



Waste Handling

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## **1. PURPOSE**

This procedure covers waste handling in the Meath Waste to Energy facility. It covers all movements of waste from the security gate to the feeding hopper. Specific handling for Department of Agriculture Regulated waste is detailed in section 5.6.

## **2. SAFETY**

### **2.1. PRODUCTS**

N/A

### **2.2. IMMEDIATE RISKS**

N/A

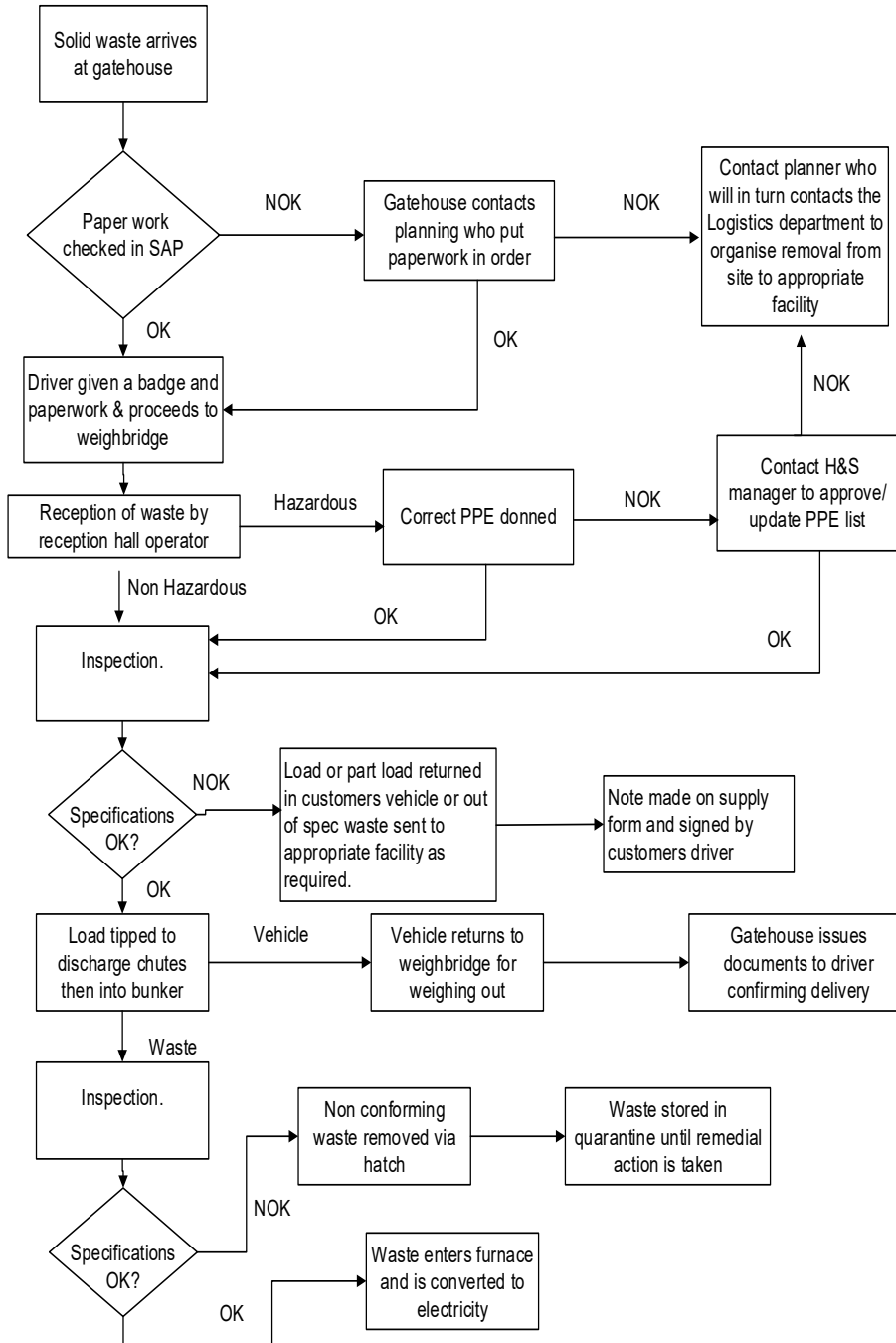
### **2.3. MSDS**

N/A

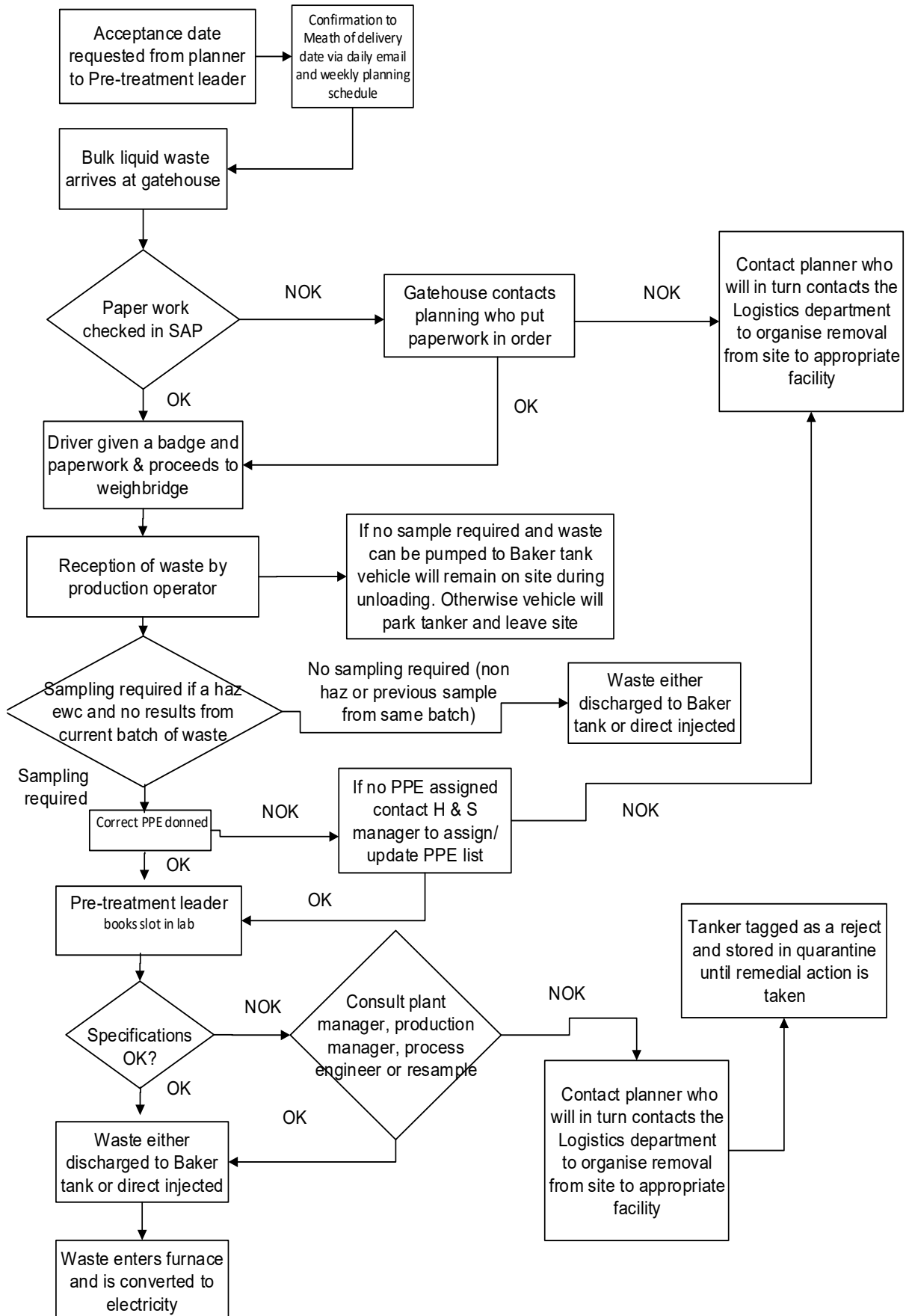
### **2.4. PPE**

### 3. PROCESS OVERVIEW

#### SOLID WASTE WORK FLOW



### LIQUID WASTE WORK FLOW



#### 4. DEFINITION

EPA - Environmental Protection Agency

WAC - Waste acceptance criteria

WTF – Waste Transfer Form

#### 5. RESPONSIBILITIES

Task	Responsible	Accountable	Consulted	Informed
<ul style="list-style-type: none"> <li>Paperwork checked in SAP.</li> <li>Badge supplied to driver.</li> <li>Documents confirming delivery supplied to driver.</li> </ul>	Gatehouse	Production Manager	N/A	N/A
<ul style="list-style-type: none"> <li>Organise removal of unapproved loads to appropriate facility.</li> </ul>	Customer Order Management	N/A	Production Manager	Plant Manager
