Accident Management Plan

Wyke Farms Ltd
Bruton Site

Version 8 reviewed by James Barwick – addition of electric and gas shut off valves 23/02/21, addition of reference to EN3.30 Management of Liquid Waste Bruton Contingency Plan and complete review of Emergency Procedures section and re-ordering of sections.
Version 7 reviewed by James Barwick – alteration of AMP regarding site changes, emergency contingencies and site monitoring 13/01/20
Version 6 reviewed by Nigel Pritchard and James Barwick – general details update and review of whole AMP 10/05/19
Version 5 reviewed by Nigel Pritchard 15/03/17 bulk storage amendments and staff details
Version 4 reviewed by David Rowswell 02/10/14.
Amended site drainage plans and staff details.
Version 3 Verified for EA by Penny Gadd 23/09/13. Report Id BQ1824IV/0189519.

Contents

1 Accident Management Plan – Summary Information Sheet

Site Name: Wyke Farmhouse, Bruton, Somerset, BA10 0PU	**Operator:** Wyke Farms Ltd

SITE LOCATION DETAILS	
Unit Phone No – Main Reception	01749 812424
Mobile Contact – Greg Conway	07740 895792
Grid Reference	ST 6640 3470

EMERGENCY CONTACT DETAILS	
Engineers – Shift Engineer	07714 227458
Production Manager – Greg Conway	07740 895792
Assistant Production Manager – David Rowswell	07714227445
Maintenance Manager – Max Carson	07703194405
Health and Safety Manager – Nigel Pritchard	07398 187215
Site Technical Manager – Janine Conway	07734 558903
Renewable Energy Manager – Piers Griffith-Jones	07964 906206
Engineering Manager – Rich Gould	07718 801453
Renewable Energy Technical Manager – James Barwick	07710 094789
Production Director – Tom Clothier	07714 227443
Emergency Services	999
Local Police	0845 856700
Doctor	01749 812310
Environment Agency hotline	0800 80 70 60
Environment Agency Local Office	01278 484717
Environment Agency Officer – Lee Williams	020302 51527

SERVICES	**OFFICE HOURS**	**OUT OF HOURS EMERGENCY**
Electrical supplier (E.ON Energy)	02476 42 42 42	105
Gas Supplier (Barrow Shipping Ltd)	01242 604691/07785503796	07768 456604
Local Authority (SSDC)	01935 462462	
Oil Supplier (Ford Fuels)	01761 452222	
Water (Wessex Water)	0345 6004600	0345 6004600
Viridor Solid Waste Management	01823 324088 / 07789966619	01823 324088 / 07789966619
Viridor Liquid Waste Management	07766107758 / 07798702448	07766107758 / 07798702448
Gilder Environmental	07392 090193 / 01242 509790 / 01242 620137	07392 090193
Brenntag Chemical Supplier	01275 844518	07824 348281
Zenith	01942 722000	07590 182 930
Aqua Treat Chemical Supplier	01554 775236	07799 400772
Christeyns Chemical Supplier	01925 234696	07738 457 594
Perry's Recycling Waste	01935 850111 01278 459995	07779 249510
Grist Environmental (Hazardous Waste)	01380 730411 / 01380 735061	07826915983
Yellowstone Environmental (Hazardous Waste Disposal including Interceptor Waste)	01747 858561 / 07809205630	01747 858561
Qualitech Environmental Services (Hazardous Waste, Chemical Disposal, Tank Cleaning)	01942 277277 / 01633 252 642 / 01429 279831	01942 277277
Andrew Sykes (Pump Hire) (Normally GP100M)	07976088230/ 07976088067/ 0800 211 611	07976088230/ 07976088067/ 0800 211 611

COMPANY CONTACT OUT OF HOURS	
Site Engineer	07714 227458 (Shift Engineer)
Production Manager	07740 895792 Greg Conway
Assistant Production Manager	07714227445 David Rowswell
Maintenance Manger	07703194405 Max Carson
Site Technical Manager	07734 558903 Janine Conway
Stores and Yard Manager	07710 094 787 Danny Bennett
Renewable Energy Manager	07964 906206 Piers Griffith-Jones
Dairy Supervisor	07885 967 017 Chris Hart
Pasteuriser Team Leader	07739 950 984 Marcus Jones
Butter Dairy Manager	07714 227 451 Leigh Vinnell
Evaporator Team Leader	07714 227 440 Gary Lumber
*Assistant Head Cheesemaker	07398 187 216 Daniel Botezatu
Engineering Manager	07718 801453 Richard Gould
Engineering Director	07703 131409 Jason Fewell
Farm Director	07714 227469 Roger Clothier
Production Director	07714 227443 Tom Clothier
Farm Director	07714 227444 David Clothier
Technical Director	07703187808 Diane Cox
Renewable Energy Technical Manager	07710094789 James Barwick
Health and Safety Manager	07398 187215 Nigel Pritchard
Effluent / AD Plant Operatives	07530 599988 P Dyer/ 07703187724 D Howell/ 07507 967732 G Mattravers

2 Accident Management Plan

2.1 Purpose

The purpose of the Accident Management Plan is to:
• Identify the events or failures that could cause damage to the environment
• Assess the likelihood of occurrence and the potential environmental consequences; and
• Take steps to minimise both the potential cause and the consequences of accidents.
• Identify how to minimise the consequences should accidents occur.

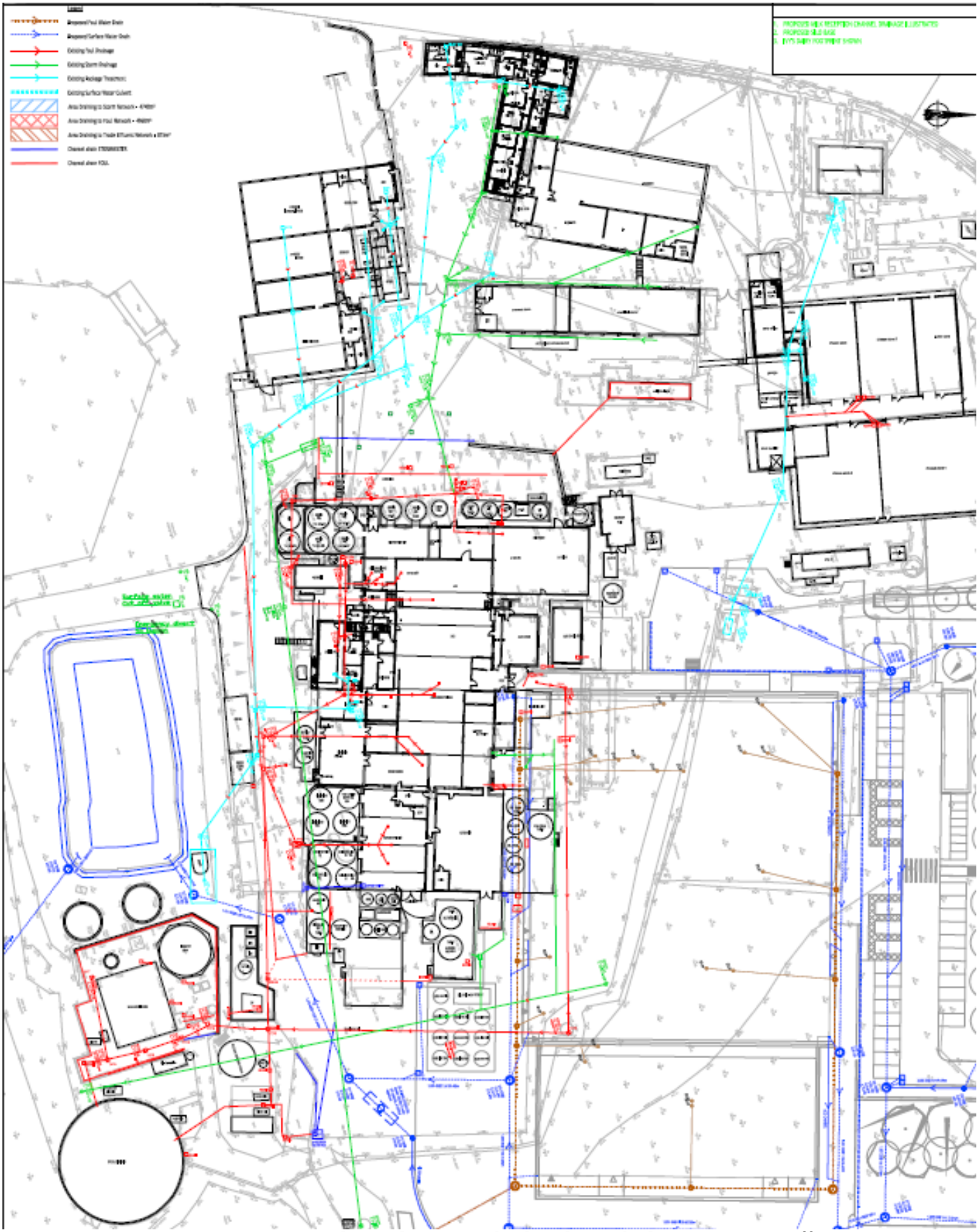
2.2 Scope

This procedure covers all major spillages occurring at Wyke Farmhouse Cheese Dairy.
This accident management plan contains the following information:
• Accident management site plan
• Inventory of tanks and stores
• Inventory of raw materials
• Emergency procedures:
• Immediate actions
• Secondary actions – depending on type of accident

