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February 20, 1973

Ref. (40-8084)

John F. Kendig, Esq.
Materials Branch
Directorate of Licensing
United States Atomic Energy Commission
WASHINGTON, D.C. 20545

Dear Mr. Kendig:

We have been delaying responding to your letter requesting monitor program details pending the establishment of a 5th monitor well which we feel is desirable to cover the eastern side of our tailings containment area. Heavy snow cover has prevented this but time is running on and as winter conditions at the site still prevail we feel we should provide the information requested as fully as possible at this time.

The attached describes the procedures we have under way in respect of:

1. Vegetation Sampling
2. Air Sampling
3. Water Monitoring Program
4. Rodents

The baseline data being awaited for the 5th monitor well will be comprised we feel sure of low values in the constituents of concern due to the stratigraphic relationship of the eastern side of the tailings area to the storage basin itself.

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Appended also are current guidelines in effect for the operating personnel on site, for exercise of the above controls.

Kindly advise if further information is needed in relation to our license application.

Sincerely

R. D. Lord, Vice-President
Research and Development

RDL/gh
Encls.

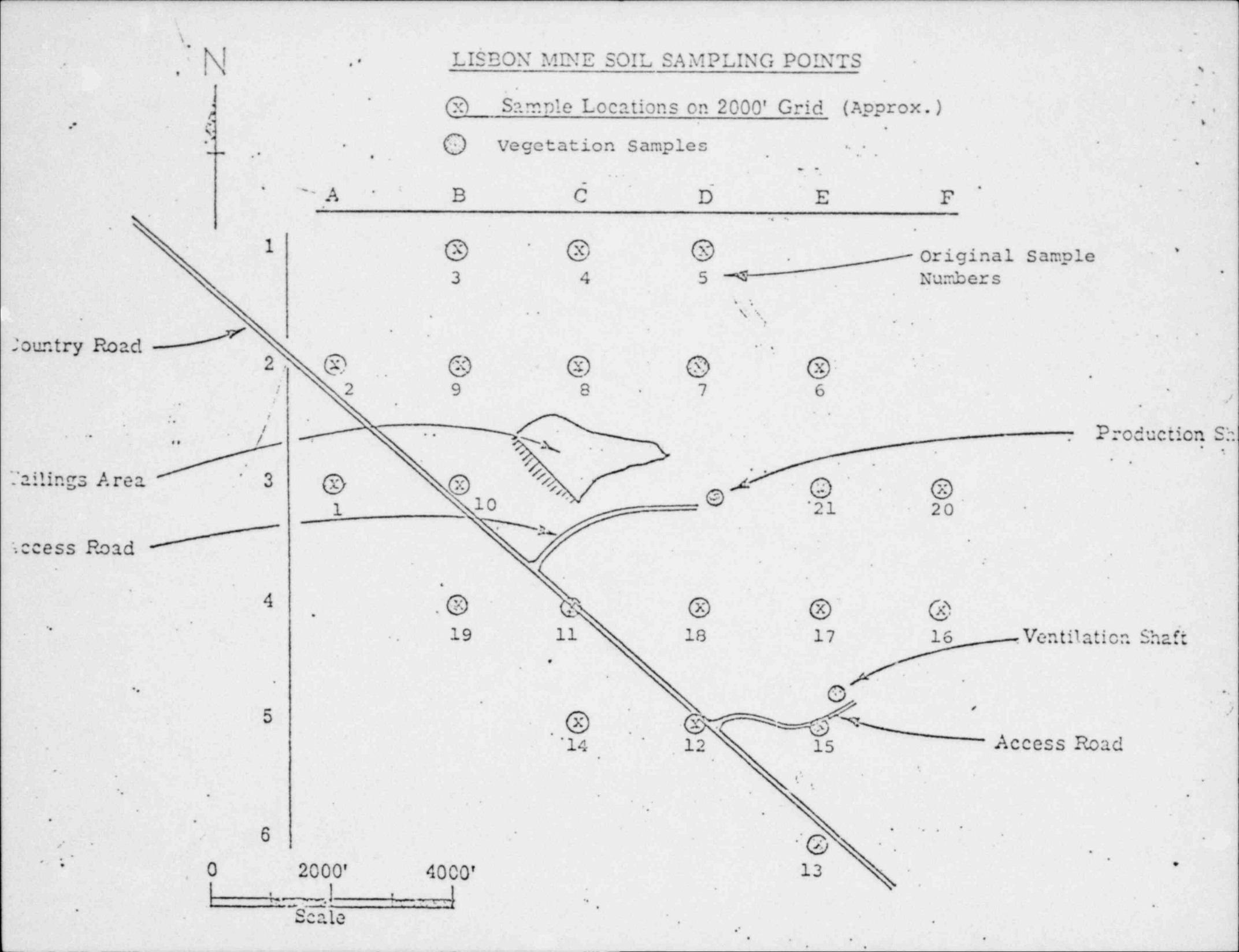
VEGETATION SAMPLING PROGRAM

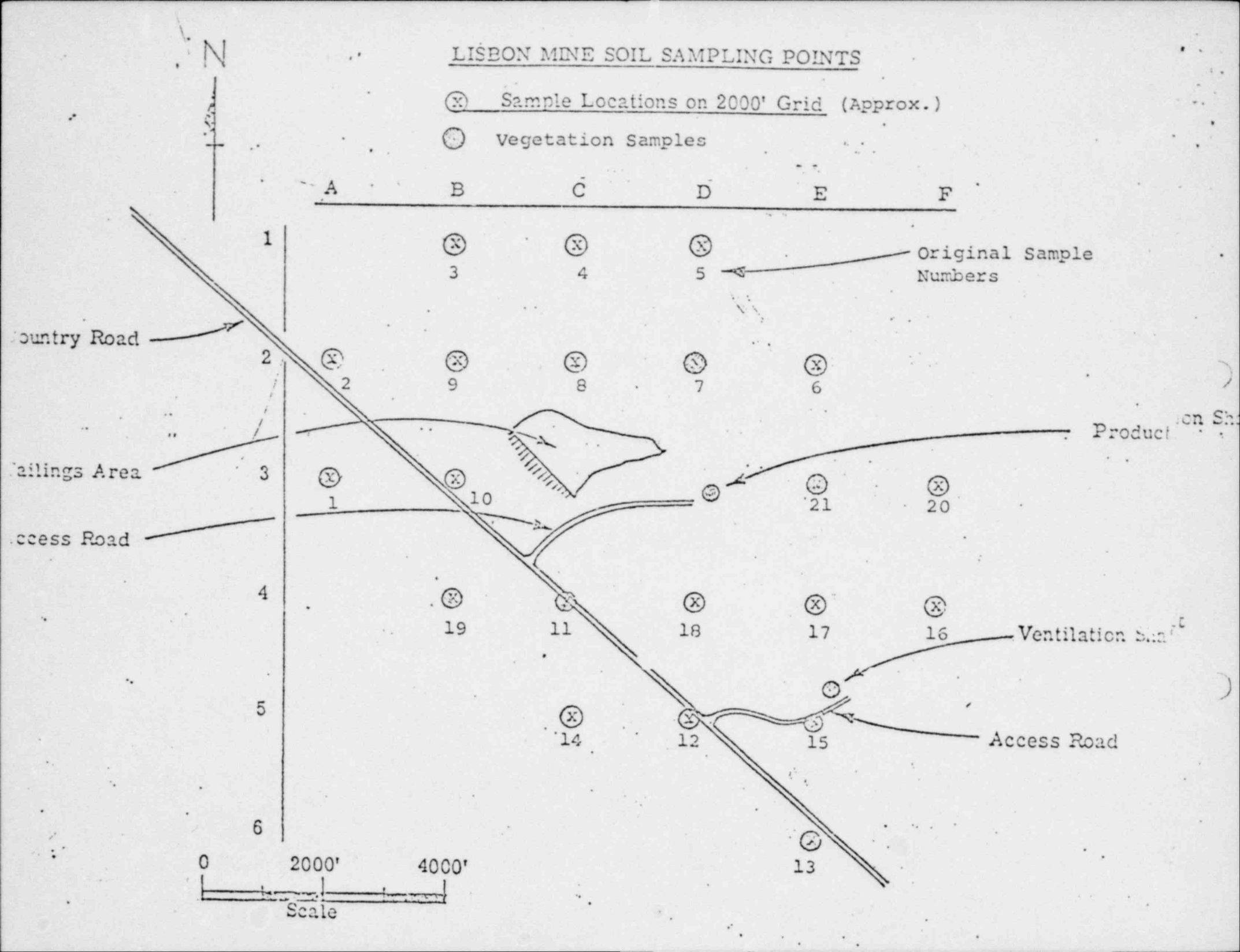
During the baseline soil and vegetation sampling program of early 1971 vegetation samples were taken at ten of the 21 soil sampling points. Due to the scarcity of vegetation that would likely be consumed by animals, there was considerable difficulty in obtaining sufficient quantity for analysis at some of the sample points.