<ul style="list-style-type: none"> <li>Approve/Update PPE list.</li> </ul>	H & S manager	EHS Manager	N/A	Haz Waste Coordinator
<ul style="list-style-type: none"> <li>Receives waste in tipping hall.</li> <li>Inspection of loads whilst discharging.</li> </ul>	Hall Operator	Shift Supervisor	N/A	N/A
<ul style="list-style-type: none"> <li>Visual inspection of waste in chutes.</li> <li>Mixing of waste in bunker.</li> </ul>	Crane Driver	Shift supervisor	N/A	N/A
<ul style="list-style-type: none"> <li>Receives liquid waste.</li> <li>Wears correct PPE.</li> <li>Samples tanker.</li> <li>Discharges waste to Baker tank or direct injects.</li> </ul>	Production Operator	Shift supervisor	N/A	N/A
<ul style="list-style-type: none"> <li>Books slot in lab.</li> </ul>	Pre-treatment leader	Production Manager	N/A	N/A
<ul style="list-style-type: none"> <li>Determines whether liquid waste load to be rejected.</li> </ul>	Plant Manager/Production Manager/Process Engineer	General Manager/Plant Manager	N/A	Customer Order Management

Indaver's customers have a responsibility to deliver waste in compliance with the waste acceptance criteria as defined in Waste Acceptance procedure P0362. The Tipping Hall Operator is responsible for conducting visual checks of the waste to ensure compliance with the waste acceptance criteria and filling in the waste inspection checklist F0363. The crane driver is responsible for performing visual checks as the waste clears the discharge chutes and to mix the waste. They are also responsible for

checking the closed circuit TV screen on the hopper as a final check. The gatehouse staff are responsible for enforcing the opening hours and filling in the acceptance of Waste Transfer Forms and filling in the online web system for WTF's. The logistics department is responsible for moving rejected loads to a suitable destination.

## **6. WORK INSTRUCTIONS**

### **6.1. RECEPTION OF TRUCK CONTAINING SOLID WASTE**

Waste is only accepted if it is planned and scheduled in the SAP system and in accordance with the requirements of the licence. All waste supplied must be in conformance with Indaver's waste acceptance criteria (WAC). The criteria for acceptance are outlined in the WAC procedure P0362. Upon arrival, the vehicle parks in one of the designated parking bays and the driver walks to the security hut via a designated walkway. When a driver arrives on site for the first time they must complete an induction before entering the site. The opening hours of the facility in accordance with the Licence W0167-03 will be adhered to.

