HACCP Study

Raw Milk Collection, Transportation and Delivery

Dairy UK
Dairy Transport Assurance Scheme
Reviewed 09.04.2013

Milk Quality Harmonisation Group
December 20th, 2005
Reviewed 09.11.2007
Reviewed 05.05.2009
Reviewed 29.03.2011
Reviewed 26.04.2012

Dairy UK
Dairy Transport Assurance Scheme
Reviewed 09.04.2013

HAACP study overseen and validated by:

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08th May 2013 (Chris Coggins)

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1. Introduction

In January 2006, existing legislation was replaced by new EC food hygiene regulations. These regulations are intended to ensure that all primary producers and businesses involved in the processing and manufacture of food products take all appropriate steps to control potential food hazards at every stage of the operation.

The following HACCP study was developed using the information gathered during the milk quality harmonisation group meetings attended by representatives from Arla Foods, Dairy Farmers of Britain, Dairy Crest, First Milk, Milk Link and OMSCo. The objective of this HACCP study is to identify and consider any potential hazards associated with raw milk collection, transportation and delivery to a registered processing facility. Utilising a risk-based approach will concentrate the appropriate resources on those steps that could critically affect product safety.

Despite the presence of a wide range of anti-microbial systems, milk supports the growth of a wide range of microorganisms and temperature is the major growth-limiting factor. Microorganisms can enter the milk from a large number of sources and it must be remembered that this study is only concerned with raw milk collection, transportation and delivery of raw milk. Subsequent steps at the processing site such as filtration and heat-treatment are designed specifically to eliminate identified food safety hazards or reduce the likely occurrence to an acceptable level.

In April 2011 the Dairy Industry through Dairy UK launched a standard for the haulage of raw milk and bulk liquid milk fractions, known as Dairy Transport Assurance Scheme (DTAS). The standard includes the requirement for HACCP and an annual HACCP review. From April 2012 the management of this HACCP study and the ongoing annual review process has been adopted by Dairy UK through the DTAS Management Committee.

2. Process and product background information

2.1 Table 1 – Terms of reference (raw milk)

RAW WHOLE MILK (Pre Heat-Treatment)	
1. Product Name	Raw Cow's milk
2. HACCP study	Bulk raw milk collection, transportation and delivery to an appropriate processing or disposal facility
3. Hazards considered	Microbiological, physical and chemical
4. Specific microbiological hazards	Significant microbiological hazards controlled by this HACCP study
	Salmonella spp *E. coli (verocytotoxin)* *Listeria monocytogenes* *Staphylococcus aureus* *Mycobacterium bovis (TB)* *Brucella spp* *Streptococcus sp* *Campylobacter jejuni* *Bacillus cereus*
	Generic low risk hazards controlled by prerequisite programme
	Aflatoxin
5. Specific chemical hazards	Significant chemical hazards controlled by this HACCP study
	Antibiotic residues and other anti-microbial drugs
	Generic low risk chemical hazards controlled by prerequisite programme
	Heavy Metals Environmental chemicals – Pesticides Cleaning chemicals Allergens from official list Flukicides
6. Specific physical hazards	Significant physical hazards controlled by this HACCP study
	None
	Generic low risk physical hazards controlled by prerequisite programme
	Metal, Glass, Pests
7. Legislation & supporting documents	Detailed under Appendix A

