

DOCKET NO. 40-2172  
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PORTER BROS. CORPORATION

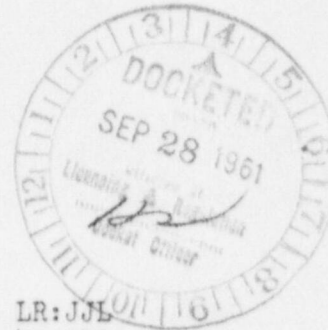
2509 WARM SPRINGS AVENUE  
P. O. BOX 667 BOISE, IDAHO

ROBERT P. PORTER, PRESIDENT  
DAVID L. SKIDMORE, VICE PRES. & SEC.-TREAS.

TELEPHONE  
4-3505

September 26, 1961

Donald A. Nussbaumer, Chief  
Source & Special Nuclear Materials Branch  
Division of Licensing and Regulation  
Atomic Energy Commission  
Washington 25 D.C.



Ref: LR:JJB  
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Gentlemen:

Enclosed you will find the additional information requested as pertaining to our application for renewal of Source Material License C-5257.

Yours very truly,  
PORTER BROS. CORPORATION

*DL Runft*  
Donald L Runft

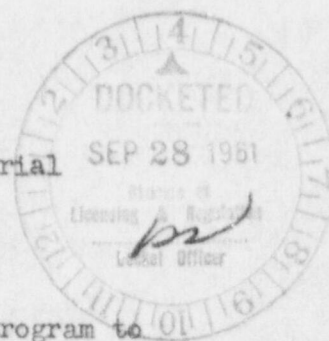
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D.L.*

Hiley.

## PORTER BROS. CORPORATION

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Additional Information for Application Source Material  
License C-5257



## Item 12(c) Continued

Porter Bros. Corporation proposes as a radiation survey program to commence simultaneous with the beginning of mill operation the following: Dust samples will be initially collected on a monthly basis with spot checks at shorter time intervals. Long-lived alpha count will <sup>then</sup> ~~there~~ be measured on existing equipment which will have been adapted and standardized for this purpose. Locations sampled will be those at which the personnel are principally stationed.

Coincident with the taking of the air sample a beta, gamma count at each sample location will be performed. To augment this measurement a film badge service will be used with badges issued to all personnel until such time as this monitoring would have been deemed unnecessary.

As experience dictates and dust control allows, sample locations will be changed and the frequency of sampling increased or decreased.

Records will be maintained in accordance with the Atomic Energy Commissions regulation number 10 CFR Part 20.

The program as outlined is that recommended for our operation. The adequacy can only be determined by experience. However, the monitoring of all areas will yield not only a measure of the effectiveness of the radiation survey program, but also a measure of the adequacy of the dust control procedures.

Description of Processing Operation

Mill feed sand is received in a wet (10% moisture) condition and while in the wet condition is size-graded, scrubbed and deslimed. Magnetite sand

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is removed from the sand aggregate by a wet magnetic separator. Magnetite concentrate is conveyed from the mill building to the outside storage area by water through a pipe. Non-magnetic reject from this operation is stored in de-watering tanks and allowed to drain.