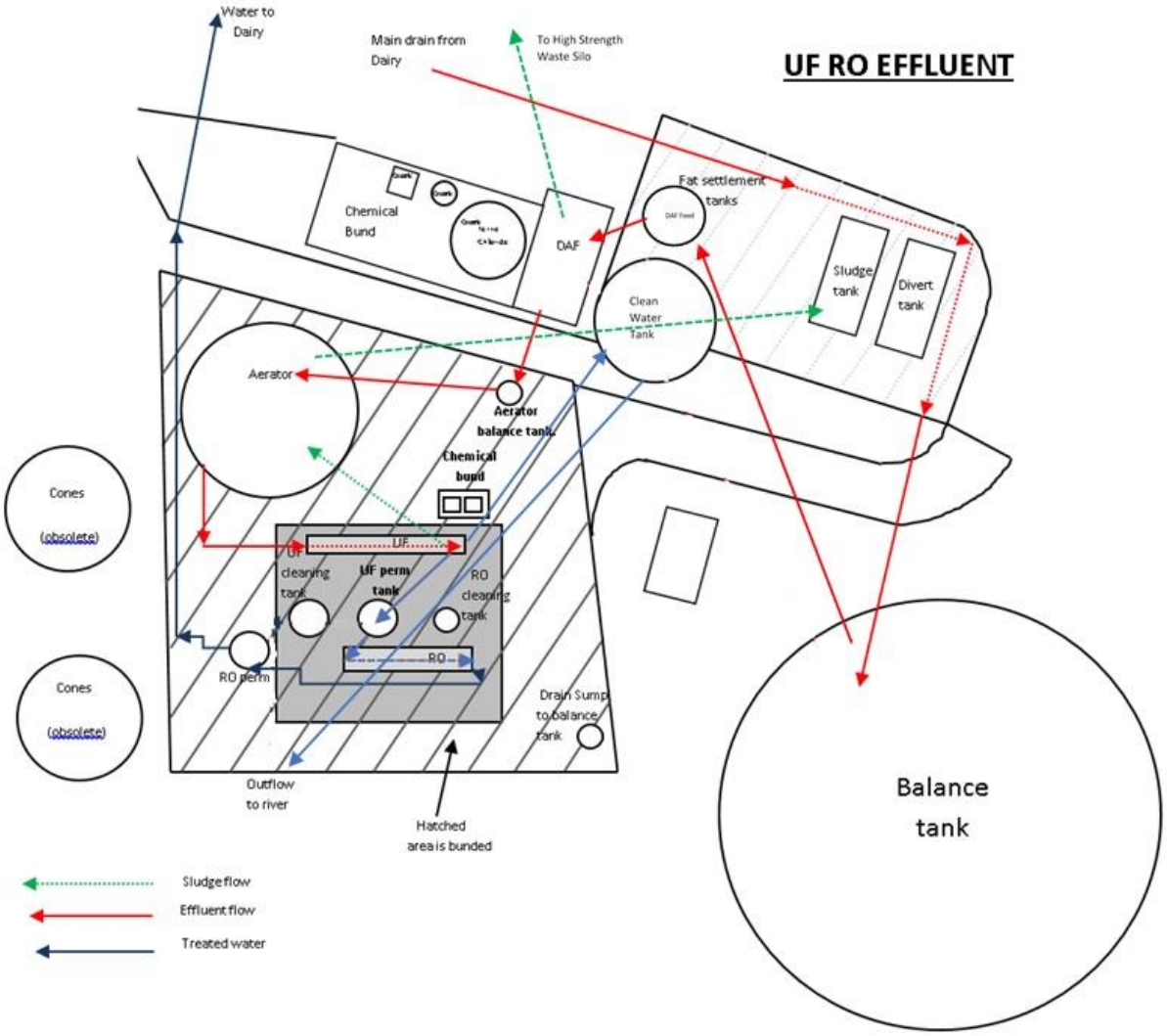
2.3 Site Plan (see page 5)

The accident management site plan includes information of relevance for dealing with accidents that may pose a risk of environmental pollution and pin points the location of key equipment.
This includes:
• Site Drainage details
• Fire hydrant (recovered water and soft water silos)
• Main electrical supply isolator
• Gas supply isolators
• Divert valves
• Ponds, tanks etc containing water for fire fighting
• Storage areas e.g. chemicals, fuel
• Drain inlets vulnerable to contamination
• Spill kits or emergency materials e.g. sand bags
• Vulnerable locations such as product silos

• Potentially sensitive areas of porous or unmade ground



Version Nov 2020 - A clearer drawing is displayed outside the Engineering Office.


UF RO EFFLUENT
Water to Dairy
Main drain from Dairy
To High Strength Waste Silo
Chemical Bund
DAF
Fat settlement tanks
Sludge tank
Divert tank
Clean Water Tank
Aerator
Aerator balance tank
Chemical bund
Cones (obsolete)
UF
UF cleaning tank
UF perm tank
RO cleaning tank
RO
RO perm
Cones (obsolete)
Drain Sump to balance tank
Outflow to river
Hatched area is bunded
Balance tank
Sludge flow
Effluent flow
Treated water

2.4 Electric and Gas Shut off Valves

For detail see procedure EG4.11 ISOLATING MAINS ELECTRIC AND GAS TO SITE. This are only to be operated by engineering, management or if you are instructed by management.

Gas Shut off valve

Location: behind gas building/behind the generator switch room/to the left of the boiler house

Turn the valve clockwise to shut off the gas supply to Bruton Site.

Electric Shut off

Location: inside the generator switch room indicated on the panel with a red label

Lift the plastic screen and push the red button to shut off the electric to Bruton Site.

Turn off the back up generator otherwise this will start when the electric is shut off.

2.5 General Liquid Spillage Procedure (There is further detail in Section 2.6.2)

1. Once a spill has been witnessed:
   Shut (by pushing down) the surface water valve (blue) at the rear of site (behind Evaporator Department) if the spillage concerns this area of yard.

   Check to make sure a perfect seal is created by the valve (the drain fills up) if not then try shutting again or inflate a drain balloon in the inlet pipe to the valve.

   If the spillage occurs near blue drainage at Milk Reception, or any other blue drainage, then use clay mats in the yellow spill kit bins, drain balloons to block off blue drainage by lifting manhole drain covers and sandbags to divert away from blue drainage.

   Absorbent granules are to be used on any fuel oil spillage.

   Sandbags are kept onsite and can be used direct the flow of liquid or block off any areas. The forklift drivers can pick these up from the Tractor Drivers Rest Room.
   *The Emergency Spill Kit Store in front of Milk Reception contains extra spill kit supplies that you will also find in Yellow Spill Kit Bins.

2. If possible, without endangering yourself, stem source from the offending vessel or area.

3. Assess the route of discharge. Contain the spillage in any way possible from entering blue surface water drains and leaving site.
   Contact engineering to pump out any blue drains to red drainage.

4. In the case of any major spillage of any product, chemical, fuel, oil or effluent contact the department operators concerned and the engineers first to get the situation under control by making sure the previous steps have been completed.

Department	Number
Engineering	144 or 07714 227 458
Evaporator	152 or 01749 814717
Butter Dairy	136 or 01749 814716
Milk Reception	145 or 01749 814718
Cheese Dairy	188
Effluent Plant	175 or 01749 814720
Yard	155 or 07793 306 932

5. Contact the nearest manager/department leader to raise the alarm who will inform the rest of the management team.

Department Leader	Number
Gary Lumber (Evaporator)	07714 227 440
Leigh Vinnell (Butter Dairy)	07714 227 451
Marcus Jones (Milk Reception)	07739 950 984
*Daniel Botezatu (Cheese Dairy)	07398 187 216
Piers Griffith-Jones (Effluent)	07964 906 206
Danny Bennett (Stores and Yard)	07710 094 787

Any other emergency contact numbers for managers are displayed in Dairy Reception or see company out of hours contact on page 3.

6. Establish pollutant type. If pollutant is dairy products or effluent, pump to adjacent emergency lagoon or balance tank. If pollution is oil based or chemical based, collect in a vacuum tanker and transfer to a suitable vessel. Arrange collection with an authorised collector of oil / chemical waste
7. Inform the Green Team to monitor water course for any signs of pollution. Take water samples and test immediately.
8. Notify a senior manager who will contact the Environment Agency
9. Department concerned must fill in a problem report *and spillage report. Management will

carry out an internal investigation and complete a root, cause, analysis report. The Accident Management Plan, and management system will need to be reviewed as a result of learnings from incidents.

2.6 Emergency Procedures

2.6.1 Summary of Immediate Actions

Depending on the emergency,
• Where human safety is concerned take no risks.
• *Isolate/stop any leaks if appropriate
• *Close Surface Water shut off valves if necessary
• Raise alarm to personnel onsite including management
• If necessary, contact emergency services
• Extinguish all naked flames if necessary
• Obtain help from other members of staff nearby.
• In all cases wear and use appropriate Personal Protective Equipment.
• Do not enter tanks or confined spaces unless trained in correct procedures and not before all procedures have been satisfied.
• Senior Management must immediately contact the Environment Agency

2.6.2 CRISIS MANAGEMENT PLAN

In the event of a major spillage the following managers will assume the following responsibilities:
Follow appropriate procedures for type of accident as described in the following table:

Accident Type	**Anticipated Consequences**	**Actions to be taken (listed in order of priority)**
1. **Overflow or failure of**: • Product tanks • Chemical tanks / IBC • Lagoon • Drains • Fuel tank Failure of pipework or controls Chemical Spillage. Spillages during loading, unloading or internal transport operations. Failure of automatic liquid level control sensors and devices. Rupture of pipes. Surface water flooding from adjacent land/nearby watercourse. Off-site pollutants at risk of entering site	Potentially polluting liquids flow over yard to: • Surface water drain • Surrounding land	***Follow Work Instruction G4.010 Control Of Any Major Liquid Spillages To The Environment** Which includes: • Assessing the pollutant type and if possible and safe to do so, stem source of liquid flow. • Assess route of discharge and identify easiest method and location to prevent further discharge. Close off or block liquid entering blue surface water drains • Contact Engineers, Department Team Leaders, Production Manager, Assistant Production Manager, Site Technical Manager, Renewable Energy Technical Manger and *Health and Safety Manager (note; this may be whilst any of the above is being carried out.) • Consult product data sheets (COSHH) if appropriate. • If possible, stop further additions to tank. • Engineers/Management - In the event of a fuel spill, if safe to do so and appropriate, turn off electricity/fuel supplies. • Use vacuum tanker or pump to clean up spillage and dispose of safely by, placing in another appropriate storage vessel. Contact either Roger Clothier (07714227469) or Ade Wiltshire (07714227453) or Bert Vincent (07846187625). Management - If spill is hazardous, contact Yellowstone Environmental or Grist Environmental, details can be found in section 1.

Contaminated surface water from fire fighting or other emergency equipment		• Reduce tank contents to a safe level. • Engineers - Make temporary repairs if appropriate. • Clean up yard/land/watercourse/contaminated areas. • Senior Management - Immediately inform the Environment Agency. This is to be handled by one of the following personnel: James Barwick, Tom Clothier, Greg Conway, or any other deputising senior manager. • Green Team and Management - Drive to outflow to river to monitor outflow. Sample and test. • Segregate and dispose of contaminated materials safely. • Management - * Contact Viridor Liquid Waste, Gilder Environmental or Grist Environmental (Hazardous) or Yellowstone Environmental (Hazardous) if liquid needs removing from site in an emergency. Contact details in Part 1 Services. • Management - * Contact Andrew Sykes Pumps if liquid needs pumping. Standard pump hired previously is a GP 100M General Purpose Pump. Contact details in Part 1 Services. • Management - oversee control of clean-up operation. Liaise with and assess the type of spill and assess any H&S implications with Health and Safety Manager. Management Review • Submit a Schedule 1 Notification to the Environment Agency within 24 hours of the incident. • Assess cause and take action to prevent repeat. • Record incident, measures taken and to be taken.
2.Power Outage • Failure of milk processing systems resulting in tank overflow. • Failure of automatic liquid level controls and sensors.	Overflow of storage facilities	• As above – See section 1 • Engineering - Start emergency generator for essential electric supplies if necessary and if it hasn't already started automatically.

Accident Type	**Anticipated Consequences**	**Actions to be taken (listed in order of priority)**
3.Fire • Fuels & Oils • Chemicals	Spreading between buildings and stores	• Raise alarm to personnel onsite including management and activating the fire alarm • Ensure all persons are evacuated from the danger area *and assemble at fire assembly point.

