

North American Rendering Industry Code of Practice

1. Introduction to the Code

- 1.1** This Code of Practice (COP) was developed by a task force convened by the Animal Protein Producers Industry (APPI) whose member companies represent 95% of the animal by-products produced in North America. The task force members represented a cross-section of the poultry, swine, and cattle packer renderers, independent renderers and protein blenders. Feed safety related issues and biosecurity concerns in the United States and elsewhere in the world have highlighted the importance of standardizing feed safety programs in order to enhance consumer confidence and facilitate domestic and global trade. The standards stipulated in this Code should be met or exceeded by APPI members, recognizing the uniqueness of each member's processes and finished products.

2. Goal of the Code

- 2.1** This COP establishes minimum industry practices and an accreditation process that promotes the safety of rendered animal proteins and fats for feed use.

3. Scope of the Code

- 3.1** The COP is applicable to renderers, fat recyclers and blenders, and protein blenders. Preventive policies and practices are described that govern the maintenance and operation of facilities to minimize product safety hazards in a universal way. Product safety hazards are also addressed by procedures that identify specific steps within a process where controls can be applied to prevent, eliminate, or reduce them to acceptable levels. In order to verify that facilities have implemented and are practicing the minimum safety programs, independent accreditation is required.

4. Objectives of the Code

- 4.1** Provide a list of Good Manufacturing Practices (GMPs) to implement as minimal protective practices.
- 4.2** Provide the necessary components to be addressed in developing a Process Control (PC) plan and list those safety hazards to be addressed to meet the minimum standards.
- 4.3** Provide a mechanism for independent accreditation to verify attainment of the established minimum industry product safety programs.
- 4.4** Support the use of this COP through continuing education and training certification programs.

5. Preconditions for accreditation

- 5.1** Active participation in the APPI Salmonella testing program for rendering and protein blending facilities.
- 5.2** Verified compliance with the FDA Feed Rule (see 11.2.3).
- 5.3** Each facility has at least one person on-site who has received APPI certification, received training by an APPI certified trainer, or received training through an equivalent program. (Applies to rendering, protein blending, and fat recyclers and blenders.)

6. Requirements for accreditation

- 6.1** Meet the precondition requirements appropriate for the facility type, described in Section 5.
- 6.2** Facility personnel have developed GMPs to address the minimum objectives described in Section 7. Accreditation requires verification that GMPs are routinely followed through logs, records and other documentation.
- 6.3** Facility personnel have developed a PC plan, using the measures described in Section 8, to meet the minimum objectives described in Section 9. Accreditation requires verification that the PC plan is routinely used in daily operations and accomplishes its intended outcome(s).

7. Minimum GMPs required for rendering, protein blending and fat recycling and blending facilities (when applicable).

Objective 1

Minimize the risk of potential product safety hazards entering the processing system and finished products.

- 7.1** **GMP** - Raw material inspection.
- 7.2** **GMP** - On-site chemical control program.
- 7.3** **GMP** - Facility/equipment plan for housekeeping and sanitation.
- 7.4** **GMP** – Inspect and secure load-out and transport trucks, cars, vessels, and containers.
- 7.5** **GMP** – Finished Product Compliance Testing

Objective 2

Assure accuracy of process monitoring.

- 7.6** **GMP** - Instrument and probe calibration.

Objective 3

Insure compliance, traceability and recall capability.

7.7 **GMP** – Labeling and record keeping.

7.8 **GMP** – Written product recall plan.

7.9 **GMP** – Removal & Disposal of Cattle Material Prohibited From Animal Feed (CMPAF)

8. Minimum measures taken for the development of a PC plan. (1)

8.1 Preliminary tasks

8.1.1 Describe the product and its normal intended use.

8.1.2 Describe the process flow for each product type.

8.2 Application of HACCP principals

8.2.1 Hazard analysis

8.2.1.1 Determine if physical hazards exist and identify them.

8.2.1.2 Determine if biological hazards exist and identify them.

8.2.1.3 Determine if chemical hazards exist and identify them.

8.2.2 Identify critical control points (CCP)

8.2.3 Set critical limits

8.2.4 Monitor

8.2.5 Establish corrective action

8.2.6 Record keeping

8.2.7 Verification procedures

9. Minimum product safety hazards that must be controlled

9.1 Biological hazards.

9.1.1 Heat treatment must be sufficient to kill conventional pathogens that may be in the raw material.

9.1.1.1 The CCPs that determine the extent of heat treatment must be identified for each product type.

9.1.1.2 *Applicable facilities* – Rendering, Fat Recycling and Fat Blending

9.2 Chemical hazards.

9.2.1 Insure that finished products are in compliance with established federal tolerances for agricultural chemicals and other toxic substances, such as PCBs, etc.

