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Mr. Joseph Holonich, Chief  
Uranium Recovery Branch  
U.S. Nuclear Regulatory Comm.  
Washington, DC 20555

5 February 1997

Dear Mr. Holonich,

Mr. Robert Fonner suggested we prepare and send to you a mine plan we are contemplating for use on an underground uranium mine in New Mexico.

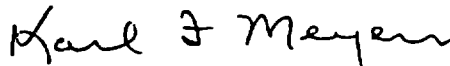
We have prepared a brief description and flowsheet for your perusal.

The questions are:

- 1) Which regulatory department will have jurisdiction in an operation of this style?
- 2) Will we be permitted to use the residue from the gravity separation as backfill in the mine?

Your response to these questions will be greatly appreciated.

Sincerely yours,



Karl F. Meyers, Pres.  
Uranium King Corporation

cc: Richard Ohrbom - NMEID  
Holland Shepherd - NMEID

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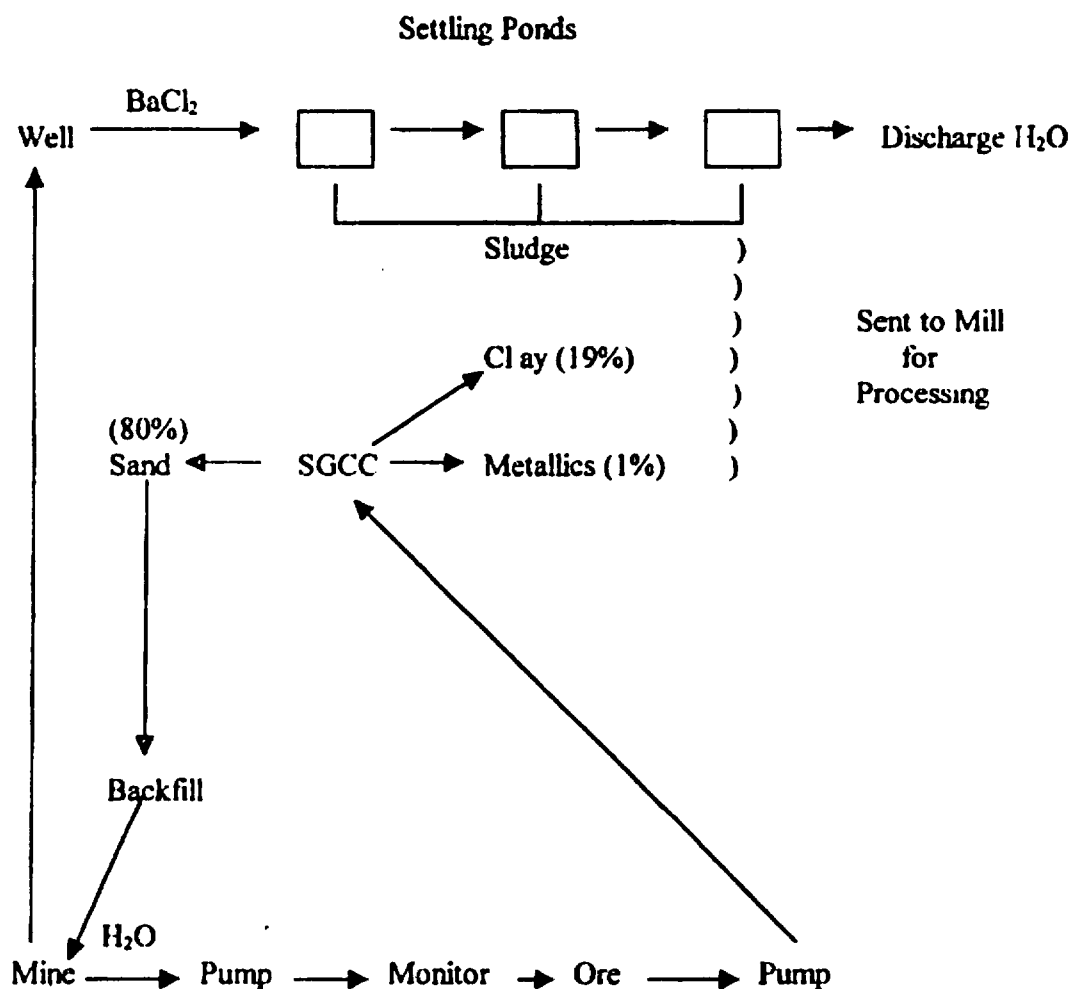
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## WET UNDERGROUND URANIUM MINE PLAN RIO PUERCO MINE - NEW MEXICO