• Buildings • Wood (boxes/pallets) • Electrical equipment	Toxic and polluting smoke Wind dispersion of pollutants Surface runoff from fire fighting water Surface run-off from failed tanks, stores or pipework Exploding gas and fuel canisters /containers Dust and fibres from sheet building materials	• Engineers/Management - If safe to do so, turn off electricity/fuel/Gas supplies. *Bear in mind the emergency generator will start when the electric supply is turned off so follow EG4.11 ISOLATING MAINS ELECTRIC AND GAS TO SITE. • Call fire brigade and other emergency services if necessary. • Contact Engineers and Management including: Production Manager, Assistant Production Manager and Health and Safety Manager. • Close all surface water shut off valves. Ensure firefighting water and other liquids cannot cause pollution. • Engineers/Management - Firefighting water needs to be contained and diverted to appropriate storage tank for storage assessment and correct disposal. If diverted to the effluent Concrete Ring the Green Team need to be informed due to the affect on the effluent treatment process. • Senior Management - Immediately inform the Environment Agency. This is to be handled by one of the following personnel: James Barwick, Tom Clothier, Greg Conway, or any other deputising senior manager. • Post member of staff at entrance to direct emergency services. • Liaise and follow instructions of emergency services making them aware of the risks and hazards and provide a copy of the Accident Management Plan. • Consult Product data sheets (COSHH) if appropriate. • Do not enter or permit others to enter affected area unless it is safe to do so to evacuate persons. • Management - oversee control of clean-up operation. Liaise with and assess the type of spill and assess any H&S implications with Health and Safety Manager. • Engineers - Make any temporary repairs if appropriate. • Clean up any materials that may be a hazard to the environment – where materials containing asbestos are identified specialist services are to be employed. • Green Team and Management – If appropriate, drive to outflow to river to monitor outflow. Sample and test. • Segregate and dispose of contaminated materials safely. Management Review • Submit a Schedule 1 Notification to the Environment Agency within 24 hours of the incident. • Assess cause and take action to prevent repeat. • Record incident, measures taken and to be taken.

Fire risk assessments have been done for all areas.
Stocks of combustible materials are kept to a minimum in the factory, only being brought in as needed.
Packaging materials are kept in the dry goods store and limited to 46 pallet footprints.
There is a firebreak around chemical store office and factory of at least 4 meters and larger around the offices that are occupied from 8AM to 6PM Monday to Friday.
No materials are stored directly against the site boundary.
We have considered sprinklers for the cheese dairy but the cost was prohibitive.
The fire service has been contacted and has agreed to our fire prevention and fire water management and containment measures.
They will also do their own risk assessment to control water further to ours in the event of a fire.
***The fire service has visited site and identified hazardous areas and accessibility around site should local crews need to attend and should they need to use a high reach platform.**
***In the event of a fire, if more water is needed then this is to be taken from the Soft Water/Recovered Water Silo.**
Fire fighting media is adequate and is checked 6 monthly by external contractor.
Combustible materials are kept clear from strong oxidising such as Nitric acid.

Accident Type	Anticipated Consequences	Actions to be taken (listed in order of priority)
4. Severe Weather • Flooding • Wind Damage	• Overflow of storage facilities • Power Outage • Fire	• As above – see 1 • Start emergency generator • As above – see 2 • As above – see 3
5. Delivery storage and use of bulk chemicals •Surface run-off from failed tanks, stores or pipework • Rupture of pipes. • Delivery of chemicals into wrong tank causing thermal reaction	Failure of delivery tanker, pipeline, storage tank or containment leading to a large spillage of chemicals.	• Driver and supervisor will wear appropriate PPE. •Take no risks when dealing with chemicals. Do the measures below only if they can be done safely, leave the area, form a cordon to stop anyone getting near and raise the alarm to personnel onsite and management. • Shut off delivery pump on tanker and close valves • If possible, stem source of liquid. • Assess route of discharge and identify easiest method and divert if possible, to prevent further discharge. If spillage cannot be contained in tank divert to effluent and allow chemical to collect in lagoon for later disposal by competent contractor, i.e. Viridor waste management. Inform the Green Team and Management of this immediately. • Contact Engineers, Department Team Leaders, Production Manager, Assistant Production Manager, Site Technical Manager, Renewable Energy Technical Manger and Health and Safety Manager • Consult product data sheets (COSHH) if Appropriate. • Senior Management - Immediately inform the Environment Agency. This is to be handled by one of the following personnel: James Barwick, Tom Clothier, Greg Conway, or any other deputising senior manager. • Reduce tank contents to a safe level. • Engineers - Make temporary repairs if appropriate.

		• Green Team and Management - Drive to outflow to river to monitor outflow. Sample and test. • Clean up yard/land/watercourse/ contaminated areas. • Segregate and dispose of contaminated materials safely. Management Review • Submit a Schedule 1 Notification to the Environment Agency within 24 hours of the incident. • Assess cause and take action to prevent repeat. • Record incident, measures taken and to be taken. Ref WI EN3.12 unloading bulk tankers EN risk Delivery of bulk chemicals to tanks Risk assess Delivery of bulk chemicals to tanks.
Accident Type	**Anticipated Consequences**	**Actions to be taken (listed in order of priority**
6.Effluent Treatment Plant loss of air due to aerator failure.	Death of treatment micro flora in aerator tank if left without aeration for more than 8 hours.	• If DO goes below minimum setpoint, alarm will activate on Scada. • Operative *and engineering will pick up alarm and investigate reason for change in DO. • System has 2 pumps. 1 duty and 1 standby. • If fault is with air system get engineer to investigate. • If problems cannot be resolved, call Piers Griffith-Jones / Rich Gould / Jason Fewell /*Max Carson. • Engineering – If the air system is down for more than 8 hours hire in air compressor with sparge pipes to keep aeration tank mixed. • Green Team – continue to test and monitor UF and RO water quality. If any signs of going out of spec, then shut down. • If dissolved oxygen is not maintained in the Bioreactor due to the aeration not being fixed, then the effluent plant will need to be manually shutdown. • There will be no outflow to the UF, RO or river as system if the system has been shutdown. Greg Conway, David Rowswell, Chris Hart and all dairy management need to be informed immediately to review production runs. • Management - Submit a Schedule 1 Notification to the Environment Agency within 24 hours of the incident. **For more detailed actions, the EN3.30 Management of Liquid Waste Bruton Contingency Plan Procedure needs to be enacted.** • Management - Concrete balance tank has capacity for approx. 2 days' worth of effluent capacity, depending on level. If necessary, stop production for long enough to allow ETP to be return to normal. • Management - Contact Viridor Liquid Waste or Gilder Environmental if effluent needs to be hauled off-site for treatment. • Management - Contact Andrew Sykes Pumps if a pump needs hiring.
7.Effluent Treatment Plant loss of air in aerator tank due to product or chemical spillage.	Death of treatment micro flora in aerator tank.	• Inflow turbidity meter will divert turbid material to high strength waste silo. *Meter has feedback to SCADA to show trend of effluent turbidity. • If a chemical or product leak is detected raise alarm to personnel around site including management and look for source of contamination. • Call Piers Griffith-Jones / Green Team / Rich Gould / Jason Fewell / Greg Conway / David Rowswell / Chris Hart

		• DAF has acid and alkali pH correction so it can help neutralise any pH changes from chemicals • Inflow to aerator is monitored for pH and DO. If a change is detected outside the normal parameters, the plant will alarm to Scada. • Green Team/Management - If the DAF and Bioreactor can't cope with the treatment then shutdown and if possible consider diluting effluent in the concrete ring under management instruction. • Green Team - Test pH, suspended solids, ammonia and COD etc. throughout the process to decide how far contamination goes. • Management - If contaminated with chemicals liquor must be disposed of by Waste contractor i.e. Viridor or Gilder Environmental. • If the effluent plant has been shutdown Greg Conway, David Rowswell, Chris Hart and all dairy management need to be informed immediately to review production runs and look at enacting EN3.30. • **For more detailed actions, the EN3.30 Management of Liquid Waste Bruton Contingency Plan Procedure needs to be enacted.** • Management – if necessary, stop production for long enough to allow ETP to be cleared of contaminated material. • Management - Once system is clear of contamination if necessary, reseed the system. Contact Tom and Roger Clothier to ask tractor tankers over to Barbers to collect activated sludge from their system or Muller's site at Severnside. • Green Team – when instructed by management. Allow effluent into the system again carefully monitoring the activity in the aerator tank.
Accident Type	**Anticipated Consequences**	**Actions to be taken (listed in order of priority**
***8. Effluent Treatment Plant treated effluent water quality exceeding permitted limits**	Pollution of watercourse	Manual Testing • If V-notch water is tested and found to be above discharge consent limits – firstly re-test. • If still found to be over limits, sample and test at all other points in the process to find out where the issue is occurring • If possible, isolate and fix the issue. If a serious issue where the problem cannot be easily resolved, then the effluent plant must be shutdown. • **For more detailed actions, the EN3.30 Management of Liquid Waste Bruton Contingency Plan Procedure needs to be enacted.** • Contact management including Piers Griffith-Jones, Tom Clothier, James Barwick, Jason Fewell, Rich Gould, Roger Clothier, Greg Conway • If the effluent plant has been shut down, Greg Conway, David Rowswell, Chris Hart and all dairy management need to be informed immediately to review production runs • Management - If not able to be fixed immediately or if the plant has to run at a reduced flow rate if a problem isolated, consider the need to start any emergency contingency measures such as contacting Viridor Liquid Waste or Gilder Environmental if effluent needs to be hauled off-site for treatment. • Senior Management - Immediately inform the Environment Agency. This is to be handled by one of the following personnel: James Barwick, Tom Clothier, Greg Conway, or any other deputising senior manager. Management Review • Submit a Schedule 1 Notification to the Environment Agency within 24 hours of the incident. • Assess cause and take action to prevent repeat. • Record incident, measures taken and to be taken. *Automated Measuring

		• In the event of the modulation valve at the outlet of the Water Storage Tank shutting this is indicating that discharge has reached the consent limits • This needs to be checked against other the other plant flowmeters to see if there are any issues • If the modulation valve has closed correctly then the plant will eventually shut down when the level in the water storage tank reaches high level. If the modulation valve does not open, then all liquid will be sent to the concrete ring balance tank, so the level needs to be monitored closely. If consent was reached for the day the valve wont, then open until 0:00 the next day. If volumes are not able to be delt with then the EN3.30 Management of Liquid Waste Bruton Contingency Plan Procedure needs to be enacted. • **For more detailed actions, the EN3.30 Management of Liquid Waste Bruton Contingency Plan Procedure needs to be enacted.** • If not possible, contact management including Piers Griffith-Jones, Tom Clothier, James Barwick, Jason Fewell, Rich Gould, Roger Clothier, Greg Conway • If the effluent plant has been shut down, Greg Conway, David Rowswell, Chris Hart and all dairy management need to be informed immediately to review production runs • Management - Consider the need to start any emergency contingency measures such as contacting Viridor Liquid Waste or Gilder Environmental if effluent needs to be hauled off-site for treatment. • Senior Management - Immediately inform the Environment Agency. This is to be handled by one of the following personnel: James Barwick, Tom Clothier, Greg Conway, or any other deputising senior manager. Management Review • Submit a Schedule 1 Notification to the Environment Agency within 24 hours of the incident. • Assess cause and take action to prevent repeat. • Record incident, measures taken and to be taken.

2.7 Recording Incidents

All incidents that have caused or could result in environmental pollution are recorded on a Problem Report and if relevant a spillage report. *The Environment Agency need to be informed of incidents immediately and a Schedule 1 Notification submitted within 24 hours.