9.2.1.1 The CCPs must be identified for each product type or managed through GMP program(s).

9.2.1.2 *Applicable facilities* – Rendering, Protein Blending, Fat Recycling and Fat Blending

9.3 Physical hazards.

9.3.1 Employ appropriate measures to prevent the inclusion of materials such as wood, glass, metal, plastic, etc., in finished products that may be injurious to animals if consumed.

9.3.2 The CCPs must be identified for each product type or managed through GMP program(s).

9.3.3 *Applicable facilities* - Rendering, Protein Blending, Fat Recycling and Fat Blending

10. Accreditation

10.1 Objectives of accreditation

- Promote the safety of rendered products.
- Legitimize the Code of Practice.
- Provide credibility to the industries.
- Promote consistency and conformity with accepted industry practices.
- Preserve existing markets and facilitate development of new markets.
- Provide assurance to regulatory agencies.

10.2 An Independent “third party” firm will be contracted by APPI to conduct audits for accreditation. This firm shall:

- Have experience in industry practices
- Be competent in food safety issues
- Have relevant regulatory experience

11. Audit procedures

11.1 Accreditation is based on meeting minimum criteria.

11.2 All facilities must first meet all applicable precondition requirements listed in Section 5.

11.2.1 APPI shall provide a current list of companies that participate in the APPI Salmonella testing program to the independent auditing firm.

11.2.2 The independent auditing firm shall determine compliance to federal and state regulations appropriate to the type of facility requesting accreditation, by reviewing:

- Federal and state inspections and the results thereof
- The status of rendering and feed licenses pertaining to finished feed products.

11.2.3 The independent auditing firm shall determine compliance with the FDA Feed Rule by conducting an on-site audit using the FDA inspection criteria.

11.3 The Code of Practice is offered in two phases:

Phase I – the facility meets the minimum GMPs identified (Section 7) for the type of processing undertaken on the premises (Rendering, Protein Blending, Fat Recycler, or Fat Blender).

Phase II – Phase I accreditation has been previously obtained and the facility has implemented a PC plan to control the hazards identified (Section 9) for the products made on the premises (Rendering, Protein Blending, Fat Recycler, or Fat Blender).

11.4 Accreditation is valid for two years from the date issued. Re-accreditation audits must be conducted prior to the expiration date to avoid a lapse in accreditation. Firms may choose to be audited more frequently.

11.5 Auditing and accreditation fees are determined by APPI. The fee structure is reviewed bi-annually and fees adjusted as appropriate.

11.6 If during an accreditation audit, it is discovered that since the preceding accreditation audit, the facility received a Warning Letter from the FDA for non-compliance to the FDA Feed Rule, the facility must provide evidence that:

11.6.1 Corrective actions were made and these actions were acceptable to the FDA.

11.6.2 The facility was found to be compliant at all subsequent FDA inspections conducted prior to the present accreditation audit.

11.7 Publication and maintenance of accreditation records.

- 11.7.1** APPI shall publicize the Code of Practice in the media to increase industry awareness and promote the safety of using animal proteins and rendered fats in feed.
- 11.7.2** APPI shall maintain a current list of accredited facilities on the APPI web site.
- 11.7.3** Once each year, APPI shall publish a current list of accredited facilities in an acceptable industry publication, such as Feedstuffs.

12. Definitions

Accreditation: officially recognized by the appointed independent auditing firm and confirmed by APPI as meeting the essential minimum requirements set forth in this Code of Practice.

APPI: Animal Protein Producers Industry. The organization is the biosecurity arm of the North American Rendering Industry, dedicated to the administration and maintenance of innovative programs to promote the safety of animal proteins and feed fats through a testing regimen, continuing education and training and collaborative research.

APPI certification: Awarded by the APPI Institute of Continuing Education for successful completion of training on biosecurity, PC and GMPs.

APPI salmonella testing program: An on-going, comprehensive testing program administered by APPI to test animal proteins for salmonella. The program is the most reliable model for animal protein testing in the world, representing 95% of the industry's production of protein meals.

Audit: A systematic and independent examination of records and practices to determine the degree of compliance with this Code of Practice.

Certification: Reliably endorsed as having fulfilled stated requirements or objectives.

