Schedule 1

Relevant part of application form	Information requirements	Applicant Response
Part 3.4 Premises maps and 9.1 Emissions, discharges and waste	Provide a map of where the wet scrubber and discharge stack are located as these could not be found in the application documents.	The wet scrubber and stack are shown on the site plan included in the application as Figure 2 in Attachment 2.
Part 4.2 Detailed description of the proposed activities	Provide details including a description of all the proposed activities undertaken within the premises. The description should cover all activities which occur from the receipt of inputs at the facility through to the transport of final products off the premises.	Raw materials and packaging are received in the Loading/Unloading Dock, as shown on the provided Accensi Kwinana Site Plan Marked with Waste Storage, Air Emissions & Sullage. The raw materials are moved by forklift from the Loading/Unloading Dock ("the Dock) to the fully bunded and covered Storage Areas S2 to S4, which are concrete tilt-panel structures.
	Provide details on the annual/monthly amount and type of each product that will be produced within the premises (including what form the product is in solid or liquid form).	Production volume for Category 31 is 6,720,000 L/Yr Production volume for Category 32 is 54,000,000 L/Yr Production volume for Category 75 is 7,000,000 L/Yr (estimated – this is a new startup manufacturing process) All liquids – no solids produced
	List all the key infrastructure and equipment located on the premises and provide details about the infrastructure size, composition, and what process the equipment is used within, inputs and outputs from the infrastructure (both product and emissions). Process flow charts are a helpful way to illustrate premises infrastructure and process flow/activities.	
Part 4.8 Maximum production or design capacity for each category applied for and 4.9 Estimated / actual throughput for each category applied for:	Please provide the maximum design or production capacity for each of the categories 31, 32, and 75 which the application has been made for, noting that design capacity is based on infrastructure operating 24 hours a day, 7 days a week and is based on the amount of product produced for each individual category. Noting that this information is used to determine appropriate fees and the assessment of emissions and discharges from the premises the applicant should provide a response which is either the design capacity of the	Maximum design or production capacity for Category 31 is 29,200,000 L/Yr (37,960 T/yr) Maximum design or production capacity for Category 32 is 113,000,000 L/Yr (135,600 T/yr) Maximum design or production capacity for Category 75 is 29,200,000 L/Yr (26,280 T/yr)

Relevant part of application form	Information requirements	Applicant Response
	premises infrastructure or the maximum production the premises is likely to achieve for each individual category.	
Part 7.5 Planning approvals	Section 7.5 indicates that planning approval has been received for the premises. Please provide details of the planning approval relevant to premises, preferably including a copy or the approval if available.	Unable to locate development approval. Original owners of business owned the site, and the approval is unable to be located in Accensi archives and the new owners do not have a copy. Original owners are overseas and difficult to contact, however, they have managed to send plans to a member of the company Executive Team on 18/4 and will be forwarded as soon as they are available.
Part 9 Emissions, discharges, and waste	Provide specific details of any pollution control equipment or management controls employed on the premises including a description of the equipment/management control, how it is operated and any standards it meets.(i.e. bunds, loading/unloading controls, tank level controls, tank suitability for the chemicals that they contain (ie tank standards), dust controls (if relevant – fertiliser dust), spill and leak management (plans) for all tank types etc)	Pollution Control Equipment is as follows: The main loading/unloading dock is fully roofed and bunded. Isotainer and road tanker transfer bunds adjacent to B2, S1 and S5. Wet scrubbers (local and main) and plenum chambers
	Provide details of the wet scrubber, including how it operates, components, size, type, location, what it removes, emission point details (stack height), the nature/magnitude of residual emissions (particulates, specific pollutants etc) and what emission standards it is designed to achieve. Provide copies of any product specification and air emission monitoring results available for the scrubber.	Dynaflow 900 cabinets in use as local wet scrubbers. Main wet scrubber is of unknown make. The scrubber system removes dusts, mists vapours and fumes from chemical formulating activities in Formulation Areas F1 to F4 The stack is circular with 2 x 100mm BSP ports installed on the same plane as per AS4323.1 Stack height is approximately 11 metres AGL
	Locations of all waste storage areas (liquid and solids) on the premises, the type of waste stored, expected volumes of waste and how/where it will be disposed.	The waste storage areas are shown on Accensi Kwinana Site Plan Marked with Waste Storage, Air Emissions & Sullage. Most of the waste areas hold washings from the chemical process equipment and most of this volume of liquid waste is reused in the manufacturing process with an estimate 10,000 - 20,000 litres of liquid waste being