2.2 Table 2 - Terms of reference – (finished product)

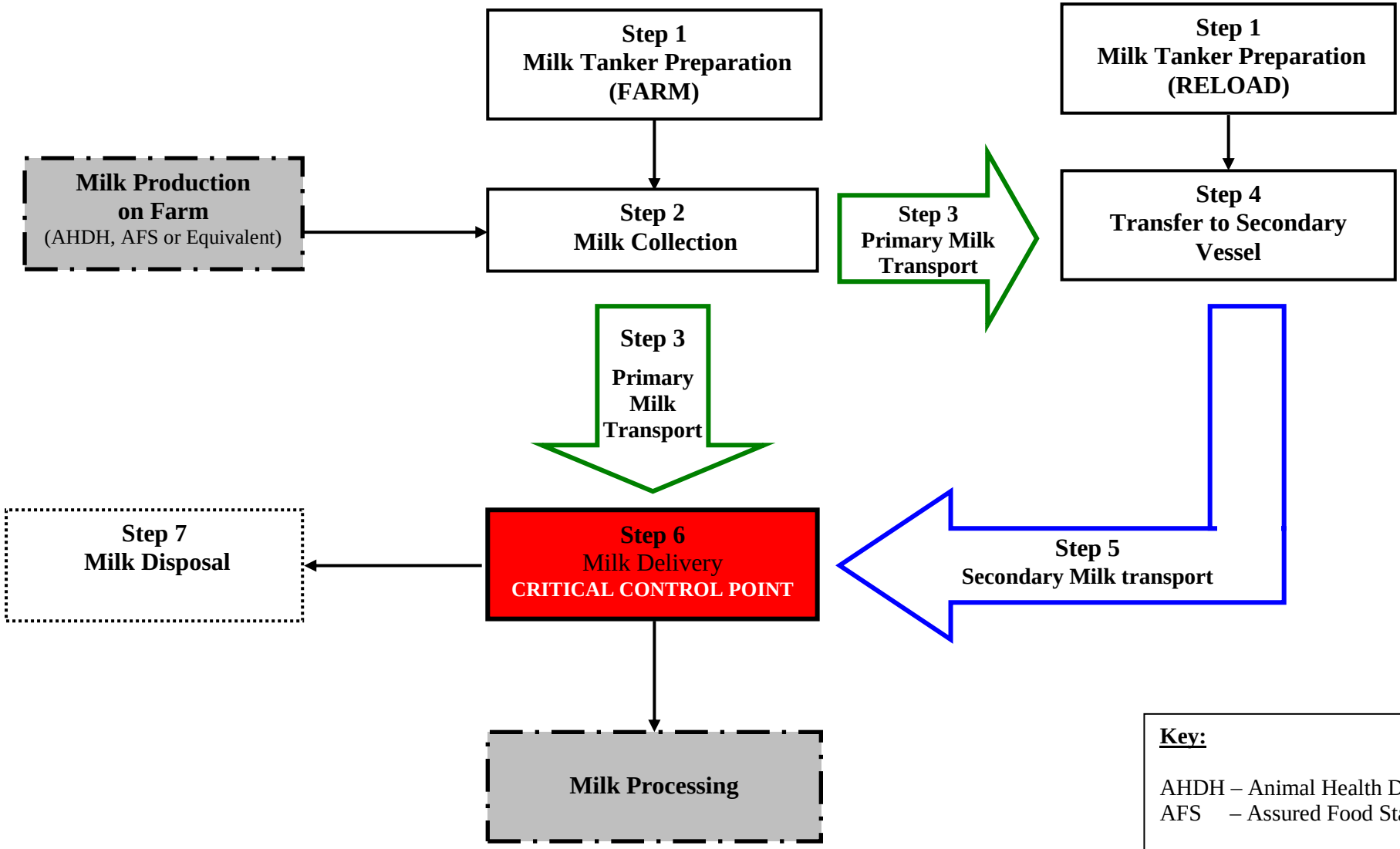
FINISHED PRODUCT (Post Heat-Treatment)	
1. How the end product is to be used	Direct consumption or used as an ingredient
2. Where the products will be sold	Domestic / Retail
3. Distribution control	Refrigerated/Ambient (UHT)
4. Shelf life	As defined by the end product
5. Important final product characteristics	Heat treatment of raw milk. Product judged safe at point of despatch from processing dairy

2.3 Table 3 – (Original) HACCP food safety team (FST) members

Name	Company, job title & HACCP qualifications	Dairy Experience
Peter Dawson (FST Leader)	Dairy Crest - Technical Development Manager – Advanced certificate in HACCP principles (RIPH) MSc HACCP, Lead Assessor, SOFHT HACCP Trainer	25 Years
Diana Brydson	First Milk – Group Milk Quality Technical Specialist - Intermediate certificate in HACCP Principles	27 Years
David Baxter	Dairy Farmers of Britain – Quality and Compliance Manager	32 Years
Linda Clow	Arla Foods - Technical Support Manager	30 Years
Stan Coleman	Arla Foods – Bulk Farm Liaison Manager	34 Years
Tim Hampton	Milk Link – Quality Standard Manager - Intermediate certificate in HACCP principles	30 Years
Roger Duckett	OMSCo Ltd – Quality Manager	5 Years
Steven Pinchbeck	Arla Foods – Technical Manager (Ashby) Validation (consultation and proof reading) - Advanced certificate in HACCP Principles (RIPH)	15 Years

