



Compliance Audit of

# Collier Industrial Waste Ltd

Nash Road, Trafford Park, Manchester

**Waste Management Licence Number** WML/0363/M06



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## EXECUTIVE SUMMARY

A compliance audit of Collier Industrial Waste Ltd (P J Collier) was undertaken by the Environment Agency on Monday, 2 and Tuesday, 3 March 1998. The objective of the audit was to measure compliance with recently-modified Waste Management Licence conditions.

In general terms, the audit team were impressed by recent financial investments into site infrastructure, including new storage bays and relining of treatment tanks.

Aside from a few minor criticisms, reception procedures and waste sampling were all carried out effectively by competent staff.

However the audit did uncover problems with regard to waste storage, waste treatment and surface water control.

Timescales for the implementation of recommendations have been agreed with the licence holder and are detailed within this report.

## 2. INTRODUCTION

The Environment Agency was formed on 1 April 1996 and holds the responsibility under the Environment Act 1995 for the regulatory controls previously exercised by Local Authority Waste Regulation Authorities (WRA), the National Rivers Authority (NRA) and Her Majesty's Inspectorate of Pollution (HMIP). Under the former regulatory structure, the WRAs were responsible for the implementation and enforcement of the Waste Management Licensing system as set out under the Environmental Protection Act 1990 and subsequent secondary legislation.

### 2.1. History of The Trafford Park Site

Collier Industrial Waste was founded in 1976 as a specialist land-filling company

based in Rixton, Warrington. The Treatment Plant on Trafford Park was opened during 1985 to provide facilities for the pre-treatment of waste prior to disposal at the Rixton landfill site.

The site is set within an area of heavy industry and occupies approximately 20 hectares adjacent to the Manchester Ship Canal on Nash Road, Trafford Park. The position is shown on the location Plan P1 (Annex A).

Historically, the site was occupied by an oil refinery (Burmah) which stretched from the top end of Nash Road, down to the south western boundary of the Collier Industrial Waste site. When Burmah moved from the site in 1979, it was split into a number of smaller sites for a variety of industrial uses.

### 2.2. Regulation of Waste Management Activities on the Site

A Waste Disposal Licence for the Trafford Park Site was issued to Mr P J Collier by Greater Manchester County Council on 8 January 1985 (Licence Number RD/LIC/363/84). The Licence authorised the operation of a station for the transfer and loading of solid industrial and commercial waste to the Collier landfill site at Rixton, and a plant for the treatment of both difficult - solid and liquid - wastes prior to off-site disposal.

Since the licence was originally issued, the conditions have been modified six times. The most recent modification (Waste Management Licence Number WML/0363/M06), issued by the Environment Agency on 14 November 1997, saw the licence being completely re-written to bring the conditions up to date with current waste management standards. The modified licence is different to its predecessors in a number of ways and includes controls over many areas that were not covered by previous licence conditions.

These areas include sampling & laboratory analysis, waste reception procedures, waste storage, environmental monitoring and process controls.

The modified Waste Management Licence also places restrictions on the treatment of a number of hazardous and difficult wastes, requiring the licence holder to demonstrate safe and effective treatment prior to any full-scale processing being agreed with the Environment Agency.

Although the Licence has been recently modified, the Working Plan has not been thoroughly reviewed and updated by the licence holder for sometime.

The site has no consent to discharge to surface water, nor is it covered by an IPC Authorisation.

### **2.2.1. Previous Incidents**

Over the past 2 years there have been a number of incidents on the site that have been investigated by the Environment Agency:

- 1) An outbreak of fire in mixing pit 0 on 23 August 1997. An incident report was submitted to the Environment Agency by the licence holder.
- 2) A release of Nitrogen Dioxide from one of the mixing pits on 4 December 1997. The licence holder put the release down to cross-contamination in a road tanker that resulted in the release of Nitric Oxide (oxidised to NO<sub>2</sub>) during discharge. When asked by the Environment Agency, the licence holder could not supply a representative sample of the load in question.

As a result of this incident, the Environment Agency had to warn the licence holder that it was minded to take enforcement action, should such break of condition occur.

- 3) A fire in mixing pit 0 on 7

December 1997. As above, a report outlining the possible cause of the fire was submitted by the licence holder at the request of the Environment Agency. The report concluded that most likely the fire started as a result of smouldering, dry, pulverised paper within the pit. As a result of this incident, the Environment Agency requested that the licence holder amend procedures for mixing of wastes

### **2.2.2. Day-to-Day Compliance with Licence Conditions**

Prior to the issue of the latest licence modification WML/0363/M06 in 1997, the site has had a relatively good record of day-to-day compliance with licence conditions. The current licence conditions are a great deal more comprehensive than past conditions however, and there are requirements that, up until this audit, had yet to be fully assessed by the Environment Agency.

### **2.3. Waste Treatment Operations**

The area on site plan P2 outlined in blue is the area covered by the Waste Management Licence.

The site operation can be split into 2 main activities; the treatment of bulk aqueous effluent liquors prior to sewer discharge and: the mixing of dry shredded wastes with hazardous wastes prior to landfill disposal.

The area on site plan P2 (Annex A) outlined in red is where treating and keeping of waste is permitted to take place.

All waste enters the site via the weighbridge. Dry waste is inspected in the Transfer station where scrap metal and waste for direct landfill disposal are

removed. The remainder is pulverised in the Waste Shredder Facility and transferred to the mixing pits in large steel bins.

Bulk loads of sludges in either skips or tankers, with the exception of acidic material, are run directly into mixing pits 0 - 7 (photograph ref SW/0363/003) which contain the pulverised solid waste, and mixed with the bucket of the loading shovel. The mixed sludge is removed to the company's Rixton landfill site. There is a restriction of 35 loads per day to landfill.

Incoming loads of drums are inspected and stored within the drum storage bays. Empty, damaged steel and plastic drums are crushed in pit 0 and then landfilled. Sound drums are stockpiled prior to bailing within the Waste Processing and Storage Compound. Bailed drums are then exported as foundry feedstock.

Bulk treatment of aqueous effluent sludges and liquids is carried out in tanks 1 - 6 which are interconnected with hydraulic linkages for flexibility. The pumps are capable of handling suspended solids.

Acidic material is neutralised by adding it to a tank containing a slurry of lime. Strongly alkaline material is neutralised by using stored, drummed, acidic wastes. Any scum floating on the surface of the tank is pumped to the mixing pits for absorption onto dry waste.

After carrying out quality checks to ensure the treated effluent conforms to North West Water discharge limits (See Annex B) the contents are pumped to sewer.

### **3. AUDIT PLANNING AND METHODOLOGY**

The primary objective of the audit was to assess compliance with current Waste Management Licence conditions, and suitability of documented procedures and processes (as detailed in the site Working

Plan) with a view to making recommendations for improvements.

#### **3.1. Audit Scope**

Each of the areas that are regulated on the site by the Waste Management Licence were listed. From this list, a number of common themes and areas were identified which were deemed worthy of detailed audit and which would allow assessment of the majority of the licence conditions:

- 1) Waste Reception/Waste Output
- 2) Waste Storage
- 3) Site Infrastructure
- 4) Laboratory Facilities and Procedures :
  - Sampling of Wastes
  - Analysis of Wastes
- 5) Environmental Monitoring
- 6) Waste Treatment

The Audit was arranged to take place over 2 & 3 March 1998, it being deemed that a two day period would provide adequate time over which to be able to make a detailed assessment of each of the study areas.

#### **3.2. Audit Team**

The audit team was made up of 6 Environment Agency Officers from the NW region, South area. They comprised 2 Hazardous Waste Officers, 2 Operational Monitoring Officers and 2 Environmental Protection Officers.

The Hazardous Waste Officers were given the role of assessing waste reception and output; the Operational Monitoring Officers looked at sampling & analytical techniques and environmental monitoring; while the Environmental Protection Officers audited waste treatment, waste storage and site infrastructure. The role of audit team co-ordinator was taken by one of the Environmental Protection Officers.

### 3.3. The Audit

Notification of the audit was served on the licence holder five days prior to the event. This notification consisted of a letter and an audit agenda (Annex C). The site was visited by 2 members of the audit team on Friday, 27 February 1998, in order to obtain baseline information and brief the site management prior to the commencement of the audit.

The audit period started at 7:30 am on Monday, 2 March 1998, when assessment began. The Environment Agency maintained a presence at all times when the site was operational over the two-day period. An office was set aside by the licence holder for the auditors to use for meeting and compiling/reviewing paperwork.

The audit was completed at 7:30 pm on Tuesday, 3 March 1998.

## 4. RESULTS & DISCUSSION

### 4.1. Waste Reception Procedures

Two weeks prior to the commencement of the audit, copies of documents were made for all newly renotified, single and successive special waste movements into the site. This allowed any potential problem waste streams to be identified and provided a cross reference with Collier's documentation.

Due to the geographical limitations of the site and the throughflow of vehicles, two officers were required: one based at the weighbridge collating generic information and one based in the vicinity of the effluent plant and mixing pits collating information relating to dry or bulk wastes. Data collected was logged on a simple tick sheet relating to the licence conditions and the results obtained by the two officers matched by the registration number of the waste vehicle inspected (Annex D).

### 4.1.1 Discussion

The procedures for incoming waste is both simple and efficient. All vehicles entering the site and containing waste are weighed at the weighbridge. The driver of the vehicle then reports to weighbridge operator.

All incoming wastes are classified as being either:

- 1) Difficult (including all Special Waste) or
- 2) Non-difficult

All incoming difficult waste is booked in advance. Before the end of the previous working day the staff managing the weighbridge are provided with a Daily Waste Input Sheet. This document lists the following:

Name	Customer Name
Quote	a quote reference number, unique to each customer & waste type
Type Expected	waste container type an estimate of the weight or volume of the waste
Special Waste	whether the waste is special or not the description on the Duty-of-care consignment note
Ticket	Duty-of-Care consignment note (ticket) number
Route	not used

Each of these proposed loads has a 'ticket' (equivalent to a Duty-of-Care consignment note) which is provided at the same time.

### Difficult Waste

On reporting to the weighbridge, a driver carrying difficult waste hands over relevant paperwork to the weighbridge operator. The relevant sections of consignment notes are completed at this

stage.. The Site Register for Difficult Waste Received is also completed apart from the tonnage. The driver is then directed where to park. Tankers and drummed/IBC loads were invariably asked to park adjacent to the weighbridge to be sampled.

Before the unloaded waste vehicle leaves the site it is 'weighed off' at the weighbridge. The weighbridge operator completes consignment notes, the driver collects completed paperwork and the Site Register is completed.

#### Non-Difficult Wastes

Non-difficult wastes do not require pre-booking, and the loads are directed to tip immediately. Most non-difficult loads are carried by Colliers vehicles and therefore a transfer is not taking place at the site. A ticket is carried with every load.

#### Waste Rejection

No waste was rejected during the two days of the audit. One load (from Ellis & Everard) arrived without the correct consignment note: the driver claimed that the incorrect consignment note was given to him at the consignors site. A facsimile transmission of the correct copy of the Special Waste Consignment Note (EA00559164) was sent from the consignor, and as this load had been renotified (EA00551958) as part of a succession of rounds, Collier Industrial Waste accepted the consignment with the agreement of the Environment Agency. Photocopied copies of the facsimile were used to comply with the Special Waste Regulations.

#### Special Waste Consignments

The quality of completion of the Consignee's Certificate (Section E) was good apart from Section E2: Quantity Received. An accurate tonnage is obtained by the weighbridge and although the size of the containers is generally recorded the actual amount (weight or

volume) of waste is never recorded on the consignment note.

The quality and accuracy of the descriptions of waste in Section B were inadequate in some cases. To comply with the Duty-of-Care of more difficult wastes, a chemical & physical analysis should be included within the description (See Waste Management, The Duty-Of-Care: A Code of Practice). The producer of the waste bears the responsibility for ensuring that the description is adequate.

#### 4.2. Waste Storage

Over the two-day period, storage of waste on the site was assessed in detail to measure compliance with licence requirements. All containers were logged, as were details of storage location, waste description, hazard classification, and date of arrival (Annex E). For the purposes of this audit, a container is to be defined as either a drum (ranging in volume from 5ltr to 230ltr); an IBC; a shrink-wrapped pallet; or any other medium used to contain waste.

##### 4.2.1. Discussion

A total of 1494 containers were logged as being stored on the site. 384 of the containers were nominally empty while 1110 contained waste. These volumes are within the overall storage capacity of the site.

#### Designated Areas

Waste storage areas as designated by the Waste Management Licence are shown on site plan P3. It was observed that 575 containers (52%) were being stored outside these designated areas, although there was storage capacity in bays 1 to 8. Bays 9 to 14 and the quarantine storage area as designated by the Waste Management Licence, had not been constructed.

The majority of the waste that was being stored outside designated storage areas was situated to the north and west of the Waste Shredder Facility and to the south of tanks 7, 8, and 9. These areas are referred to in Annex E and on site plan P3 as 'Non Designated Areas' A to P.

### Labelling of Containers

Of the 1110 containers that held waste, 45 carried no visible description of the waste that they contained (96% compliance). A further 32 were labelled with an inadequate waste description, usually either a generic term such as 'Corrosive Liquid NOS', or a trade name such as 'Nalco Nal 1200 Antiscalant' (97% compliance).

86 of the 1110 containers were without a hazard-classification label. 50 of these (marked as perfume/odour counteractant) could possibly have been classed as non-hazardous, however this still leaves 36 potentially hazardous drums without any visible hazard classification (97% compliance).

A total of 961 out of 1110 containers did not have the date of arrival marked on them (23% compliance).

30 of the 1110 containers failed to have any labelling or marking on them, making them impossible to classify (97% compliance).

None of the containers on site were marked up with their status (i.e. whether rejected; approved for treatment/off-site transfer; or empty and decontaminated) as required by the Waste Management Licence (0% compliance).

Nearly all of the containers were accessible for examination, so that any labels could be identified. The only exceptions to this were 2 IBCs in the Non-Designated area O (99.8% compliance).

### Waste Types

All of the 1033 containers that carried an adequate waste description are permitted for storage on site by the Waste Management Licence (100% compliance). However, an accurate assessment cannot be made on the 77 containers that couldn't be classified.

### General Housekeeping

17 containers were noted as being open to the air, without either lids or bungs (photograph ref SW/0363/007). The majority of containers though were sealed satisfactorily (98% compliance).

Generally, containers were stacked securely, no more than two high. However, one 205ltr drum had fallen off its pallet in Non-Designated Area E (99.9% compliance).

Two 205ltr drums labelled as containing Sulphonic Acids were noted as leaking in Bays 4 & 6 (photograph ref SW/0363/008).

The 384 empty containers that were being stored on the site were noted as being stored in a secure fashion.

Segregation of wastes was commendable, with no examples of incompatible waste storage noted.

### **4.2.2 Audit Trail of Waste in Storage**

In order to assess the traceability of waste in storage on the site, four sets of drums were picked randomly for further audit.

#### Empty drums marked Phenyl Chloroformate

136 x 205ltr drums labelled as containing Phenyl Chloroformate were being stored in designated storage bay 6. Upon inspection, it was noted that these drums were nominally empty, but had not been decontaminated. Using the drum record

book which is stored on site, it was determined that a load of 205ltr drums containing Phenyl Chloroformate residues had been received on the site on 29 August 1997. This load had been consigned as special waste from Caird Environmental in Minworth on Section 62 Note number EA00208928. Because none of the drums had themselves been labelled with the date that they were received on the site, they could not be directly linked to this consignment.

96 x 205ltr drums marked as Sulphuric/Sulphonic Acids & LAS & LES Acids.

Designated bay 5 contained 96 x 205ltr drums labelled as either a) Sulphuric/Sulphonic Acids; or b) LAS & LES Acids. Both these waste streams are produced by Lever Brothers at Port Sunlight. The drums that were checked all appeared to be full. From the drum record book, it was evident that this waste stream is regularly received on the site. The most recent consignment had arrived on 9 February 1998 on consignment note number EA/00449358. As above, because none of the drums had been correctly labelled, a full audit trail was not possible. This waste stream is permitted for storage and treatment by the Waste Management Licence.