2.8 Inventory of tanks and stores

Tank No	Contents	Capacity (litres)	Location	Construction Materials	Level Measurement	Insulation/ Comments	Venting consideration
RCW2	Recovered Water	*227,000	East of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile.
SW1	Softened Water	*180,000	East of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
RCW1	Recovered Water	70,000	Rear of Boiler House	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
RPTNK 002	MPG	4,000	Yard Outside butter room	Steel/plastic	Level sensor	Insulated	Tank covered
RPTNK 001	MPG	4,000	Yard areas adjacent to boiler house	S/Steel	Level sensor	Insulated	Tank covered
RPTNK 003	MPG	11,000	East end of evaporator	Steel/plastic	Level sensor	Insulated	Tank covered
SS	Salt Saturator	25,000	Yard areas adjacent to main building	Steel/plastic	visual	Bunded	N/A
Boiler fuel	Boiler Oil Standby	9000	Yard front of boiler house	Plastic	Head gauge	Bunded	Tank vented Contents not volatile
BULK CIP 1	Caustic soda	25,000	Yard front of Boiler house	Stainless steel Double skinned	Pressure	Bunded	Tank vented

Tank No	Contents	Capacity (litres)	Location	Construction Materials	Level Measurement	Insulation/ Comments	Venting consideration
CIP 2	Caustic soda	20,000	Yard front of Boiler house	Stainless steel Double skinned	Pressure	Bunded	Tank vented Contents not volatile
CIP 2	Phosphoric and nitric acid solution	12000	Yard front of Boiler house	Stainless steel Double skinned	Pressure	Bunded	Tank vented Contents not volatile
T28	Rinse water from pasteuriser Dept'	20000	Outside dairy Reception.	Stainless steel			Tank vented Contents not volatile
SILO 1&2	Raw Milk	2 x 68,000	SW part of main building	Stainless steel	Pressure		Tank vented Contents not volatile
SILO3,4	Raw Milk	2 x 136,000	SW part of main building	Stainless Steel	Pressure	Insulated & clad	
SILO 5,6, 7 & 8	Raw Milk	4 x 180,000	SW part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
L1 L3	Skim Milk	2 x 180,000 ***(L3 to change to 1 x 160000 in 2021)**	S part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
L4	Whey	1 x 160,000	S part of Main building	Stainless steel	Pressure	Insulated & clad	
C1,2,3,4.	Skim Concentrate	2 x 96,000 2x 160000 ***(to change to 3 x 130000 and 1 x 160000 in 2021)**	S part of Main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
RWS	Whey	1 x 68,000 ***(to change to 1 x 160000 in 2021)**	S part of main building	Stainless Steel	Pressure	Insulated & clad	Tank vented Contents not volatile
WBT	Whey buffer tank	1 x 20,000	S part of main building	Stainless Steel	Pressure	Insulated & clad	Tank vented Contents not volatile

S216	Pre UF buffer	1 x 10,000	S part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
VO1	*Buttermilk	1 x 30,000	SW part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile

Tank No	**Contents**	**Capacity (litres)**	**Location**	**Construction Materials**	**Level Measurement**	**Insulation/ Comments**	**Venting consideration**
T 1 2 3 4	Starter	2 x 3,000 2 x 1,000	N part of main building	Stainless steel		Double skinned	Tank vented Contents not volatile
CT1,2,3	Cream	3 x 25,000	W part of main building	Stainless steel	Level probe	Insulated & clad	Tank vented Contents not volatile
Cream Tank 2,3,5	Cream	3 x 25,000 ***(C5 to change to 1 x 30000 in 2021)**	N part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
Cream Tank 6 and 7	Cream	1 x 30,000	N part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
Cream tank 9	Cream	1 x 9,000	N part of main building	Stainless steel	Pressure	Insulated	Tank vented Contents not volatile
Disposal Silo	Permeate	1 x 180,000	S part of main building	Stainless steel	Volumetric Level sensor	Insulated & clad	Tank vented Contents not volatile
T4	Buttermilk	1 x 68,000	N part of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
RAW CIP	Detergents & Water	4 x 3,000	W part of main building	Stainless steel	Level probe	Insulated	Tank vented Contents not volatile
MAIN CIP	Detergents & water	3 x 5,500	W part of main building	Stainless steel	Level probe	Insulated	Tank vented Contents not volatile
EV1	Evaporator caustic	1 x 9,000	SE part of main building	Stainless steel	Pressure	Insulated	Tank vented Contents not volatile
EV2	Nitric acid	1 x 9,000	SE part of main building	Stainless steel	Pressure	Insulated	Tank vented Contents not volatile at normal concentrations

EV3	Salt whey	1 x 9,000	SE part of main building	Stainless steel	Pressure	Insulated	Tank vented Contents not volatile
Lagoon/ Pond	Rain water.	1848CuM	South side of building	Excavated, lined with butyl liner.			Tank open to air

Tank No	**Contents**	**Capacity (litres)**	**Location**	**Construction Materials**	**Level Measurement**	**Insulation/ Comments**	**Venting consideration**
BUTTER CIP	Product recovery Detergent & water	2 x ,4500 1 x 2,000 3 x 1,200	N part of main building	Stainless steel	Level probe	Insulated	Tank vented Contents not volatile
WPC 1 &2	Whey Protein	2 x 53,000	Yard, S of main building	Stainless steel	Pressure	Insulated & clad	Tank vented Contents not volatile
SLUDGE	Sludge	1 x 58,000	ETP	Steel	Visual marker		Tank vented Contents not volatile
PERMASTORE (Clean Water Pre-V-notch)	Treated water	1 x 186,000	ETP	Glass coated steel	Volumetric Level sensor		Tank open to air
*DIVERT TANK	Crude Effluent	1 x 60,000	ETP	Stainless steel	Level probe	Water jacket but not used	Tank vented Contents not volatile
DAF CELL	Effluent	1 x 22,000	ETP	Stainless steel	Level Probe		Tank open to air
BULK COAGULANT	*PAC(Poly Aluminium Chloride)	1 x 30,000	ETP	Plastic	Volumetric meter		Tank vented Contents not volatile.
ETP Concrete Balance tank	Crude Effluent	1 x 2,000,000	ETP	Concrete	Level probes		Tank open to air (is covered)
ETP CONES	Activated sludge	2 x 40,000	ETP	OUT OF USE			
ETP AERATION TANK	Activated sludge	1 x 540000	ETP	Glass lined steel	Level probes		Tank open to air
ETP UF Permeate	Filtered Treated water	1 x 16,000	ETP	Polypropylene	Level probes	Inside ETP building	Vented
ETP Post DAF balance tank	DAF Treated effluent water	1 x 2000	ETP	Polypropylene	Level probes		Vented
ETP RO Permeate tank	Clean treated water	1 x 13000	ETP	Polypropylene	Level probes		Vented

Tank No	Contents	Capacity (litres)	Location	Construction Materials	Level Measurement	Insulation/ Comments	Venting consideration
ETP UF Cleaning tank	Treated water and cleaning chemicals	1 x 6000	ETP	Polypropylene	Level probes	Inside ETP building	Vented
ETP RO Cleaning tank	Treated water and cleaning chemicals	1 x 4000	ETP	Polypropylene	Level probes	Inside ETP building	Vented
B75	Steam care chemicals	500L	Inside boiler house	Plastic Bunded	Visual		Tank vented Contents not volatile
B10	Steam care chemicals	1000L	Inside boiler house	Plastic Bunded	Visual		Tank vented Contents not volatile
Boiler treated water	Hot water	5000L	Inside boiler house	Steel	Level probe	insulated	Tank vented Contents not volatile
OT1 & 2	Heating Oil	2 x 1,100	N of office	Plastic Bunded			Tank vented Contents not volatile
Bulk 1	Nitric acid 60%	28000L	East of Evaporator	Stainless steel	Volumetric meter	Insulated	Fume scrubber to be attached before filling
Bulk 2	Caustic liquor 32%	28000L	East of Evaporator	Stainless steel	Volumetric meter	Insulated	Tank vented Contents not volatile
*High Strength Waste silo	6% solids Dairy waste	100,000L	Evap tank silo plinth	Stainless Steel	Volumetric Level sensor	Clad	Tank vented
Waste oil Tank	Various waste oils	1000 Litres	Outside engineering stores	Double bunded Plastic	Volumetric gauge	Plastic	Not vented
Small balance tank pre-DAF	Effluent	6000 ltrs	Next to DAF plant	Plastic	Volumetric Meter and floats (not yet in use)	Plastic	Vented (not yet in use)

2.9 Inventory of raw materials

Substance (CAS Number)	Annual amount used (L)	Environmental impact (ref safety data sheets)	Comments	Tank /silo REF
1.Milk	156,000,000L	Milk has a typical COD of 165000mg/L. Naturally occurring bacteria breakdown milk entering a watercourse, which could use up the oxygen in the water more quickly than it can be replaced. In extreme cases of falling oxygen levels, fish and other creatures could suffocate. Prevent release to the environment and waters. Notify authorities if product enters waters.		Silo 1-8
2.Cream	500000L	Cream could use up the oxygen in the water more quickly than it can be replaced. In extreme cases of falling oxygen levels, fish and other creatures could suffocate. Prevent release to the environment and waters. Notify authorities if product enters waters.		Cream Silo's in Pasteuriser area and butter dairy
3.Gas oil diesel 68476-30-2	~2000L	Prevent product from entering drains. Do not flushing into surface water or sanitary sewer system. Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.	Fuel for generator and standby fuel for boiler	Standby generator tank
4.Heating oil 8008-20-6	*Approx..6000 L	Toxic to aquatic life with long lasting effects. Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. Do not flushing into surface water or sanitary sewer system.	2 x 1100 L tanks Bunded	Office Tank 1 and 2
5.Acid foam 7664-38-2 1300-72-7	1125L	Foam detergent based on phosphoric acid and a mixture of surfactants. Used in the dairy industry as an acid detergent, and for descaling the exterior of vessels to remove build up of mineral scale. 30% phosphoric acid. *Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters.	Detergent cleaner	Chemical Store
6.Acid Klenz 50 7664-38-2, 7697-37-2.	*41625L	Solution of phosphoric and Nitric acid (38% Nitric acid, 7% phosphoric). Nitric acid and detergents. Toxic to aquatic life by effect on pH Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Acid cleaner	Evap department, Pasteuriser department Bulk Tank
7.*Ad Blue 57-13-6		Hazard for aquatic organisms. Not classified as hazardous for the environment Toxicity values see MSDS	Lorries	IBC by drum wash
8.Analox 70 75-75-2	1000L	METHANESULPHONIC ACID 50-70% Biodegradable. No bioaccumulation potential. Toxic due to low pH. Do not discharge to drains or rivers. Contain spillage using bunding.	Membrane cleaner	Chemical store, Outside Evap Room and Evap area