In conjunction with the soil sampling program that has been proposed on a continuing basis each spring and fall, vegetation samples will be taken each summer at five of the 10 previous sampling points, namely B-2, C-4, D-2, E-3, & E-5. These sample locations fairly well surround the tailings and plant area.

As described in Section 4.1.9.3 of the Supplementary Environmental Report, vegetation samples will be obtained from the succulent portion of the plants that might be used as browse by animals, and will each be about two pounds dry weight. These will be analysed for uranium, radium and thorium as well as copper, zinc and manganese.

Should these samples indicate a significant upward trend in radioactivity, then sample stations will be re-sampled to determine if the trend is valid. Should an upward trend be indicated, adjacent sampling stations will be sampled and the cause of any increase in contamination sought and corrected, and the number of sampling stations increased as well as the sampling frequency as deemed necessary.


LISBON MINE SOIL SAMPLING POINTS
N
Sample Locations on 2000' Grid (Approx.)
Vegetation Samples
A
B
C
D
E
F
1
2
3
4
5
6
Original Sample Numbers
Country Road
Tailings Area
Access Road
Production Sh
Ventilation Shaft
Access Road
0
2000'
4000'
Scale


LISBON MINE SOIL SAMPLING POINTS
Sample Locations on 2000' Grid (Approx.)
Vegetation Samples
N
A
B
C
D
E
F
1
2
3
4
5
6
Original Sample Numbers
3
4
5
2
9
8
7
6
1
10
21
20
19
11
18
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Access Road
0
2000'
4000'
Scale

AMBIENT AIR MONITORING PROGRAM

The baseline and routine ambient air monitoring program is given on pages 52 and 53 of the Environmental Report and pages 129 and 130 of the Supplemental Environmental Report.

From mill start-up in June until November two ambient air samples were obtained weekly. Since then two samples per month have been obtained.

Samples are obtained at distances approximating 500, 1500 and 3500 feet down-wind from the plant, the distance and direction depending on the strength and direction of the wind at the time the sampler is set out.

A high-volume sampler is used to collect a sample on an 8 x 10 inch filter over a period of about 8 hours. The samples are weighed for total dust and analysed for uranium.

In the first six months of operation, the dust in the ambient air down-wind from the plant averaged one third the allowable and one quarter the average of the baseline survey, which was taken last April. The average uranium in the dust samples was below the MPC by a factor of about 65 but higher than the baseline by a factor of 5. April is normally a windy month in southeast Utah, and the air contains much air-borne dust at times; hence the ambient air samples since start-up of the plant are below the baseline average for total dust. However, because of the operation of the concentrator since June, the average uranium value is now above that obtained during the baseline survey.

On the basis of these low concentrations it is believed that analyses for other contaminants would not give information of real value. Because the heating plant is operated on natural gas or propane, it is believed that contaminants down-wind of the plant would not be detectable.