Relevant part of application form	Information requirements	Applicant Response
		disposed though licensed contractors per year with the remainder being used in subsequent formulations.
	Provide details of the wastewater infiltration tank sizes, the type of tanks, and operational and flow pathways of wastewater. Provide details of wastewater water quality testing and procedures and disposal methods of the wastewater.	The infiltration tanks are for stormwater and not wastewater and these stormwater infiltration tanks are of concrete construction and approximately 5,000 litres capacity each. Water quality analysis is conducted by a NATA accredited laboratory for herbicides and pesticides in Parts Per Billion (PPB) and metals in Parts Per Million (PPM). The document 2023.07.05 Accensi Kwinana Stormwater Tank Analysis June 2023 is provided for reference.
	Provide details of all emissions/discharge locations for stormwater management, including the flow pathway, drainage grates, soak wells, and stormwater basin.	The stormwater emission/discharge locations are shown on Accensi Kwinana Site Plan Marked with Waste Storage, Air Emissions & Sullage.
	What groundwater monitoring is proposed to be undertaken on the premises. Provide details of the proposed sampling programs including bores, frequency, and parameters.	Groundwater monitoring has been previously undertaken from 2004 to 2017, and the again in 2022 and in 2023 during the Baseline Environmental Assessment by JBS&G. Bi-annual groundwater monitoring is proposed for the Accensi Kwinana site, with the most recent being done on 18 April 2024.
Section 12.4 and 12.8 Fees	Provide supporting information/evidence/calculations to verify the accuracy of the discharge to air rates specified in the application, including zero emission rates, in order for the department to verify that correct discharge fees are applied.	There is only 1 previous stack test report from March 2007 (provided), with bi-annual stack testing proposed to be commenced in April/May 2024. The new stack emission sampling ports were installed recently to conform to Australian Standard AS4323.1-1995 Stationary source emissions - Selection of sampling positions.
Attachment 10 Request for exemption from publication	Provide details of the relevant exemption found in Schedule 1 to the *Freedom of Information Act 1992* which applies to the information which has been requested to be exempt from publication. It should be noted that if an entire report is requested to be exempt then the entirety of the report must meet the exemption ground otherwise the applicant must indicate which specific sections or information in the report meet the exemption ground.	The Accensi Kwinana site manufactures chemicals that have raw materials and finished goods that are Schedule 2 Chemical Weapon Precursors as per the Chemical Weapons Prohibition Regulation. The site also handles substances chemicals classed as Chemicals of Security Concern as per the National Security Act, Drugs Misuse legislation and possible explosives precursors or additives.

Relevant part of application form	Information requirements	Applicant Response
		If the entire application and supporting documents are not exempt outright, the redactions must be made to conceal security sensitive information. The are numerous references to processes, chemicals and corporate sensitive information that can provide competitors a competitive advantage from Australian Agribusiness providing the information, including this response to the information request. Australian Agribusiness reserves all of its rights and remedies at law.

MANUFACTURING PROCESS DESCRIPTION

Manufacturing is typically conducted in a 10,000L to 26,000L stainless steel mixing tank fitted with load-cells and a fixed speed agitator. Liquids are added directly from a drum or IBC using an air-operated diaphragm pump (maximum pressure 8 bar) or from bulk tank storage. Solids are added at the top of the tank or hopper, with dust extracted to a wet scrubber. On completion of manufacturing, the finished product is packaged directly out of the mixing tank, transferred to a storage tank and packaged out of the storage tank, or transferred by pipeline to a header tank in Area B1 for packaging.

All manufacturing is conducted at ambient pressure. Some technical products and additives require heating to melt them prior to addition to the batch, and are heated in hot-water baths with a maximum temperature of 65-75 °C.

Manufacturing is a manual process, with some automation provided on certain plants. Level indication and alarms are provided on the mixing and storage tanks for aqueous solutions. Packaging is done either manually, or through a metered packaging machine.

BUILDING AREA DESCRIPTIONS

Area B1 (main warehouse and packing area)

The main package and finished goods warehouse at the site is Area B1, a 3,262m^2 steel and concrete tilt-slab building, provided with bunds. The Building B1 functional description is as follows:

- Storage of empty drums and packaging, general packaging area with packing of some aqueous and combustible liquids. No storage or packaging of flammable liquids.
- Storage of finished products. No storage of flammable liquids.
- Packaging of products.

Area B2 (paraquat formulation area)

Area B2 is 911m^2 steel and concrete tilt-slab building, provided with bunds. It is used for paraquat/diquat production.