20th December 2005

2.4 Chart 1 – Flow diagram



For Step 6 [Milk Delivery]: the receiving site also covers these requirements

Flow chart validation:

J Owens

April 12th 2012 (Janice Owens)

2.5 Table 4 – Process flow description

PROCESS STEP	PROCESS FLOW DESCRIPTION
1. Milk Tanker Preparation	Raw milk collection tankers are cleaned at least once every 24hrs. Cleaning is normally carried out by connecting the tanker to a cleaning (CIP) system while in the reception area or at a special cleaning station. Planned maintenance and regular inspections of collection tankers are carried out at a defined frequency as defined within DTAS standards.
2. Milk Collection	Raw milk is stored on the farm in refrigerated bulk tanks. The collection of raw milk normally takes place daily or on alternate days. On arrival at the farm the driver undertakes certain checks prior to loading the milk into the tanker. A loading hose from the tanker is connected to the outlet on the bulk tank.
3. Milk Transport	Once the milk tanker has completed it's scheduled route, milk is transported either direct to the Dairy or to a reload point.
4. Transfer to Secondary Vessel	The transfer of raw milk from a tanker that has collected raw milk direct from the farm, which is then transferred to another tanker at a reload point.
5. Secondary Movement	The transportation of raw milk direct to the Dairy from a reload point.
6. Milk Delivery	A delivery of a milk tanker at the receiving Dairy with a batch of raw milk. The first thing done at the Dairy is to determine the quantity of milk collected. The organoleptic composition and hygienic quality is determined by a number of analytical tests. Upon satisfactory completion of these checks the milk is then pumped into a raw milk silo.
7. Milk Disposal	Milk rejected on Food Safety grounds will always be disposed of as a minimum Category 2 Animal By Product.

3. Prerequisite programme

Prerequisites are recommended and proven management procedures that help prevent 'low risk' food safety problems from occurring and are the foundation of this HACCP study. The HACCP team agreed to group the prerequisites into the following categories:

3.1 Table 1 - Prerequisites

No:	Activity	Control Measure
P1	Milk collection, hygiene, temperature and sampling operations	Driver's/Hauliers handbook Standard operating procedures DTAS compliance
P2	Farm and vehicle security Vehicles tagged or accompanied during collection	Driver's/Hauliers handbook Standard operating procedures Vehicle security logbook DTAS compliance
P3	Temperature and age of milk	Driver's/Hauliers handbook Standard operating procedures
P4	Filtration during loading (1.75 x 1.25 mm, diamond shape)	Driver's/Hauliers handbook Standard operating procedures
P5	Product traceability	Driver's/Hauliers handbook Standard operating procedures DTAS compliance
P6	Driver competency & training (Including Agency drivers)	Staff training and communication DTAS compliance
P7	Agreed quality standards	Raw milk specification Producer contracts Milk quality (payment scheme) Minimum Legislative standards
P8	Haulier approval	Evaluation and approval of bulk milk hauliers (DTAS). Registered with local authority to ensure compliance with legislation
P9	Approved facility	DHI/EHO Licensed (or equivalent)
P10	Quality Assurance	Assured Dairy Farms scheme
P11	Transport Operation	Maintenance and cleaning of milk collection vehicles. Approved haulage depots (DTAS) and CIP of milk transfer equipment.
P12	Disposal of milk	Adherence to ABP regulations / Feed Hygiene Legislation / Hauliers handbooks and Standard Operating procedures
P13	Malicious contamination	Rejection and disposal of the milk if there is any doubt about integrity of the tanker or its security. Crisis management procedures.

3.2 Table 2- Special measures

No:	Activity	Control Measure
SM1	Foot and mouth disease	Associated with animal health and welfare. Operate to Ministry guidelines.
SM2	Tuberculosis	Associated with animal health and potentially human health. Adhere to legislation via Drivers / Hauliers manuals and Standard Operating procedures – Effective heat-treatment.
SM3	Radioactive fallout affecting agricultural land or haulage operation	Procedures and monitoring in place to monitor radioactive fallout. Responsibility of the Food Standards Agency.