9. WW3000	*240 drums 6000 kg	Not hazardous. Do not discharge to drains or rivers. Contain spillage using bunding.	Effluent flocculent.	DAF bund
10.Bio Klenz *64-02-8 2372-82-9 1300-72-7	100L	Blend containing amphoteric disinfectants. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Disinfectant	Cheese Dairy Fogger
11.Butter Klenz 1344-09-8 1310-58-3 68515-73-1	*10000L	Alkaline detergent with silicate Biodegradable. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Butter equipment cleaner	IBC Outside Butter Dairy
12.Calcium Chloride Liquor 20-38% 10043-52-4		Should not be released to the environment. Do not flush to sewer system. Avoid subsoil penetration. Toxicity values see MSDS.	Cleaning Product	Dry Goods Store
13.Caustic liquor 32% W/W 1310-73-2	*186000L	Sodium Hydroxide solution; corrosive R35- causes severe burns. Caustic soda aqueous solution with detergents, toxic to aquatic life by effect on pH. (30-65% sodium Hydroxide) Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters.	General caustic cleaner used for Evaporator.	Bulk 2. Outside Evap Bulk Tank
14.Chlorofoam 1310-73-2 7681-52-9 308062-28-4	*2125L	2% Sodium Hydroxide Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Detergent sanitizer	Chemical store and multiple places around site
15.Citric acid 77-92-9	*28000L	Citric acid 10-50% R36 irritant. High concentrations will injure aquatic life by effect on pH. *Should not be released to the environment. Do not flush to sewer system. Avoid subsoil penetration. Toxicity values see MSDS.	Dairy RO cleaning chemical	Chem store, Outside Evap and RO Room
16.Cirklenz 1310-73-2 64-02-8 68515-73-1	*133000L	Highly chelated caustic detergent for single stage cleaning of HTST plants and CIP cleaning in hard water areas. Toxic to aquatic life by effect on pH. Corrosive-causes severe burns. (15-30% sodium hydroxide) Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. Toxcity values see MSDS.	General caustic cleaner used throughout dairy industry.	BULK Pasteuriser, Cheese Dairy
17.Coolcare C32 2809-21-4	1800L	This product is corrosive. Biodegradable Do not discharge to drains or river. Contain the spillage using bunding. See MSDS for toxicity information.	Water treatment chemicals	Softwater/Cooling Tower dosing rooms
18.Cloxide R 7758-19-2	2800L	Very toxic to aquatic organisms. Toxic to soil organisms. Avoid release to the environment. Do not discharge to drains or river. Contain the spillage using bunding. Bioaccumulation potential.	Water treatment chemicals	Softwater/Cooling Tower dosing rooms
19.Endosan 7722-84-1		Harmful if swallowed, skin irritation, eye damage, respiratory irritation Prevent spreading in sewers Toxcity values see MSDS.	Biofilm Remover	RO and UF

20.Evaporator Additive (EDTA) 1310-73-2 64-02-8	*11000L	Contains Ethylenediaminetetraacetic acid and sodium hydroxide R36/38 -irritating to eyes and skin. Toxic to aquatic life. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. Toxcity values see MSDS.	Caustic cleaner used for Evaporator.	Bulk 1 and 2 bund. Outside Evap Bulk Tank
21.Filta acid 7664-38-2 7697-37-2	500 L	Phosphoric (10-30%) and Nitric (10-30%) acids. Readily biodegradable in dilute solutions. Causes severe burns. Toxic to aquatic life if the pH falls below 5 Do not discharge to drains or rivers. Contain spillage using bunding. See MSDS for toxicity information.	Acidic Cleaner	UF
22.Filzym 26468-86-0 54549-24-5	1250L	2-Ethylhexanol ethoxylate, C6 Alkyl Glucoside Causes serious eye damage Prevent entry to sewers and public waters Toxcity values see MSDS	Detergent for Cleaning UF	Evap and UF Room
23. Fleet Clean Pre-spray 68955-55-5 68439-46-3 160875-66-1 1310-73-2		Do not discharge into drains or rivers. Contain the spillage using bunding. For toxicity values see MSDS.	Washing lorries	Lorry Wash
24. Green'R Indus 1310-58-3 15763-76-5 69011-36-5 345590-94-8 160875-66-1 54549-24-5	50L	Potassium Hydroxide Prevent liquid from entering sewers, watercourses, underground or low areas. See MSDS for toxicity information.	Floor Cleaner	Cold Store
25 Hannilase (rennet)		Proteinase, Mucor aspartic Limited harmful product effects to the environment. Avoid discharge to drains, watercourses, or on to the ground.	Rennet	Cold stores and cheese dairy
26.Hydrogen Peroxide *35% 7722-84-1	*3240L	Hydrogen Peroxide 35% w/w aqueous solution. Harmful R22- harmful if swallowed. R37/38 irritating to respiratory system and skin. R41- Risk of serious damage to eyes. Toxic to aquatic life. *Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. Toxcity values see MSDS.	Sterilent	Chemical Store and Evap
27.Hypoklenz Sodium Hypochlorite 7681-52-9,	*42850L	Contains: (10% available Chlorine and 5-15% sodium hydroxide. Chlorine based bleaching agent. Rated as slightly toxic to aquatic species. *Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Water treatment chemical.	Chemical store and multiple places around site
28.Klenz 30CL-300 1310-73-2	*144000L	Caustic soda based detergent. R35 – causes severe burns. (30% sodium Hydroxide) *Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	General purpose CIP chemical	Bulk Tank at Milk Reception, Evap department

29.Klenzbrite Extra 1310-73-2	New chemical Don't use	Sodium Hydroxide Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Cleaning chemical	Cheese Dairy and Pasteuriser Bulk Tank
30.KOH 25% 1310-58-3	1000L	Potassium hydroxide 25% w/w aqueous solution Whey protein concentrate additive. Corrosive; R22- harmful if swallowed; R35- Causes severe burns. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Food grade pH additive.	Chem store and UF Room
31. Klenzklor Tabs 293-78-9 124-04-9	Infrequent use	Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information	Cleaning tablets	Dry goods store
32.Lactic Acid 79-33-4		Should not be released to the environment. Prevent further leakage or spillage if safe to do so. See MSDS for toxicity values.	Adding to Butter	Butter Dairy
33.MPC12 1310-73-2 68955-55-5		Causes severe skin burns and eye damage Do not get in eyes, on skin or on clothing. Do not discharge into drains or rivers. Toxicity: Sodium Hydroxide Fish 4mg/l Akkyl Dimethylamine Oxide Algae <10mg/l Aquatic invertebrates <10mg/l Fish <10 mg/l Micro organisms >100mg/l	For cleaning effluent membranes.	ETP and chemical store
34.MPC10 7697-37-2		Causes severe skin burns and eye damage Do not get in eyes, on skin or on clothing. Do not discharge into drains or rivers.	For cleaning effluent membranes.	ETP and chemical store
35.MPC1 139-33-3 1310-58-3 7320-34-5		Causes severe skin burns and eye damage Do not get in eyes, on skin or on clothing. Do not discharge into drains or rivers. Contain the spillage using bunding.	For cleaning effluent membranes.	ETP and chemical store
*36.MPA1		Do not get in eyes, on skin or on clothing. Do not discharge into drains or rivers. Contain the spillage using bunding. Toxicity: Algae 20mg/l Daphina 297mg/l Fish >330mg/l	For cleaning effluent membranes.	ETP and chemical store
37.Microquest A 9014-01-1 85586-07-8 68515-73-1 126-92-1	2000L	Subtilisin (1-10%) liquid enzyme cleaner. May cause redness and irritation. Do not discharge into drains or rivers. Contain the spillage using bunding. See MSDS for toxicity values.	Dairy RO cleaning chemical	Chem store, Outside Evap Room and RO Room
38.Microclean 1310-73-2 64-02-8 68515-73-1	2000L	Caustic soda based detergent. R35 – causes severe burns. (10 – 30% sodium Hydroxide) Do not discharge into drains or rivers. Contain the spillage using bunding. See MSDS for toxicity values.	Dairy RO cleaning chemical	Chem store, Outside Evap Room and RO Room
39.Microsoak 7631-90-5	4000L	Sodium meta bisulphate (10-30%) based RO and UF sterilant. Do not discharge into drains or rivers. Contain the spillage using bunding. See MSDS for toxicity values.	Dairy RO cleaning chemical	Dry goods store, Outside Evap Room and RO Room

40.Microcare C20	2500L	Do not discharge to drains or river. Contain the spillage using bunding. Biodegradable. Readily absorbed into the soil.	Water treatment chemicals	Softwater/Cooling Tower dosing rooms
41.Mida Chriox F2 64-19-7 7722-84-1 79-21-0 69011-36-5 85536-14-7	*2484L	Peracetic acid, Acetic Acid, Hydrogen Peroxide, Sulphuric Acid, Phosphonic acid, Dodecylbenzenesulfonic acid Oxidiser, May be corrosive to metals, causes severe burns and eye damage, may cause respiratory irritation, toxic to aquatic life with long lasting effects Prevent for entering sewers, rivers. Toxicity values see MSDS	Used in boot washes	Chemical store and multiple places around site
42.MPG 57-55-6	*5000L	MonoPropyleneGlycol (propane-1, 2-diol) Very low toxicity to both humans and to the environment. MPG does not bio-accumulate and is readily biodegradable. S37/39 Wear face and eye protection. This product should not be allowed to enter drains, watercourses or the soil. See MSDS for toxicity information.	To provide chilled water for compressor system.	Chem store and chilled water 2, 4, 6. IBC at milk reception.
43.Nutromex 512	*2000L Used rarely	Nutrient solution of urea, containing 18% nitrogen. Readily biodegradable. Do not flush to surface water. Advise local authorities if large spills can not be contained.	Nutrient for Aerator tank	ETP and chemical store
44.Nitric Acid (55%) 7697-37-2	*125L	May be corrosive to metals, causes severe skin burn and eye damage Avoid release to the environment, prevent entry to the sewers and public waters. Notify authorities if enter sewers or public waters. Toxicity values see MSDS	Used every few months in a wash	Evap department
45.Nitric acid 60% 7697-37-2	*22000L	High concentrations injure aquatic life by effect on pH. The product is rated as moderately toxic to aquatic species. R35. (60% Nitric acid) Avoid release to the environment, prevent entry to the sewers and public waters. Notify authorities if enter sewers or public waters. Toxicity values see MSDS	Evaporator descaler.	Evap department, Outside Evap in Bulk Tank
46.Oxysan 5 79-21-0, 7722-84-4, 64-19-7	*24302L	Paracetic acid 5%, Hydrogen Peroxide 10-25%, Acetic acid 5-10%. No bioaccumulation, considered abiotic and biotic degradability. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Sanitizer used in CIP systems	IBC store and butter dairy. Outside Packing Room IBC
47.Oxysan 15 79-21-0, 7722-84-4, 64-19-7	*4000L	Acetic Acid, Hydrogen Peroxide, Peracetic Acid Heating may cause a fire, May be corrosive to metals, Harmful if swallowed or if inhaled, Causes severe skin burns and eye damage, May cause respiratory irritation, Very toxic to aquatic life with long lasting effects. Avoid release to the environment. Toxicity values see MSDS.	Sanitizer used in CIP systems	IBC Cabinet at Milk Reception
*48.PAC 39290-78-3	*216 tonnes	R41-risk of serious damage to eyes,H290 may be corrosive to metals,H318 causes serious eye damage. No special environmental requirements	Water treatment chemical	BULK COAGULANT in DAF Bund bulk tank