Paraquat concentrate is supplied as a 420 g/L aqueous solution of Paraquat dichloride.

Diquat concentrate is supplied as a 400 g/L aqueous solution of Diquat dibromide.

Three different products are produced by dilution of active concentrates with water:

- Paraquat 250: Diluted with water and additives to 250 g/L Paraquat ion.
- Diquat 200: Diluted with water to 200 g/L Diquat ion.
- Paraquat / Diquat 250: Diluted with water and additives to 135 g/L Paraquat ion and 115 g/L Diquat ion.

Manufacturing process

Manufacturing is conducted using dedicated tanks, pump and flexible hoses in Building B-2. Two tanks are provided (MV7 and EUP7) to allow for mixing of a new batch in MV7 while the previous batch is being packaged out of EUP7.

Paraquat and Diquat concentrate are supplied in IBCs (approximately 1100L) or 200L drums and stored on-site in area B2 and S3/S4. The required quantity of Paraquat and/or Diquat concentrate is transferred to the entrance of area B2 by forklift.

Flexible hose of approximately 3 metres length is connected to the suction side of a dedicated air-operated diaphragm pump (maximum pressure 8 bar) and a drum spear. Flexible hose is used to connect the discharge side of the pump to the mixing tank.

The cap on the drum or IBC is removed, and the drum spear inserted. The Paraquat and/or Diquat concentrate is transferred to the 26,000L mixing tank MV30 (transfer time is approximately 15 minutes for an IBC and 3 minutes for a 200L drum). Once empty, a water-hose is used to rinse the spear and drum or IBC. The rinse-water is pumped from the drum or IBC into the mixing tank, and the spear inverted to allow the pump to suck the spear and flexible hose dry. This process is repeated until the required quantity of Paraquat and/or Diquat concentrate is added, as determined by weight using mixing tank load-cells.

Additives such as surfactant, dyes and antifoam are added. Quantity addition is measured by weight using the mixing tank load-cells. Larger quantities are transferred from 200L drums using the same method as for the Paraquat and Diquat concentrate. Smaller quantities (e.g. dye or antifoam) are added through a normally-closed hatch in the top of the tank using a small hand-pump or poured directly from a 20L container. No additives are required for manufacture of Diquat 200 g/L (i.e. dilution is only with water).

For Paraquat products, a sample is taken for pH analysis in the laboratory. Adjustments are made, if required, to achieve the desired pH of 6.5. Pyridine (stenching agent) is added to Paraquat / Diquat 250 (this provides a "top-up" to the pyridine already contained in the Paraquat concentrate).

The mixing tank is fitted with a three-blade stirrer (low, medium and high-level blades). The stirrer is turned on once the blades are all covered (generally after addition of the additives).

Water is added to the mixing tank through a dedicated line. The operator opens the water valve and closes it once the required weight is reached, as measured using the tank load-cells (typically takes only a few minutes).

The stirrer is turned off after 15 minutes. A sample is taken for lab analysis. If directed by the lab, additions are made to adjust the final product until approval is given by the lab for release for packaging.

The flexible hoses connected to the air-operated diaphragm pump are re-connected to allow transfer from the mixing tank to the 26,000L storage tank EUP7. The storage tank is fitted with a high-level alarm. If transfer slows, the operator needs to replace the filter in the transfer line.

Finished product is packaged by gravity through a flexible hose into 20L drums (semi-automatic filler), 110L drums (dedicated packaging machine) or approximately 1,000L IBCs (manually filled by weight using load-cells).

Operators wear a Powered Air-Purifying Respirator (PAPR) and standard manufacturing PPE plus elbow-length nitrile gloves at all times when manufacturing or packaging Paraquat or Diquat products.