20 x 205ltr drums marked as Propionic Acid.

20 x 205ltr drums labelled as containing Propionic acid were being stored in a non-designated area outside the front of the waste shredder unit (Non-Designated area G). Each of the drums checked appeared to contain waste. It was determined from the drum record book that a consignment of Propionic acid had been received on site on 12 January 1998 on Section 62 note number EA00541286. The producer of the waste was Chemoxy Ltd. An audit trail could not be carried out on this load because none of the drums had been labelled as specified by the Waste Management Licence. This waste type is

permitted for storage and treatment by the Waste Management Licence.

62 x 205ltr drums marked as Chloropropionic Acids, Esters & HCl.

62 x 205ltr drums labelled as containing Propionic acid were being stored in Non-Designated area G. As above, each of the drums inspected appeared to contain waste. The drum record book showed that the last load of Chloropropionic acid drums had arrived on site on 25 April 1997. The load had been consigned on Section 62 note number EA00171394 from producers A H Marks & Co Ltd, Bradford. Again, an audit trail could not be followed due to poor labelling of drums.

#### 4.3. Infrastructure

As part of the site audit, the provision of relevant site infrastructure was assessed.

All of the areas of the site where waste is kept and treated are covered with an impermeable concrete surface (see site plan P4; Annex A). However, not all of the edges of the impermeable pavement were found to be bunded or kerbed to contain any potentially contaminated surface water run-off. Areas that require bunding are highlighted in red on site plan P4.

The site has a consent to discharge from North West Water (Annex B) and the majority of surface water arising on the site drains to foul sewer. This drainage is via an oil/water interceptor. The Environment Agency currently has no up-to-date plan of site drainage infrastructure.

Storage bays 9 to 14 and the quarantine storage area (see Section 3.2.1) had yet to be constructed or demarked. The recently constructed bays 1 to 8 were very well distinguished and marked up with the appropriate hazard classification labels (see photograph refs SW/0363/001 & SW/0363/002).

Fuel was being stored in 2 separate tanks on the site during the audit (highlighted on site plan P4). Neither of these tanks was bonded to a minimum of 110% of volume as required by the Waste Management Licence.

All treatment and bulk storage takes place in sunken pits and tank on the site (see tanks 1 - 6 and pits 0 to 7 on site plan P3). Effluent tanks are of steel construction lined with re-enforced concrete, while the mixing pits are constructed of re-enforced concrete. The lip of each effluent tank protrudes by at least a meter above the level of the site surface.

#### 4.4. Laboratory Facilities and Procedures

##### 4.4.1. Sampling of Wastes

All tankers entering the site are sampled. After booking in at the weighbridge the vehicle reverses up to the boundary fence. Access for sampling is normally by the top hatch of the tank, unless the vehicle is of a design such that there is a mechanical "blower" capable of agitating the load. In this case the sample is removed from the drain cock of the sight glass which is located at the front end of the tank.

The equipment used is a ~2 metre long metal tube capable of being closed at the bottom end with a valve actuated by a rod attached to a lever at the top of the tube. The device can take a column of liquid which represents the tank contents from top to bottom.

The sampler was equipped with adequate safety and protective clothing.

It was noted that the sampler allowed a tanker driver to take a sample from the top hatch using the tube. Whilst it is acceptable that the driver prepares the vehicle for sampling and gives directions to the sampler with regards to the safe use of access ladders and platforms, it should be the sampler who personally collects the

sample so that a repeatable procedure can be followed with every load.

The sampling of a tanker load *via* the sight glass drain cock is acceptable for homogeneous single-phase liquids, but where there is a possibility of two or more phases in a liquid waste - for example a thin layer of oil or solvent on top of an aqueous phase - then the use of the sampling tube should be the preferred technique. The chemist should advise the sampler as to how a particular load should be treated with regard to this question.

The sampling tube does not appear to be routinely rinsed with water between the sampling of successive loads unless it is contaminated with a particularly viscous liquid, when it will be steam cleaned. There is a distinct possibility of cross-contamination between successive samples. The tube should be rinsed with tap water from a hosepipe immediately after taking a sample and also should be flushed with one tube volume of liquid from the tanker prior to transferring the sample to the sample container.

The sample container used was a 500 ml, wide necked, screw capped, glass jar approximately half filled (~250 ml) with liquid which conforms to the licence requirements.

Waste from the mixing pits is agitated with the bucket of a mechanical shovel (backactor), then one bucketful removed from the pit and hand-sampled into a 2 gal plastic bucket by the chemist. Because of the non-homogeneous nature of this waste, it will be difficult to obtain a representative sample.

##### 4.4.1 Analysis of Wastes

###### The "Wet" Laboratory

The "Wet" Laboratory receives samples of incoming and outgoing waste and ascertains the general suitability for

disposal and conformity to the waste description on the documentation. When the checks have been assessed as satisfactory by the chemist, he issues a Certificate of Conformity, a copy of which is handed to the vehicle driver with the other paperwork (Section 62 or Controlled Waste Transfer Note) before he can proceed to unload. The screening results are logged on a Laboratory Results sheet before being transferred to the Certificate of Conformity.

The checks carried out are rapid and simple to avoid delays in the vehicle reception area. Appearance, odour, pH, reactivity with acid or alkali, ammonia and nitrate/nitrite, acidity or alkalinity and flammability (the ability of the waste to burn unaided in air) are the tests applied on a routine basis.

The licence holder's current Working Plan specifies that a flashpoint will be measured on all incoming tankered waste. This does not appear to be carried out. Flammability tests should be backed up with concrete flashpoint data to confirm the presence or absence of any volatile solvent material.

The use of the propriety test strips or simple titration methods is adequate and acceptable provided their limitations are realised. All are dependent on observable colour changes and these may be affected by coloured solutions, suspended material and immiscible or insoluble samples.

A simple Hach spectrophotometer is available for the determination of chemical oxygen demand (COD), phenol and volatile acids. Control standards are run on the phenol and volatile acid to verify the accuracy and reproducibility of the analytical methods.

The main instrument is an atomic emission spectrometer using an inductively coupled plasma in an argon gas atmosphere. The instrument detects the emitted wavelength of the particular element as excited electrons return to a lower energy level. The instrument is standardised every day.

Samples are prepared by filtration for liquids and digestion in concentrated nitric acid for solids. A range of twenty-two elements can be processed in 7 minutes to a detection limit of 1ppm.

Whilst this instrument is ideal for aqueous solutions there may be some doubt as to its usefulness in analysing solids or sludges unless a satisfactory extraction technique is applied to dissolve the metals of interest completely. Standard procedures for the extraction of metals usually involve boiling the sample under reflux for at least one hour in an oxidising acidic medium such as nitric acid or sulphuric acid/hydrogen peroxide mixtures.

The licence holder is recommended to review sample preparation procedures for the ICP-AES, particularly with regards to the analysis of the solid wastes from the Mixing Pits.

#### The Analytical Laboratory

This facility is situated on the first floor of the main office block and contains the following equipment:

- a) Gas Chromatograph to carry out analysis for volatile organic compounds (VOC). A suitable mixed standard containing a range of typical organic components is available to calibrate the instrument. Unfortunately during the audit the instrument was out of use awaiting repair of a fault.
- b) Pinsky-Martens flashpoint apparatus.
- c) COD distillation apparatus.
- d) Soxhlet apparatus to carry out solvent (e.g. toluene or cyclohexane) extractions on solid or sludge samples.
- e) pH meters (2) which did not appear to be in use and a stick pH

probe. Buffer solutions were available to calibrate these instruments.

- f) A range of Merck test kits for rapid checks on samples.

Records of analysis of the outgoing waste are kept in a duplicate book printed with Colliers details, the green copy stays in the book and the top, white copy goes forward for processing.

A cursory inspection of the Waste to Landfill Laboratory Reports showed a lack of flashpoint data in the analytical results. Whilst the flammability test gives a rapid indication of combustible organic material there is a need to back up these tests with concrete flashpoint data to confirm the presence of any volatile solvent material, in the waste.

The site Working Plan specifically refers to flashpoint data on outgoing waste and it is reasonable to expect at least one determination per day on each Category 1 and Category 2 waste leaving the site for landfill disposal.

#### Sample Storage

Samples of bulk loads, pre-acceptance material and others were retained in the sample storage facility between the waste-shredder facility and the emergency water storage tank. The samples could be identified by the licence holder's reference numbers.

#### Analysis of Samples Taken by the Environment Agency

A summary of the samples taken by the Agency is shown in Annex F. These samples were submitted to Scientific Analysis Laboratories (SAL) for representative analysis to be carried out. The results are attached.

Mixing Pits. Refer to EA Sample Nos. 2158 and 2159 and the attached "Waste to Landfill - Laboratory Report"

The samples were analysed for a selection of heavy metals, pH and the major volatile and semi-volatile organic components.

From Mixing Pit 3, Sample 2158 showed a general agreement with Colliers analysis although the Agency figures were always higher and notably the mercury and nickel results were a factor of 10 higher in the Agency's sample.

These discrepancies may be explained either by the failure to achieve homogeneity in the sample collection and preparation, or by differences in the acid extraction techniques used by the two laboratories.

Because the site's gas chromatograph was undergoing repairs, it was not possible to compare the organic components in the sample.

From Mixing Pit 5, Sample 2159 showed that the selected total heavy metals, concentration in the pit was a factor of 10 higher than the results reported for Pit 3, mainly due to the presence of copper. A similar comparison of the volatile components showed that the concentration of benzene type hydrocarbons (toluene, xylenes, etc.) in the Pit 5 sample were in the order of 100 times the concentration in Pit 3

The waste from Pit 3 was described as "Category 1" and that from Pit 5 as "Category 2". Colliers system of notification for these wastes uses a Duty-of-Care note for Category 1 and classifies Category 2 waste as Special (S.62). The analysis confirmed that this classification was in the correct order.

#### Leachate from Rixton

Sample 2050 and Collier's Certificate of Conformity Ref No. 1660. There were discrepancies between the values for ammonia and TON (total oxidised nitrogen or nitrate/nitrite) reported on the

sample analysed at reception and those obtained by the Agency.

If the Wet Laboratory was using the Merck test strips, these should be capable of detecting the approximate levels of ammonia and TON which were found in the leachate.

#### Tankered Waste.

##### a) Phenol solution.

Sample 2161 and Colliers Certificate of Conformity Ref. No. 11040. There was general agreement between the checks reported by Colliers and the results obtained by the Agency.

##### b) Polyethylene glycol/nonyl phenol ethoxylate.

Sample 2163 and Colliers Certificate of Conformity Ref. No. 10746. On-site checks failed to detect a total nitrate/nitrite concentration of approximately 480 ppm. This could be explained by the properties of viscosity and miscibility of the waste.

#### 4.5. Environmental Monitoring

A chemist carries out a perimeter walk twice per day to check for emissions of dust and odours to the atmosphere, and records the results in a book. The observations are based on human senses and not on any specific monitoring apparatus.

The site is currently not equipped with any meteorological apparatus for recording weather conditions.

#### 4.6. Waste Treatment

Two areas of waste treatment were assessed against compliance with the requirements of the Waste Management Licence and Working Plan: treatment through mixing pits and treatment through effluent tanks. Assessment against the 'day-to-day' operational requirements was conducted on site. Whilst details of the treatment of individual waste streams, to

be assessed at a later date, were recorded by one of the two Environment Protection Officers.

#### 4.6.1 Treatment through mixing pits 0-7 (Ref. Annex A. Plan P2)

##### Inputs

A record of all waste inputs including time, type, nature and quantity of waste, were recorded over the two-day period. Details of the depositing vehicle were also taken and cross-referenced against receipt information gathered by the Hazardous Waste Officers (Annex D). Input information is summarised in diagrams 1 and 2 (Annex G).

##### Outputs

Subsequent to the completion of the Audit, details of waste output were provided by the licence holder (summarised in Annex I and Annex J). At the time of the audit this information was only available from the company's Rixton landfill and was not held at the Nash Rd site.

Output information is summarised in diagrams 1 and 2 (Annex G).

##### Baseline Information

Proforma formats for recording information were drawn up prior to the audit. Baseline information (ie. pit contents) was obtained from the licence holder before the commencement of operations on the 2 March (Annex H).

#### 4.6.2 Treatment through Effluent Tanks 1-6

##### Inputs

Details of waste input (ie. time, type, nature and quantity of waste) were documented together with details of the depositing vehicle or drum storage reference (Annex K).

### 4.6.3 Permitted Treatment Methodologies

The Waste Management Licence authorises the treatment of controlled waste including Special wastes as defined by regulations in force under Section 62 of the Environmental Protection Act 1990, subject to permitted treatment operations. No other waste treatment operation is permitted, except in accordance with the written agreement of the Environment Agency. Waste treatment may include the mixing of different categories of Special waste and the mixing of Special waste with waste which is not Special. The following treatment methodologies are detailed in the current Working Plan:

#### The Effluent Tanks:

##### Treatment of Aqueous Effluent via:

- (i) Oil/Water Separation: via phase separation and pH adjustment if required.
- (ii) Primary sedimentation: removal of suspended solids via gravity settlement. Tank bottom sludges arising from this process are removed for further treatment via process (viii).
- (iii) Coagulation and pH adjustment: via the use of Ferrous sulphate, lime and /or organic flocculants to aid the removal of heavy metal by process (ii).

#### The Mixing Pits:

##### Treatment of Drummed Waste via:

- (iv) Processing of mobile drummed waste pH 4-11: via decanting into mixing pit, homogenising, and subsequent mixing with shredded general waste.
- (v) Processing of solid drummed waste pH 4-11: via decanting into mixing pit, homogenising, and subsequent

mixing with shredded general waste.

- (vi) Neutralisation of drummed waste pH 4-11: via decanting into mixing pit, homogenising, and subsequent mixing with shredded general waste.

##### Treatment of Sludges via:

- (vii) Absorption of low grade oil (not suitable for recycling) obtained from process (i) and absorbed into shredded rubbish in mixing pits prior to landfill disposal.
- (viii) Blending of sludges prior to mixing with shredded general dry waste to produce a solid product with a predetermined specification (pH 7-10, flash Point none, flammability - >50°C, moisture 30 - 50% w/w).
- (ix) Neutralisation: followed by phase separation and subsequent removal of liquid to the effluent tanks (ii), solid residues being transferred for process method (viii).
- (x) Reduction of Hexavalent Chromium: using ferrous salts prior to processing via process (xi) & (viii).
- (xi) Heavy Metals: precipitation of the associated metal hydroxide followed by processes (xi) & (viii).

In the treatment of waste through the mixing pits, it noted should be that the relative input of special waste is high compared to that of the special waste output to disposal.

The mixing of Special Waste with Non Special Waste (photograph ref SW/0363/004) is authorised by the licence. However the current issue of the

working plan gives no details of how these wastes are being 'effectively' treated prior to final landfill disposal (ie. how blending the 'given' Special waste with non-special sludges, and shredded waste, corresponds to one of the permitted treatment processes as defined in the Waste Management Licence.

There is a requirement under the licence for the operator to demonstrate that the mixing of Special Wastes with Non-Special Wastes is consistent with one or more of the physiochemical treatment processes permitted. Failure to demonstrate such 'effective' treatment may result in the conclusion that the mixing activity is solely a process of dilution, which is not permitted without prior agreement from the Environment Agency.

In cases where an 'effective' treatment process cannot be demonstrated to be occurring via one of the mechanisms outlined in the Waste Management Licence, (ie. by effecting a reduction the toxicity and/or leachability of harmful substances in the waste), then a decision will have to be made as to whether dilution is the Best Practical Environmental Option (BPEO).

In instances where a waste, given its chemical composition, is acceptable for landfill without prior treatment, Dilution would be inconsequential. The production, through mixing, of a product that is easier to handle and dispose of would be justifiable.

In cases where a waste stream is unacceptable for landfill disposal due to its chemical composition, a process consisting purely of dilution to a level where the waste would be acceptable would not be deemed to be an 'effective' treatment.

Effective treatment must be assessed on a case-by-case basis.