### **6.2. DOCUMENT CHECK**

The gatehouse staff check that the paperwork supplied with the vehicle matches what is available on the SAP system. The following information is recorded:

- a) the date and time
- b) the name of carrier (and waste collection permit details if appropriate)
- c) the vehicle registration number
- d) the trailer, skip, or other unique identification (where relevant)
- e) the name of producer/ collector of waste as appropriate
- f) the name of waste facility from which the load originated, including the waste licence or waste permit register number
- g) description of the type of waste including EWC codes
- h) quantity of waste in tonnes
- i) details of the treatment(s) to which the waste has been subjected, if any.
- j) the classification or coding of the waste, including whether MSW or otherwise.
- k) name of person checking the load
- l) if a load is rejected/ removed detail the date, type of waste and facility to which they were removed
- m) if applicable a consignment note number (CMR number/WTF number/TFS number)
- n) Badge number (which is handed to the driver).

Once everything is confirmed as acceptable, the gatehouse staff hands the driver a supply form and a badge to activate the weighbridge.

If an unscheduled load arrives at the gate, the gatehouse staff makes contact with the planning department. The planning department then confirms whether the load can be accepted or not (in consultation with the customer) and then ensures the SAP system is updated as required.

Should an anomaly arise, the planning department will ensure the matter is dealt with appropriately. All anomalies will be recorded by the planning department.

The records of waste accepted are submitted to the planning authority on a monthly basis as agreed in line with Condition 4 of planning permission PL 17.219721 and will be summarised in the annual environmental report. The records of waste accepted will be maintained at the facility and reported as part of annual environmental report.

When waste arrives on a waste transfer form (WTF) the gatehouse staff must follow Indaver's WTF completion manual in [link](#) from Section 'Acceptance of the WASTE TRANSFER FORM'

### **6.3. WEIGHING IN**

The vehicle drives to the 'in' weighbridge where they use the badge to activate the weighing of the load. There is no requirement to leave the cab during weighing. This weight is automatically recorded on the SAP system. On receiving a green light the driver moves the vehicle towards the Tipping Hall.

The gatehouse staff will look out for anomalies on the weighing scales (too heavy/light may indicate waste is out of specification). If the gatehouse staff notices any anomalies the Tipping Hall Operator is notified via the two way radio system.

### **6.4. TIPPING HALL FOR SOLID WASTE**

Entry to the tipping hall is controlled by the Tipping Hall Operator. The Tipping Hall Operator gives a signal to the driver and then the driver may enter the tipping hall. The supply form is handed to the Tipping Hall Operator. If materials meet the acceptance criteria, the vehicle driver is directed to the appropriate bunker gate. More detailed inspections may be carried out periodically as outlined below.

### **6.5. INSPECTIONS**

There are various options for waste inspections. For every solid waste load received checklist F0363 is completed by the person inspecting the waste. At least one of the following checks must be performed on every load received.

### **6.5.1 . Visual on discharge**

This inspection is carried out in the waste inspection area of the tipping hall. As the load is being tipped into the bunker the Tipping Hall Operator watches for any non conforming waste. If a non conformance is spotted the Tipping Hall Operator immediately radios the crane driver who will remove the waste in question. The tipping hall operator will also notify the planning department who contacts the relevant account manager.

The visual inspection can also be carried out on palletised wastes which are unloaded using a forklift.

### **6.5.2 . Visual in truck**

This may be carried out if the Tipping Hall Operator suspects non compliance and it is possible to inspect vehicle before load is discharged. CCTV cameras are in place at the weighbridge and waste can be inspected using this. Another possible method would involve the Tipping Hall Operator using a ladder or mobile platform to look into the truck. Should any waste not be in conformance with the WAC a detailed inspection will follow.

### **6.5.3 . Detailed inspections**

These will be carried out periodically on solid waste as required to ensure that customers do not supply waste outside the WAC. As a minimum, one random inspection per week will be carried out either by the tipping hall operator or the day shift leader. During such inspections the contents of the load are tipped onto the tipping hall floor and the tipping hall operator completes a check of the contents to ensure compliance with the WAC. The inspection checklist F0363-01 is filled out by the person performing the inspection. See section 6.11 for storage of these records.