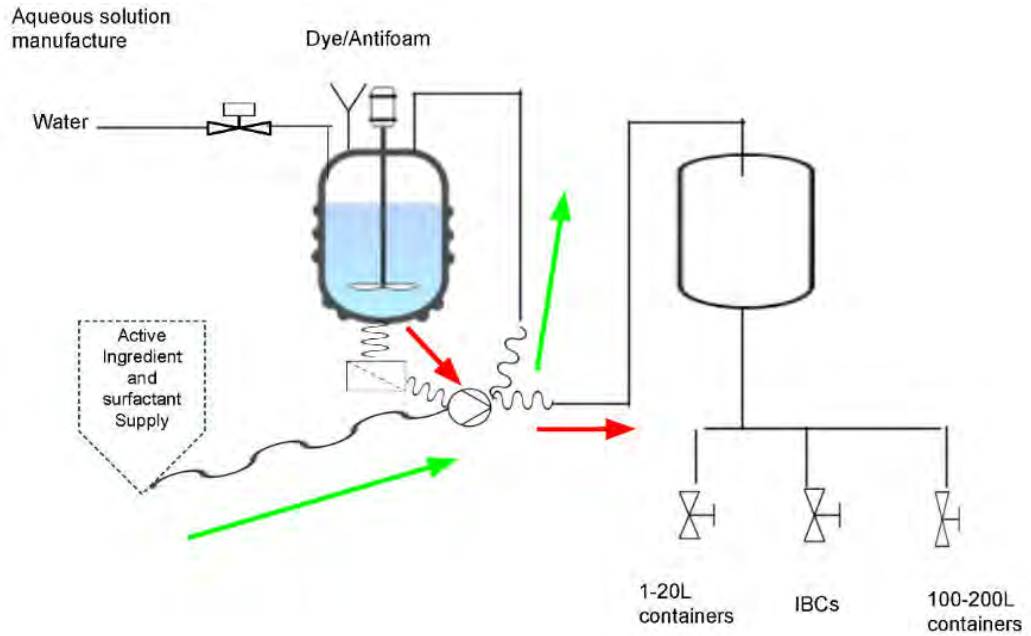

Figure 1: Process flow diagram - Aqueous solutions

Area B3 (packaged goods store)

Area B3 is 413m^2 steel and concrete tilt-slab building, provided with bunds. It is used for the storage of chemical packaged goods, mostly 1,000L IBCs and palletised 200L drums.

Area S1 (flammable liquids bulk tanks)

Area S1 is a 113m^2 roofed storage area for bulk flammable liquids contained in 2 x 26,000 litre isotainers permanently stationed in S1. The store is fully bunded. Ventilation is provided by the front face which is completely open to the atmosphere. There are no electrical installations.

The maximum individual bulk tank storage capacity of Building S1 is 44,000L with a concrete wall at the front to provide adequate bund volume. Storage is dedicated to 100% monoisopropylamine (Class 3 Packing Group I),

Area S2 (flammable & combustible liquids packaged goods store)

Area S2 is a 113m^2 roofed storage area for packaged flammable and combustible liquids, typically 200L drums and 1,000L IBC's. The store is fully bunded and has a rollover bund for forklift access. Ventilation is provided by the front face which is completely open to the atmosphere. There are no electrical installations.

The maximum storage capacity of Building S2 is 154,000L. Storage includes flammable and combustible liquids (typically raw materials) including 60% dimethylamine (Class 3 Packing Group II).

Area S3 (corrosive, toxic and Class 9 liquids packaged goods store)

Area S3 is a 204m^2 roofed storage area for packaged corrosive, toxic and Class 9 liquids, typically 200L drums and 1,000L IBC's. The store is fully bunded and has a rollover bund for forklift access. Ventilation is provided by the front face which is completely open to the atmosphere. There are no electrical installations.

Area S4 (corrosive, toxic and Class 9 liquids packaged goods store)

Area S3 is a 204m^2 roofed storage area for packaged corrosive, toxic and Class 9 liquids, typically 200L drums and 1,000L IBC's. The store is fully bunded and has a rollover bund for forklift access. Ventilation is provided by the front face which is completely open to the atmosphere. There are no electrical installations.

Area S5 (combustible liquids bulk tanks and mixing vessels)

Area S5 is a 255m^2 roofed storage area for bulk combustible liquids contained in 3 x 130,000 litre vertical tanks, 4 x 30,000 litre vertical mixing vessels and 2 x 20,000 finished goods tanks. The store is fully bunded. Ventilation is provided by the front face which is completely open to the atmosphere.

The maximum individual bulk tank storage capacity of Building S5 is 150,000L with a concrete wall at the front to provide adequate bund volume. Main storage is the solvent Solvesso 150.

Area F1 (glyphosate formulation area)

Area F1 is a 144m^2 roofed formulation area for the formulation of glyphosate. The formulation area is fully bunded. Ventilation is provided by the front face which is completely open to the atmosphere.

Glyphosate is reacted with amines (monoisopropylamine) to produce amine salts and 100% MIPA transferred from bulk storage tanks is used for the glyphosate reaction.

Manufacturing process

A range of products are produced by amination-based reactions including

- Glyphosate 360, Glyphosate 450 and Glyphosate 510: Glyphosate reacted with 70% monoisopropylamine to produce aqueous solutions of glyphosate isopropylamine salt (CAS 38641-94-0).