**Steps:**

- 1) Mine dewatered by conventional pumps
- 2) Water treated with  $BaCl_2$  to remove actinides
- 3) Actinides settled in 3 stage settling pond
- 4) Mine water used to activate jet nozzles (monitors)
- 5) Men underground break and slurry ore with monitors
- 6) Ore slurry hoisted to surface with pumps
- 7) Ore slurry gravity separated by SGCC using water only
- 8) Clays (19%) and Heavy metals (1%) shipped to mill
- 9) Sands (80%) sent back to mine for backfill



# United States Patent [19]

Schulz et al.

[11] Patent Number: 4,961,842

[45] Date of Patent: Oct. 9, 1990

[34] SIPHON GRAVITY CLASSIFIER AND CLARIFIER

[76] Inventors: Douglas K. Schulz, P.O. Box 1264, Los Lunas, N. Mex. 87031; Karl F. Meyers, P.O. Box 9, Tierra Amarilla, N. Mex. 87575

[21] Appl. No.: 267,943

[22] Filed: Nov. 7, 1988

[51] Int. Cl.<sup>3</sup> ..... B03B 5/08

[52] U.S. Cl. .... 209/155; 209/158; 209/208; 209/459; 210/258; 210/523; 137/140; 137/546

[58] Field of Search ..... 209/155, 158, 208, 209, 209/210, 459, 460, 461; 210/258, 523, 525, 803; 137/140, 546

[56] References Cited

### U.S. PATENT DOCUMENTS

982,734 1/1911 Martacelli ..... 137/546 X  
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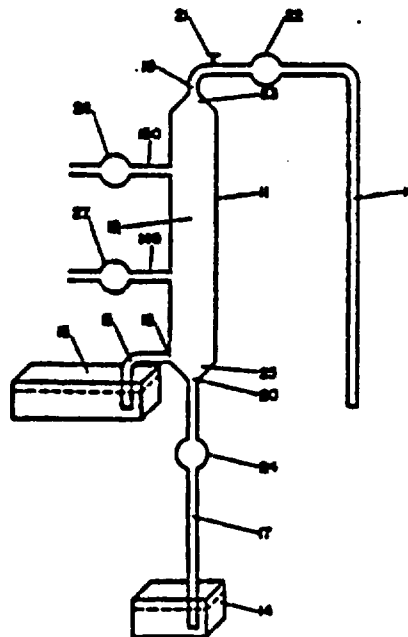
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1,544,640 7/1925 Gibbs ..... 209/208 X  
1,579,448 4/1926 Homewood ..... 209/208 X  
1,727,534 9/1929 Millard ..... 210/258 X  
1,948,140 2/1934 Strobl ..... 209/155  
2,360,129 10/1944 Hubbard ..... 209/158

Primary Examiner—Donald T. Hajco

### [57] ABSTRACT

A device for separating liquids from solids and solids from solids is provided by utilizing a tall column filled with liquid which is subjected to a siphon action that pulls the liquid/solids mixture vertically through the column clarifying the liquid and classifying the solids. This siphon method provides a most efficient method of classification of solids and clarification of liquids. Atmospheric pressure and gravity create forces within the device which simultaneously act on every particle. The interior of the tall column has no moving parts.

18 Claims, 2 Drawing Sheets





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 6  
1445 ROSS AVENUE  
DALLAS, TEXAS 75202-2733**

July 16, 1993

**CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 373 364 971)**

**REPLY TO: 6W-PS**

**Mr. Karl F. Meyers  
President  
Uranium King Corporation  
P.O. Box 60261  
Las Vegas, Nevada 89160**

**Re: Application to Discharge to Waters of the United States  
NPDES Permit No. NM0028169  
Final Permit Decision**

**Dear Mr. Meyers:**

Enclosed is the public notice of the Agency's final permit decision, a copy of our response to comments, and the final permit. This public notice describes any substantial changes from the draft permit.

Should you have any questions, please feel free to contact the Permits Branch at the above address or telephone (214) 655-7190.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Myron O. Knudson".

**Myron O. Knudson, P.E.  
Director  
Water Management Division (6W)**

**Enclosures**

**cc w/permit copy:**

**New Mexico Environment Department**