4. Regulatory minimum quality standards

4.1 Table: 1 – Regulatory quality standards

Regulatory Compliance (EC) No: 853/2004
II. HYGIENE ON MILK PRODUCTION HOLDINGS
A. Requirements for premises and equipment
1. Milking equipment, and premises where milk is stored, handled or cooled must be located and constructed so as to limit the risk of contamination of milk.
2. Premises for the storage of milk must be protected against vermin, have adequate separation from premises where animals are housed and, where necessary to meet the requirements in part B, have suitable refrigeration equipment.
3. Surfaces of equipment that are intended to come into contact with milk (utensils, containers, tanks, etc, intended for milking, collection or transport) must be easy to clean and, where necessary, disinfect and be maintained in a sound condition. This requires the use of smooth, washable, and non-toxic materials.
4. After use, such surfaces must be cleaned and where necessary, disinfected. After each journey, or after each series of journeys when the period of time between unloading and the following loading is very short, but in all cases at least once a day, containers and tanks used for the transport of raw milk must be cleaned and disinfected in as appropriate manner before re-use.
B. Hygiene during milking, collection and transport
2. Immediately after milking, milk must be held in a clean place designed and equipped to avoid contamination. It must cooled immediately to not more than 8^0C in the case of daily collection, or not more than 6^0C if collection is not daily.
3. During transport the cold chain must be maintained and, on arrival at the establishment of destination, the temperature of the milk must not be more than 10^0C.
4. Food business operators need not comply with the temperature requirements laid down in points 2 or 3 if the milk meets the criteria provided in Part III and either (a) the milk is processed within two hours of milking or (b) a higher temperature is necessary for technological reasons related to the manufacture of certain dairy products and the competent authority so authorises.

4.2 Table: 2 – Regulatory quality standards

Regulatory Compliance (EC) No: 853/2004
III. CRITERIA FOR RAW MILK
1. The following criteria for raw milk apply pending the establishment of standards in the context of more specific legislation on the quality of milk and dairy products.
2. A representative number of samples of raw milk collected from milk production holdings by random sampling must be checked for compliance with points 3 and 4. The checks may be carried out by, or on behalf of: (a) the food business operator producing the milk; (b) the food business operator collecting or processing the milk; (c) a group of food business operators; or (d) in the context of a national or regional control scheme.
3. (a) Food business operators must initiate procedures to ensure that raw milk meets the following criteria: (i) for raw cow's milk Plate count at 30^0C (per ml) <100,000(*) Somatic cell count (per ml) <400 000(**) (*) Rolling geometric average over a two-month period, with at least two samples per month. (**) Rolling geometric average over a three-month period, with a least one sample per month, unless the competent authority specifies another methodology to take account of seasonal variations in production levels.
4. Without prejudice to Directive 96/23/EC, food business operators must initiate procedures to ensure that raw milk is not placed on the market if either: (a) it contains antibiotic residues in a quantity that, in respect of any one of the substances referred to in Annexes I and III to Regulation (EEC) No2377/90, exceeds the levels authorised under that regulation. or (b) the combined total of residues of antibiotic substances exceeds any maximum permitted value.

NB. Milk purchasers in their commercial contracts may require temperatures of 5^0C or lower to safe guard quality and shelf life of their products.

5.0 HACCP

5.1 Hazard analysis

Step	Potential Hazard Introduced or Controlled	Is the Potential Hazard Significant	Justification for Inclusion or Exclusion as a Significant Hazard	Preventative Measures of the Significant Hazards
1 **Milk Tanker Preparation**	Biological Potential for material to be contaminated by collection tanker.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures. Vehicle maintenance and cleaning controlled by prerequisite programme. CIP log -book verified by driver prior to milk collection.	
	Chemical Potential for material to be contaminated by collection tanker.	No	Not reasonably likely to occur; Vehicle maintenance and cleaning controlled by prerequisite programme. Drivers responsibility to ensure that the tanker is completely drained of liquids after C.I.P.	
	Physical Potential for material to be contaminated by collection tanker.	No	Not reasonably likely to occur, controlled by Milk Collection and Customer Delivery Procedures and prerequisite programme. Milk filtered (1.75 x 1.25 mm diamond shape) during collection and delivery.	
2 **Milk Collection**	Biological Potential for material to be contaminated during scheduled collection.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures. Milk inspected prior to collection.	
	Chemical Potential for material to be contaminated during scheduled collection.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures.	
	Physical Potential for material to be contaminated during scheduled collection.	No	Not reasonably likely to occur, controlled by procedures and prerequisite programme. Milk filtered (1.75 x 1.25 mm diamond shape) during collection.	