Once it is shown that the waste is in accordance with the WAC, the waste is loaded into the bunker using a front loader. The front loader will only be used by trained personnel. Should anomalies be noticed the non conforming waste is returned to the customer's vehicle where appropriate.

For a new customer the frequency of inspection may be increased to ensure that the waste has been characterised correctly and that it meets the WAC.

### **6.5.4 . Hazardous waste inspection**

Any solid waste that enters the plant on a hazardous EWC must undergo a detailed inspection as outlined above including filling out form F0363-01 for palletized waste or form F0363-04 for closed container waste. This means in practice that if the waste is delivered in a closed container the overall load is visually examined, and for waste delivered in box containers or on pallets, at least 2 containers or pallets per EWC code are opened where possible and the contents visually examined for compliance with the description supplied. Correct PPE to be ascertained from the [solid hazardous](#)



[tech sheet](#) and must be donned when carrying out all hazardous waste inspections. Any instructions contained within the [solid hazardous tech sheet](#) must be fully adhered to. If PPE is not on this list, the pre-treatment leader/ supervisor must contact the H & S manager to update or assign PPE for the product. For bulk solid waste, where practical, the load will be inspected when the doors of the container are opened. Other inspections as outlined in the sections above also apply to hazardous waste. See section 6.11 for storage of these records.

#### **6.5.5 . GMO Hazardous waste inspection**

Any GMO waste that enters the plant must undergo a detailed inspection by filling out the checklist F0363-01 for palletized waste. This means in practice that all GMO delivered in box containers or on pallets as per EWC code will be visually inspected without being opened. Correct PPE to be ascertained from the solid hazardous tech sheet and must be donned when carrying out all hazardous waste inspections. Any instructions contained within the solid hazardous tech sheet must be fully adhered to. If PPE is not on this list, the pre-treatment leader/ supervisor must contact the H&S manager to update or assign PPE for the product. Other inspections as outlined in the sections above also apply to hazardous waste. See section 6.11 for storage of these records.

#### **6.5.6 . Camera inspection**

There is a camera in the bunker/hopper area of the plant. This can be used to inspect solid waste in the hopper. The monitor for this camera is in the control room where a crane operator can ensure that only acceptable waste loaded into the hopper.

#### **6.5.7 . Inspection by crane operator**

As the crane operator mixes and transfers the solid waste they must always be vigilant for any waste that does not conform to the waste acceptance criteria. Should any non conforming waste be found it is removed via the hatch to be disposed of in a correct manner.

### **6.6. DEPARTMENT OF AGRICULTURE REGULATED WASTE DELIVERIES**

#### **6.6.1 . Sanitising delivery units**

For containers carrying CAT 1 department of Agriculture waste the following must be adhered to. After unloading the waste into the bunker, the vehicle and the container shall be cleansed in the tipping hall, where all "wash" will be discharged into internal drainage channels which leads into the waste bunker for incineration. The skips will then be sprayed with an approved disinfectant which for the time being stands approved by the Minister in accordance with the Diseases of Animals (Disinfectants) Order, 1975 (SI No 273 of 1975), amended by the Diseases of Animals (Disinfectants) Order, 1975 (Amendment) Order, 1978 (SI No 345 of 1978) at the highest concentration of disinfectant on the list of approved disinfectants. The skip is then closed and leaves site after weighing out as normal. It is

not likely that a detailed inspection occurs on this waste because of the Category I status however all other aspects of the procedure are applicable to this waste type as normal.

## 6.7. BULK LIQUID WASTE

### 6.7.1 . Approach to sampling liquid waste

A detailed liquid WAC to confirm compliance with the licence acceptance requirements is performed for all new waste liquid streams. A conformity check sample is required for each hazardous load or batch. Conformity check samples are tested for water content, layering, CV, pH and chlorine. This is to ensure the waste stream has not changed since the initial WAC was carried out.