49. P&G Cleaner 68439-46-3	60L	Prevent soil pollution. Prevent spreading in sewers. toxicity values see MSDS	Floor cleaner	Stores/Percy
50.Power Klenz 68891-38-3 308062-28-4	*2375L	Low toxicity to environment. Readily Biodegradable and non persistent. R41Risk of damage to eyes. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Surfactant manual detergent.	Chemical store and multiple places around site
*51.Protosolv 5329-14-6	72kg	Wash hands thoroughly after handling Avoid release to the environment Do not discharge to drains or rivers	Powder used once a month as an extra clean on the evaporator	Evap and Sep Room
*52.Quat Foam 68439-46-3 68515-73-1	*500L	Harmful if swallowed, skin irritation, eye damage, harmful to aquatic life with long lasting effects. Avoid release to the environment, prevent entry to the sewers and public waters. Notify authorities if enter sewers or public waters. Toxcity values see MSDS.	Detergent for cleaning floors	Butter Dairy
53.Regenerant H	3200L	R36,37,38. Do not discharge to drains or river. Contain the spillage using bunding. Biodegradable.	Water treatment chemicals	Softwater/Cooling Tower dosing rooms
54.Sulphuric acid 50% 7664-93-9	35000L	The Product is rated as being practically non-toxic to aquatic species. However high concentrations will injure aquatic life by effect on pH. (50% sulphuric acid) Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	pH correction at ETP.	DAF BUND
55.Steri Klenz 5 64-02-8 63449-41-2 6419-19-8 68439-46-3	*725L	The products constituents are biodegradable and do not bio accumulate. Harmful to aquatic life. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	QAC sanitizer	Chem store
56.Steri Klenz 63449-41-2 68439-46-3	625L	Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Cleaning product	Chemical store and multiple places around site
57.Sterichill 68131-39-5 67-63-0 63449-41-2	60L	Very toxic to aquatic life with long lasting effects. Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters. See MSDS for toxicity information.	Cleaner	Butter Dairy chilling units
58.Sodium Silicate 1344-09-8	50L	Avoid release to the environment, prevent entry to sewers and public waters. Notify authorities if product enters waters.	Anti sticking solution for butter packer.	Chem store
59.Steamcare B75	500L	Do not discharge to drains or river. Contain the spillage using bunding.	Boiler water treatment	Boiler house
60.Steamcare B10 7631-90-5	200L	Harmful. R22, R31. Do not discharge to drains or river. Contain the spillage using bunding. See MSDS for toxicity information.	Boiler water treatment	Boiler house

2.10 Risk assessments Method

The technique followed here is carried out to generate and allocate numerical values to the subjective considerations of hazard and risk. First a simple matrix has been established to allocate numerical values to **severity** and **likelihood** of hazards. The base values are described below in **table 1 Ranking matrix.**

"S" Severity of environmental impact		**"L" Likelihood of event**	
1. Minor	Nuisance on site only, no off site complaint	**1. Extremely unlikely.**	Incident occurs less than once in one million years.
2. Noticeable	Noticeable nuisance offsite e.g. odour. Minor breach of permitted emissions, but no environmental harm One or two complaints from the public.	**2. Very unlikely**	Incident occurs between once per million and once every 10,000 years
3. Significant	Severe and sustained nuisance e.g. strong odour. Major breach of permitted emissions with possibility of prosecution. Numerous public complaints	**3.Unlikely**	Incident occurs between once per 10,000 years and once every 100 years
4.Severe	Hospital treatment required Public warning and off-site emergency. Hazardous substance released into water course with ½ mile effect.	**4. Somewhat unlikely**	Incident occurs between once per 100 and once every 10 years
5.Major	Evacuate of local populace Temporary disablement and hospitalisation. Serious toxic effect on beneficial or protected species. Widespread but not persistent damage to land. Significant fish kills over 5 mile range.	**5. Fairly probable**	Incident occurs between once per 10 years and once every year.
6.Catastrophic	Major airborne release with serious off site effects. Site shutdown. Serious contamination of groundwater or water course this extensive loss of aquatic life.	**6. Probable**	Incident occurs at least once per year.

A list of the potential hazardous events has been developed by identifying scenarios for different generic events and activities on the site and then identifying specific examples of these. The materials involved in and the process are shown. The worst possible consequence is listed and allocated the appropriate value shown under “s” for the severity of the outcome, and “L” for the likelihood of the event occurring. The risk is then calculated by multiplying the severity and the likelihood the result being “R” Risk. The lower the figure, the lower the risk.

Calibration of risk assessment Output

Likelihood of event		**Severity of Environmental effect**					
		MINOR	NOTICEABLE	SIGNIFICANT	SEVERE	MAJOR	CATASTROPHIC
		1	2	3	4	5	6
Extremely unlikely.	1	1	2	3	4	5	6
Very unlikely	2	2	4	6	8	10	12
Unlikely	3	3	6	9	12	15	18
Somewhat unlikely	4	4	8	12	16	20	24
Fairly probable	5	5	10	15	20	25	30
Probable	6	6	12	18	24	30	36

Calibration of risk assessment Output

Risk score	**Magnitude of risk**	**Consideration**
6 or less	Insignificant	Low or negligible levels of risk, low or negligible impacts. Adherence to good operational practices will adequately control their risk
8 – 12	Acceptable	Lower level of possible impact, but major severity or higher likelihood would require consideration of further action to reduce risk
15 or more	Unacceptable	Combination of high likelihood or major impact would require further assessment and possible actions to reduce risk.

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	8. Records of pollution	2. Existence of pollution prevention measures	Nature of Primary Containment	Testing and Inspection of Primary Containment	Nature of Secondary Containment	Testing and Inspection of Secondary Containment	Nature of Tertiary Containment	Testing and Inspection of Tertiary Containment	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Name Unit Operation and refer to the relevant section of the Permit Site Report containing its description	Name substance, provide CAS RN If appropriate as well as manufacturers product name. Volume stored. For mixtures provide breakdown of polluting substances and percentage by volume.	Detail the relevant activity for each substance where the location, pollution risk or pollution prevention measures differ	Detail the failure mechanism and potential pollution arising from the loss of primary containment	Detail any incidents of pollution or spills from the relevant activity. This can be based on visual assessment during site reconnaissance, installation or other records and data sources. Have measures been put in place to ensure no further pollution incidents?	Do pollution prevention measure exist for each element of the relevant activity	Detail the nature of the storage vessel, including volume, location and provide unique reference number and indicate which site plan it is shown on	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the secondary containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the tertiary Containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	Insignificant / Acceptable / Unacceptable (further actions)
Cheese making, butter, Evaporator and dairy	Raw milk and cream	Delivery by road tanker to installation	Spillage from road tanker on installation roads entering surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Road Tanker	Compliant to British Standard and DOT Regulations Spillage record filled out in department.	Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	Tankers park when filling on impermeable ground.	3 yr site drainage survey	3	3	9	Acceptable
		Road tanker offloading	Spillage from road tanker or delivery pipework to land or surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Road Tanker and delivery hose	Compliant to British Standard and DOT Regulations Spillage record filled out in department.	Tankers park when filling on impermeable ground.	Roadways and Impermeable areas checked on monthly Silo and Bund check sheet	Land drains discharge to foul drainage system with effluent storage capability		2	3	6	Acceptable
		Storage	Failure of containment leading to spillage to land surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Stainless Steel and Raw Milk Silos 1 to 8. capacities 70-180,00	Silos crack tested annually by third party Spillage record filled out in department.	Store tanks situated above impermeable ground and protected from vehicle damage by robust barriers.	Roadways and Impermeable areas checked on monthly Silo and Bund check sheet and in Hygiene and housekeeping audit	Land drains discharge to foul drainage system with effluent storage capability		3	3	9	Acceptable
		Transfer product to Processing plant	Failure of pipeline leading to loss of product to land or surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Stainless Steel pipelines	Pipelines designed/fabricated to relevant standards and installed by competent personnel. Spillage record filled out in pasteuriser department. Pasteurisers are crack tested annually by a 3rd party	Pasteuriser situated above impermeable ground	None	Land drains discharge to foul drainage system with effluent storage capability		3	3	9	Acceptable
Whey & Skim Tanks	Skim Milk, Whey Protein Concentrate, permeate and skim concentrate	Delivery by road tanker to installation	Spillage from road tanker on installation roads entering surface drains and reaching culvert to Brue	No evidence /records of spills or leaks	YES	Road Tanker	Compliant to British Standard and DOT Regulations Spillage record filled out in department.	Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	Tankers park when filling on impermeable ground.	Roadways and Impermeable areas checked on monthly Silo and Bund check sheet	3	3	9	Acceptable
		Road tanker offloading	Spillage from road tanker or delivery pipework to land surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Road Tanker and delivery hose	Compliant to British Standard and DOT Regulations Spillage record filled out in department.	Tankers park when filling on impermeable ground.	Roadways and Impermeable areas checked on monthly Silo and Bund check sheet	Tankers unload in bunded area. Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	3	3	9	Acceptable
		Storage	Failure of containment leading to spillage to land surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Stainless Steel Tanks 53000 – 180000L capacity	Silos C1, C2, L3 and WPC crack tested annually by third party Spillage record filled out in department.	Store tanks situated above impermeable ground. And protected from vehicle damage by robust barriers.	Bund checked on Hygiene audit F79. Contents are checked before disposal. Roadways and Impermeable areas checked on monthly Silo and Bund check sheet	Bunds can be drained towards Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	3	3	9	Acceptable