Step	Potential Hazard Introduced or Controlled	Is the Potential Hazard Significant	Justification for Inclusion or Exclusion as a Significant Hazard	Preventative Measures of the Significant Hazards
3 **Milk Transport**	Biological Potential for material to be contaminated during transportation.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures. Temperature and age of milk covered by prerequisite programme.	
	Chemical Potential for material to be contaminated during transportation.	No	Not reasonably likely to occur	
	Physical None identified	N/A		
4 **Transfer to Secondary Vessel**	Biological Potential for contamination during transfer to secondary vessel.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures. Temperature and age of milk covered by prerequisite programme.	
	Chemical Potential for material to be contaminated during transfer to secondary vessel.	No	Not reasonably likely to occur; Vehicle maintenance and cleaning controlled by prerequisite programme. Driver's responsibility to ensure that the tanker is completely drained of liquids after CIP.	
	Physical Potential for material to be contaminated during transfer to secondary vessel.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures.	
5 **Secondary Movement**	Biological Potential for material to be contaminated during transportation.	No	Not reasonably likely to occur; controlled by Milk Collection and Customer Delivery Procedures. Temperature and age of milk covered by prerequisite programme.	
	Chemical Potential for material to be contaminated during secondary movement.	No	Not reasonably likely to occur	
	Physical None identified	N/A		

Step	Potential Hazard Introduced or Controlled	Is the Potential Hazard Significant	Justification for Inclusion or Exclusion as a Significant Hazard	Preventative Measures of the Significant Hazards
6 **Milk Delivery**	Biological Potential for material to be contaminated during delivery.	No	Due to preventative control measures, the presence or growth of pathogens in the raw product is not considered significant at this stage. Raw milk not deemed safe to consume at this point. The raw product will undergo some form of bacteria-reducing process prior to consumption. Tanker cleaning details verified upon delivery. Vehicle security status verified upon delivery. Raw milk quality, age and temperature verified prior to acceptance.	
	Chemical **Antibiotic residues detectable due to inadequate withdrawal time or improper treatment.** Other drugs with milk withdrawal period	**Yes** No	**Presence of veterinary residues may potentially be allergenic and/or cause antibiotic resistance in humans.** No evidence of any issues at any significant level within the industry Managed at farm level by both legislation and the requirement for a veterinary prescription for these drugs. Statutory and non-statutory surveillance schemes run by the appropriate Government bodies.	**Analytical analysis of each batch of milk prior to processing.** On site verification of farm. Periodic testing of producer samples.
	Physical Potential for material to be contaminated during delivery.	No	Milk filtered during transfer to raw milk holding silo. Further filtration steps during processing (typically 1mm).	

5.2 Determination of critical control points

Process Step	Hazard	Q. #1 Do control preventative measures exist? No – Not a CCP – However, if control preventative measures are required to ensure safety then modify step, product, or process Yes – to **Q.#2**	Q. #2 Is the step specifically designed to eliminate or reduce the likely occurrence of the hazard to an acceptable level? No – to **Q.#3** Yes - CCP	Q. #3 Could contamination with identified hazards occur in excess of acceptable levels or could these increase to unacceptable levels? No – Not a CCP Yes – to **Q.#4**	Q. #4 Will a subsequent step eliminate identified hazards or reduce the likely occurrence to an acceptable level? No - CCP Yes – Not a CCP	CCP Yes or No
6 **Milk Delivery**	**Antibiotic residues above MRL and / or detectable levels due to inadequate withdrawal time or improper treatment**	Yes	No	Yes	No	**YES**