Chemical control program: Procedures governing the safe selection, use, and storage of chemicals within the process facility to prevent the contamination of raw or finished rendered products, i.e., antifreeze, hydraulic fluid, petroleum products, lubricants, rodenticides, insecticides, etc.

Control point: Any step at which biological, chemical, or physical factors can be controlled.

Critical control point: A step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Critical limits: A maximum and/or minimum value to which a biological, chemical or physical parameter must be controlled at a CCP to prevent, eliminate, or reduce to an acceptable level the occurrence of a food safety hazard.

Fat recyclers: Companies that collect, sanitize and filter used restaurant grease and/or frying oil for use in animal feed and industrial applications.

FDA: Food and Drug Administration. The FDA is an agency within the United States Government having oversight for food and feed safety.

FDA Feed rule: CFR 21 § 589.2000 and 2001. The rule prohibits feeding proteins of mammalian origin (with some exceptions) to cattle and other ruminant animals. It also prohibits feeding tallow to ruminants unless it contains less than 0.15% insoluble impurities. The regulation also requires that records as to the origin of raw material and sale of finished proteins be maintained and that all restricted use proteins be labeled with the cautionary statement “Do Not Feed to Cattle or Other Ruminants.”

In 2008, FDA added a new section 589.2001 to the regulations which prohibits the use of high-risk cattle material in feed for all animal species. This section builds on the 1997 BSE feed regulation at 589.2000, which remains in effect but which applies only to feed for cattle and other ruminants. Specifically, the new section 589.2001 defines the following as cattle material prohibited in animal feed (CMPAF):

- the entire carcass of BSE-positive cattle
- the brains and spinal cords from cattle 30 months of age and older
- the entire carcass of cattle not inspected and passed for human consumption, unless the cattle are less than 30 months of age or the brains and spinal cords have been effectively removed
- tallow derived from BSE-positive cattle
- tallow derived from CMPAF that contains more than 0.15% insoluble impurities
- mechanically separated beef derived from CMPAF

GMP: Good Manufacturing Practices that provide the basic environmental and operating conditions necessary for the production of safe, wholesome feed ingredients. GMPs are prerequisites to the development and implementation of PC plans.

Grease plants: Facilities that receive and process used restaurant grease and frying fats for recycling in animal feed or for industrial uses.

PC: A systematic approach to the identification, evaluation, and control of feed safety hazards. PC plans are product specific.

Hazard: A biological, chemical, or physical agent that is reasonably likely to cause illness or injury in the absence of its control.

Hazard Analysis: The process of collecting and evaluating information on hazards associated with the product under consideration to decide which are significant and must be addressed within the PC plan.

Heat Treatment: As applied to the rendering process, it involves the application of heat for sufficient duration to kill conventional pathogenic organisms.

Housekeeping/Sanitation: Controls to prevent the contamination of finished products with raw materials, wastewater, pests, or other foreign materials.

Independent auditor: An individual authorized by APPI to examine records and practices to determine the degree of compliance with this Code of Practice.

Labeling and record keeping: Controls to assure the labeling and record keeping requirements of the FDA “Feed Rule” (21 CFR 589.2000 & 2001) are being met.

Meal: A powdery to granular product resulting from the grinding of the defatted residue that remains after rendering.

Monitor: To conduct planned observations or measurements to assess whether a CCP is being controlled and create a record for future use in verification.

Non-compliance: Failure to meet one or more requirements (labeling, record keeping, etc.) specified in the FDA Feed Rule.

Protein blender: An entity that purchases or receives meat and bone meal and/or other animal proteins for mixing and subsequent sale.

Raw material inspection: Controls to prevent the collection of potentially hazardous compounds or voluntarily restricted tissues.

Rendering: Heat is used in a process to separate fat from proteins and minerals by dehydrating raw animal byproducts and/or mortalities in a batch or continuous cooker.

Traceability: The ability to track a finished rendered product back to the raw material that was processed and forward to the customer who received it.

Verification: Those activities that show the PC plan is working according to plan, including validation that it effectively controls the hazards.

13 References

More information on PC program development can be found in the following reference:

(1) *“HACCP-A Systematic Approach to Food Safety”*: *A Comprehensive Manual for Developing and Implementing a HACCP Plan, Third Edition*

Published by the Food Processors Institute

Available for \$55.00 USD from:

International HACCP Alliance

120 Rosenthal Center, 2471 TAMU

College Station, TX 77843-2471

Phone: (979) 862-3643

Fax: (979) 862-3075

E-mail: kharris@tamu.edu (Dr. Kerri B. Harris)