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	1. Records of pollution	2. Existence of pollution prevention measures	Nature of Primary Containment	Testing and Inspection of Primary Containment	Nature of Secondary Containment	Testing and Inspection of Secondary Containment	Nature of Tertiary Containment	Testing and Inspection of Tertiary Containment	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Name Unit Operation and refer to the relevant section of the Permit Site Report containing its descripti	Name substance, provide CAS RN If appropriate as well as manufacturers product name. Volume stored. For mixtures provide breakdown of polluting substances and percentage by volume.	Detail the relevant activity for each substance where the location, pollution risk or pollution prevention measures differ	Detail the failure mechanism and potential pollution arising from the loss of primary containment	Detail any incidents of pollution or spills from the relevant activity. This can be based on visual assessment during site decommissionin, installation or other records and data sources. Have measures been put in place to ensure no further pollution incidents?	Do pollution prevention measure exist for each element of the relevant activity	Detail the nature of the storage vessel, including volume, location and provide unique reference number and indicate which site plan it is shown on	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the secondary containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the tertiary Containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	Insignificant / Acceptable / Unacceptable (further actions)
Whey & Skim tanks	Skim Milk, Whey Protein Concentrate, permeate and skim concentrate	Transfer product to Processing plant	Failure of pipeline leading to loss of product or to land surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Stainless Steel pipelines	Pipelines designed/fabricated to relevant standards and installed by competent Personnel, pasteurisers are crack tested annually by a 3rd party	Process area is situated above impermeable ground	Drain Survey	Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	3	3	9	Acceptable
Cream processing tanks	Cream and buttermilk	Transfer and storage of product to Butter making plant	Failure of containment leading to spillage to land surface drains and reaching culvert to Brue	No evidence/records of spills or leaks	YES	Stainless steel Silos T2,T3,T4,T5,T6 and T9. 6000-30000L.	Silos crack tested annually by third party Spillage record filled out.	Storage tanks and pipework situated above impermeable ground.	Bund inspection monthly and checked in hygiene and housekeeping audit. Contents are checked before disposal	Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	3	3	9	Acceptable
Effluent Treatment	Effluent	Transfer of effluent to holding tank	Failure of pipeline leading to loss of effluent to land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	Drainage system pipeline	Pipelines designed/fabricated to relevant standards and installed by competent personnel	Pipelines situated above impermeable ground. Land drains discharge to foul drainage system with effluent storage capability	None	Impermeable hard standing or floor	None	3	3	9	Acceptable
		Effluent Storage, Sludge, DAF aerator and final water tanks.	Failure of containment leading to spillage to land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	Over ground vessel storage tank vessel designed in accordance with relevant standards	Inspected daily by Operative.	DAF, Aerator, pipe work and UF RO treatment plant contained in a bunded area which drains to balance tank.	Bund inspection monthly and checked in hygiene and housekeeping audit.	None	None	3	4	12	Acceptable
		Storage	Release of effluent from balance tanks to surface water and/or land	No evidence/records	Yes	Balance tanks are designed to retain effluent from the dairy.	Contents transmitters on balance tanks and high level alarms. Concrete ring level alarm linked to visual beacon and text and e-mail alerts.	Small balance tank before DAF within effluent bunded area	Small balance tank checked in silo and bund checks	None	None	5	3	15	Acceptable
		Treatment of effluent	Failure of pipeline and ETP leading to loss of effluent to land or surface drains and reaching culvert to Brue	No Evidence/records of significant spills or leaks.	YES	Pipelines, DAF plant Aerator, RO / UF and related Water tanks.	Plant designed/fabricated to relevant standards and installed by competent personnel Plant is inspected daily by operator,	DAF and aerator tank is situated within bund	Bund discharge to storage tank with procedures in event of spillage Plant is inspected daily by operator,	None	None	2	4	8	Acceptable
	Chemical Sulphuric acid, *PAC and caustic 32%	Storage	Failure of containment leading to spillage to land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	IBCs and bunded tank and protected from vehicle damage by robust barriers.	IBC's designed in accordance with relevant standard.	Chemicals are store within impermeable bund	Bund and silo inspection monthly and checked in hygiene and housekeeping audit.	Bund discharge to surface drainage system with procedures in event of spillage Plant is inspected daily by operator,	None	3	4	12	Acceptable
	Chemical Sulphuric acid, *PAC and caustic 32%	Usage in DAF plant.	Failure of containment And pipework leading to spillage to Land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	Pipelines and DAF plant	Plant designed/fabricated to relevant standards and installed by competent personnel Plant is inspected daily by operator,	Chemicals are dosed in impermeable bund	Bund inspected periodically. Contents are checked daily and recorded on daily check sheet	Bund discharge to surface drainage system with procedures in event of spillage Plant is inspected daily by operator,	None	3	4	12	Acceptable

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	1. Records of pollution	2. Existence of pollution prevention measures	Nature of Primary Containment	Testing and Inspection of Primary Containment	Nature of Secondary Containment	Testing and Inspection of Secondary Containment	Nature of Tertiary Containment	Testing and Inspection of Tertiary Containment	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Name Unit Operation and refer to the relevant section of the Permit Site Report containing its descripti	Name substance, provide CAS RN If appropriate as well as manufacturers product name. Volume stored. For mixtures provide breakdown of polluting substances and percentage by volume.	Detail the relevant activity for each substance where the location, pollution risk or pollution prevention measures differ	Detail the failure mechanism and potential pollution arising from the loss of primary containment	Detail any incidents of pollution or spills from the relevant activity. This can be based on visual assessment during site reconnaissance, installation or other records and data sources. Have measures been put in place to ensure no further pollution incidents?	Do pollution prevention measure exist for each element of the relevant activity	Detail the nature of the storage vessel, including volume, location and provide unique reference number and indicate which site plan it is shown on	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the secondary containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the tertiary Containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	Insignificant / Acceptable / Unacceptable (further actions)
Operation of CIP plant and chemical store.	Bulk caustic soda and acid. (AcidKlenz, CL30-300 and Cirklenz).Nitric acid 60% and caustic 32%	Storage	Failure of containment leading to spillage to land or surface drains and reaching culvert to Brue . Fugitive emissions from gassing chemical	No evidence/records of significant spills or leaks	YES	Double layered SS tanks. 1 x 25000 1x 20000 1 x 15000 Nitric tank fitted with fume scrubber.	Vessels designed in accordance with relevant standard.	Caustic tanks contained within a bund. And protected from vehicle damage by robust barriers.	Bund inspected monthly. Any liquid is tested for chemicals then disposed of safely.	Area is concrete hard standing and bunded. Drains discharge to fowl drainage system with segregation capability.	none	4	3	12	Acceptable
		Delivery	Road tanker delivery Spillage from road tanker on installation roads entering road drainage system or surface drains and reaching culvert to Brue		YES *Tanks are bunded* *Tanks have contents gauges, contents are checked weekly.* *Surrounding area is on a slope towards Effluent drains which can be diverted to storage pond.*	*Stainless steel welded tanker and PVC hose.*	*Hose and tanker pressure tested annually to 200Psi. Unload pressure 20psi* *Risk assessments and Work instructions detail correct procedures for unloading. Only trained Operatives undertake task. (see WI EN3.12)*	*Tankers park when Unloading on a sloped contained area with effluent drains in area of loading bay.*	3 yr site drainage survey	none	none	4	3	12	Acceptable
		Utilised in CIP plant	Failure of pipeline leading to loss of chemical to land or surface drains and reaching culvert to Brue		YES	Pipelines	Pipelines designed/fabricated to relevant standards and installed by competent personnel	Pipelines situated above impermeable Ground. Land drains discharge to foul drainage system with effluent storage capability	3 yr site drainage survey	none	none	3	3	9	Acceptable
	CIP chemicals IBCs OXYSAN, BUTTERKLENZ, HYPOKLENZ NITRIC .	Delivery	Spillage from vehicle on installation roads entering roads entering road drainage system or surface drains and reaching culvert to Brue		YES	Nominal 1000L ICBs Nitric and phosphoric T28 and T34 and caustic T29	IBC's designed in accordance with relevant standard.	Vehicle unloaded on impermeable ground by trained forklift driver.	Impermeable hard standing check sheet.	none	none	2	3	6	Acceptable
	CIP chemicals IBCs OXYSAN, BUTTERKLENZ, HYPOKLENZ NITRIC .	Storage	Failure of containment leading to spillage to land or surface drains and reaching culvert to Brue		YES	Nominal 1000L ICBs Nitric and phosphoric T28 and T34 and caustic T29	IBC's designed in accordance with relevant standard.	IBC's stored over Stainless steel bunds on impermeable ground.	Land drains discharge to foul drainage with effluent storage capability	IBC's stored on bund on impermeable ground and protected from vehicle damage by robust barriers.	Bund periodically checked liquid in bund is tested for chemicals then disposed of safely.	2	3	6	Acceptable
	CIP chemicals IBCs OXYSAN, BUTTERKLENZ, HYPOKLENZ NITRIC .	Utilised in CIP plant			YES	Pipelines	Pipelines designed/fabricated to relevant standards and installed by competent	Pipelines situated above impermeable Ground. Land drains	3 yr site drainage survey	Pipelines sited on impermeable ground.	none	3	3	9	Acceptable

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	1. Records of pollution	2. Existence of pollution prevention measures	Nature of Primary Containment	Testing and Inspection of Primary Containment	Nature of Secondary Containment	Testing and Inspection of Secondary Containment	Nature of Tertiary Containment	Testing and Inspection of Tertiary Containment	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Name Unit Operation and refer to the relevant section of the Permit Site Report containing its descripti	Name substance, provide CAS RN If appropriate as well as manufacturers product name. Volume stored. For mixtures provide breakdown of polluting substances and percentage by volume.	Detail the relevant activity for each substance where the location, pollution risk or pollution prevention measures differ	Detail the failure mechanism and potential pollution arising from the loss of primary containment	Detail any incidents of pollution or spills from the relevant activity. This can be based on visual assessment during site reconnaissance, installation or other records and data sources. Have measures been put in place to ensure no further pollution incidents?	Do pollution prevention measure exist for each element of the relevant activity	Detail the nature of the storage vessel, including volume, location and provide unique reference number and indicate which site plan it is shown on	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the secondary containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the tertiary Containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	Insignificant / Acceptable / Unacceptable (further actions)
Chilling plant	MPG Glycol	Storage	Failure of containment leading to loss of glycol to land or surface drains and reaching culvert to River Brue	No evidence/records of significant spills or leaks	YES	IBC, S/S 1000 litre tank.4000L GRP and 5000L GRP tank.	Vessel designed in accordance with relevant standards	Store tanks situated within bund above impermeable ground.	Periodical inspection. Monthly bund checks,	Land drains discharge to foul drainage system with effluent storage capability	None	3	3	9	Acceptable
		Utilised in plant		No evidence/records of significant spills/ leaks	YES	Pipeline	Pipelines designed/fabricated to relevant standards and installed by competent personnel	Pipelines situated above impermeable ground. capability	None	Land drains discharge to foul drainage system with effluent storage	None	3	3	9	Acceptable
Boiler house and fuel	Plant fuel DERV	Road tanker delivery	Spillage from road tanker on installation roads entering drainage system	No evidence/records of significant spills/ leaks	YES	Road tanker	Tanker and pipework Compliant to British Standard and DOT Regulations	Tankers park when filling on impermeable ground. Land drains discharge to foul drainage system With interceptors and temporary storage.	None	Class 1 full retention separator fitted to surface water drains Cutoff valves on all outlets to culvert	System alarmed high level. Monthly checks on separator. Oil found in separator to be disposed of safely.	4	3	12	Acceptable
		Road tanker offloading	Spillage from road tanker or delivery pipework to land or surface drains and reaching culvert to Brue		YES	Road Tanker and delivery hose						4	3	12	Acceptable
		Storage	Failure of containment or pipework leading to spillage to land or surface drains and reaching culvert to Brue		YES	9000 litre double skinned bunded plastic tanks used as emergency fuel for 2 boilers and generator.	Vessel designed in accordance with relevant standards	Vessel contained within purpose built bund.	Bund periodically checked in monthly silo and bund checks Contents are monitored			4	3	12	Acceptable
		Underground Fuel Supply Pipe to Boilers			YES	Steel delivery pipework	Two flow meters at each end of the pipe	Pipework encased in concrete	None			4	2	8	Acceptable
		Above ground fuel supply to generator			YES	Steel delivery pipework	Visual inspection.	None	None			4	2	8	Acceptable
		Transfer to forklift	Spillage from delivery pipework to land		YES	Filling hose	Proprietary purpose made hose	Fuel nozzle is cut off' type and has a burst valve in the filling line to minimise accidental Fuel release.	None, nozzle must be manned to deliver fuel.			4	2	8	Acceptable
							personnel	discharge to foul drainage system							