It is apparent that the current issue of the Working Plan is in need of urgent review in reference to the current licence as regards 'Waste Treatment'. At present there are no details, or justification, as to why it is acceptable to mix one waste stream with another for the purposes of treatment.

There is a need for the licence holder to determine the specific waste streams where treatment is required to be demonstrated. Systems should be put in place to monitor and record the effectiveness of any physical/chemical processes that may be occurring.

#### 4.6.4 Permitted Waste Types

The Waste Management Licence permits the treatment of various waste types. A number of these waste types are only permitted for treatment subject to specific restrictions (summarised in Annex L). No other wastes apart from those listed in the licence are permitted for treatment.

In addition to these restrictions, there is a general prohibition on the mixing, in open pits or reaction vessels, of liquids or sludges with a flashpoint of  $<55^{\circ}$  C, unless agreed in writing with the Environment Agency.

#### Restricted Treatment

Over the two-day period, 2 loads which should have been subject to treatment restrictions were received and processed though the mixing pits. Both of these consignments were processed without a written method statement having been agreed with the Agency.

Similarly, 10 such loads were received and processed though the effluent tanks. All of these were processed without a written method statement having been agreed with the Agency.

### Restricted Treatment, Liquid or Sludge with a Flashpoint Of <55<sup>0</sup>

Over the two-day period, 5 loads, designated as having a Flash point of < 55<sup>0</sup>C (Hazard code H3a, H3b) on the appropriate Special Waste consignment note, were received and processed through the pits. All of these were processed without a written method statement having been agreed with the Agency.

Similarly, 11 such loads were received and processed through the effluent tanks. All of these were processed without a written method statement having been agreed with the Agency.

While the Environment Agency recognises that there may not be any significant problem with processing these waste streams, it is a requirement under the current Waste Management Licence that prior agreement has been granted.

#### **4.6.5 Management and Operation of Treatment Facilities**

The management and operation of the treatment facilities are required to be carried out in accordance with the Working Plan. In addition to this, the licence requires that appropriate care is taken in the day to day operation of the facilities as detailed below.

#### Waste Treatment Compatibility Checks.

After acceptance, prior to being bulked or mixed together, checks on waste inputs must be carried out to ensure their compatibility. All subsequent reactions must only be carried out under controlled conditions.

All waste input checks are carried out at the site's laboratory.

#### Supervision of Waste Inputs

All inputs into the treatment systems are required to be supervised by suitably

trained and qualified members of site staff. The capacity of reaction vessels must be checked prior to discharging waste and not overfilled. Any spillages resulting from the operation of the treatment facilities must be contained and dealt with immediately.

Throughout the audit, all waste discharges were conducted under the direction from the site chemist and supervised by designated staff.

No major spillages occurred whilst minor ones were contained and removed immediately.

#### Utilisation of Abatement Equipment

Effective extraction and abatement equipment must be in place for all tanks and open reaction vessels treating waste which may give rise to noxious or polluting gases, odours and/or other emissions.

Over the two days, 3 loads of Special waste consigned as hazard code H3a were processed through the pits. Further to this, it was noted that a strong solvent odours were associated with the discharge of loads EA00552833 & EA00552832.

Hazard code H3a indicates a waste stream that the producer believes has a Flash point of <22<sup>0</sup> C. Such waste may be expected to contain components that will volatilize on discharge and/or processing.

Abatement equipment was not utilised on any of the treatment pits during the period of the audit.

#### Turnaround of Treated Wastes

Unless prior agreement has been obtained in writing from the Environment Agency, waste treatment must be completed within three months from the date of initiation.

A written record is required to be kept of all wastes held in bulk at the end of each shift (end of the working day). The record should document details of the storage point, nature and quantity of the appropriate wastes within the treatment system.

It was not possible to assess full compliance with the condition over a two-day 'snap shot' period. However, it was noted that waste was processed through the treatment pits fairly rapidly relative to the 3-month turnaround period.

As regards treatment through the effluent tanks, specific compliance cannot be assessed as individual waste streams are being discharged into a dynamic system. Once a waste has entered the system its individual characteristics are effectively lost and can no longer be tracked.

Details of wastes held in bulk within the treatment system (at the end of the working day) are currently not recorded.

#### **4.6.6 Monitoring Treatment, Quality Control, & Auditing**

The licence requires that subsequent to the initial compatibility checks, all waste treatment reactions are monitored to ensure satisfactory completion. A written record should be kept of all processes monitoring results.

Further to this, a written record must be kept of all wastes removed from the site including details of relevant analysis and information required to fulfil the Duty of Care requirements.

Outputs of waste from the pits are currently checked against the criteria specified in the working plan. However this information is recorded only via the Duty-of-Care documentation associated

with that output to landfill, held at the Rixton Landfill site.

The monitoring of aqueous effluent from the the effluent tanks is conducted to meet the trade effluent discharge requirements.

#### **4.6.7 General Comments**

The day-to-day operation of the mixing pit facilities are supervised by suitably trained and qualified members of site staff. However, staff appear to be unaware of some of the requirements of the recently-modified Waste Management Licence Conditions, specifically where these conditions override requirements in the existing working plan.

#### **Incidents**

On 3rd March 1998 at 17.20, Agency Officers were in attendance when a fire was observed to break out in mixing pit 0. This incident was attended by GMC fire service and is currently under investigation by the Environment Agency.

### **5. OVERALL CONCLUSIONS**

#### **5.1 Waste Reception Procedures**

Throughout the audit period, the licence holder demonstrated compliance with conditions relating to reception procedures. All paperwork was completed as required and incoming loads were inspected as required by the Waste Management Licence.

#### **5.2 Waste Storage**

The Agency recognises that resources have been recently invested in improving the site's waste storage infrastructure. The new bays have been constructed to high standards and are well marked with appropriate hazard labelling. There is still some work to be carried out on constructing bays 9-14.

A large number of drums were being stored outside of areas designated for storage by the licence conditions. However the licence holder can designate further areas if required by modifying the Working Plan in agreement with the Environment Agency.

Waste description and hazard labelling was mostly adequate except for a small number of cases. Only a very small percentage of packages were marked with their date of arrival.

### **5.3. Site infrastructure**

A number of areas were noted which require bunding and/or kerbing improvements so as to prevent any potentially-contaminated surface water from draining onto un-surfaced ground. Bunding work is also required on the two fuel tanks on the site.

Site security was in good order and the provision of office facilities were impressive.

### **5.4. Waste Sampling**

In the majority of cases, sampling of incoming tankered waste was observed being carried out appropriately by the licence holder's own staff. Sampling methods were generally adequate, with a core sample being taken from most tankers upon reception.

However on a number of occasions, the tanker driver was allowed to take his own sample by one of the site chemists. This sample was taken from the tanker's sight glass drain cock.

### **5.5. Laboratory Facilities and Analytical Techniques**

Laboratory facilities were found to be well equipped with appropriate analytical equipment. However, standard test

methods were not being followed in a number of cases.

Since the site audit was carried out, some work has been done on agreeing standard test methods for specific waste streams. This work is currently ongoing.

### **5.6. Environmental Monitoring**

At present, the only environmental monitoring carried out on the site is for odour.

The Waste Management Licence requires that a schedule for the monitoring of all emissions is agreed in writing with the Environment Agency. There is also a requirement that weather monitoring is carried out by the licence holder.

### **5.7. Waste Treatment**

A number of loads, which had been consigned by the producers as waste types permitted only following written agreement with the Agency, were accepted for treatment on site during the audit period. The Environment Agency requires that method statements are agreed prior to the treatment of all restricted-permitted waste types.

Since the audit was carried out, method statements for most restricted-permitted waste types have been agreed in writing with the Environment Agency.

Abatement equipment was not in use on any of the reaction vessels.

## 6. COMPLIANCE WITH LICENCE CONDITIONS & RECOMMENDATIONS

### SECTION 1 – GENERAL CONSIDERATION

Condition	Status	Comments	Recommendations	Compliance Date
1.1 Site Boundary	Compliance	All operations were carried out within the licenced area		
1.2 Licence Holder	Compliance	All operations were carried out under direct control of the licence holder.		
1.3 Permitted Operations	Compliance	All operations observed on the site during the audit were permitted in Annex A of Waste Management Licence WML/0363/M06		
1.4. Operational Areas	Compliance	A number of restricted-permitted waste streams, the treatment of which had not been agreed in writing with the Environment Agency, were received for treatment over the audit period.		
1.5 Waste Types	Non-Compliance	A number restricted-permitted waste streams, the treatment of which had not been agreed in writing with the Environment Agency, were received for treatment over the audit period.	<p>1) Ensure that method statements have been agreed in writing with the Environment Agency prior to the treatment of restricted-permitted waste types.</p> <p>Since the undertaking of the audit, method statements for the treatment of most restricted-permitted waste types have been agreed in writing with the Environment Agency.</p>	

**SECTION 1 – GENERAL CONSIDERATION (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
1.6 Waste Input Rates	Not Assessed	Compliance with this Licence Condition was not assessed over the audit period.		
1.7 Duration of Storage In Packages	Not Assessed	Compliance with this Licence Condition was not assessed over the audit period.		
1.8 Duration of Storage of Treated Residues in Skips	Compliance	All treated residues were removed off-site for disposal over the audit period		
1.9 Duration of Storage of Empty Drums	Not Assessed	Compliance with this condition was not assessed over the audit period.		
1.10 Maximum Duration of Treatment and Storage in Bulk	Not Assessed	Compliance with this condition was not assessed over the audit period.		

**SECTION 1 – GENERAL CONSIDERATION (Cont'd/.....)**

Condition	Status	Comments	Recommendations	Compliance Date
1.11 Current Issue of the Working Plan	Non Compliance	The site Working Plan was found to be lacking in information, especially with regard to waste treatment processes.	<p>2) A complete and comprehensive review of the current issue of the working plan to bring site treatment operations into line with current licence conditions. This should include details of waste streams that are deemed acceptable for treatment via mixing through the pits and details of appropriate process monitoring to confirm that they are effective. At present there are no details or justification of why it is acceptable to mix one waste stream with another for the purposes of treatment. Neither are there systems in place to monitor and record the effectiveness of any physical / chemical processes that may or may not be occurring.</p> <p>A list of recommended areas to be included in the Working Plan is given in Section 7 of this report</p>	First draft to be submitted to Environment Agency by 31 December 1998.
1.12 Variations to the Working Plan	Not Assessed	Compliance with this condition was not assessed over the audit period.		
1.13 Review of the Working Plan	Not Assessed	Compliance with this condition could not be assessed over the audit period as the current Waste Management Licence had only been in place for a period of four months.		
1.14 Display of Site Licence and Working Plan	Not Assessed	Compliance with this condition was not assessed over the audit period.		
1.15 Emergencies	Compliance			

**SECTION 1 – GENERAL CONSIDERATION (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
1.16 Contact Details	Compliance	The licence holder has submitted the details required by this condition.		
1.17 Supervision of Site Operations	Non-Compliance	Over the audit period, a waste stream was treated by the site operatives that should have been restricted by the Waste Management Licence.	<b>3)Ensure that all site operatives are aware of requirements under the Waste Management Licence, Including restrictions on certain waste types.</b>	Immediately. Continuous need for re-assessment.
1.18 Lighting	Not Assessed	Compliance with this condition was not assessed over the audit period.		
1.19 Complaints	Not Assessed	Compliance with this condition was not assessed over the audit period.		

**SECTION 2 - SITE INFRASTRUCTURE**

Condition	Status	Comments	Recommendations	Compliance Date
2.1 Site Identification Board	Not Assessed	Compliance with this condition was not assessed over the audit period.		
2.2 Office Facilities	Compliance	Office facilities are provided on the site for the purposes of site management and control.		
2.3 Weighbridge	Compliance	A weighbridge is provided and during the audit was maintained in effective working order.		
2.4 Laboratory Facilities	Non-Compliance	It was observed during the audit that quality controls over waste acceptance and waste export were not effective enough to ensure compliance with all licence conditions.	<p><b>4) Flashpoint tests to be carried out on all incoming bulk loads that are either a) consigned as flammable H3a/H3b under the Special Waste Regulations 1996; or b) described as containing organic solvent for the purposes of the aforementioned regulations</b></p> <p><b>5) Analytical regime for treated outgoing wastes to be incorporated into the Working Plan following agreement in writing from the Environment Agency.</b></p> <p><b>6) Standardisation &amp; documentation of all routine laboratory test methods resulting in the drafting of a laboratory manual detailing exact procedures to be followed for each test. Procedures to be incorporated into the Working Plan following agreement in writing from the Environment Agency.</b></p>	<p>Requirements now being met by licence holder.</p> <p>Draft to be submitted by 31 December 1998.</p> <p>Draft to be submitted by 31 December 1998.</p>

**SECTION 2 – SITE INFRASTRUCTURE (Cont'd/.....)**

Condition	Status	Comments	Recommendations	Compliance Date
2.5 Site Security	Compliance	The site boundary is fully enclosed by gates, walls and fencing constructed to a minimum height of two metres.		
2.6 Fuel Storage Tanks	Non-Compliance	Neither of the two fuel storage tanks on the site were banded.	<b>7) Both fuel storage tanks to be banded to a capacity of 110% of the volume of each tank.</b>	500 gallon diesel tank by 1 April 1999.  10,000 gallon road tank by 1 October 1999.
2.7 Vehicle Discharge Points	Compliance			

**SECTION 2 – SITE INFRASTRUCTURE (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
2.8 Site Surface and Drainage	Non-Compliance	<p>Areas of the site were identified as requiring bunding/curbing so as to prevent potentially contaminated surface water from draining to uncontained ground (see site plan P4).</p> <p>Not all surface water arisings are collected and contained within the site for appropriate treatment prior to permitted discharge. The current system allows for surface water to drain direct to foul sewer via an oil/water interceptor and emergency shut-off valve.</p>	<p>8) Areas identified on site plan P4 to be bunded or kerbed so as to prevent surface water draining onto un-surfaced ground.</p> <p>9) All surface water to be collected and contained within the site for appropriate treatment prior to permitted discharge.</p>	<p>1 April 1999.</p> <p>Environment Agency to specify compliance date following submission of full site drainage plan as required by recommendation 21.</p>
2.9 Location of New Pipework	Not Applicable	No pipework has been installed since the Waste Management Licence was Modified.		
2.10 Design and Construction of Plant and Equipment	Not Assessed	Compliance with this condition was not assessed over the audit period.		
2.11 Tank Facilities	Compliance	<p>All tanks were marked as required by the licence.</p> <p>The contents levels within each tank can be monitored visually.</p>		

**SECTION 2 – SITE INFRASTRUCTURE (Cont'd/.....)**

Condition	Status	Comments	Recommendations	Compliance Date
2.12 Bunding of Tanks	Compliance	<p>All tanks used for the storage and treatment of waste are situated below ground.</p> <p>All tanks were lined with re-Inforced concrete prior to the audit.</p>		
2.13 Inspection of Impermeable Surfaces and Bunded Compounds	Not Assessed	Compliance with this condition was not assessed over the audit period.		

**SECTION 3 – WASTE ACCEPTANCE**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
3.1 Difficult and Special Waste Pre-Acceptance	Compliance	In accordance with this condition all loads that arrived had been pre-booked, and arrived with the relevant CWTN or S62 document. Pre-acceptance samples are also provided by the waste producers for testing to ensure suitability for treatment.		
3.2 Waste Rejection	Compliance	No loads were rejected during the audit period.		
3.3 Dry Bulk Waste Reception Procedures	Not Assessed			
3.4 Tankered Waste Reception Procedures	Compliance	Observations indicated that the staff were fulfilling the requirements under this condition.		
3.5 Package Waste Reception	Compliance	Only one load of packaged waste was received on site over the two days. Observations indicated that site staff were following procedures		
3.6 Laboratory and Small Packages Waste Reception Procedures.	Not Assessed	Over the audit period, no laboratory and small package waste loads were received at the Nash Road site.		