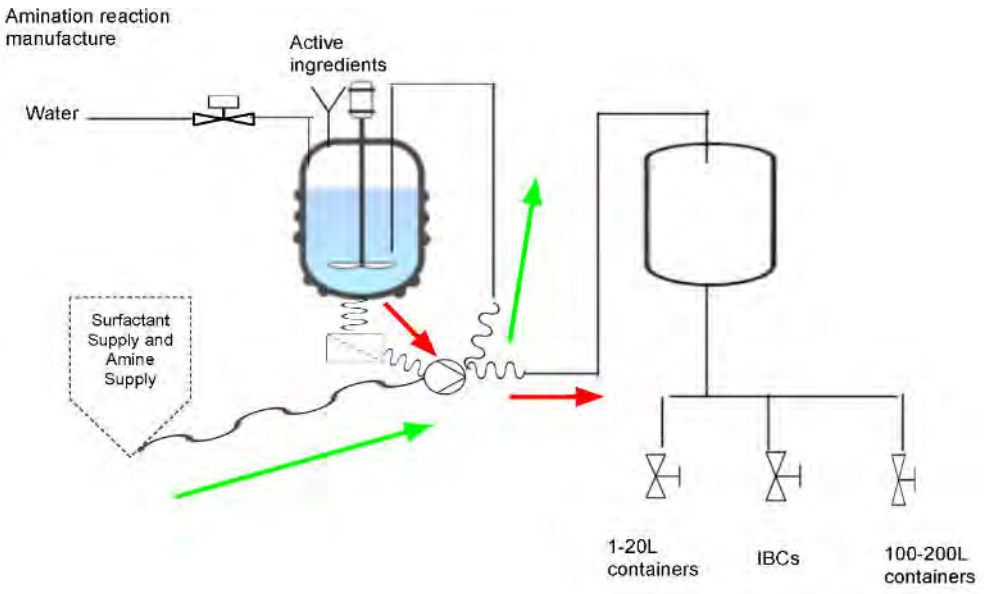

Figure 2: Process flow diagram - Amination reactions

Manufacturing Glyphosate Isopropylamine Salt

Manufacturing of glyphosate isopropylamine salt is conducted in Building B-3NSH or Building B-1. The equipment in Area F1 is largely a manual operation (as for other manufacturing at the site).

The mixing tanks are fitted with cooling jackets. Water is recirculated through the cooling jackets and a common fan-driven cooling tower. The cooling jacket is turned on prior to commencement of manufacturing.

Approximately 85% of the water required for the batch is added to the mixing tank through a dedicated line. In Building B-3 the operator opens the water valve and closes it once the required weight is reached, as measured using the tank load-cells (takes approximately 10 minutes).

The mixing tank is fitted with a three-blade stirrer (low, medium and high level blades). The stirrer is turned on during or after addition of the water.

Blue dye (approximately 1kg) is added through the hatch at the top of the tank.

The next steps involve the addition of glyphosate to the mixing tank at the same time as 100% MIPA. The glyphosate completely reacts with the 100% MIPA to produce the amine salt. At this point, the flammable hazard associated with the 100% MIPA is removed. The reaction is mildly exothermic, and with the cooling jacket the resulting temperature is no higher than 60 °C (cooling to this temperature is required as the surfactant cannot be added at temperatures above 60 °C).

The required number of bags of glyphosate are transferred from their storage location (Area S3 or S4) to the entrance of the manufacturing building by forklift to the Formulation Area F1. The bag is lifted by a hoist to above the tank, where the bottom seal of the bag is released and the glyphosate is transferred directly into the mixing tank. The mixing tank is fitted with a dust extraction system and wet scrubber.

Fixed piping supplies 70% MIPA from the storage tanks to the mixing tanks. Two independent pumps are located at the 70% MIPA storage tanks – one for Building B-3NSH and one for Building B-1. Prior to manufacturing glyphosate, the discharge valves from the transfer pumps are unlocked and opened. The pumps are activated by the control system with interlocks to prevent unsafe addition. The pump is turned off and the pump-valve is closed and locked at the end of each day.

The scales are tared to zero before addition of the first bag of glyphosate. After adding the first bag of glyphosate, the addition of 100% MIPA is started by the operator opening the valve located at the top of the

mixing tank (mezzanine level). A second bag of glyphosate is added, and the 70% MIPA flow is turned off once 654kg of 70% MIPA have been added based on scale reading of 1854kg (takes approximately 10 minutes). This process – taring scales, adding one bag of glyphosate, opening 100% MIPA valve, adding another bag of glyphosate, closing 100% MIPA valve when scales reach 1854kg – is repeated three more times to add the batch quantity of glyphosate and 100% MIPA.