5.3 HACCP plan

Critical Control Point	Significant Hazard	Control / Preventative Measure	Critical Limits	Monitoring					Corrective Action and Records	Verification
				What	How	Frequency	Who	Records		
CCP 1 **Milk Delivery**	Antibiotic residues above MRL and / or detectable levels due to inadequate withdrawal time or improper treatment	Analyse each batch (tanker or silo) of raw milk to ensure absence of antibiotic residues	Absence of antibiotic residues Not detectable	Each batch of raw milk	Approved test method	Each batch	Trained QC Staff or other designated trained staff	Test results	Reject affected batch Follow rejection procedures Inform site management Report to appropriate local authority Sample before next collection Disposal of affected batch as per legislation and industry guidelines	Record actions Verification of farm Incident report/reject forms

Appendix A - Supporting documentation

Standard Operating Procedures

1. Drivers Handbook – Milk collection and customer delivery procedures.
2. Hauliers Manual.
3. CIP code of practice for milk tankers.
4. Animal By-Products procedures.
5. Crisis management procedures.

Relevant UK & EU Legislation and relevant guidelines

1. FSA MAP Strategy.
2. Regulation (EC) No 852/2004 on the hygiene of foodstuffs.
3. Regulation (EC) No 853/2004 laying down specific rules for food of animal origin.
4. Regulation (EC) No 854/2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption.
5. Regulations (EC) No: 2073/2005 on Microbiological Criteria For Foodstuffs.
6. Regulation (EC) No: 2074/2005 laying down implementing measures for certain products.
7. Council Directive (EC) No 96/23/EC on measure to monitor certain substances and residues there of in live animals and animal products.
8. The Veterinary Medicines Regulations 2008 (SI 2297)
9. Regulation (EC) No: 2377/90 laying down specific rules for maximum residue limits of veterinary medicinal products in foodstuffs of animal origin.
10. 1990 Food Safety Act. (EC 178/2002)
11. Animal By-Products Regulation 2005 – (SI No: 2347/2005)
12. Regulation (EC) 79/2005 Laying down health rules concerning animal by products not intended for human consumption, defined as category 3 material.
13. Regulation (EC) 829/2007 amending Annexes I, II, VII, VIII, X and XI to (EC) 1774/2002 as regards the placing on the market of certain animal by-products.
14. Regulation (EC) 437/2008 laying down the requirements for the processing of milk and milk products defined as category 3 material.
15. Regulation (EC) No: 1881/2006 setting maximum levels for certain maximum levels for certain contaminants in foodstuffs. (Nitrates, Mycotoxins, Metals, Dioxins)
    + amendments (EC) No: 1126/2007, (EC) No: 565/2008, (EC) No: 629/2008
16. Feed Hygiene legislation (EC) 183 / 2005
17. FSA/Dairy UK – Industry Guide to Good Hygiene – Milk and Dairy Products.
18. FSA – Information and guidance on the testing of milk for antibiotic residues (04/ 2009)
19. Codex Alimentarius Commission (Revision 4 - 2003) Recommended International COP – General Principles of Food Hygiene.
20. Bovine TB and the safety of pasteurised milk and milk products, ACM /995
21. Dairy Transport Assurance Scheme (DTAS), revised standard April 2013 V3
22. Dairy UK Tanker Cleaning COP
23. Dairy Transport Assurance Scheme guide to out-based reload sites
24. IDF Guide to Prudent Use of Antimicrobial Agents in Dairy Products
25. Commission Directive 2007/68/EC (ingredients labelling and adverse reaction to susceptible individuals)

Forms

1. Tanker cleaning logbook. (Cleaning verification)
2. Vehicle security form.
3. Route collection summary.
4. Reload/transhipment summary.
5. Traceability.

6. Incident report/rejection forms.
7. Animal by Product (ABP) Paperwork
8. HACCP poster for producers

Appendix B – HACCP review

A HACCP review should be conducted annually to review the need to revise the HACCP plan. This review ensures a critical evaluation of any changes that may affect overall product safety.

The following items are assessed to determine if a review of the HACCP plan is required.