**SECTION 4 – STORAGE OF WASTE**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
4.1 Waste Storage Areas	Non-Compliance	52% of drummed and packaged wastes were being stored in areas not currently outlined as storage areas by the Waste Management Licence.	10) Site layout plan to be updated so as to designate additional storage areas.	To be submitted by 31 November 1998
4.2 Marking of Storage Areas	Compliance	The newly-constructed bays had all been marked as required by the Waste Management Licence.		
4.3 Vehicular Access Routes and Building Access	Compliance	All routes were kept clear during the audit period.		
4.4 Labelling of Drums	Non-Compliance	A proportion of drums inspected during the audit were inadequately labelled.	11) Labelling of drums must be improved. A system is required so that the following information can be readily identified from every drum or package of waste stored on site:  a) <b>Producer's name</b> b) <b>Waste type</b> c) <b>Appropriate hazard classification</b> d) <b>Date of arrival</b> e) <b>Status i.e. whether rejected; approved for treatment/off site transfer; or empty and decontaminated.</b>	31 November 1998.

**SECTION 4 – STORAGE OF WASTE (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
4.5 Storage of Drums	Compliance (99.8%)	Access could be gained to all but two packages on the site.	<b>12) Ensure that access can be gained to all drums, IBCs and other packages used for waste storage</b>	Immediate
4.6. Sealing of Drums	Compliance (98%)	The vast majority of containers in storage were noted as being securely sealed.	<b>13) A system is to be introduced so as to ensure that all containers awaiting processing/off site disposal are securely sealed, stacked securely and effectively containing the waste held within them.</b>	Immediate
4.7 Stacking of Drums	Compliance (99.9%)	All drums bar one were being stored securely.	<b>As recommendation 13</b>	
4.8 Repackaging of Faulty Containers	Non-Compliance	2 small separate spillages were noted within the storage bays. These spillages had arisen from damaged drums being stored within the bays which had not been repackaged.	<b>As recommendation 13</b>	
4.9 Water Reactives	Compliance	No water-reactive waste types were noted as being stored on-site.		
4.10 Storage Under Cover	Compliance	All packaged waste logged on-site was contained within weatherproof containers.		
4.11 Storage of Empty Drums	Compliance	All empty drums logged during the audit were being stored securely.		
4.12 Storage of Flammable Waste Liquids	Compliance	Provisions as required by the Waste Management Licence were being taken in relation to the storage of flammable waste.		

**SECTION 4 – STORAGE OF WASTE (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
4.13 Storage of Waste in Skips	Not Assessed	Compliance with this condition was not assessed over the audit period.		
4.14 Storage of Pressurised Gas Containers	Not Assessed	Over the audit period, there were no waste LPG containers being stored on site.		
4.15 Asbestos Wastes	Not Assessed	Compliance with this condition was not assessed over the audit period.		
4.16 Incompatible Wastes	Compliance	No incompatible waste types were noted as being stored together		
4.18 Tank and Pit Capacity	Compliance	All discharges were monitored by a site operative so as to ensure that adequate capacities remained available.		
4.19 Tank Decontamination	Not Assessed	Compliance with this condition was not assessed over the audit period.		
4.20 Redundant Tanks, Equipment and Pipework	Not Assessed	Compliance with this condition was not assessed over the audit period.		
4.21 Tank Survey	Not Assessed	Compliance with this condition was not assessed over the audit period.		

**SECTION 5- WASTE TREATMENT**

Condition	Status	Comments	Recommendations	Compliance Date
5.1 Methods of Treatment	Non-Compliance	<p>Restricted flammable waste type treated on-site without prior written agreement from the Environment Agency.</p> <p>The Environment Agency wishes to clarify that exclusions under Annex B and licence condition 5.4. override all inclusions in reference to permitted waste types. In these circumstances, the treatment of Chloropropionic Acid should have been notified to the Environment Agency prior to treatment.</p>	<p>14) An immediate suspension of treatment operations for those wastes requiring a method statement to be agreed in writing with the Environment Agency under Annex B and Condition 5.4 of the current Waste Management Licence.</p> <p>Since the audit, this recommendation has been implimented</p> <p>15) A Continuous review of waste designated for treatment to assess the potential of that waste to give rise to noxious or polluting gases, odours or other emissions., Attention should be paid to wastes where the producer has indicated it to have a volatile component. The assessment should be risk-based and indiated if abatement equipment and/or specific emissions monitoring is required throughout treatment.</p> <p>16) An immediate review of waste designated for treatment to assess the potential of that waste to give rise to noxious or polluting gases, odours or other emissions. Attention should be paid to wastes where the producer has indicated it to have a volatile component. The assessment should be risk based and indicated if abatement equipment and / or specific emissions monitoring is required throughout treatment.</p>	<p>Requirements now being met</p> <p>Ongoing requirement.</p> <p>Scheme currently under development. Full methodology to be submitted by 31 December 1998.</p>

**SECTION 5- WASTE TREATMENT (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
5.2 PCB Containing Wastes	Compliance	No wastes containing PCBs or PCTs were treated on site during the audit.		
5.3 Mixing of Wastes	Non Compliance	On 3 <sup>rd</sup> March 1998 at 17.20, Agency Officers were in attendance when a fire was observed to break out in mixing pit 0. This incident was attended by GMC fire service and is currently under investigation by the Environment Agency.	<b>As Recommendation 14</b>	
5.4 Mixing of Flammable Liquids	Non-Compliance	Waste streams which had been consigned to the site as both highly flammable and flammable were mixed through open pits without written agreement from the Environment Agency.	<b>As Recommendation 14</b>	
5.5 Emission Control	Not Assessed	Compliance with this condition was not assessed over the audit period.		
5.6 Monitoring of Treatment Processes	Non-Compliance	A formal system was not fully in place to record the monitoring of the completion of reactions.	<b>17) The implementation of a system to document the details of monitoring (including analysis) carried out on treatment processes, including information obtained to indicate that the treated waste meets specification as required under licence condition 5.6 of the Waste Management Licence.</b>	31 December 1998.
5.7 Treatment of Dry Bulk Waste	Not Assessed	Compliance with this condition was not assessed over the audit period.		

SECTION 5- WASTE TREATMENT (Cont'd/.....)

Condition	Status	Comments	Recommendations	Compliance Date
5.8 Tanker Wash Out	Not Assessed	Compliance with this condition was not assessed over the audit period.		

**SECTION 6 - WASTE RECORDS**

Condition	Status	Comments	Recommendations	Compliance Date
6.1 Records Availability	Compliance	Copies of all records requested were made available for inspection during the audit period.		
6.2 Audit Trail/Stock Keeping	Non-Compliance	An audit trail of waste transfers to, from and within the site could not be completed due to inadequacies with regard to labelling of drums (see licence condition 4.4.).	As recommendation 11.	
6.3 Drum Records	Compliance	Records were being kept of all the drums in storage on the site.		
6.4 Tank Records	Not Assessed	Compliance with this condition was not assessed over the audit period.		
6.5 Records of Wastes Removed	Non-Compliance	Records as required by this licence condition were available, but not being kept on licence holder's site.	<b>18) The implementation of a system to document the details of all wastes removed from the treatment facilities for off-site disposal to comply with condition 6.5.</b>	1 November 1998
6.6 Waste Returns	Non-Compliance	The required information is currently not being forwarded to the Environment Agency.	<b>19) Monthly returns dating back to 1 April 1997 to be submitted to the Environment Agency.</b>	Requirements now being met by licence holder

**SECTION 7 - PREVENTION OF WATER POLLUTION**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
7.1 Drainage Plan	Non-Compliance	At the time of the audit, the drainage plan required had not been submitted to the Environment Agency.	20) A full site drainage plan to be submitted to the Environment Agency as specified in licence condition 7.1.	31 December 1998
7.2 Drainage Method Statement	Non-Compliance	At the time of the audit, the drainage method statement had not been submitted to the Environment Agency.	21) A full drainage method statement to be submitted to the Environment Agency as specified in licence condition 7.2.	31 December 1998
7.3 Inspection of Site Drainage Systems	Not Assessed	Compliance with this condition was not assessed over the audit period.		
7.4 Effluent Discharges	Not Assessed	Compliance with this condition was not assessed over the audit period.		

### SECTION 8 - ENVIRONMENTAL CONTROLS

Condition	Status	Comments	Recommendations	Compliance Date
8.1 Containment of Wastes	Compliance	Throughout the audit, there was no evidence of any contamination to unprotected ground or the water environment.		
8.2 Contaminated Debris	Compliance	All contaminated debris remained within the site boundary. Any contaminated debris that built up on the site was cleared at the end of each working day.		
8.3 Cleanliness of Vehicles	Compliance	No waste was noted as having tracked out of the site gates onto the public highway.		
8.4 Spillages	Non-Compliance	Small spillages were noted in drum storage bays 4 and 6 on both days of the audit.	<b>22) The licence requires that all spillages are dealt with by the end of the working day. All site operatives need to be aware of the spillage procedure, which should be adhered to in the event of any spillage, wherever it is on the site.</b>	Immediate.
8.5 Discharges	Not Assessed	Compliance with this condition was not assessed over the audit period.		
8.6 Noise	Compliance	Noise was kept to a minimum and did not cause any detriment to the amenity of the area during the audit.		

**SECTION 8 - ENVIRONMENTAL CONTROLS (Cont'd/.....)**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
8.7 Fire	Non-Compliance	On 3rd March 1998 at 17.20, Agency Officers were in attendance when a fire was observed to break out in mixing pit 0. This incident was attended by GMC fire service and is currently under investigation by the Environment Agency.	See recommendation 14	
8.8 Monitoring Schedule for Emissions to -Air.	Non-Compliance	At the time of the Audit, details of the schedule for the monitoring of aerial emissions had not been submitted to the Environment Agency. The current system for emissions monitoring is inadequate.	<b>23) A risk-based emissions-monitoring programme to be agreed with the Environment Agency and form part of the updated Working Plan.</b>	Draft to be submitted by 31 December 1998.
8.9 Weather Station	Non-Compliance	Weather conditions as specified by the licence condition are not being monitored.	<b>24) Monitoring of weather conditions to begin as specified in condition 8.8. (ie wind speed and direction at intervals not exceeding 15 minutes during site operations). Results to be recorded.</b>	31 January 1999

**SECTION 9 - SITE AUDIT**

<b>Condition</b>	<b>Status</b>	<b>Comments</b>	<b>Recommendations</b>	<b>Compliance Date</b>
9.1 Site Inspection	Not Assessed	Compliance with this condition was not assessed over the audit period.		
9.2 Inspection of Below-Ground Pits and Sumps	Non-Compliance	The Environment Agency has not yet been notified of any inspection of below ground pits or sumps.	<b>25) All below-ground pits and sumps used for wastes or water contaminated by waste shall be inspected as specified in licence condition 9.2.</b>	31 December 1998
9.3 Inspection of Below-Ground Pipes and Drains	Non-Compliance	Inspections as required by this licence condition had yet to be carried out at the time of the audit	<b>26) All below-ground pipes and drains used for wastes or process effluents shall be inspected by a competent person using an appropriate method (e.g. CCTV).</b>	31 December 1998
9.4 Tank Inspection	Not Assessed	Compliance with this condition was not assessed over the audit period.		

## 7. WORKING PLAN AMENDMENTS

As a result of the findings of the audit, it became apparent that many of the aspects of the working plan were either out of date, or lacked the detail required by the Environment Agency.

The Environment Agency requests that the licence holder review the current site Working Plan, incorporating the following information (in addition to the relevant information that is in his current Working Plan) in a format similar to the one specified below:

### General Information

- a) A revised Management Structure/Site Personnel diagram.

### Site Infrastructure

- a) A revised statement with regard to the site noticeboard
- b) Details of fuel storage tanks including locations and bunding specifications
- c) Details and specification of the impermeable site surface. Location of bunding/kerbing to be included.
- d) Site drainage plan and method statement as specified in recommendations

### Waste Storage

- a) Full details of the current storage areas including location, construction, designation, volumes and markings/numbering.
- b) Labelling/recording procedures for drummed waste so as to ensure that a full audit trail of each container can be performed.

- c) Details of the procedures in place for the quarantining of non-permitted wastes.
- d) Programme for the regular inspection of storage areas so as any problems (e.g. leaking/spilt drums) can be identified for action.
- e) Details of maintenance inspection frequencies for storage tanks and bays.

### Laboratory Facilities

- a) Details of the laboratory facilities and all analytical equipment provided.
- b) A list of all routine analytical tests carried out on incoming waste specifying exact reproducible test protocols.
- c) A list of all non-routine/occasional analytical tests carried out on specific waste streams, specifying exact reproducible test protocols.
- d) Details of an analytical test regime for the monitoring of treated outgoing wastes.

### Waste Treatment

- a) Details of the 'Bio Frag' treatment process including justification and specifications
- b) Method statements for all standard routine treatment processes as currently carried out on site and permitted by licence conditions.
- c) Method statement and timescales for processing lead ash received on site.
- d) Details and specifications of the plant and equipment utilized for the treatment of waste.

### Environmental Controls

- a) A revised spillage control procedure detailing actions to be taken in the event of a spillage and persons responsible for ensuring that these actions have been taken.
- b) A revised emergency plan detailing the procedures to be enacted should an incident occur. These procedures shall cover how any reasonably foreseeable emergency shall be managed to safely minimise the environmental risks. The plan should include details of the person(s) responsible for overseeing an emergency situation.
- c) Details of name, address and telephone number of a responsible person for contact in the event of an emergency.
- d) A methodology for the routine inspection of below ground pits and sumps.

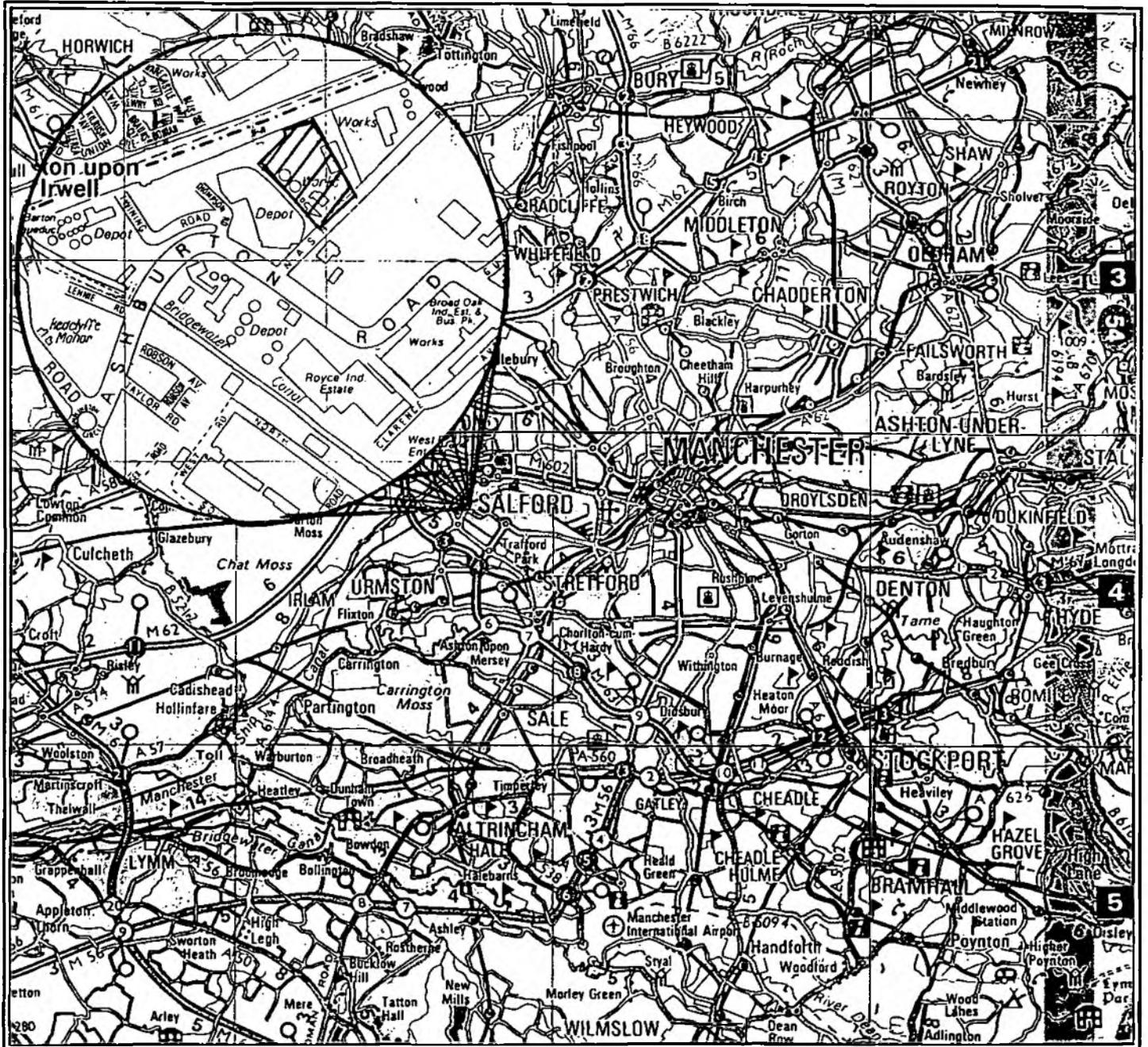
### Environmental Monitoring

- a) Details of a risk based emissions monitoring programme including the types of emission to be monitored, the monitoring locations, monitoring equipment and frequencies of monitoring.
- b) A weather monitoring schedule for the measurement of wind speed and direction, with reference to the specification of the equipment to be used.

