CLAIMS

What is claimed is:

1. A flow diverter for use in a biocontainer or bioreactor, comprising:

a shoulder having a first surface and a second surface opposite the first surface;

a conduit extending from the first surface of the shoulder;

an inlet at a first end of the conduit, wherein the first end comprises a connector;

a first outlet formed within the second surface of the shoulder in fluid communication with the inlet at an end opposite the first end of the conduit; and

a hood adjacent to the first outlet, the hood extending from the second surface and comprising a second outlet which, in use, deflects fluid supplied through the first outlet, wherein the flow diverter is capable of directing the fluid down a sidewall of the biocontainer or bioreactor, attenuating a splashing or foaming condition.

2. The flow diverter of claim 1, wherein the flow diverter is formed of one of high-density polyethylene (HDPE), low density polyethylene (LDPE), linear-low density polyethylene (LLDPE) acrylonitrile-butadiene-styrene (ABS), nylon 6, nylon 66, nylon 46, cellulosics, phenolics, thermosetting polyesters, thermosetting polyurethanes, polyethylene terephthalate, polybutylene terephthalate, polyvinylidene fluoride, ethylene-tetrafluoroethylene, polysulfone, or polyether sulfone.

3. The flow diverter of claim 1 or 2, wherein the flow diverter is bonded to a sidewall of the biocontainer or bioreactor.

4. The flow diverter of claim 1 or 2, wherein the biocontainer or bioreactor comprises a single-use biocontainer or bioreactor.

5. The flow diverter of claim 1 or 2, wherein the biocontainer or bioreactor comprises a multi-layer plastic film.

6. A flow diverter for use in a biocontainer or bioreactor, comprising:

a shoulder having a first surface and a second surface opposite the first surface;

a conduit extending from the first surface of the shoulder;

an inlet at a first end of the conduit, wherein the first end comprises a connector;

an outlet formed within the second surface of the shoulder in fluid communication with the inlet at an end opposite the first end of the conduit; and

a deflecting film bonded to adjacent to the outlet, the deflecting film having an unbonded section located under the outlet, wherein the flow diverter is capable of directing a fluid down a sidewall of the biocontainer or bioreactor, attenuating a splashing or foaming condition.

7. The flow diverter of claim 6, wherein the deflecting film is partially bonded to a sidewall of the biocontainer or bioreactor.

8. The flow diverter of claim 6 or 7, wherein the flow diverter comprises at least one of high-density polyethylene (HDPE), acrylonitrile-butadiene-styrene (ABS), nylon 6, nylon 66, nylon 46, polysulfone, or polyether sulfone.

9. The flow diverter of claim 6 or 7, wherein the shoulder of the flow diverter is bonded to a sidewall of the biocontainer or bioreactor.

10. The flow diverter of claim 6 or 7, wherein the biocontainer or bioreactor comprises a single-use biocontainer or bioreactor.

11. The flow diverter of claim 6 or 7, wherein the biocontainer or bioreactor comprises a multi-layer plastic film.

12. A biocontainer or bioreactor, comprising:

a top surface, a bottom surface, and a sidewall disposed between the top surface and the bottom surface, wherein an inner volume for holding a liquid is formed between the top surface and the bottom surface;

the flow diverter of claim 1 disposed on the sidewall; and

one or more fluid outlets.

13. The biocontainer or bioreactor of claim 12, wherein the flow diverter is formed of one of high-density polyethylene (HDPE), low density polyethylene (LDPE), linear-low density polyethylene (LLDPE) acrylonitrile-butadiene-styrene (ABS), nylon 6, nylon 66, nylon 46, cellulosics, phenolics, thermosetting polyesters, thermosetting polyurethanes, polyethylene terephthalate, polybutylene terephthalate, polyvinylidene fluoride, ethylene-tetrafluoroethylene, polysulfone, or polyether sulfone.

14. The biocontainer or bioreactor of claim 12 or 13, wherein the biocontainer or bioreactor comprises a multi-layer plastic film.

15. The biocontainer or bioreactor of claim 12 or 13, wherein the flow diverter is disposed above a fluid level within the biocontainer or bioreactor.

16. The biocontainer or bioreactor of claim 12 or 13, further comprising a baffle.

17. A biocontainer or bioreactor, comprising:

a top surface, a bottom surface, and a sidewall disposed between the top surface and the bottom surface, wherein an inner volume for holding a liquid is formed between the top surface and the bottom surface;

the flow diverter of claim 6 disposed on the sidewall; and

one or more fluid outlets.

18. The biocontainer or bioreactor of claim 17, wherein the flow diverter is formed of one of high-density polyethylene (HDPE), low density polyethylene (LDPE), linear-low density polyethylene (LLDPE) acrylonitrile-butadiene-styrene (ABS), nylon 6, nylon 66, nylon 46, cellulosics, phenolics, thermosetting polyesters, thermosetting polyurethanes, polyethylene terephthalate, polybutylene terephthalate, polyvinylidene fluoride, ethylene-tetrafluoroethylene, polysulfone, or polyether sulfone.

19. The biocontainer or bioreactor of claim 17 or 18, wherein the biocontainer or bioreactor comprises a multi-layer plastic film.

20. The biocontainer or bioreactor of claim 17 or 18, wherein the flow diverter is disposed above a fluid level within the biocontainer or bioreactor.

21. The biocontainer or bioreactor of claim 17 or 18, further comprising a baffle.