

Title (en)  
METHOD FOR TREATING A NUCLEAR PROCESS OFF-GAS STREAM.

Title (de)  
VERFAHREN ZUM BEHANDELN EINES WÄHREND EINES KERNVERFAHRENS ENTSTANDENEN ABGASSTROMES.

Title (fr)  
METHODE POUR LE TRAITEMENT DE COURANTS GAZEUX EMIS PENDANT UN PROCEDE NUCLEAIRE.

Publication  
**EP 0032949 A4 19820108 (EN)**

Application  
**EP 80901636 A 19810224**

Priority  
US 6397079 A 19790806

Abstract (en)  
[origin: WO8100413A1] Method for selectively removing and recovering the noble gas and other gaseous components typically emitted during nuclear process operations. The method is adaptable and useful for treating dissolver off-gas effluents released during reprocessing of spent nuclear fuels whereby to permit radioactive contaminant recovery prior to releasing the remaining off-gases to the atmosphere. Briefly, the method sequentially comprises treating the off-gas stream to preliminarily remove NO<sub>x</sub>, hydrogen and carbon-containing organic compounds, and semivolatile fission product metal oxide components therefrom (11 and 16); adsorbing iodine components on silver-exchanged mordenite (17); removing water vapor carried by said stream by means of a molecular sieve (31); selectively removing the carbon dioxide components of said off gas stream by means of a molecular sieve (51); selectively removing xenon in gas phase by passing said stream through a molecular sieve (71) comprising silver-exchanged mordenite; selectively separating krypton from oxygen by means of a molecular sieve (91) comprising silver-exchanged mordenite; selectively separating krypton from the bulk nitrogen stream using a molecular sieve (111) comprising silver-exchanged mordenite cooled to about -140 to -160 C; concentrating the desorbed krypton upon a molecular sieve (131) comprising silver-exchange mordenite cooled to about -140 to -160 C; and further cryogenically concentrating, and then recovering for storage, the desorbed krypton (137).

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IPC 8 full level  
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CPC (source: EP)  
**G21F 9/02** (2013.01)

Citation (search report)

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