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	1. Records of pollution	2. Existence of pollution prevention measures	Nature of Primary Containment	Testing and Inspection of Primary Containment	Nature of Secondary Containment	Testing and Inspection of Secondary Containment	Nature of Tertiary Containment	Testing and Inspection of Tertiary Containment	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Name Unit Operation and refer to the relevant section of the Permit Site Report containing its descripti	Name substance, provide CAS RN if appropriate as well as manufacturers product name. Volume stored. For mixtures provide breakdown of polluting substances and percentage by volume.	Detail the relevant activity for each substance where the location, pollution risk or pollution prevention measures differ	Detail the failure mechanism and potential pollution arising from the loss of primary containment	Detail any incidents of pollution or spills from the relevant activity. This can be based on visual assessment during site reconnaissance, installation or other records and data sources. Have measures been put in place to ensure no further pollution incidents?	Do pollution prevention measure exist for each element of the relevant activity	Detail the nature of the storage vessel, including volume, location and provide unique reference number and indicate which site plan it is shown on	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the secondary containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the tertiary Containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	Insignificant / Acceptable / Unacceptable (further actions)
Boiler house and fuel	Boiler and Water Treatment Chemicals – see 2.6 Inventory of raw materials	Storage and use	Failure of containment leading to spillage to land	No evidence/records of significant spills/ leaks	YES	25 litre plastic Drums *and bunded containers	Containers designed in accordance with relevant standards	Containers on impermeable Plastic bunds.	Contents are checked before disposal .	None	None	3	3	9	Acceptable
Offices/Storage	Heating oil	Road tanker delivery	Spillage from road tanker on installation roads entering drainage system or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	Road tanker	Tanker and pipework Compliant to British Standard and DOT Regulations	Tankers park when filling on impermeable ground.	None	Class 1 full retention separator fitted to surface water drains Cutoff valves on all outlets to culvert	System alarmed high level. Monthly checks on separator EN 3.1.6 WI. Oil found in separator to be disposed of safely.	4	3	12	Acceptable
		Road tanker offloading	Spillage from road tanker or delivery pipework to land or surface drains and reaching culvert to Brue		YES	Road Tanker and delivery hose						4	3	12	Acceptable
		Storage	Failure of containment leading to spillage to land or surface drains and reaching culvert to Brue		YES	2 x 1,000 litre double skinned bunded plastic tanks.	Vessel designed in accordance with relevant standards	Tanks protected from vehicle damage by robust barriers.	None			4	3	12	Acceptable
IBC Chemical storage Area	Paracetic acid, Hypoklenz Butterklenz	Storage	Failure of containment leading to spillage to land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	Nominal 1000L ICBs.	IBC's designed in accordance with relevant standard.	Chemical store is made up from impermeable ground, draining to far end sump area to catch any spills	None	None	None	3	3	9	Acceptable
Transfer of high strength waste and whey permeate to AD Plant	Dairy rinses and whey permeate	Transfer		No evidence/records of significant spills/ leaks	YES	Plastic pipelines	Pipelines designed/fabricated to relevant standards and installed by competent Personnel *Pressure transmitters and flow meters either end of pipework	None	None	None	None	3	3	9	Acceptable
		Storage			YES	Silo approx. 100000litres	Inspected in monthly silo and bund checks. Contents transmitter and high level alarm on tanks that alarm to scada when high level. Checked daily	Bunded area	Monthly bund checks	Bund leading to effluent drains		3	3	9	Acceptable
Effluent plant	PAC 10 % (Poly Aluminium Chloride)	Delivery	Road tanker delivery Spillage from road tanker on installation roads entering road drainage system.or surface drains and reaching culvert to Brue		YES	*Stainless steel wielded tanker and PVC hose.*	*Hose and tanker pressure tested annually to 200Psi. Unload pressure 20psi* *Risk assessments and Work instructions detail correct procedures for unloading. Only trained Operatives undertake task. (see WI EN3.13)*	*Tankers park when Unloading* on impermeable Ground. *With effluent drains in area of loading bay.*	3 yr site drainage survey	none	none	4	3	12	Acceptable

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	1. Records of pollution	2. Existence of pollution prevention measures	Nature of Primary Containment	Testing and Inspection of Primary Containment	Nature of Secondary Containment	Testing and Inspection of Secondary Containment	Nature of Tertiary Containment	Testing and Inspection of Tertiary Containment	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Name Unit Operation and refer to the relevant section of the Permit Site Report containing its descripti	Name substance, provide CAS RN if appropriate as well as manufacturers product name. Volume stored. For mixtures provide breakdown of polluting substances and percentage by volume.	Detail the relevant activity for each substance where the location, pollution risk or pollution prevention measures differ	Detail the failure mechanism and potential pollution arising from the loss of primary containment	Detail any incidents of pollution or spills from the relevant activity. This can be based on visual assessment during site reconnaissance, installation or other records and data sources. Have measures been put in place to ensure no further pollution incidents?	Do pollution prevention measure exist for each element of the relevant activity	Detail the nature of the storage vessel, including volume, location and provide unique reference number and indicate which site plan it is shown on	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the secondary containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks etc.	Detail the nature of the tertiary Containment	Provide details of a testing and inspection programme or reference to a separate document, e.g. pressure tests, leak tests, material thickness checks	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	See 2.8.3 risk assessment method	Insignificant / Acceptable / Unacceptable (further actions)
EXTERNAL PIPEWORK AND TANKS	Milk	Storage	Trespassers onto site open taps or pipes and allow egress of liquids leading to spillage to Land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/ leaks	YES	Tanks are bunded so any spillage would be caught within foul water system	Bund inspected periodically.	Milk reception is manned 24hrs	None	CCTV monitoring to deter intruders	Records video to server, serviced annually	3	3	9	Acceptable
	Cream	Storage			YES	Tanks are bunded so any spillage would be caught within foul water system	Bund inspected periodically.					4	3	12	Acceptable.
	Bulk chemicals	Storage			YES	Tanks are bunded so any spillage would be caught within foul water system	Bund inspected periodically.	Inlet to tank is lock and keys are locked in Production office	None			4	3	12	Acceptable
	Chemical store	Storage			YES	Area is walled and locked at all times when not in use.	None	Incompatible Chemical IBCs are stored 3 Meters apart.	None			4	3	12	Acceptable
	Whey and skim products	Storage			YES	Tanks are bunded so any spillage would be caught within foul water system	Bund inspected periodically.					3	3	9	Acceptable
	effluent	Storage			YES	Area is fenced off and locked at night.	None					3	3	9	Acceptable
	All above	Storage	Damage by vehicle movement leading to spillage to Land or surface drains and reaching culvert to Brue		YES	Pipework is either internal or sited in such a way to prevent damage from vehicles	None.								
Storage of chemicals	See inventory	Storage	Fugitive emissions from chemical	Only 60% nitric acid will fume at ambient temperature	YES	New Nitric tank is sealed with fume scrubber attached	Scrubber media checked 3 monthly			Manual cut off valves on all surface water drains, personnel trained to close these in the event of a spillage.	None	3	3	9	Acceptable
PAC storage	Poly Aluminium Chloride	Storage	Failure of containment leading to spillage to Land or surface drains and reaching culvert to Brue	No evidence/records of significant spills/	YES	Self bunded 30000L plastic tank	Tank designed/fabricated to relevant standards	Coated concrete bund to catch 110% of tank	Monthly silo and bund checks.			3	3	9	Acceptable
Drain operation	Trade effluent	Transfer via underground pipework	Wrong connection of pipework	No evidence/records of significant spills/ leaks	Drains are connected permanently and underground.	Drains are solid and there is no possibility of pipework being switched to contaminate surface water drains, without excavating the pipework first.	3 yr site drainage survey	None	None	None	None	3	1	3	Acceptable
Silo storage	All	Vehicle movements around Storage silos.	Vehicle damage to Silos causing product spillage.	No evidence/records of significant spills/ leaks	Yes	Silos are sited within robust bunds or behind vehicle proof barriers.	None					3	2	6	Acceptable

Assessment for operation and control of Effluent treatment process to ensure water released to Brue is in Specification.

Site Operation	Substance	Relevant Activity	Potential for Pollution from the relevant activity	1. Records of pollution	2. Existence of control measures	Nature of Primary Control	Testing and Inspection of Primary Control	Nature of Secondary Containment	Testing and Inspection of Secondary control	Nature of Tertiary Control	Testing and Inspection of Tertiary Control	Severity	Likelihood	Severity x Likelihood = Risk	Risk assessment output
Effluent treatment	Trade effluent from dairy	Receipt of Trade effluent in balance tanks	Release of excessive solids or fats to DAF and aerator tank	No evidence/records	Yes	Balance tanks are designed to retain effluent from the factory	Tanks are designed/fabricated to relevant standards and installed by competent personnel. Flows in and out are monitored. Level control on the tank is monitored with level sensors and float switches.	Turbity meter monitors outflow from factory, diverting any flow above a set level into a separate tank.	Probe is removed and cleaned daily.	none	none	1	3	3	Acceptable
Effluent treatment	Trade effluent from Balance Tanks	Treatment of Trade effluent in DAF	Release of high solids, COD, or out of spec pH water to aerator through poor treatment in DAF plant *or from a spillage	No evidence/records	Yes	Daily testing of COD, flow rates, continuous phosphates and pH into and out of the DAF to monitor effluent process.	Results recorded and monitored by staff. pH meter regularly calibrated. HACH kit annually calibrated.	Daily maintenance checks on DAF	Checks recorded on daily maintenance sheet, problems resolved with onsite engineers.	*Concrete balance tank has approx. 2-day capacity depending on level. Can use external liquid waste hauliers to remove effluent from site	none	1	3	3	Acceptable.
Effluent treatment	Trade effluent from DAF	Treatment of Trade effluent in Aerator tank	Poor bioactivity in aerator tank .	No evidence/records	Yes	Dissolved oxygen, essential for bioactivity, is continuously monitored and alarmed on scada if level falls below 2%	DO meter calibrated twice yearly and checked monthly.	Mixed liquor suspended solids is tested *daily to monitor the level of activated sludge.	none	pH is an indication of the health of the aerator tank and is monitored and recorded daily along with checking parameters on the UF banks.	pH probe is stored in pH 4 buffer and probe is calibrated regularly.	1	3	3	Acceptable.
Effluent treatment	Trade effluent from the aerator	Removal of sludge from water flow.	High SS water passed onto the final water tank causing an out of consent discharge to the river Brue.	No evidence/records	Yes	Outflow is monitored by turbidity and conductivity continuously. Plant will shutdown if too high turbidity and an alarm will alert the operator. Water Storage Tank (to be commissioned) will monitor pH, ammonia, redox and conductivity to ensure treated water is within consent and if not will alarm or shut down.	Work instructions, Training records and daily maintenance sheet.	FOG checked daily and recorded. SS and COD checked twice weekly. External sample sent monthly.	*pH and Dissolved Oxygen meter calibrated monthly.	UF membranes are a physical barrier for the sludge.	None.	1	4	4	Acceptable.
Effluent treatment	Trade effluent	Testing water using COD, SS, Phosphate, Ammonium, Nitrate and pH.	Malfunction of testing equipment allowing an out of consent discharge to the river Brue.	No evidence/records	Yes	*Handheld equipment is calibrated monthly and HACH testing equipment is calibrated annually.	Work instructions and Calibration records	If effluent testing equipment failed, SS and pH could be done in Dairy Lab as we have duplicate equipment. COD could be done externally at Barbers or sent to *SMS Lab.	Lab equipment calibrated regularly. *SMS Lab is accredited labs.	none	none	1	4	4	Acceptable.