CLAIMS:

1. A method for pre-treatment of dissolved and undissolved radioactive matter (radionuclide) in seawater prior to reclamation of seawater into drinking water in a seawater treatment plant, comprising the steps:

   identifying a seawater intake source and collecting seawater from seawater intake source;
   measuring collected seawater for trace of one or more radionuclide;
   diverting collected seawater for electro-coagulation of one or more radionuclide to one or more elected coagulant agent to yield coagulant-laden seawater;
   removing the elected coagulant and one or more radionuclide from coagulant-laden seawater to obtain pre-treated seawater substantially free of one or more radionuclide;
   routing the pre-treated seawater to seawater treatment plant for reclamation into drinking water,

   wherein collected seawater is diverted for electro-coagulation if one or more radionuclide trace level in collected seawater measured exceeds a determined trace standard deviation value associated with one or more radionuclide.

2. The method of claim 1 wherein electro-coagulation comprises passing an electric direct current (DC) though collected seawater disposed between an anode apparatus and a cathode apparatus to cause radionuclide containing dissolved ions, suspended solids to coagulate with elected coagulant agent.

3. The method of claim 1 wherein collected seawater is measured for trace radionuclide comprising one or more trace radionuclide analytical measurement signal.

4. The method of claim 3 wherein one or more trace radionuclide analytical measurement signal is digitally supplied to a analytical processor to generate one or more trace radionuclide statistical distribution table and one or more corresponding determined trace standard deviation value of each said trace radionuclide statistical distribution table.

5. A system for pre-treatment of dissolved and undissolved radioactive matter (radionuclide) in seawater prior to reclamation of seawater into drinking water in a seawater treatment plant, comprising the steps:

   a seawater intake apparatus for identifying a seawater intake source and seawater intake apparatus collecting seawater from seawater intake source;

   an analyzer device for measuring collected seawater for trace of one or more radionuclide and analyzer device deriving a first trace radionuclide measurement signal;

   a first fluid pump for diverting collected seawater for filtration in a suspension filter, of one or more suspended radionuclide particle and suspension filter for removing the suspended radionuclide particle to yield first pre-treated seawater volume substantially free of one or more suspended radionuclide particle based on one or more first computed trace deviation signal;

   analyzer device for measuring first pre-treated seawater volume for trace of one or more dissolved radionuclide and analyzer device deriving a second trace radionuclide measurement signal;

   a second fluid pump for diverting first pre-treated seawater volume for electro-coagulation in an electro-coagulation module, of one or more dissolved radionuclide to one or more elected coagulant agent to yield coagulant-laden seawater and electro-coagulation module removing the elected coagulant and one or more dissolved radionuclide from coagulant-laden seawater volume to obtain second pre-treated seawater volume substantially free of one or more dissolved radionuclide based on one or more second computed trace deviation signal;

a third fluid pump for routing second pre-treated seawater volume to seawater treatment plant for reclamation into drinking water,

wherein first computed trace deviation signal is generated by analyzer device and first computed trace deviation signal is indicative of at least one first trace radionuclide measurement signal exceeding a reference set point first trace radionuclide activity concentration value stored in the analyzer device.

6. The system of claim 5 wherein second computed trace deviation signal is generated by analyzer device and second computed trace deviation signal is indicative of at least one second trace radionuclide measurement signal exceeding a reference set point second trace radionuclide activity concentration value stored in the analyzer device.

7. The system of claim 5 wherein analyzer device comprising at least one electronic processor.

8. A method for pre-treatment of dissolved radioactive matter (radionuclide) in seawater prior to reclamation of seawater into drinking water in a seawater treatment plant, comprising the steps:

identifying a seawater intake source and collecting seawater from seawater intake source;
measuring collected seawater for trace of one or more dissolved radionuclide;

diverting collected seawater for selective radionuclide removal of one or more dissolved radionuclide to yield pre-treated seawater substantially free of one or more dissolved radionuclide;
routing the pre-treated seawater to seawater treatment plant for reclamation into drinking water,

wherein collected seawater is diverted for selective radionuclide removal if one or more dissolved radionuclide trace level in collected seawater measured exceeds a determined trace standard deviation value associated with one or more dissolved radionuclide.

9. The method of claim 8 wherein each determined trace standard deviation value is indicative of a determined activity concentration associated with a corresponding dissolved radionuclide.

10. The method of claim 8 wherein collected seawater is measured for trace radionuclide comprising one or more dissolved trace radionuclide analytical measurement signal.

11. The method of claim 10 wherein one or more dissolved trace radionuclide analytical measurement signal is digitally supplied to a analytical processor to generate one or more dissolved trace radionuclide statistical distribution table and one or more corresponding determined trace standard deviation value of each said dissolved trace radionuclide statistical distribution table.

12. The method of claim 8 wherein selective radionuclide removal comprises one or more electro-coagulation process stage wherein each electro-coagulation process stage further comprising a power supply circuit passing an electric direct current (DC) though collected seawater disposed between an anode apparatus and a cathode apparatus to cause radionuclide containing dissolved ions, and colloids to coagulate with one or more elected coagulant agent.

13. The method of claim 8 wherein selective radionuclide removal comprises one or more ion exchange process stage.