CLAIMS

1 A method for mapping and cleaning sediment in a tank, the method comprising:

conducting a pre-survey site inspection from a sample of water to determine at least pH level of water in the tank;

analyzing water chemistry data from the sample of water to determine at least pH level of water in the tank;

conducting an acoustic survey of the tank; mapping sediment elevation in the tank;

creating a floor sediment elevation map identifying location of sediment and height thereof in the tank;

collecting sediment samples from the tank; analyzing the sediment samples;

generating a sediment report based on analyzing the sediment samples;

calculating sediment volumes and weight in the tank;

cleaning the tank;

separating at least a portion of the sediment from the water;

conducting a post-cleaning acoustic survey of the tank;

re-mapping the sediment elevation;

calculating a volume of removed sediment from the tank; and generating a tank cleaning report.

2. The method of claim 1, wherein the pre-cleaning acoustic survey and the post- cleaning acoustic survey are compared in the tank cleaning report to determine sufficiency of cleaning.

3. The method of claim 1, wherein the mapping the sediment elevation and the re-mapping the sediment elevation are compared in the tank cleaning report to determine sufficiency of cleaning.

4. The method of claim 1, wherein the calculated sediment volumes and weight and the calculated volume of removed sediment are compared in the tank cleaning report to determine sufficiency of cleaning.

5. The method of claim 1 further comprising analyzing at least one water chemistry measurements.

6. The method of claim 5, wherein the at least one water chemistry measurement comprises temperature and salinity of the water.

7. The method of claim 5, wherein the at least one water chemistry measurement comprises turbidity of the water.

8. The method of claim 1, wherein the floor sediment elevation map comprises a three dimensional topographic image.

9. The method of claim 1, wherein the floor sediment elevation map comprises a tank floor elevation map.