### Site Records

- a) Details and formats of all site records currently kept as required by the licence conditions.

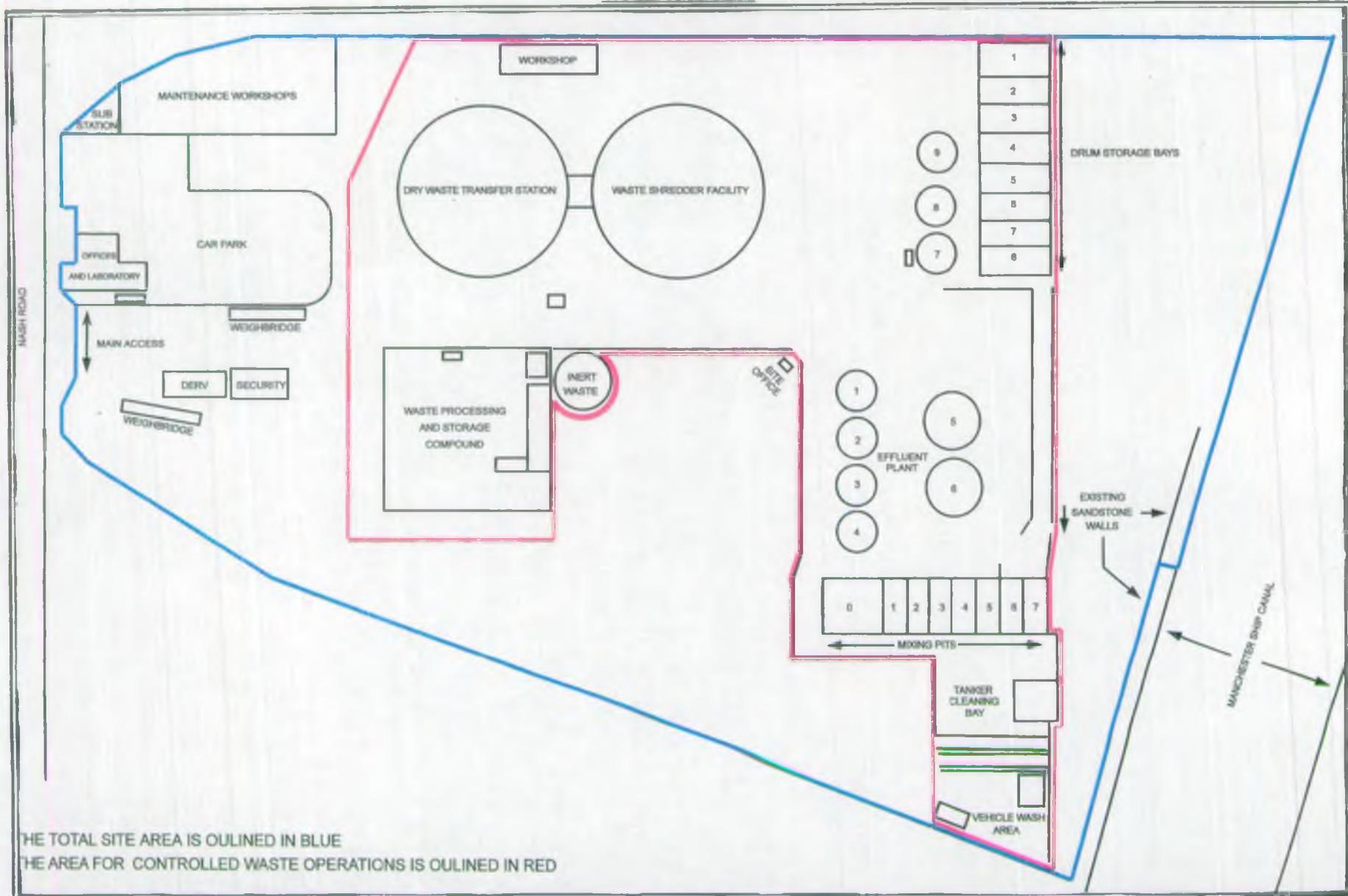
**SITE LOCATION PLAN P1**  
**WML/0363/M06**



<b>LICENCE HOLDER:</b> P. J. Collier	
<b>SITE ADDRESS:</b> Nash Road, Trafford Park, Manchester.	↑ N
<b>NGR:</b> SD 775 977	

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Environment Agency  
**SITE LOCATION PLAN P2**  
**WML/0363/M06**

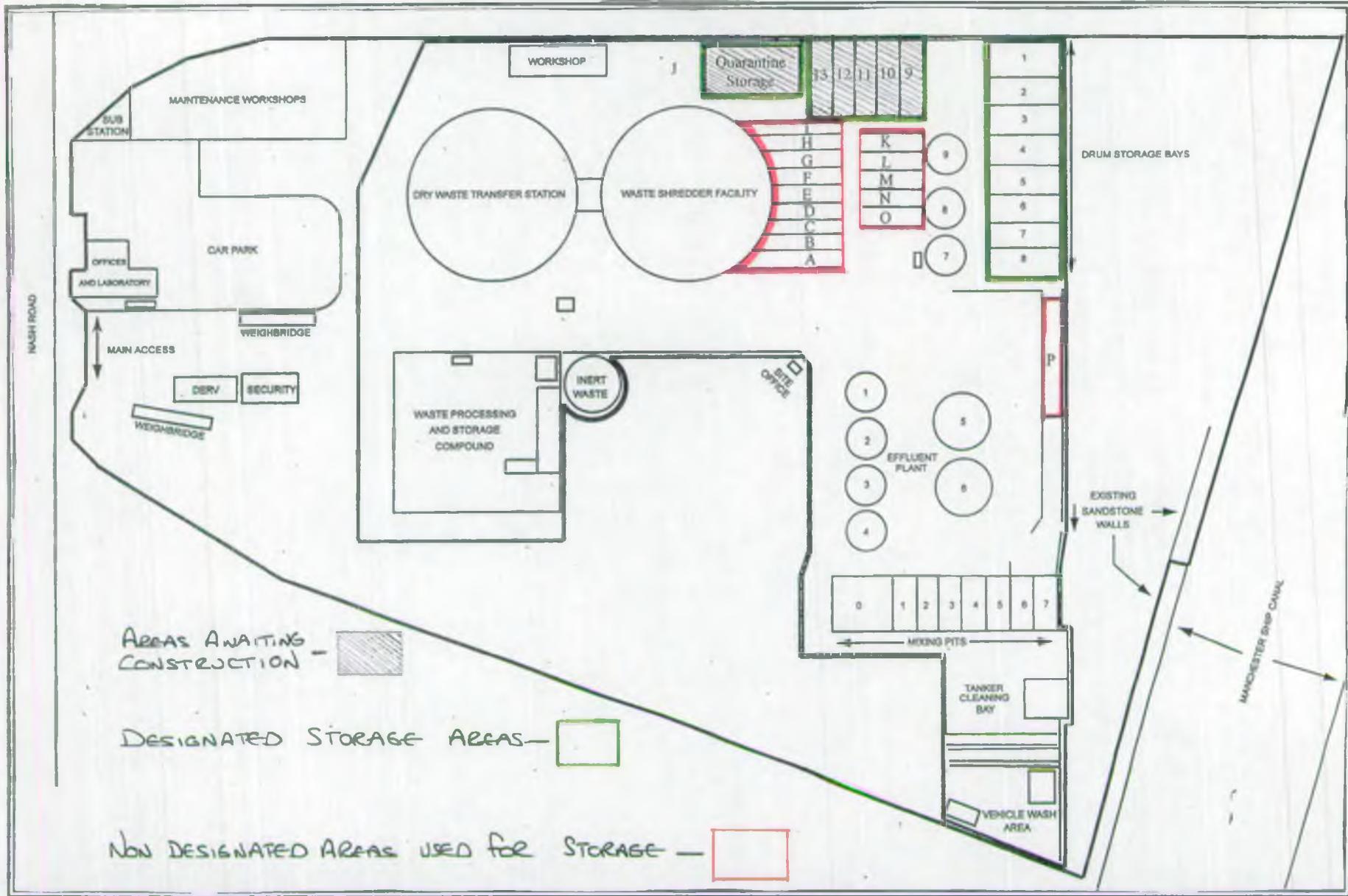


LICENCE HOLDER: P. J. Collier

SITE ADDRESS: Nash Road, Trafford Park, Manchester.

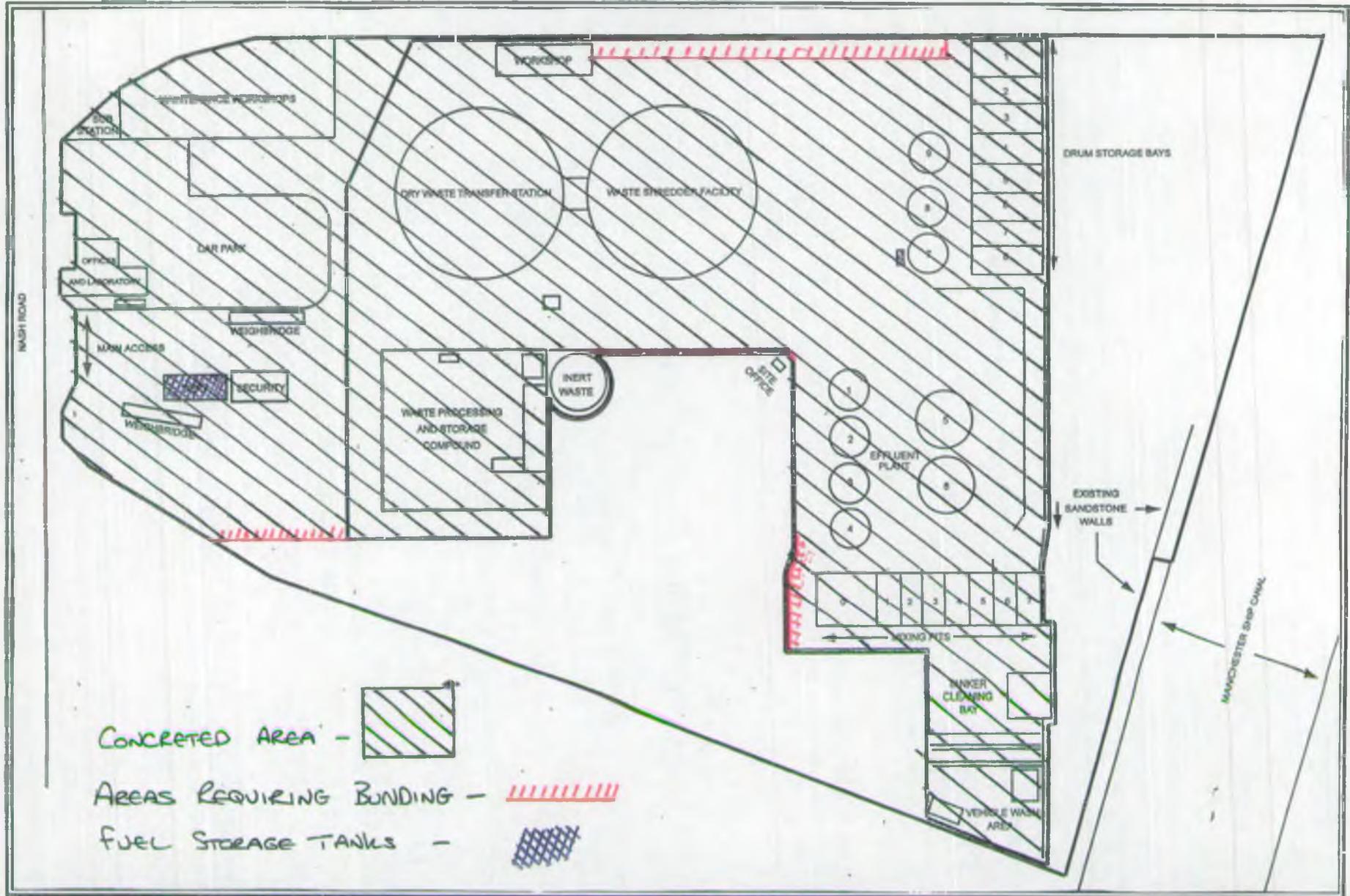
NGR: SD 775 977

Environment Agency  
**SITE PLAN P3 - STORAGE AREAS**  
 WML/0363/M06



LICENCE HOLDER: P. J. Collier  
 SITE ADDRESS: Nash Road, Trafford Park, Manchester.  
 NGR: SD 775 977

**SITE PLAN P4 - SITE INFRASTRUCTURE**  
**WML/0363/M06**



LICENCE HOLDER: P. J. Collier  
SITE ADDRESS: Nash Road, Trafford Park, Manchester.  
NGR: SD 775 977

PHOTOGRAPH REF: SW/0363/001:  
NEWLY CONSTRUCTED STORAGE BAYS 1-8



PHOTOGRAPH REF SW/0363/002:  
HAZARD LABELLING ON RECENTLY CONSTRUCTED BAYS



PHOTOGRAPH REF: SW/0363/003:  
DISCHARGE OF TANKER INTO MIXING PITS



PHOTOGRAPH REF SW/0363/004:  
DISCHARGE OF BULK WASTE STREAM ARISING FROM CHEMICAL RECOVERIES,  
AVONMOUTH, UK.



PHOTOGRAPH REF: SW/0363/005:  
STORAGE OF CAPACITORS ALONG NORTH EASTERN SIDE OF SITE



PHOTOGRAPH REF SW/0363/006:  
STORAGE OF CAPACITORS AND TANKS ALONG NORTH EASTERN SIDE OF SITE



PHOTOGRAPH REF: SW/0363/007:  
STORAGE OF CALCIUM HYPOCHLORITE KEGS IN BAY 7



PHOTOGRAPH REF SW/0363/008:  
STORAGE OF LEVER BROTHERS SULPHONATION RESIDUES IN BAY 4



**Annex B**

NWW Discharge Limits

pH : 6 - 10

Toxic metals : < 10 ppm

Sulphate: 1%

No cyanide, sulphide, organohalogens, chlorinated pesticides, petrol, solvents or any other substance which interferes with treatment process.

Your Ref:  
Our Ref: SW/0363/003  
Date: 18 February 1998



**ENVIRONMENT  
AGENCY**

Mr D Wishart  
Collier Industrial Waste Ltd  
Nash Road  
Trafford Park  
Manchester  
M17 1SX

Dear Mr Wishart

**ENVIRONMENTAL PROTECTION ACT 1990  
WASTE MANAGEMENT LICENCE NUMBER WML/0363/M06  
COLLIERS INDUSTRIAL WASTE LTD, NASH ROAD, TRAFFORD PARK**

I am writing to notify you that the Environment Agency plans to conduct an audit of the above site on the dates of Monday 2 March 1998 and Tuesday 3 March 1998.