1. Actions arising from audits, nonconformities or complaints.
2. Changes to raw material suppliers.
3. Changes to customer or consumer use.
4. Changes to storage, collection or distribution systems (Farm and haulage).
5. Changes to current testing schedules
6. New or emerging hazards (Microbiological, Physical. Chemical)
7. Developments in scientific information associated with raw milk
8. Changes to legislation or relevant guidelines

Data arising from HACCP reviews should be documented and forms part of the HACCP record keeping system.

No:	Raw Milk HACCP Review Agenda	Changes	
		Yes	No
1	Actions arising from audits, nonconformities or complaints.		✔
2	Changes to raw material suppliers.		✔
3	Changes to customer or consumer use.		✔
4	Changes to storage, collection or distribution systems (Farm and haulage).		✔
5	Changes to current testing schedules.		✔
6	New or emerging hazards (Microbiological, Physical. Chemical).		✔
7	Developments in scientific information associated with raw milk.		✔
8	Changes to legislation or relevant guidelines.	✔	

Comments/Considerations

Melamine incident in China. New Food Safety Law being introduced by the Chinese government with fresh obligations and increased penalties. Effective 01st June 2009.
Mycobacterium Avium Para tuberculosis - no changes since last review.
Dioxins – current surveillance testing schedules under review – sub group formed under Dairy UK with the intention to establish one system for all processors managed through Dairy UK.
New guidance documents developed by the FSA and Dairy UK - Dairy Industry Hygiene Code of Practice – included under supporting documentation.
FSA guidance document revised – Information and guidance on the testing of milk for antibiotic residues (April 2009) – considered as no significant impact to current HACCP study.

HACCP Review Meeting Date	05th May 2009
Team members present at meeting	**Team members reviewed by E-mail**
Peter Dawson	Linda Clow
Tim Hampton	Diana Brydson
David Baxter	Roger Duckett
	Stan Coleman

No:	Raw Milk HACCP Review Agenda	Changes	
		Yes	No
1	Actions arising from audits, nonconformities or complaints.		✔
2	Changes to raw material suppliers.		✔
3	Changes to customer or consumer use.		✔
4	Changes to storage, collection or distribution systems (Farm and haulage).		✔
5	Changes to current testing schedules.		✔
6	New or emerging hazards (Microbiological, Physical. Chemical).		✔
7	Developments in scientific information associated with raw milk.		✔
8	Changes to legislation or relevant guidelines.		✔

Comments/Considerations

Points considered during the review meeting included:

- Proposed reductions of FSA dairy hygiene inspections from annual to ten yearly.
- Recent changes to ABP regulations.
- Dairy Transport Assurance Scheme (DTAS) introduced in 2011.
- Surveillance testing now coordinated through Dairy UK, tested four times a year, increased scope with a wider range of pesticides, better geographical coverage.
- Out-based reload tankers – considered covered under P11.
- Increase in positive TB reactors, the ACMSF confirms that pasteurisation gives an adequate safety margin for the destruction of any Mycobacterium bovis, considered outside of HACCP scope. (ACM/995 Sep 2011)
- Dairy UK working group on Johne's disease.
- Approved Antibiotic testing methods and MRLs.

HACCP Review Meeting Date	29th March 2011
Team members present at meeting	**Team members reviewed by E-mail**
Peter Dawson (Dairy Crest Ltd)	Linda Clow (Arla Foods)
Tim Hampton (Milk Link)	
Diana Brydson (First Milk)	
Roger Duckett (OMSCO)	
David Hay (Gregory's Distribution)	

No:	Raw Milk HACCP Review Agenda	Changes	
		Yes	No
1	Actions arising from audits, nonconformities or complaints.		✔
2	Changes to raw material suppliers.		✔
3	Changes to customer or consumer use.		✔
4	Changes to storage, collection or distribution systems (Farm and haulage).		✔
5	Changes to current testing schedules.		✔
6	New or emerging hazards (Microbiological, Physical. Chemical).		✔
7	Developments in scientific information associated with raw milk.		✔
8	Changes to legislation or relevant guidelines.		✔

Comments/Considerations

Points considered during the review meeting included:

- Implementation of reductions of AHDH farm inspections from annual to ten yearly and transfer of direct responsibility to FSA.
- Pseudomonas as a specific microbiological hazard. Considered not to be significant.
- Noted Cadnium and Mercury not covered in current due diligence program. Raised with Dairy UK for consideration.
- Additional specific physical hazards such as wood and straw were discussed but not considered significant to itemise.
- Dairy Transport Assurance Scheme (DTAS) revised standards.
- Procedures do not include crack testing of tankers, beyond visual inspections. Risk considered low and should not cause an additional hazard not covered elsewhere.
- DTAS compliance added to prerequisites (P1, 2, 5 and 6)
- Consideration given to completed questionnaires from DTAS haulage operators.