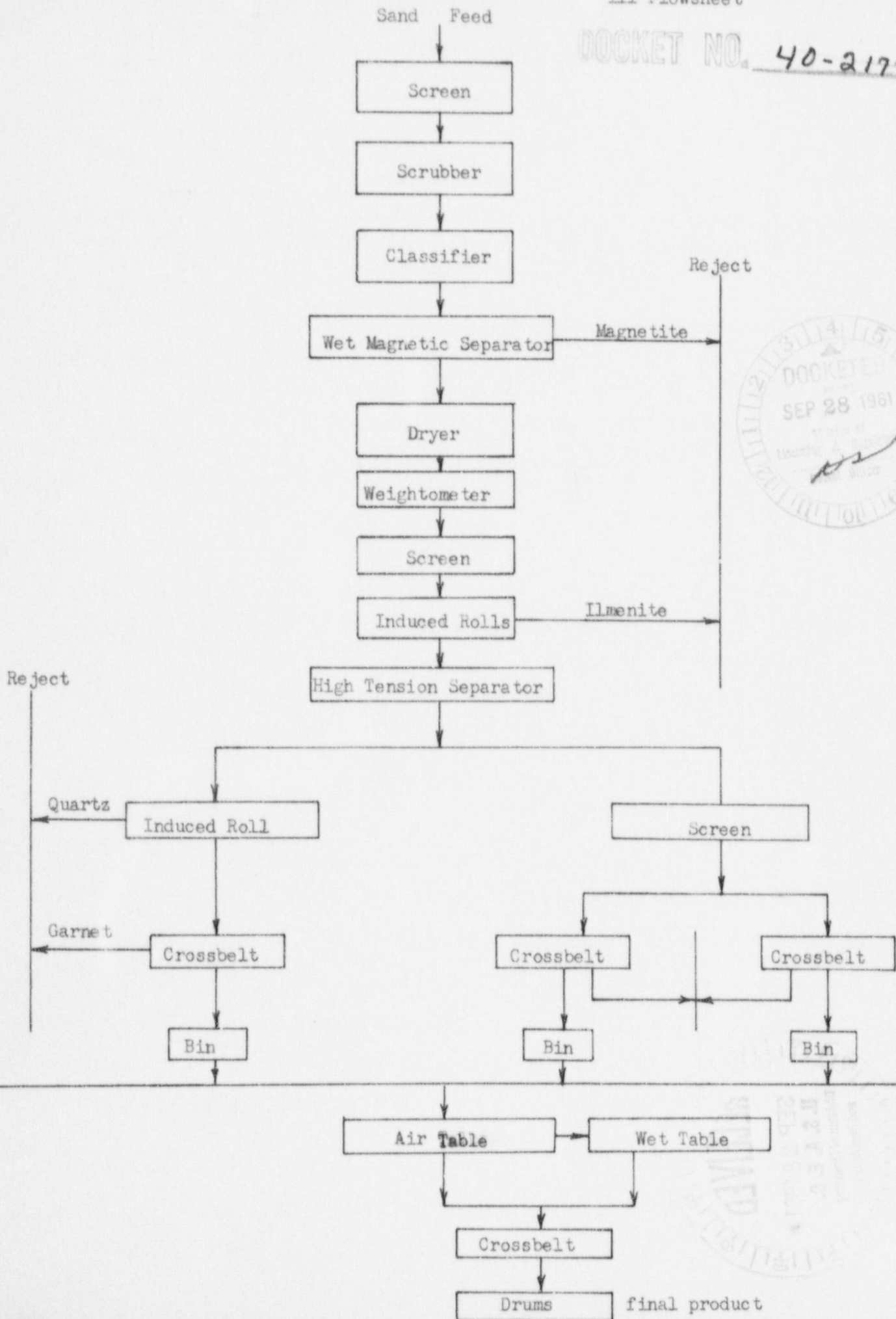
The drained sand aggregate is further dried in an oil-fired rotary dryer and elevated to a separator feed surge tank. Both elevator and tank are exhausted. A Merrick weightometer (~~an~~exhausted) delivers the feed to a Tyler screen (exhausted). Screen fractions are elevated (exhausted) to magnetic separators (exhausted) from which a magnetic ilmenite reject product is produced and removed from the mill by pumping.

Non-magnetic sand is elevated (exhausted) to feed a high tension separator (exhausted). Conductor and non-conductor fractions are elevated (exhausted) to a magnetic separator (exhausted) to reject quartz sand and there to a cross belt separator to reject garnet sand. Non-magnetic manazite sand concentrate is stored in a surge tank to await further processing.

