CLAIMS

What is claimed is:

1. An isolated quantity of particulate plastic solids comprising greater than 70% by weight polyethylene terephthalate (PET), from 0.1% to 10% by weight polyvinyl chloride (PVC), and a moisture content of less than 4% by weight.

2. A quantity of particulate plastic solids comprising greater than 70% by weight polyethylene terephthalate (PET), from 0.1% to 4% by weight polyvinyl chloride (PVC), and at least 0.1% by weight of solid materials that do not phase change below 270°C and 1 atm.

3. The quantity of particulate plastic solids according to claims 1 or 2, wherein the quantity of particulate plastic solids has a microorganism content of less than 10^4 CFU/g of said particulate plastic solids.

4. The quantity of particulate plastic solids according to claim 3, wherein the quantity of particulate plastic solids has not been treated with any antimicrobial agent other than an antimicrobial composition applied to the particulate plastic solids as a part of a density separation process, and the antimicrobial composition applied to the particulate plastic solids as a part of the density separation process is a caustic solution.

5. The quantity of particulate plastic solids according to claim 4, wherein no other antimicrobial agent has been used in the density separation process other than said caustic solution.

6. The quantity of particulate plastic solids according to claim 5, wherein the reduction in microorganism count is obtained without application of any antimicrobial agent after a last density separation stage, or after a drying step through application of external heat energy in a vessel, or after a last liquid density separation step.

7. The quantity of particulate plastic solids according to claims 1 or 2, wherein the monthly average D90 particle size within said quantity of particulate plastic solids having a volume of at least 765 m^3 (1000 yd^3) is less than 2.54 cm (1 inch).

8. The quantity of particulate plastic solids according to claims 1 or 2, wherein a sampling of the airspace located no more than 3.0 m (10 feet) from the quantity of particulate plastic solids comprises less than 500 ppm of one or more of hydrogen sulfide, dimethyl sulfide, methanethiol, putrescine, cadaverine, trimethylamine, ammonia, acetaldehyde, acetic acid, butanoic acid, propanoic acid, and/or butyric acid.

9. The quantity of particulate plastic solids according to claims 1 or 2, wherein the quantity of particulate plastic solids is derived from a quantity of a mixed plastic waste having a volume of greater than 76.46 m^3 (100 yd^3).

10. A quantity of particulate plastic solids comprising at least 50% by weight polyolefins on a dry plastic basis, less than 10% by weight PET on a dry plastic basis, and less than 10,000 ppm of halogens, on a dry plastic basis.

11. The quantity of particulate plastic solids according to claim 10, wherein the quantity of particulate plastic solids has a microorganism content of less than 10^4 CFU/g of said particulate plastic solids.

12. The quantity of particulate plastic solids according to claim 11, wherein the quantity of particulate plastic solids has not been treated with any antimicrobial agent other than an antimicrobial composition applied to the particulate plastic solids as a part of a density separation process, and no

other antimicrobial agent has been used in the density separation process other than a caustic solution.

13. The quantity of particulate plastic solids according to claim 10, wherein the particulate plastic solids are derived from a mixed plastic waste feed, and wherein the level of microorganism count in the quantity of particulate plastic has been reduced by at least 90% relative to the mixed plastic waste feed.

14. The quantity of particulate plastic solids according to claim 10, wherein a sampling of the airspace located no more than 3.0 m (10 feet) from the quantity of particulate plastic solids comprises less than 500 ppm of one or more of hydrogen sulfide, dimethyl sulfide, methanethiol, putrescine, cadaverine, trimethylamine, ammonia, acetaldehyde, acetic acid, butanoic acid, propanoic acid, and/or butyric acid.

15. The quantity of particulate plastic solids according to claim 10,wherein the quantity of particulate plastic solids is unpackaged.

16. The quantity of particulate plastic solids according to claim 10, wherein the quantity of particulate plastic solids is derived from a quantity of a mixed plastic waste having a volume of greater than 76.46 m^3 (100 yd^3).

17. At least first and second co-located quantities of plastic solids that have been processed to reduce the level of microorganisms thereon, wherein said first quantity of plastic solids is enriched in polyolefins relative to said second quantity of plastic solids, and wherein said second quantity of plastic solids is enriched in polyethylene terephthalate (PET) relative to said first quantity of plastic solids.

18. The at least first and second co-located quantities of plastic solids according to claim 17, wherein said first quantity of plastic solids is housed in at least one first enclosed structure or present as a non-enclosed pile, and

wherein said second quantity of plastic solids is (a) present as a non-enclosed pile, or (b) also housed in said at least one first enclosed structure, or (c) housed in at least one separate, second enclosed structure.

19. The at least first and second co-located quantities of plastic solids according to claim 18, wherein at least said second quantity of plastic solids has not been treated with any antimicrobial agent other than an antimicrobial composition applied to the particulate plastic solids as a part of a density separation process, and the antimicrobial composition comprises a caustic solution.

20. The at least first and second co-located quantities of plastic solids according to claim 19, wherein no other antimicrobial agent has been used in the density separation process other than said caustic solution.