HACCP Review Meeting Date	26th April 2012
Team members present at meeting	**DTAS members reviewed by questionnaire**
Janice Owens (Milk Link)	Arla Foods ONE Logistics
Tim Hampton (Milk Link)	Owen Evans Transport
Mike Overfield Collins (Milk Link)	Conway Bailey
Roger Duckett (OMSCO)	Mansel Davies & Son Ltd
David Hay (Gregory's Distribution)	Abbey Logistics Group
	Bibby Distribution
	JS & KM Wilson & Son
	Lloyd Fraser Group
	A J Daries
	Gregory Distribution Ltd
	Turners Transport
	J H Willis Ltd
	G Easton & Son Ltd
	T P Niven Ltd
	Ulpha Dairy Transport Ltd
	S J Bargh Haulage Ltd
	Wm Armstrong (Longtown) Ltd
	Bannatyne Motors

No:	Raw Milk HACCP Review Agenda	Changes	
		Yes	No
1	Actions arising from audits, nonconformities or complaints.	✔	
2	Changes to raw material suppliers.		✔
3	Changes to customer or consumer use.		✔
4	Changes to storage, collection or distribution systems (Farm and haulage).	✔	
5	Changes to current testing schedules.		✔
6	New or emerging hazards (Microbiological, Physical. Chemical).	✔	
7	Developments in scientific information associated with raw milk.		✔
8	Changes to legislation or relevant guidelines.		✔

Comments/Considerations

Points considered during the review meeting included:

- Dairy Transport Assurance Scheme (DTAS) revised standards V3.
- Consideration given to completed questionnaires from DTAS haulage operators.
- Added IDF Guide to Prudent Use of Antimicrobial Agents in Dairy Products to App A
- Authenticity of cows' milk considered following horse meat issue in wider food sector. No food safety risk within dairy sector or impact on HACCP identified
- Q4 – Consideration given to move away from manway lids for sampling and loss of visual inspections on tankers balanced by inspections on farm and CIP procedures. No significant change to risk identified under prerequisites.
- Q1 – Allergens from cross contamination of non dairy liquid food products on tankers considered. Noted current DTAS standards to manage risk and recommend more specific limitations on foods carried and controls needed. Official allergen list added to Appendix A and Allergen listed as hazard (table 1). Low risk covered under pre-requisites.
- Issue of Dicyandiamide (DCD) used to reduce nitrate leaching in soil and residues into food report from New Zealand was considered. Has low toxicity, no MRL and residues not found in UK, application method in the UK is also different. No hazard risk identified.
- Q6 – National surveillance scheme identified substances used in flukicides in milk. Liver Fluke prevalence in Dairy Cattle is on the rise in the UK and no products currently licensed in the UK for treatment in lactating dairy cattle. VMD have placed an interim MRL on the active ingredients and issued position on use. Currently not included in quality control, quality assurance or due diligence systems by the dairy sector. Recommend risk analysis undertaken through Dairy UK and then incorporated into HACCP. Listed in table 1 as a low risk hazard covered under pre-requisites to be consider after risk assessment or at next HACCP review..

HACCP Review Meeting Date	9th April 2013
Team members present at meeting	**DTAS members reviewed by questionnaire**
Chris Coggins (Yeo Valley)	Arla Foods Logistics, Helers, Caledonian,
Tim Hampton (Arla Foods)	Conway Bailey, Mansel Davies & Son Ltd
David Hay (Gregory's Distribution)	Bannatyne Motors, S J Bargh Haulage Ltd,
Edwina Maclaine (Arla Foods)*	Lloyd Fraser Group, A J Daries, J H Willis Ltd,
	Gregory Distribution Ltd, Turners Transport,
*Via email	G Easton & Son Ltd, T P Niven Ltd,
	Ulpha Dairy Transport Ltd, Bibby Distribution Ltd