Claims:

1) A method for treating emergency spill or leak of elemental bromine, comprising contacting an aqueous solution of quaternary ammonium halide with the bromine and collecting a bromine neutralization product as complexed bromine in a form of liquid or solid mass, wherein the quaternary ammonium halide is selected from the group consisting of aliphatic and cyclic quaternary ammonium bromides or chlorides.

2) The method of claim 1, wherein the aliphatic quaternary ammonium bromide is of the formula $R_1R_2R_3R_4N^+ Br^-$, wherein R_1, R_2, R_3 and R_4 are independently selected from linear or branched C_1-C_5 alkyl.

3) The method of claim 2, wherein the $R_1R_2R_3R_4N^+ Br^-$ is symmetrical quaternary ammonium bromide, such that R_1, R_2, R_3 and R_4 are the same.

4) The method of claim 3, wherein the quaternary ammonium bromide is tetra ethyl ammonium bromide (TEAB), tetra propyl ammonium bromide or tetra n-butyl ammonium bromide (TBAB).

5) The method of claim 1, wherein the cyclic quaternary ammonium bromide or chloride is selected from the group consisting of 2-methyl-1-alkyl-pyridinium bromides, 2-methyl-1-alkyl-pyridinium chlorides, 3-methyl-1-alkyl-pyridinium bromides and 3-methyl-1-alkyl-pyridinium chlorides wherein the alkyl at position 1 of the ring is linear or branched C_1-C_5 group.

6) The method of claim 5, wherein the 2-methyl-1-alkylpyridinium bromide is 2-methyl-1-ethyl pyridinium bromide (2-MEPy) and the 3-methyl-1-alkyl-pyridinium bromide is 3-methyl-1-n-butyl pyridinium bromide (3-MBPy).

7) The method of any one of claims 1 to 6, wherein the bromine is liquid bromine.

8) The method of claim 7, wherein the aqueous solution of the quaternary ammonium halide comprises a foaming agent, to form a foam on top of the liquid bromine.

9) The method of any one of claims 1 to 6, wherein the bromine is bromine gas.