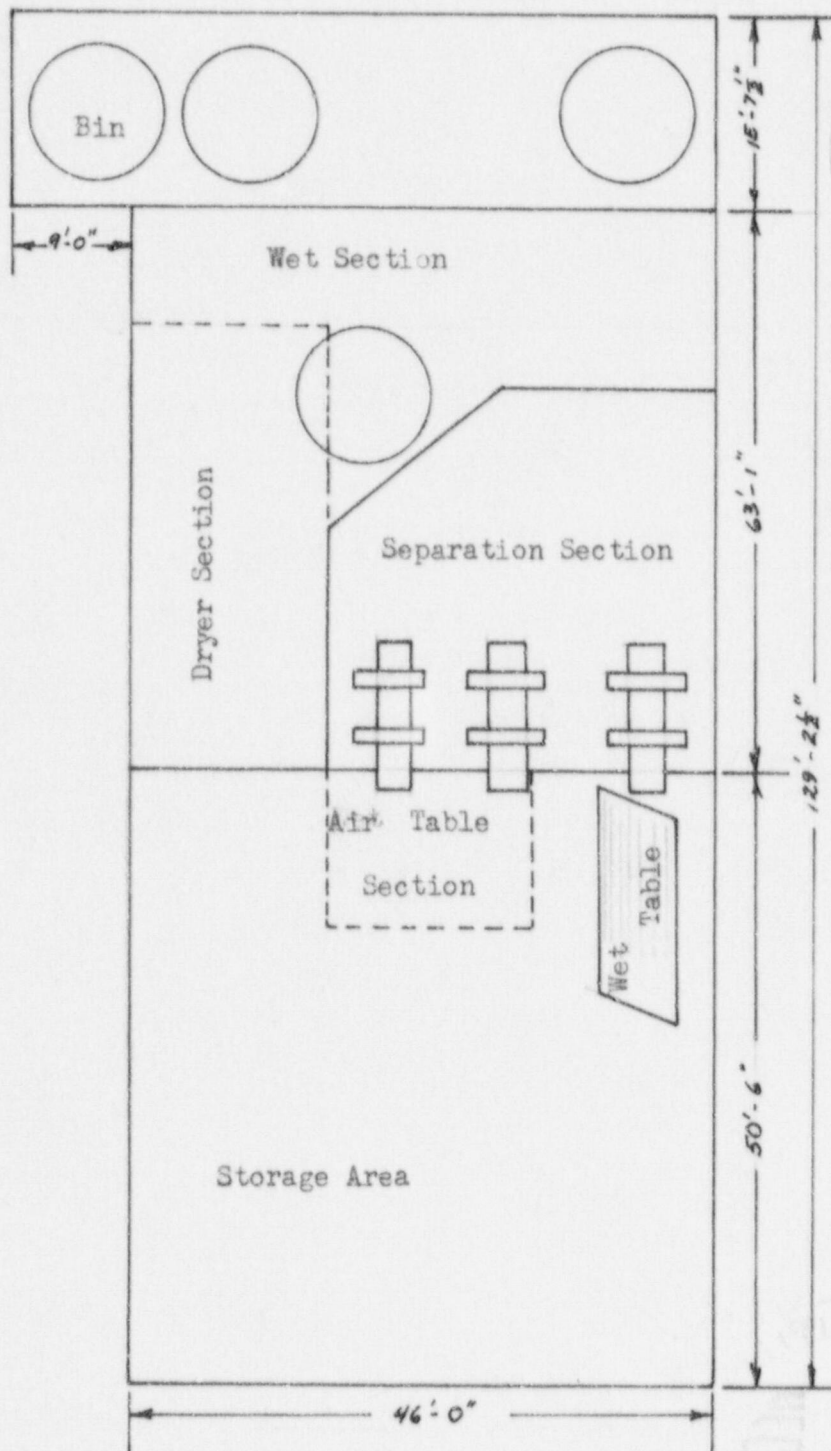
The high tension conductor fraction is elevated (exhausted) to a Tyler screen (exhausted) from which the two screen fractions are fed to crossbelts. Ilmenite sand is removed as magnetic reject with non-magnetic fractions going to surge tanks to await further processing.

The cross belt concentrates are fed individually to air tables (exhausted) for further up grading. Concentrates from this operation are charged into 30 gallon steel drums for storage.

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Porter Bros. Corporation  
Lowman Separation Plant  
Processing Area Sketch

