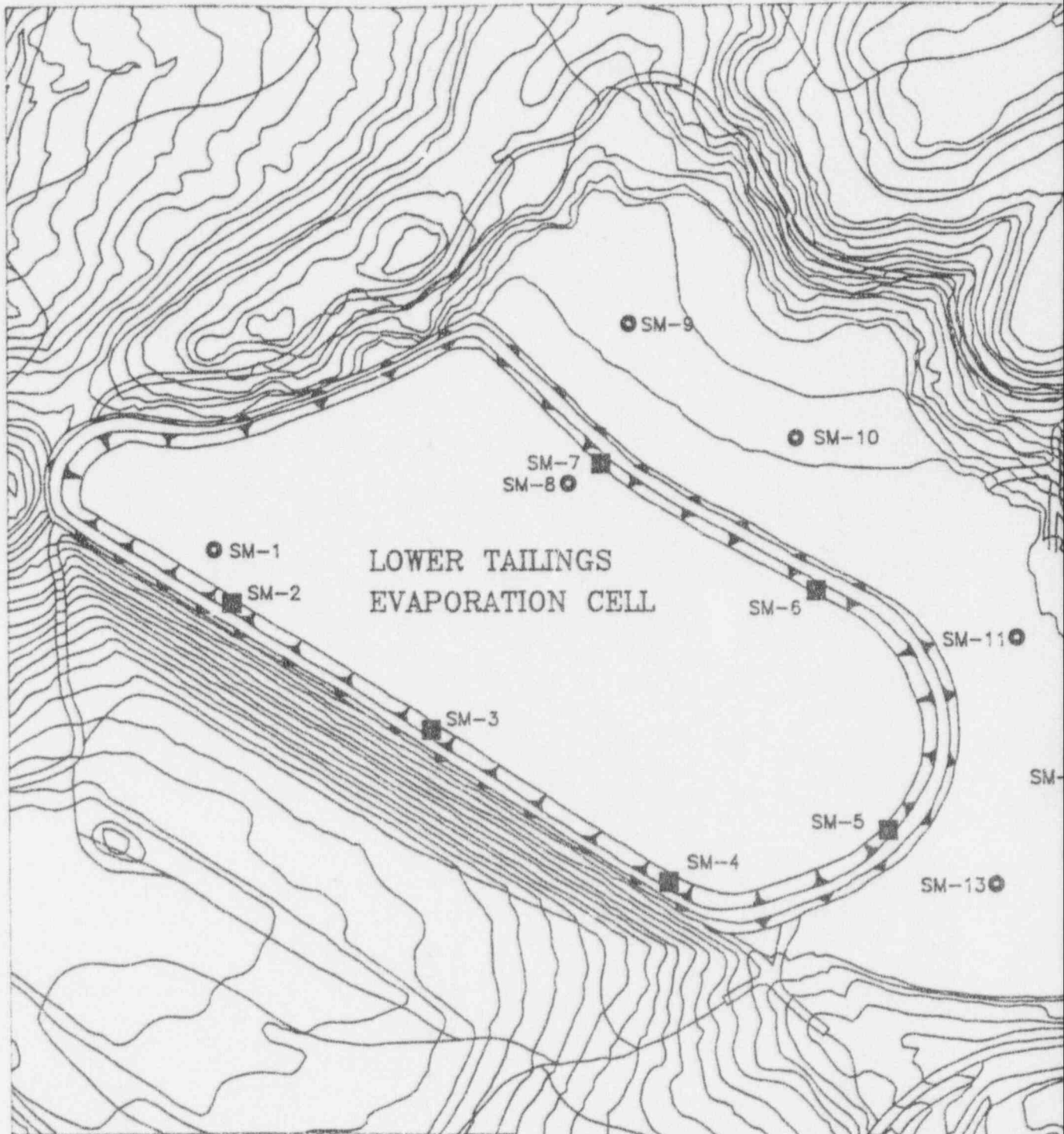
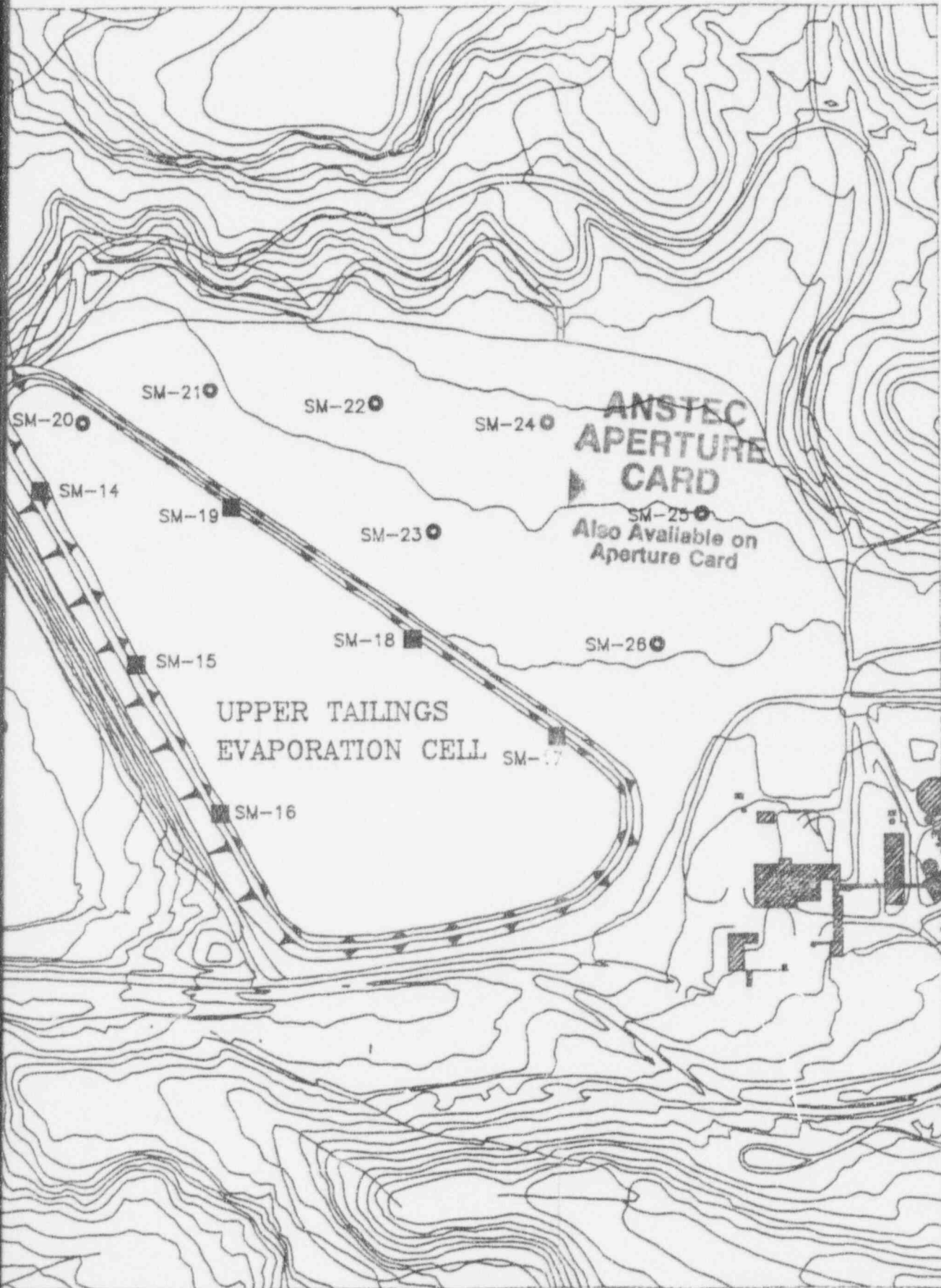


FIGURE 3

- MONUMENTS ON FLAT SURFACES
- MONUMENTS ON EMBANKMENT SLOPES



SCALE: 1" = 300'



1 9405050276-01