Additional water is then added to aid in cooling before the wetting agents are added.

Mixing continues for approximately 10 minutes before taking a sample for pH analysis. Any correction required to pH is advised by the lab. Once pH is correct, and batch temperature is below 60 °C, the wetting agent is added

Any other additives (e.g. glycol, antifoam) are added to the batch, before the batch is brought to its final weight by the addition of water. A further sample of the finished product is taken for lab analysis. If directed by the lab, additions are made to adjust the final product until approval is given by the lab for release for packaging.

An electric transfer pump is used to transfer the finished product from the mixing tank to the storage tank. Product is then pumped to Building B-8 for packaging.

Operators wear a Powered Air-Purifying Respirator (PAPR) and standard manufacturing PPE plus elbow-length nitrile gloves at all times when manufacturing or packaging glyphosate products.

Area F2 (phenoxy formulation area)

Area F1 is a 144m^2 roofed formulation area for the formulation of phenoxies (2,4-D). The formulation area is fully bunded. Ventilation is provided by the front face which is completely open to the atmosphere.

2,4-D is reacted with amines (dimethylamine) to produce amine salts. 60% dimethylamine (DMA), supplied in 200L drums, is used for the 2,4-D reaction.

Manufacturing process

A range of products are produced by amination-based reactions including:

- 2,4-D Amine 300: 2,4-D acid reacted with 100% monoisopropylamine to produce an aqueous solution of 2,4-D isopropylamine salt (CAS 5742-17-6).
- 2,4-D Amine 625: 2,4-D acid reacted with 60% dimethylamine to produce an aqueous solution of 2,4-D dimethylamine salt (CAS 2008-39-1).

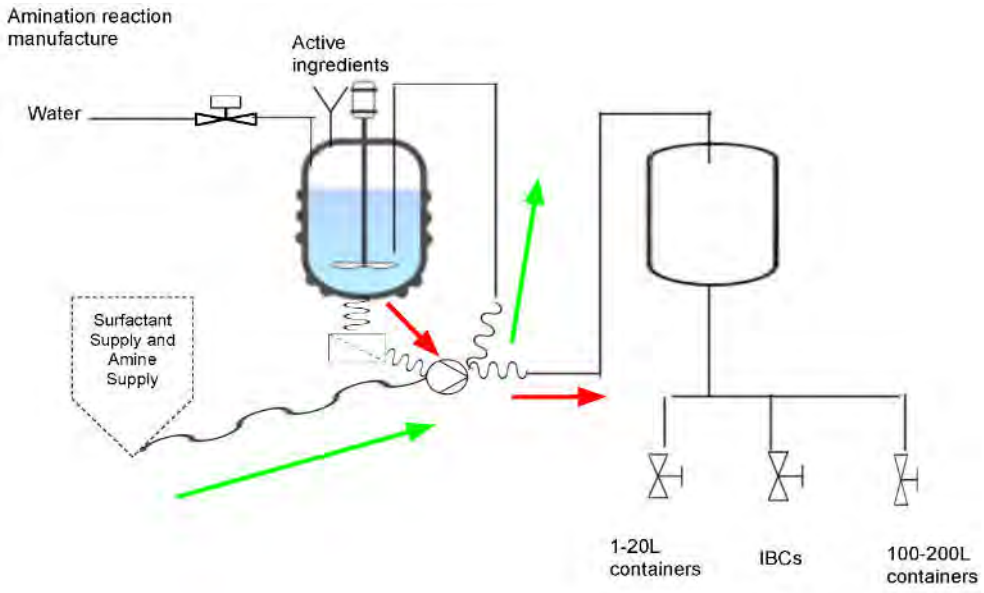

Figure 3: Process flow diagram - Amination reactions

Manufacturing 2,4-D Amine Salts

Manufacturing of 2,4-D amine salts is conducted in mixing tank MV3 in Area F2. The tank is fitted with internal extraction, drawing air in through the open hatch on the top of the tank.

Approximately 3000L of water is added to the mixing tank through a dedicated line. The operator opens the water valve and closes it once the required weight is reached, as measured using the tank load-cells.

The mixing tank is fitted with a three-blade stirrer (low, medium and high-level blades). The stirrer is turned on after addition of the water.

200L drums of 60% DMA are transferred by forklift from their storage location in Area S2 to the mezzanine platform external to Area F2. Ten drums (2100L) of 60% DMA are required. The area below the mezzanine level is bunded, and the mezzanine level through to ground-level is classified as a hazardous area and has no ignition sources. The tank is earthed and a clamp and earthing strap are used to connect the drum to earth.