The objective of the audit will be to measure compliance with licence conditions and procedures detailed in your operational Working Plan. Specific areas that will be addressed include waste reception, sampling and analysis techniques, bulk and drummed waste storage and record keeping.

Following the audit, the Agency will produce a report outlining findings and recommending any required working plan amendments.

I would be grateful if you could be available at the site on the morning of Monday 2 March 1998 for a briefing on the audit.

If you require further information regarding the above, then please do not hesitate to contact me on extension number 3936.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'S A Walters'.

Mr S A Walters  
Environmental Protection Officer



<b>TREATMENT PLANT AUDIT</b>		 <b>ENVIRONMENT AGENCY</b>		
<b>Colliers Industrial Waste, Nash Road, Trafford Park, Manchester M17 1SX</b>				
<b>Monday 2 March 1998 &amp; Tuesday 3 March 1998</b>				
<b>07:30 to 18:00</b>				
<b>Audit Team:</b>	S Walters	Environmental Protection Officer		
	S Molyneux	Environmental Protection Officer		
	N Homer	Hazardous Waste Officer		
	J Ratcliffe	Hazardous Waste Officer		
	B Stringer	Operational Monitoring Officer		
<b>Agenda</b>				
<b>Aspect</b>	<b>Activity</b>	<b>Location</b>	<b>Timescale</b>	<b>Officer(s)</b>
1. Waste Reception	Assessment of compliance with waste reception procedures as required by licence conditions & as detailed in the Working Plan	Waste Reception Area/Effluent Tanks/Mixing Pits	02/03/98 - All Day 03/03/98 - All Day	N Homer & J Ratcliffe
2. Waste Input/Output	Logging of all waste movements to and from the site	Weighbridge	02/03/98 - All Day 03/03/98 - All Day	N Homer & J Ratcliffe
3. Waste Storage	Assessment of waste types and quantities	Waste Storage Areas	02/03/98 - AM	S Walters
4. Waste Treatment	Monitoring of all inputs & outputs to/from mixing pits and treatment tanks	Mixing Pits & Effluent Treatment Tanks	02/03/98 - All Day 03/03/98 - All Day	S Walters & S Molyneux
	Assessment of documented treatment processes	Mixing Pits & Effluent Treatment Tanks	03/03/98 - All Day	B Stringer
5. Waste Sampling	Assessment of sampling procedures for incoming and outgoing waste.	Waste Reception Area	02/03/98 - AM	B Stringer
6. Analysis of Samples	Assessment of laboratory equipment and analytical techniques	Wet Lab & Analytical Lab	02/03/98 - PM	B Stringer

Your Ref:  
Our Ref: SW/0363/003  
Date: 18 February 1998



**ENVIRONMENT  
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Environmental Protection Officer



**TREATMENT PLANT AUDIT**
**ENVIRONMENT  
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**Colliers Industrial Waste, Nash Road, Trafford Park, Manchester M17 1SX**
**Monday 2 March 1998 & Tuesday 3 March 1998**
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Environmental Protection Officer



**TREATMENT PLANT AUDIT****ENVIRONMENT  
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## ANNEX D - INCOMING SPECIAL WASTE

Line No	Date	Time	Consignor	Note/No	Description	Weight	Comments
1	02-Mar-98	07:04	Bush Boake Allen	EA00164848	alkaline aqueous waste inorganic upto 30% Na carbonate	12.81	arrived previous day
2	02-Mar-98	07:17	Bush Boake Allen	EA00164824	alkaline aqueous waste inorganic upto 5% NaOH	18.27	arrived previous day
3	02-Mar-98	07:58	Zeneca Ltd HD21 1FF	EA00581255	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	21.74	
4	02-Mar-98	08:02	Zeneca Ltd HD21 1FF	EA00581258	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.28	
5	02-Mar-98	08:48	MV Suzanne/Simon Storage Seal Sands TS1	EC50034246	marpol washings, 1% Cresylic acid/ 1% dodecyl phenol	12.4	
6	02-Mar-98	09:07	Nipa Laboratories Ltd BBS	EA00607547	Aqueous Effluent(pH4-10) not classified as hazardous for transport	20.91	
7	02-Mar-98	09:20	Zeneca Ltd HD21 1FF	EA00581254	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.3	
8	02-Mar-98	09:33	Abright & Wilson (UK) Ltd CA28	SA00038328	Liquid/sludge Tertiary amine distillate free tertiary amine < 1%	17.65	left site On 28/2/98 - where has it been? Customer Cleansing Services Group
9	02-Mar-98	09:45	Zeneca Ltd HD21 1FF	EA00581252	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.09	
10	02-Mar-98	10:31	Abright & Wilson (UK) Ltd BS11	EA00610310	Methylene-Bis-Thiocyanate mother liquor NaBr 20%	18.2	
11	02-Mar-98	10:34	Solvay Interox Ltd	EA00417634	Waxy Caprolactone Residue, 3 part solid 1 liquid at 75 C	16.35	
12	02-Mar-98	11:37	Rhone Poulenc Chemicals M11	EA00483542	Aqueous Effluent Sludge Organic solvent < 1%, lead 3%	12.83	
13	02-Mar-98	11:45	Zeneca Ltd HD21 1FF	EA00581243	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	21.76	
14	02-Mar-98	12:04	Hickson & Welch Ltd WF10	EA00621804	Sodium Hydroxide Scrubber Liquors 5% NaOH, 15% Na Sulphite	20.44	Sulphite not sulphate
15	02-Mar-98	12:10	Elf Atochem UK Ltd SK15	EA00552423	general waste contaminated with heavy metals antimony trioxide/lead compounds 10,000 mg/kg	17.68	
16	02-Mar-98	12:54	Zeneca Ltd HD21 1FF	EA00581242	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.14	
17	02-Mar-98	13:28	Waste Oils Ltd	EA00622539	Oil sludges 25% Oil	17.6	
18	02-Mar-98	13:40	Ellis & Everard TS23	EA00559184	Polyethylene Glycol 90% & Nonyl Phenol ethoxyfate 10%	15.85	Not booked in .The incorrect consignment note (CWTN) was with load. the correct note was faxed thru.
19	02-Mar-98	14:08	Bush Boake Allen	EA00164842	alkaline aqueous waste inorganic upto 5% NaOH	13.05	
20	02-Mar-98	15:03	Chemical Recoveries Ltd	EA00552831	Solvent Recovery Residues H3-A	19.88	
21	02-Mar-98	15:08	Rolls-Royce Motor cars Ltd	EA00428480	Empty 205 litre drums	13.15	description inadequate on S82
22	02-Mar-98	15:32	Rover Group Ltd B31	EA00579902	Paint & water H5 FP 23C + mixed hydrocarbons 5%	8.21	
23	02-Mar-98	15:57	Zeneca Ltd HD21 1FF	EA00581234	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	21.77	
24	02-Mar-98	16:03	Chemoxy International plc TS3	EA00586227	Solvent Lower Layer Methanol 25% Dimethyl Esters 5% water 51%	20.3	discrepancy between 2 descriptions
25	02-Mar-98	16:33	Bush Boake Allen	EA00164849	alkaline aqueous waste inorganic upto 10% hydrochloric acid, 1% propylene chlorohydrins	17.68	
26	03-Mar-98	07:20	Zeneca Ltd HD21 1FF	EA00581237	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.18	
27	03-Mar-98	07:30	Robert Hopkins	EA50284755	Caustic Sludge NaOH 20%	17.98	booked previous day
28	03-Mar-98	08:22	Grunyts Surface Coatings	EA00428525	Crushed cans BLF, traces of xylene etc	12.38	H3-A
29	03-Mar-98	08:51	Chemical Recoveries Ltd	EA00552832	Solvent Recovery Residues H3-A	19.56	
30	03-Mar-98	09:07	Bush Boake Allen	EA00164851	alkaline aqueous waste inorganic upto 10% hydrochloric acid 1% propylene chlorohydrins	11.24	
31	03-Mar-98	09:19	Almetex Ltd WA9 1QW	EA00320818	Oil water emulsions upto 30% oil	3.42	
32	03-Mar-98	09:38	Zeneca Ltd HD21 1FF	EA00581236	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	21.7	
33	03-Mar-98	10:00	Chemoxy International plc TS3	EA00586228	Solvent Lower Layer Methanol 25% Dimethyl Esters 5% water 51%	20.1	discrepancy between 2 descriptions
34	03-Mar-98	10:22	Vita Polymers Ltd M22 4SZ	EA00533307	Contaminated Packaging Antimony trioxide .1%, formaldehyde 0.01% H5	15.34	

## ANNEX D - INCOMING SPECIAL WASTE (CONTINUED)

Lot No	Date	Time	Consignor	Note No	Description	Weight	Comments
35	03-Mar-98	11:23	Nipe Laboratories Ltd BB5	EA00607559	Aqueous Effluent(pH4-10) not classified as hazardous for transport	19.71	
36	03-Mar-98	11:54	Process Chemical Ltd ST8	EA50284436	Heavy Fuel Oil	3.42	
37	03-Mar-98	12:06	Intex Yarns Ltd	EA00449204	Nominally empty drums containing Na hydrosulphite, dithionite & carbonate	0.42	Section C & D not filled in correctly
38	03-Mar-98	12:29	Bush Boake Allen	EA00184843	alkaline aqueous waste Inorganic upto 5% NaOH	11.29	not on prebooked list
39	03-Mar-98	12:32	RoRa-Royce Motor cars Ltd	EA00428478	Filter Cake from Trade Effluent plant	15.75	
40	03-Mar-98	13:12	Lever Brothers L82	EA00449383	Filter Cake- LBL Ref 88808, pH 10-12	27.5	
41	03-Mar-98	13:49	Zeneca Ltd HD21 1FF	EA00581245	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.21	
42	03-Mar-98	13:55	Granyte Surface Coatings	EA00428526	Factory waste contaminated with organic solvents less than 0.5% solvent	12.83	H3-B
43	03-Mar-98	14:32	Zeneca Ltd HD21 1FF	EA00581263	Aqueous Mother Liquors cont Chloropropionic acid upto 0.5%, Isopropyl acetate H3-B	23.36	
44	03-Mar-98	14:45	Borden Chemicals UK Ltd 5052	EA50240383	Resol Distillate/Aqueous plant distillate- Phenol 6%	20.68	descriptions differ
45	03-Mar-98	15:06	Chemical Recoveries Ltd	EA00552833	Solvent Recovery Residues H3-A	19.25	
46	03-Mar-98	15:11	Zeneca Ltd HD21 1FF	EA00581148	Aqueous Mother Liquors cont MiBK upto 0.5%, Isopropyl acetate H3-B	19.94	

ANNEX E: WASTE STORAGE - P.J. COLLIER - 2 & 3 MARCH 1998

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Non Designated Area A	17x205 ltr drums	"Solids Containing Flammable Liquid NOS (Acetone, Toluene)"	Flammable Solid	"2 / 27"		
Non Designated Area B	Large box containing various containers (up to 25ltr) in size	Various - "Gloss Paints", "Tile Adhesives", "Brake Fluid", "MEK", "Methoxy-2-Propanol", "Polymer", "Hardner", "Resin"	Toxic Flammable Corrosive	"2 / 27"		
Non Designated Area C	51x205 ltr drums	"Plastisol liquid" "Burn't Plastisol Oils" "Plastisol Contaminated Solids"	Toxic	"2 / 27"		
Non Designated Area D	80x205 ltr drums	"Waste Photines"	Not Classified	"2 / 27"		
	1x80 ltr drums	"HCl (36%)"	Corrosive	None		
Non Designated Area E	4x205 ltr drums	None	Corrosive	None	No waste description 1 drum appeared to have fallen off pallet.	
	1x80 ltr	None	None	None	No labels on drum	
	1x205 ltr	"Sulphonic Acid (Sulphuric Acid, Alkyl Benzene, Sulphonic Acid)"	Corrosive Irritant	None		

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Non Designated Area F	62x205 ltr drums	"Waste Corrosive Liquid, Acidic, Organic, NOS. (Chloropropionic Acids, Esters & HCl)"	Corrosive	None		
Non Designated Area G	2x205 ltr drums	"Sulphonic Acid"	Corrosive	None		
	1x100 ltr drum	"Ammonia & Water"	Corrosive	None		
	3x205 ltr drums	"Corrosive Solid"	Corrosive	None	Poor Waste Description	
	1x100 ltr drum	"Ammonia"	Corrosive	None		
	1x205 ltr drum	None	Corrosive	None	No waste description Drum dented	
	4x205 ltr drum	"Metfin LP05 - Multi-Metal Spray Type Conversion"	Toxic	None	Poor Waste Description	
	20x205 ltr drum	"Propionic Acid"	Corrosive	None		
	32x205 ltr drum	"Chromic Acid"	Corrosive	None		
	4x205 ltr drum	"Flammable Liquid, Corrosive, NOS (Methanol, Mixed Acids)"	Corrosive	None		
	4x205 ltr drum	"Corrosive, Solid, Acidic, Organic NOS (Phosphoric Acid Catalyst for Formaldehyde Resin)"	Corrosive	None		
	1x50 ltr container	"Sulphonic Acid"	Corrosive	None		

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Non Designated Area G (continued)	1x205 ltr drum	"Residues Containing Chloropropionic Acid"	Corrosive	None		
Non Designated Area H	4x205 ltr drum	"Residues Containing Chloropropionic Acids, Propionic Acids & Esters, HCl"	Corrosive	None		
	12x205 ltr drums	"Acidic Aqueous"	Toxic Corrosive	None	Poor waste description	
	2x205 ltr drums	"Methanol/Nitric Acid"	None	None		
	1x205 ltr drum	"None"	Toxic	None	No markings on drum	
	2x205 ltr drums	"None except 'Nalco Nal 1200 Antiscalant'"	Irritant	None	Poor waste description	
	3x205 ltr drums	"Acid Aqueous"	Toxic Corrosive	None	Poor waste description	
	2x205 ltr drums	None	Flammable Corrosive	None	No waste description	
	1x205 ltr drum	None except "Rec Acetic ex 2 MCA"	None	None	Poor waste description	
Non Designated Area I	3x1000 ltr IBCs	None	None	None	No Labelling - 1 IBC Without Lid	
	2x1000 ltr IBCs	"Waste Corrosive Solid, Acidic, Organic NOS"	Corrosive	None	Poor waste description	

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Non Designated Area I (continued)	1x1000 ltr IBC	"Anionic Surfactants"	None	None		
Non Designated Area J	5 Capacitors	None	Toxic	None	No waste description	Photograph Ref SW/0363/005.
	9 Assorted IBC's & Steel Tanks	None	None	None	No waste description	Photograph Ref SW/0363/006.
Non Designated Area K	2x205 ltr drums	"Sulphonation Residues > 35% Sulphur Trioxide"	Corrosive	None		
Non Designated Area L	2x205 ltr drums	"Lenetol HP Jet (contains fatty alcohol ethoxylate)"	None	None		
	1x205 ltr drum	None	None	None	No waste description	
	1x205 ltr drum	"Corrosive Liquid NOS-'Tween 80'"	Corrosive	None	Poor waste description	
Non Designated Area M	35x205 ltr drums	"A673 Powder-Contains Alumina"	Not Classified	None		
	8x205 ltr drums	"Sulphonic Acid"	Corrosive	None		
	1x50 ltr drum	"Caustic Potash - Potassium Hydroxide"	Corrosive	None		
Non Designated Area M (continued)	1x100 ltr drum	"Quaternary Ammonium Salts"	None	None	Hazard labeling weathered	
Non Designated Area N	162x205 ltr empty drums	None	Various	None		
Non Designated Area O	4x1000 ltr IBC's	"Waste PT Resin"	Toxic	None	Poor waste description	

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Non Designated Area O (continued)	4x1000 ltr containers	None	None	None	No Labeling - 2 IBCs without lids	
	1x205 ltr drum	"Chloroform"	None	None	No hazard classification	
	1x205 ltr drum	"Alkane Sulphonic Acid"	Corrosive	None	No hazard classification	
	2x1000 ltr IBCs	None	None	None	Labels not visable	
	15xIBC's	"Phenol Formaldehyde Resin Gel"	Toxic	None		
Designated Bay 1	Empty					
Designated Bay 2	Empty					
Designated Bay 3	39x205 ltr empty drums	Various empty drums	Various	None		
Designated Bay 4	61x205 ltr drums (Mixture of Lever Brothers waste streams)	1) "Sulphuric/Sulphonic Acids" 2) "LAS & LES Acids (Sulphuric Acid/NDOM/1,4 Dioxane)"	Corrosive	None	Number of drums leaking	Photograph Ref SW/0363/008.
Designated Bay 5	1x205 ltr drum	"Polydimethylsiloxane"	Irritant	None		
	4x205 ltr drums	"Sodium Silicate/Aluminate Washings"	Irritant Corrosive	None		
	4x205 ltr drums	"Waste Sulphonated Paste"	Corrosive	None	1 drum with lid missing	
	96x205 ltr drums (Mixture of Lever Brothers waste streams)	1) "Sulphuric/Sulphonic Acids" 2) "LAS & LES Acids (Sulphuric Acid/NDOM/1,4 Dioxane)"	Corrosive	None	3 Drums expanded due to internal pressure build-up.	

