

Basic Principles of Safety – Plant Design

Your Objectives:

At the end of the lesson, you should be able to describe why a specific facility design works best for the biotech-industry

As was stated in a previous lesson, it is the duty of the manufacturer to ensure that its

products are free of contaminations. Under the Code of

Federal Regulations (eCFR), therefore, Biogen must record in writing and follow procedures for

preventing

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Contamination

control

exist on several levels.

Facility design is covered by FDA regulations:

- Basics

- 21 CFR 211:42-58

- 21 CFR 601.22

- 21 CFR 600.3(t)

- 21 CFR 600.12e

- Basics for European

- EMA Annex II

- Waste and flow

40 CFR Part 261

Safety in processing

40 CFR Part 264

21 CFR part 600.11, subchapter F

There are two (2) types of facility design:

Closed systems

- categorised as controlled not classified, if it can be proven that the risk of any section being open to surrounding areas is zero;

2. Open

- Although many parts of a manufacturing are closed

(e.g. bioreactor, chromatography column, filtration),

many parts remain open to surrounding areas (e.g. during media and buffer prep);

- Therefore, there is a need for a carefully controlled process environment (containment), to avoid all risks of product / process contamination.

With respect to all physical phases entering and leaving the facility, we need to have a containment in place for:

Gases

2. Liquids

3. Solids

4. 'Humans'

5. 'Product'.

The last two are not real phases.

Aufgabe Lückentext:

Folgende Wörter bitte in den Lückentext einfüllen.

Jedes Wort kommt einmal vor.

Bitte Gross- und Kleinbuchstaben beachten.

contaminations, handling, inspection, pharmaceutical, procedures, process, systems, unit,