A dedicated air-operated diaphragm pump (maximum pressure 8 bar) and drum spear, located on the mezzanine platform, are used to transfer 60% DMA into the mixing tank. Flexible hose is provided on the suction side of the pump to the spear. Fixed piping to below the water level in the mixing tank is provided on the discharge side of the pump, with only a short-length of flexible hose between the pump and the fixed piping to allow the pump to be moved from one drum to another.

The cap on the drum is removed, and the drum spear inserted. The 60% DMA is transferred to the mixing tank. Once empty, the spear is inverted to allow the pump to suck the spear and flexible hose dry. This process is repeated until the required quantity of 60% DMA has been added to react with one bag of 2,4-D.

At this time, the operator also adds a small quantity (25-100kg) of EDTA (ethylenediaminetetraacetic acid) through the hatch at the top of the mixing tank.

Bulk bags of 2,4-D are transferred by forklift from their storage location to the entrance to Building B-3 by the on-site truck and then into Building B-2. A single bulk bag (800kg) of 2,4-D is lifted by hoist to above the mixing tank and added through the hatch at the top of the mixing tank. The 2,4-D completely reacts with the 60% DMA to produce the 2,4-D amine salt. At this point, the flammable hazard associated with the 60% DMA is removed. The reaction is mildly exothermic, resulting in a temperature rise no higher than 50°C.

The process of adding 60% DMA, and then a single bag of 2,4-D, is repeated until all ingredients have been consumed.

The solution is stirred for a further 10 minutes before taking an initial sample for pH testing by the lab. The remaining water is added, together with surfactants, prior to final testing by the lab. A further sample of the finished product is taken for lab analysis. If directed by the lab, additions are made to adjust the final product until approval is given by the lab for release for packaging.

An electrical centrifugal pump is used to transfer the finished product from the mixing tank to the storage tank S1. Finished product is packaged from the storage tank.

Operators wear a Powered Air-Purifying Respirator (PAPR) and standard manufacturing PPE plus elbow-length nitrile gloves at all times when manufacturing or packaging 2,4-D products.

Area F3 (trifluralin and herbicide formulation area)

Area F1 is a 144m^2 roofed formulation area for the formulation of trifluralin and other herbicides. The formulation area is fully bunded. Ventilation is provided by the front face which is completely open to the atmosphere.

Area F4 (insecticide formulation area)

Area F1 is a 144m^2 roofed formulation area for the formulation of insecticides. The formulation area is fully bunded. Ventilation is provided by the front face which is completely open to the atmosphere.

Emulsifiable concentrates (combustible solvent) Manufacturing process

A range of products are produced by mixing the active technical product with solvents (Solvesso 150, C1 Combustible Liquid) and surfactants.

Combustible solvent (Solvesso 150) is transferred to the mixing tank via dedicated lines into Area F4. The solvent is transferred from the dedicated storage tanks in S5. The transfer pump is located at the storage tanks. Each morning, the discharge valve from the transfer pump is opened, and the pump is turned on. The pump runs only when a drop in line pressure occurs (from opening the valve at the mixing tank). The pump is turned off and the pump-valve is closed at the end of each day.

To start the flow of Solvesso 150 into the mixing tank, the operator opens the valve located at the top of the mixing tank (mezzanine level). The operator remains present (up to 30 minutes) while the Solvesso 150 is flowing into the tank and closes the valve on reaching the desired quantity (the total batch quantity is not added at this time as Solvesso 150 is used to rinse drums). The mixing tanks are fitted with load-cells with displays at ground level and at the top of the mixing tank.

The mixing tanks are fitted with three-blade stirrers (low, medium and high level blades). The stirrer is turned on after the addition of the Solvesso 150. For some formulations additional solvents are added from drums.

The technical product is then added.

For some products, the technical needs to be melted in the hot water baths to allow for transfer to the mixing tank. The required number of 200kg technical drums (typically 15 drums = 3.6 tonne) are transferred from their storage location Area S3/S4 to the hot-water baths. The steel drums are transferred into cages which are then lifted into one of 12 hot-water baths. The hot-water baths are filled with water that almost reaches the top of the drums; with a heating element located beneath a metal plate at the bottom of the hot-water bath. While two of the hot-water baths are fitted with thermostat control and alarms, these are not required or necessary for some products as the maximum temperature that can be reached in the hot-water baths (based on the capacity of the elements) is 65-75 °C. Melting is typically conducted overnight. Once melted, the cages are removed from the hot-water baths, and drums transferred by forklift to Formulation Area F1. Molten technical is then pumped into the mixing tank. Operators wear a Powered Air-Purifying Respirator (PAPR) and standard manufacturing PPE plus elbow-length nitrile gloves at all times during the transfer.