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Designated Bay 6	136x205 ltr empty drums	"Phenyl Chloroformate"	Poison Corrosive	None	4 Drums with bungs missing	
	76x205 ltr drums (Mixture of Lever Brothers waste streams)	1) "Sulphuric/Sulphonic Acids" 2) "LAS & LES Acids (Sulphuric Acid/NDOM/1,4 Dioxane)"	Corrosive	None	Drums leaking	
	4x205 ltr drums	"Flammable Solid Sulphur Waste"	Flammable Solid	None		
Designated Bay 7	111x80 ltr	"ICI Bleaching Powder"	Oxidiser	None	9 containers without lids	Photograph Ref SW/0363/007.
	20x25 ltr containers	"Sodium Nitrate 20% Aqueous Solution"	Toxic	None		
	2 full pallets of bags	"Oxidising Agent - Zinc Chromate"	Toxic Oxidiser	None		
	2x205 ltr drums	"Calcium Hypochlorite"	None	None		
	2x205 ltr drums	"Sodium Nitrate"	None	None		
	30x205 ltr drums	"Calcium Hypochlorite"	Oxidiser	None		
	1x1000 ltr IBC	None	None	None	No labeling	
	1xPallet containing a mixture of packages (<100 ltr)	None	1 package marked "Toxic"	None	Labels fallen off many of the containers	
Designated Bay 8	145x205 ltr drums (Mixture of Lever Brother waste streams)	1) "Sulphuric/Sulphonic Acids" 2) "LAS/LES Acids"	Corrosive	None		
	80x205 ltr drums	"Sulphonic Acids"	Corrosive	None		

Bay Number	Contents	Waste Description	Hazard Data	Unique No/Date	Inspectors Comments	Photo/Sample Ref
Non Designated Area P	1x205 ltr drum	None	None	None	No Labeling	
	24x205 ltr drums	"Industrial Odour Counteractant"	None	None		
	16x80 ltr Containers	"Perfume"	None	None	No hazard data	
	10x205 ltr drums	"Perfume"	None	None	No hazard data	
	2x80 ltr containers	None	None	None	No Labeling	
	7xSteel Tanks (empty)	None	None	None		
Drum Bailing Compound	40x205 ltr drums (empty)	"Dichlorodiphenylamine Distilled"	None	None		
	Bulk Load: Lead Ash	Not Packaged	Not Packaged	Not Packaged	Large Bulk Load Described By Licence Holders As 'Lead Ash'	

**ANNEX E:****TABLE 1. SAMPLES TAKEN AT COLLIER INDUSTRIAL WASTE ON 02/03/98**

<b>Colliers Ref</b>	<b>EA Ref</b>	<b>Time</b>	<b>Producer</b>	<b>S.62 Ref</b>	<b>Sample description</b>	<b>Veh Reg</b>	<b>Comments</b>
	2157	0800	Colliers		Mixed waste from Pit 3 (Cat 1)		To Rixton. Sample retained by G. RAYMENT
	2158	0800	Colliers		Mixed waste from Pit 3 (Cat 1)		EA. To SAL for analysis
	2159	0800	Colliers		Mixed waste from Pit 5 (Cat 2)		EA. To SAL for analysis
	2160	0800	Colliers		Mixed waste from Pit 5 (Cat 2)		To Rixton. Sample retained by G. RAYMENT
4316	2161		Enviromac, Beverley, E. Yorks	N/A	0.3% Phenol solution	N398 XRA	EA. To SAL for analysis
4316	2162		Enviromac Beverley E. Yorks.	N/A	0.3% Phenol solution	N398 XRA	Sample retained by P. LOVELL
4311	2050		Colliers, Rixton	N/A	Leachate	J420 DYN	Split from Colliers sample. To SAL for analysis
4353	2163		ICI Surfactants Wilton Site Middlesborough	0055 9165	Polyethylene glycol Nonyl phenol ethoxylate	D683 LJA	Split from Colliers sample. To SAL for analysis

ANNEX G  
Diagram (1)

INPUTS  
PIT ZERO

Time in	Waste Type	Weight	Special
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OUTPUTS

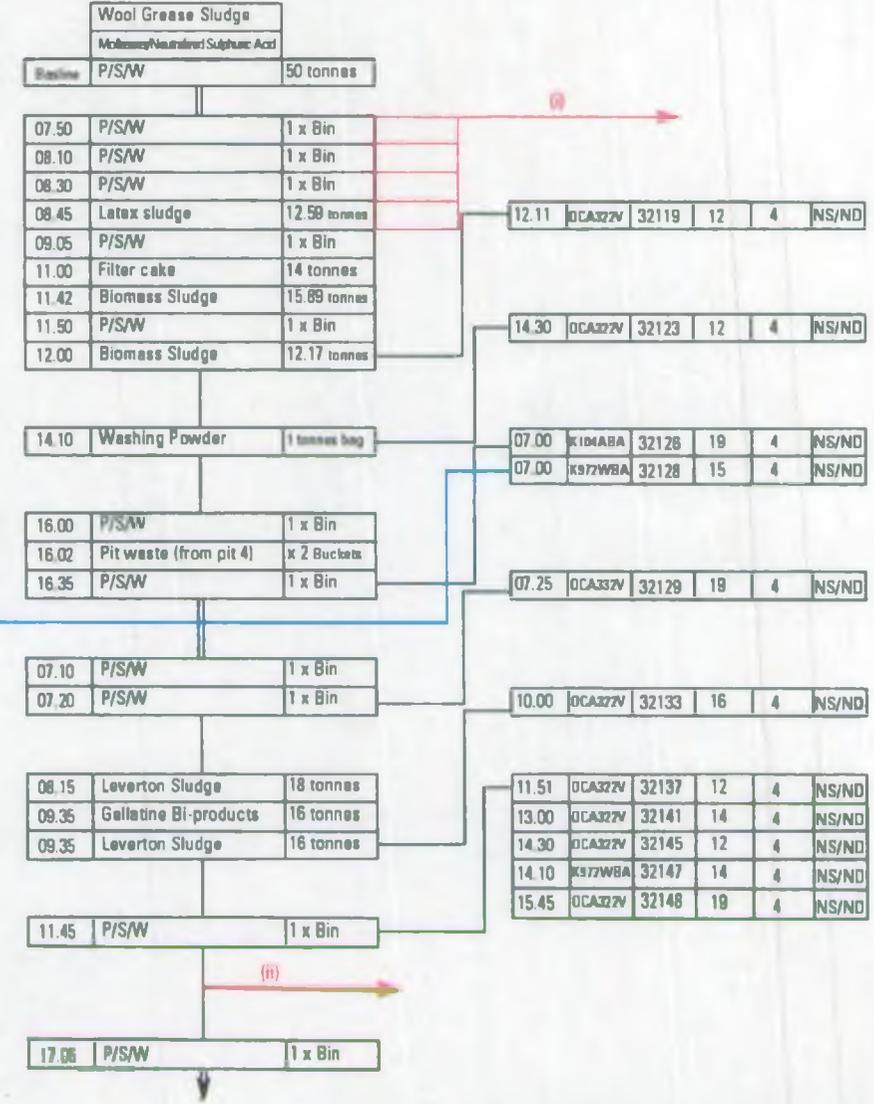
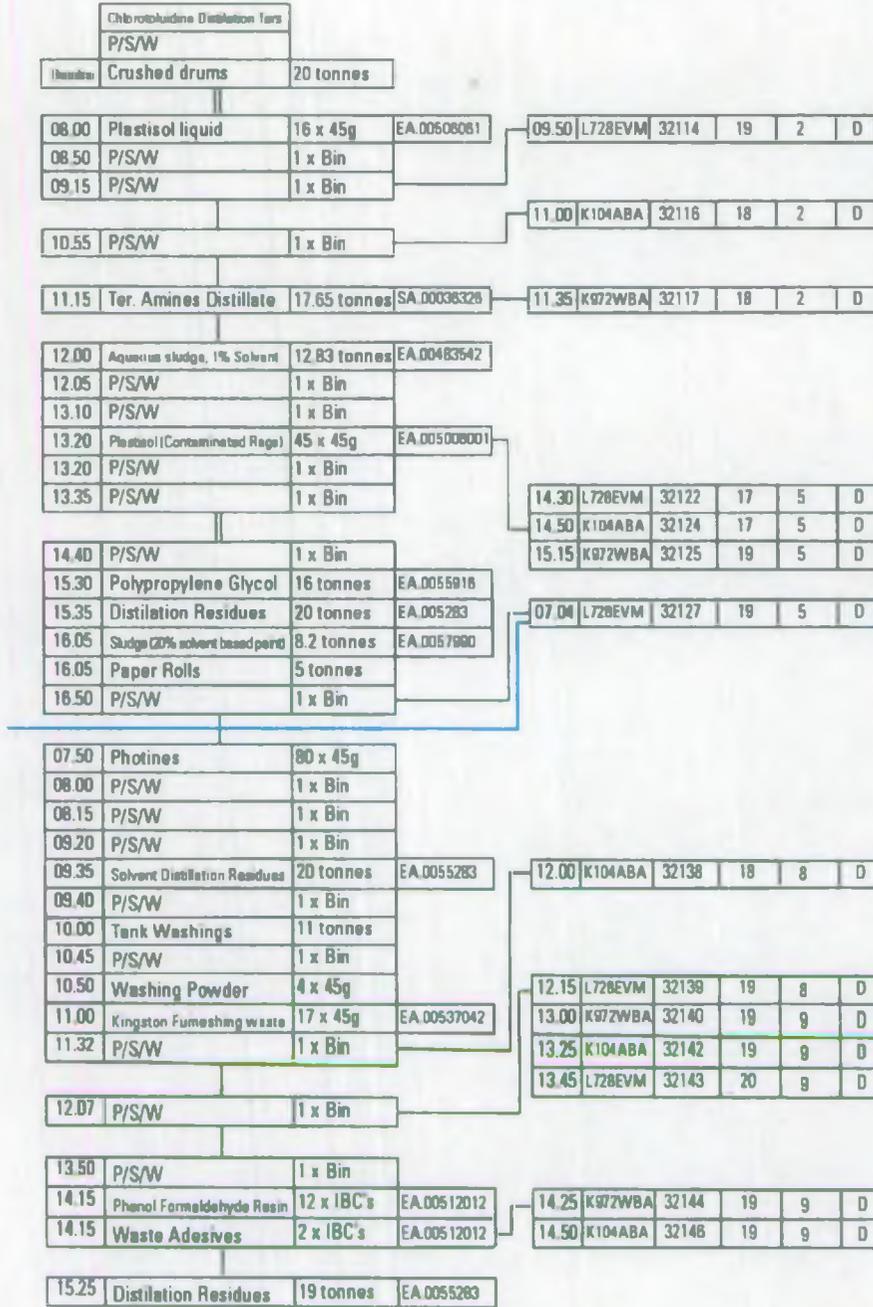
Time Out	Reg.	DoC	Weight tonnes	Waste Type
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INPUTS  
PIT TWO

Time in	Waste Type	Weight	Special
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OUTPUTS

Time Out	Reg.	DoC	Weight tonnes	Waste Type
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ANNEX G  
Diagram (2)

INPUTS  
PIT FOUR

Time in	Waste Type	Weight	Special
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INPUTS  
PIT FIVE

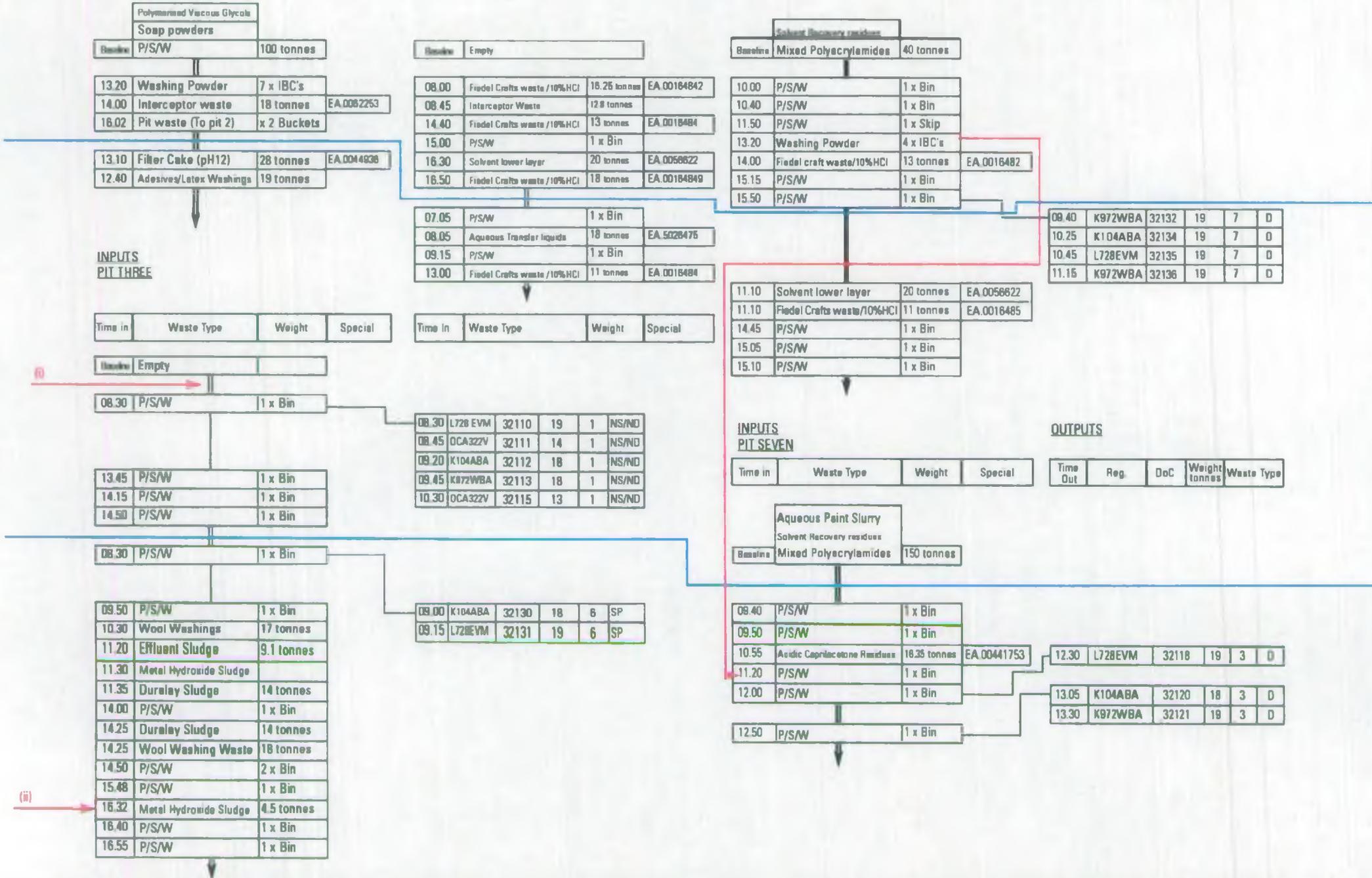
Time In	Waste Type	Weight	Special
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INPUTS  
PIT SIX