The steps required for performing a conformity check are as follows;

- Pre-treatment leader or as back up deputy pre-treatment leader book a slot in lab using the sales order number and customer name as a reference.
- From annex, PPE to be donned can be determined for each product following the link : [bulk aqueous PPE matrix](#)
- Load is sampled following the linked risk assessment/method statement : [sampling of aqueous tankers](#)
- Aqueous tanker checklist F0363-06 is filled in.
- Sample is marked with waste producer, sales order number and today's date.
- Sample is transported to lab either by taxi organised by gatehouse staff or directly by the hazardous waste coordinator or other staff member.
- Analysis is carried out in lab for water content, layering, CV, pH and chlorine.
- The lab analyst will send the results to a distribution list containing the shift and deputy shift leaders and several members of the Meath management team.
- If results are OK the tanker is tagged as cleared to unload and can be unloaded.
- Aqueous tanker checklist F0363-06 is filled in.
- If results NOK then a management team decision is needed and there is a possibility to reject the load or resample the load.
- If there is a markable variation between the resample and the original sample ie. significant layering or visible differences in colour/opaqueness then a third sample should be taken.

See section 6.11 for storage of these records.

### 6.7.2 . Waste handling liquid waste

After the paperwork has been checked at the gate house the gatehouse staff will notify either the pre-treatment leader or the day shift office. One of the above will meet the truck at the baker tank. A

sample will be taken following steps above if there is no current sample from this particular waste batch and the load is hazardous.

When there is no sample required the load will either be pumped to the baker tank or directly injected. The truck will stay onsite for the duration of the unloading exercise. When sampling is required the truck will park the tanker in one of the designated bays for storing tankers and leave site.

## **6.8. WEIGHING OUT**

After un-loading, the vehicle follows exits via the 'out' weighbridge. A tare weight is then recorded on SAP. The gatehouse staff stamps/signs the paper work for the driver. The gatehouse staff then gives the driver the relevant paperwork. Should there be any special collections whereby the weight is below the limit of detection (20Kg) then this will be flagged by the planner to gatehouse staff. Gatehouse staff will then manually weigh and record the weight of this waste. This will then be sent to the planner to update SAP. A recovery certificate will be provided to the customer in due course to prove that Indaver accepted and treated their waste.

## **6.9. WASTE TO ENERGY**

All waste is mixed together in the bunker, there is no segregation for individual EWC's everything is mixed and fed to the hopper where it enters the furnace and is converted into energy. The liquid waste is directly injected into the furnace via a separate lance.

## **6.10. REJECTION OF A LOAD**

### **6.10.1 . Solid loads**

If, after any of the inspections or test results (conformity check, WAC etc) a load is found not to be in compliance with the WAC, the whole load or part of the load may be rejected. In the case of a part load being rejected, the contents of the entire load are dumped on the ground. The front loader is used to put the acceptable waste into the bunker and the non conforming waste back in the customer's truck.

In all rejection cases the tipping hall operator should note the non compliance on F0363, F0363-01 and on the supply document that the driver was given in security. The driver is asked to sign the supply form to confirm that they accept the waste does not comply with the WAC. Photographs may be taken by the Tipping Hall Operator as evidence. The tipping hall operator may call on the day shift leader or the pre-treatment process leader for support or a second opinion. A non conformity flow on MOSS should be started as per the [waste non conformity procedure](#) and will move off-site in line with the SAP flow as described in the [IWS Waste Rejected in Meath SAP Manual](#).