Surfactants and additives are pumped into the mixing tank from drums using the same method as described above. If required, surfactants are melted in the hot-water bath using the same described above.

The pump is rinsed with Solvesso 150, and additional Solvesso 150 is added to bring the batch to the final weight (as specified in the batch sheet).

Stirring continues for another 15-30 minutes. A sample is taken for lab analysis. If directed by the lab, additions are made to adjust the final product until approval is given by the lab for release for packaging.

Finished product can be transferred to the storage tank for packaging. The flexible hoses connected to the air-operated diaphragm pump are re-connected to allow transfer from the mixing tank to the storage tank. If transfer slows, the operator needs to replace the filter in the transfer line. In other tanks packaging is conducted directly from the mixing tank.

Finished product is packaged by gravity or with a diaphragm pum ·ough a dedicated insecticide packaging machine. Package sizes are typically into 5L and 25L.

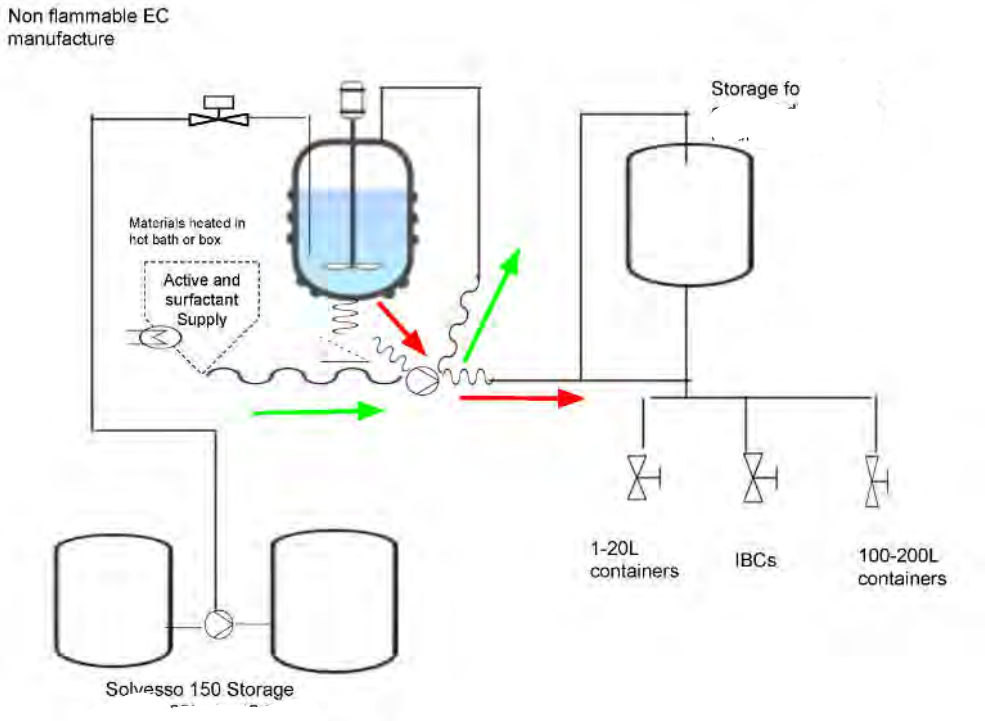

Figure 4: Process flow diagram - Emulsifiable concentrates (combustible solvent)

Plant Room

The Plant Room is a 256m^2 roofed plant and equipment area to provide services to the formulation areas, such as cooling water, compressed air, air emission pollution control from the extraction system. The Plant Area is fully bunded. Ventilation is provided by the front and face which is completely open to the atmosphere.

Waste Storage

Figure 5: 61-B1-WW01 Insecticide & Fungicide (I&F) washings

Figure 6: 61-B1-WW02 Herbicide Washings

Figure 7: 61-B2-WW01 Waste Storage

Air Emission Controls

Figure 8: 61-F1 Wet Scrubber Gly

Figure 9: 61-F1 Wet scrubber Reflex

Figure 10: 61-F2 Plenum Chamber

Figure 11: 61-F3 Plenum Chamber

Figure 12: 61-F4 Plenum Chamber

Stormwater Management

Figure 13: Stormwater Sullage pits

Figure 14: Stormwater Tanks