CLAIMS

I claim:

1. A system for providing temporary or mobile water treatment using ion exchange resins comprising,

a) a service centre adapted to regenerate one or more types of ion exchange resins;

b) a treatment vehicle comprising a tank for holding resin and adapted to permit water being treated to flow through the resin;

c) a resin transport vehicle; and

d) a resin transfer hub for moving resin between the treatment vehicle and the resin transport vehicle.

2. The system of claim 1 wherein the treatment vehicle comprises a trailer adapted for transport by road.

3. The system of claim 1 wherein the resin transport vehicle comprises a tank mounted to a frame and the frame is adapted to be carried on another vehicle.

4. The system of claim 3 wherein the resin transport vehicle is sized, and comprises connectors, such that the resin transport vehicle may be transported through an inter-modal transportation system.

5. The system of claim 1 wherein the resin transfer hub is provided on or in a vehicle.

6. The system of claim 5 wherein the vehicle is a shipping container.

7. The system of claim 1 further comprising a resin storage vessel connected to the resin transfer hub.

8. The system of claim 7 wherein the resin storage vessel comprises a silo.

9. The system of claim 1 wherein the resin transfer hub comprises a water tank, a water recirculation pump and an air compressor.

10. The system of claim 3 wherein the resin transport vehicle further comprises an inlet near the top of the tank and an outlet near the bottom of the tank.

11. The system of claim 1 further comprising a tank containing polishing resin connected to an inlet to the resin transfer hub.

12. A process for providing regenerated resin to a mobile water treatment vehicle comprising the steps of,

a) moving the water treatment vehicle to a resin transfer hub;

b) using the resin transfer hub to move spent resin from the mobile water treatment vehicle to a resin transport vehicle; and,

c) using the resin transport hub to move regenerated resin from another resin transport vehicle to the water treatment vehicle.

13. The process of claim 12 further comprising a step of transferring the spent resin to a service centre where the spent resin is regenerated.

14. The process of claim 13 further comprising a step of transporting the regenerated spent resin to the resin transfer hub.

15. The process of claim 13 wherein the step of transferring the spent resin to a service centre occurs at least in part by rail or boat.

16. The process of claim 13 wherein the resin transfer hub is located in an area of water scarcity relative to the service centre.

17. The process of claim 12 wherein the water treatment vehicle is located in a trailer and step a) comprises towing the water treatment vehicle over roads.

18. The process of claim 12 wherein step b) or step c) comprises a step of storing resin temporarily in a vessel near the resin transfer hub during the movement of the resin.

CLAIMS:

1. A process for providing regenerated ion exchange resin to a mobile water treatment vehicle comprising the steps of:

providing a water treatment vehicle having a water treatment tank containing a quantity spent ion exchange resin and an amount of water sufficient to fill the water treatment tank to a level above a level of the spent ion exchange resin;

providing a resin transfer hub having a compressed air system and a water storage tank;

providing first and second resin transfer vehicles each having a storage tank for receiving ion exchange resin, wherein the tank of the first resin transfer vehicle is empty and the tank of the second resin transfer vehicle contains a quantity of regenerated ion exchange resin;

directing compressed air from the compressed air system of the resin transfer hub into the water treatment tank of the water treatment vehicle to pressurize the water treatment tank with compressed air;

transferring the water and the spent ion exchange resin from the water treatment tank of the water treatment vehicle to the storage tank of the first resin transport vehicle with the compressed air;

transferring the water in the storage tank of the first resin transport vehicle back to the water storage tank of the resin transfer hub while retaining the spent ion exchange resin in the storage tank of the first resin transport vehicle;

and,

transferring a quantity of regenerated ion exchange resin from the storage tank of the second resin transport vehicle to the water treatment tank of the water treatment vehicle.

2. The process of claim **1** further comprising a step of moving the first resin transport vehicle to a service center where the spent ion exchange resin is regenerated.

3. The process of claim **2** further comprising a step of moving the second resin transfer vehicle from the service center to the resin transfer hub.

4. The process of claim **2** wherein the step of moving the first resin transport vehicle occurs at least in part by rail or boat.

5. The process of claim **2** wherein the resin transfer hub is located in an area of water scarcity relative to the service center.

6. The process of claim **1** wherein the water treatment vehicle is a trailer and the step of moving includes towing the water treatment vehicle over roads.

7. The process of claim **1** further comprising a step of storing ion exchange resin temporarily in a vessel near the resin transfer hub during the movement of the ion exchange resin.

8. The process of claim **1** wherein the resin transfer hub is provided on or in a vehicle.

9. The process of claim **1** wherein the storage tanks of each of the first and second resin transport vehicles have an inlet near a top of the storage tank and an outlet near a bottom of the storage tank.

10. The process of claim **9** wherein the tank of each of the first and second resin transport vehicles comprises a compressed air fitting, and wherein the step of directing compressed air includes a step of connecting the compressed air system of the resin transfer hub to the compressed air fitting.