### **6.10.2 . Aqueous Loads**

Where an aqueous waste load is rejected due to failing test results or an inspection the shift leader on duty or the pre-treatment process leader should be contacted. The shift leader or the pre-treatment process leader will contact the planning department. The gatehouse staff will put a block on the load on SAP. This must be done before the load is automatically accepted at midnight. A non conformity flow on MOSS should be started as per the waste non conformity procedure and will move off-site in line with the SAP flow as described in the IWS Waste Rejected in Meath SAP Manual.

On site the rejected load and the truck that it is in are moved to the quarantine area until paperwork is in place to move the load to an appropriate treatment facility. This may take longer than a day and in such cases where possible the cab of the truck will leave site but the trailer will remain in quarantine. In the event of any DGSA compliance matters, these will be reported to the site DGSA.

### **6.10.3 . Palletised Loads**

Once the palletised load has been opened and inspected, if the load is found not to be in compliance with the WAC (conformity check, WAC, unsafely stowed, etc.), the entire load or part of the load may be rejected. In the case of a the entire load being rejected the trailer will be closed up and directed to the quarantine area until it can be restowed safely by the person(s) responsible for originally stowing the load. In the case of a part load being rejected, the contents which are conforming will be off load for treatment. The non-conforming part of the load will be offloaded to the quarantine area until it can be repacked by the person(s) responsible for originally packing it or until the correct outlet can be found to accept this waste.

In all rejection cases the tipping hall operator should note the non compliance on F0363, F0363-01 and on the supply document that the driver was given in security. The driver is asked to sign the supply form to confirm that they accept the waste does not comply with the WAC. Photographs may be taken by the Tipping Hall Operator as evidence. The tipping hall operator may call on the day shift leader or the pre-treatment process leader for support or a second opinion. A non conformity flow on MOSS should be started as per the [waste non conformity procedure](#).

## **6.11. STORAGE OF RECORDS**

### **6.11.1 . Non-hazardous solid waste**

Form F0363 is filled out everyday by the tipping hall operator. Once a week this is delivered to the day shift leader who will summarise the previous seven days sheets by taking a note of the number of deliveries per day, the number of non conformities and the name of the tipping hall operator. These weekly summaries are saved in MOSS at the following link : [waste inspection reports](#)

Due to the nature of the tipping hall environment paper copies of F0363 are not retained.

Form F0363-01 is filled out at least once a week by either the shift leader or the tipping hall operator. As the forms can be quite smelly the details of the date of inspection, who did the inspection, the

customer and the vehicle registration number are copied into the weekly summary mentioned above. The original form F0363 is not retained.

#### **6.11.2 . Hazardous solid waste**

Completed WTF is scanned by gatehouse personnel to sales order on SAP. A paper copy of annex and either F0363-01 (palletised waste) or F0363-04 (closed container waste), are stapled together and stored in a folder on level 3 for six months then archived following P0039.

#### **6.11.3 . Non-hazardous liquid waste**

F0363-06 is stored in a folder on level 3 for six months then archived following P0039.

#### **6.11.4 . Hazardous liquid waste**

Completed WTF is scanned by gatehouse personnel to sales order on SAP. A paper copy of annex and F0363-06 are stapled together and stored in a folder on level 3 for six months then archived following P0039.

## **7. MONITORING AND EVALUATION**

1.	Monitoring tool:	Liquids – Aqueous Tanker Unloading Checklist F363-06 Solid – Inspection Checklist F-0363-01 Hazardous Waste Closed Container - Inspection Checklist F-0363-04
2.	Monitoring frequency	Every Load
3.	Evaluation method	Visual Inspection

## **8. REFERENCES/ANNEX**

Waste acceptance criteria

Licence W0167-03

Waste acceptance daily report F0363

Waste inspection checklist F0363-01

Aqueous tanker checklist

Waste inspection reports

Bulk aqueous PPE matrix

Solid hazardous tech sheet

Instructions for use of the Waste Regulation Management System (WRMS)

Waste Acceptance Procedure

Waste non conformity procedure

Hazardous waste closed container inspection checklist

## IWS Waste Rejected in Meath SAP Manual