Time in	Waste Type	Weight	Special
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OUTPUTS

Time Out	Reg.	DoC	Weight tonnes	Waste Type
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INPUTS  
PIT THREE

Time in	Waste Type	Weight	Special
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Baseline	Empty		
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08.30	P/S/W	1 x Bin	
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13.45	P/S/W	1 x Bin	
14.15	P/S/W	1 x Bin	
14.50	P/S/W	1 x Bin	

08.30	P/S/W	1 x Bin	
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09.50	P/S/W	1 x Bin	
10.30	Wool Washings	17 tonnes	
11.20	Effluent Sludge	9.1 tonnes	
11.30	Metal Hydroxide Sludge		
11.35	Duralay Sludge	14 tonnes	
14.00	P/S/W	1 x Bin	
14.25	Duralay Sludge	14 tonnes	
14.25	Wool Washing Waste	18 tonnes	
14.50	P/S/W	2 x Bin	
15.48	P/S/W	1 x Bin	
16.32	Metal Hydroxide Sludge	4.5 tonnes	
16.40	P/S/W	1 x Bin	
16.55	P/S/W	1 x Bin	

Time In	Waste Type	Weight	Special
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08.30	L728 EVM	32110	19	1	NS/ND
08.45	OCA322V	32111	14	1	NS/ND
09.20	K104ABA	32112	18	1	NS/ND
09.45	K972WBA	32113	18	1	NS/ND
10.30	OCA322V	32115	13	1	NS/ND

09.00	K104ABA	32130	18	6	SP
09.15	L728EVM	32131	19	6	SP

INPUTS  
PIT SEVEN

Time in	Waste Type	Weight	Special
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Baseline	Aqueous Paint Slurry	Solvent Recovery residues	Mixed Polyacrylamides	Weight
				150 tonnes

08.40	P/S/W	1 x Bin	
09.50	P/S/W	1 x Bin	
10.55	Acidic Caprilactone Residues	18.35 tonnes	EA.00441753
11.20	P/S/W	1 x Bin	
12.00	P/S/W	1 x Bin	
12.50	P/S/W	1 x Bin	

OUTPUTS

Time Out	Reg.	DoC	Weight tonnes	Waste Type
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12.30	L728EVM	32118	19	3	D
13.05	K104ABA	32120	18	3	D
13.30	K972WBA	32121	18	3	D

**ANNEX H**

COLLIER INDUSTRIAL WASTE LTD  
NASH ROAD  
TRAFFORD PARK  
MANCHESTER

**MIXING PIT CONTENTS**  
1200 HOURS SATURDAY 28<sup>TH</sup> FEBRUARY 1998

Pit No	Contents	Tonnage
0	Chlorotoluidine Distillation Tars ex Hickson and Welch Crushed Drums Pulverised General Waste	20 tonnes in total
1	<b>Acid Neutralisation Residues from admixture of</b> Safety Kleen 'Quest' Acid, Almatex - Caustic/Aluminium Hydroxide Solution, Bush Boake Allen - Caustic and Acid Solutions	150 tonnes in total
2	Howarth Scouring - Wool Grease Sludge Leigh Environmental - Mollasses/Neutralised Sulphuric Acid Pulverised General Waste	50 tonnes in total
3	Lime Slurry for Acid Neutralisation	30 tonnes
4	Chemoxy - Polymerised Viscous Glycols Lever Brothers - Soap Powders Pulverised General Waste	100 tonnes in total
5	Empty	
6	Chemical Recoveries - Tank Bottoms Allied Colloids - Mixed Polyacrylamides	40 tonnes in total
7	Land Rover - Aqueous Paint Slurry Chemical Recoveries - Tank Bottoms Allied Colloids - Mixed Polyacrylamides	150 tonnes in total

# ANNEX J

02-Mar-98

Reg.	Pit	Time Out	DoC	Weight (tonnes)	Waste Type
L728 EVM.	3	08:30	32110	19	1 NS/ND
OCA 322V.	3	08:45	32111	14	1 NS/ND
K104 ABA.	3	09:20	32112	18	1 NS/ND
K972 WBA.	3	09:45	32113	18	1 NS/ND
L728 EVM.	0	09:50	32114	19	2 D
OCA 322V.	3	10:30	32115	13	1 NS/ND
K104 ABA.	0	11:00	32116	18	2 D
K972 WBA.	0	11:35	32117	18	2 D
L728 EVM.	7	12:30	32118	19	3 D
OCA 322V.	2	12:11	32119	12	4 NS/ND
K104 ABA.	7	13:05	32120	18	3 D
K972 WBA.	7	13:30	32121	19	3 D
L728 EVM.	0	14:30	32122	17	5 D
OCA 322V.	2	14:30	32123	12	4 NS/ND
K104 ABA.	0	14:50	32124	17	5 D
K972 WBA.	0	15:15	32125	19	5 D
K104 ABA.	2	07:00	32126	19	4 NS/ND
L728 EVM.	0	07:04	32127	19	5 D
K972 WBA.	2	07:00	32128	15	4 NS/ND
OCA 322V.	2	07:25	32129	19	4 NS/ND
K104 ABA.	3	09:00	32130	18	6 SP
L728 EVM.	3	09:15	32131	19	6 SP
K972 WBA.	6	09:40	32132	19	7 D
OCA 322V.	2	10:00	32133	16	4 NS/ND
K104 ABA.	6	10:25	32134	19	7 D
L728 EVM.	6	10:45	32135	19	7 D
K972 WBA.	6	11:15	32136	19	7 D
OCA 322V.	2	11:51	32137	12	4 NS/ND
K104 ABA.	0	12:00	32138	18	8 D
L728 EVM.	0	12:15	32139	19	8 D
K972 WBA.	0	13:00	32140	19	9 D
OCA 322V.	2	13:00	32141	14	4 D
K104 ABA.	0	13:25	32142	19	9 D
L728 EVM.	0	13:45	32143	20	9 D
K972 WBA.	0	14:25	32144	19	9 D
OCA 322V.	2	14:30	32145	12	4 NS/ND
K104 ABA.	0	14:50	32146	19	9 D
K972 WBA.	2	14:10	32147	14	4 NS/ND
OCA 322V.	2	15:45	32148	19	4 NS/ND

03-Mar-98

### Waste Types

- NS/ND - None difficult, none special
- D - Difficult
- S - Special
- 1-9 - Refer to Annex (v) Waste descriptions.

## ANNEX J

### SUMMARY OF WASTE OUTPUT TYPES TO RIXTON LANDFILL DURING AUDIT.

- (1) PROCESSED NON-SPECIAL, NON-DIFFICULT WASTE:** Processed BioMass-Pulverised General Waste & General Treated Low Hazard Effluent Treatment Plant Sludges & Filter Cakes.  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 36%).
- (2) PROCESSED DIFFICULT WASTE:** Mixture of:  
10 tonnes - Pulverised General Waste.  
9 tonnes - Difficult Waste ie. [4 tonnes, R50 (Hickson & Welsh)] + [2 tonnes, L29, (Allied Colloidss)] + [3 tonnes, L29, (Wardle Story)].  
(Flash point: Negative, Flammability: Negative, pH 6- 7, Moisture Content ~35%).
- (3) PROCESSED DIFFICULT WASTE:** Mixture of:  
10 tonnes - Pulverised General Waste.  
9 tonnes - Difficult Waste ie. [2 tonnes, R80, (Land Rover)] + [1 tonnes, L29, (Allied Colloidss)] + [2 tonnes, R20, (Chemical Recovreies)] + [4 tonnes, K11, (Chemoxy)].  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 30 - 35%).
- (4) PROCESSED NON-SPECIAL, NON-DIFFICULT WASTE:** Processed BioMass-Pulverised General Waste & General Treated Low Hazard Effluent Treatment Plant Sludges & Filter Cakes.  
(Flash point: Negative, Flammability: Negative, pH 9, Moisture Content 39%).
- (5) PROCESSED DIFFICULT WASTE:** Mixture of:  
10 tonnes - Pulverised General Waste.  
9 tonnes - Difficult Waste ie. [4 tonnes, K71 (Albright & Wilson)] + [4 tonnes, D30, (Rhone Poulenc)] + [1 tonnes, L29, (Wardle Story)].  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 30 - 35%).
- (6) PROCESSED SPECIAL WASTE:** Mixture of:  
9 tonnes - Pulverised General Waste.  
10 tonnes - Oily Tank Bottoms, R20, (Waste Oils).  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 35%).  
Up to 25& Refinery Oil Sludge, Haz Code H7.
- (7) PROCESSED DIFFICULT WASTE:** Mixture of:  
10 tonnes - Pulverised General Waste.  
9 tonnes - Difficult Waste ie. [4 tonnes, K12, (Solrex )] + [2 tonnes, S50, (Lever)] + [1 tonnes, R20, (Chemical Recovreies)]  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 40%).
- (8) PROCESSED DIFFICULT WASTE:** Mixture of:  
9 tonnes - Pulverised General Waste.  
10 tonnes - Difficult Waste ie. [1 tonnes, R80, (Land Rover)] + [3 tonnes, K12, (Hickson & Welsh)] + [6 tonnes, R20, (Chemical Recovreies)].  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 40%).
- (9) PROCESSED DIFFICULT WASTE:** Mixture of:  
9 tonnes - Pulverised General Waste.  
10 tonnes - Difficult Waste ie. [3 tonnes, R20, (Thurroclean)] + [2 tonnes, K12, (Hickson & Welsh)] + [4 tonnes, R20, (Chemical Recovreies)].  
(Flash point: Negative, Flammability: Negative, pH 7, Moisture Content 40%).

Collier Industrial Waste Ltd.

WML/363/Mo6

Audit Sheet - Waste treatment - Effluent Treatment Tank Inputs.

Date.	Time.	Tank	Waste Type	Quantity	Physical Form	From	Sec 62 / DoC	Reg.
02-Mar-98	07.55	5	Phenol Washings (0.3% phenol / 99% water)	19.25 tonnes	Liquid	Kenal Seviles	DoC. 47169	N801 XRA
02-Mar-98	07.55	5	A2 Filtrate, Ex-Zenica, 10% Ammonium.	23.13 tonnes	Liquid	Global.	DoC. 2713	H492 FEM
02-Mar-98	08.30	5	LCPA Effluent, pre-neutralized to pH 6)	23.28 tonnes	Liquid	Zenica	EA.0058125	M916 KBC
02-Mar-98	08.30	5	LCPA Effluent, pre-neutralized to pH 6)	21.74 tonnes	Liquid	Zenica	EA.0058125	N763 AHN
02-Mar-98	09.15	4	Marpol Washings, 1% Cresylic Acid.	12.4 tonnes	Liquid	Seal Sand	EA.5003424	P596 DHM
02-Mar-98	09.30	5	1% Ammonia, 99% Alkaline Effluent.	20.9 tonnes	Liquid	Nippa Labs	EA.00607547	N956 FWU
02-Mar-98	09.40	5	LCPA Effluent, pre-neutralized to pH 6)	23.3 tonnes	Liquid	Zenica	EA.00581254	J527 LDH
02-Mar-98	09.50	5		19.4 tonnes	Liquid	Hickson & Manro.	DoC	J420 DYN
02-Mar-98	10.15	3	Interceptor Washings.	18.48 tonnes	Liquid	Chemoxy Inc. plc.	DoC 3633	G237 WVU
02-Mar-98	10.15	5	A2 Filtrate, Ex-Zenica, 10% Ammonium.	20.03 tonnes	Liquid	Zenica	DoC 739	M621 XCM
02-Mar-98	10.15	5	LCPA Effluent, pre-neutralized to pH 6)	23.09 tonnes	Liquid	Zenica	EA.00581252	L57 JRM
02-Mar-98	10.55	1	MBT Moter Liqour.	18.2 tonnes	Liquid	Albright & Wilson	EA.00616310	N596 AHF
02-Mar-98	12.10	5	LCPA Effluent, pre-neutralized to pH 6)	21.76 tonnes	Liquid	Zenica	EA.00581243	N763 AHF
02-Mar-98	12.15	5	Caustic Scrubber Liqour.	20.44 tonnes	Liquid	Hickson & Welsh.	EA.00621804	P342 WUG
02-Mar-98	13.20	5	A2 Filtrate, Ex-Zenica, 10% Ammonium.	22.29 tonnes	Liquid	Zenica	DoC 2807	H492 FEM
02-Mar-98	13.20	5	LCPA Effluent, pre-neutralized to pH 6)	23.14 tonnes	Liquid	Zenica	EA.00581242	M916 KBC
02-Mar-98	13.40	3	Surfactant Washings	19.62 tonnes	Liquid	Cleveland Chemicals	DoC	L285 HNP
02-Mar-98	14.30	5	Landfill Leachate.	20 tonnes	Liquid	Rixton landfill	DoC	J420 DYN.
02-Mar-98	14.45	3	Ink / Water Mix.	21 tonnes	Liquid	Robert Hopkins & Son	DoC 9280	N950 FWU
02-Mar-98	14.45	5	Aqueous Washings (0.3% Phenol).	20 tonnes	Liquid	Kenal Services	DoC 44159	N398 XPN.
02-Mar-98	16.20	5	LCPA Effluent, pre-neutralized to pH 6)	21.5 tonnes	Liquid	Zenica	EA.0058123	N763 AHN.
03-Mar-98	07.30	5	LCPA Effluent, pre-neutralized to pH 6)	23 tonnes	Liquid	Zenica.	EA.0058123	M91 6KBC
03-Mar-98	10.00	5	Effluent Discharge (COD)	21 tonnes	Liquid	Hickson & Manro.	DoC 42238	J489 DYM
03-Mar-98	10.15	5	LCPA Effluent, pre-neutralized to pH 6)	22 tonnes	Liquid	Zenica.	EA.0058123	N763 AHN
03-Mar-98	10.15	2	5% Oil / Water Emmulsion.	3.4 tonnes	Liquid	Almex Ltd	EA.00520818	B776 DCA
03-Mar-98	10.45	5	Landfill Leachate.	21 tonnes.	Liquid	Rixton landfill		B692 NEH
03-Mar-98	11.25	5	Phenol Washings (0.3% phenol / 99% water)	18 toinnes	Liquid	Kenal Services	DoC 44128	M583 STU
03-Mar-98	11.45	5	1% Ammonia, 99% Alkaline Effluent.	20 tonnes	Liquid	Nippa	EA.0060755	P342 WVG
03-Mar-98	13.30	5	Effluent Discharge (COD)	20 tonnes	Liquid	Hickson & Manro.	DoC 6373	J983 DYM
03-Mar-98	13.35	5	Surface Water.		Liquid	Site	NA	NKA 9805
03-Mar-98	12.19	5	Landfill Leachate.	22 tonnes	Liquid	Rixton landfill	DoC	B692 NEH

ANNEX K



## ANNEX L

### WASTE TYPES WHICH ARE PERMITTED FOR TREATMENT BY WASTE MANAGEMENT LICENCE WML/0363/M06

WASTE TYPES	CODE	CONDITIONS
INORGANIC ACIDS:		
OTHER INORGANIC ACIDS	A90	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
ORGANIC ACIDS:		
ACID ANHYDRIDES	B13	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
ACID CHLORIDES	B14	
SULPHONIC ACIDS	B15	
INORGANIC ALKALIS:		
ALKALI METAL OXIDES	C10	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
METALS AND THEIR INORGANIC COMPOUNDS:		
CADMIUM	D10	For concentrations in excess of 5% w/w as metal treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
MERCURY	D20	For concentrations in excess of 5% w/w as metal treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
OTHER METALS	D99	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
AMMONIUM SALTS	E91	Unstable wastes only permitted in accordance with the written agreement of the Environment Agency
ELEMENTAL METALS:		
SODIUM AND POTASSIUM	F11	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
MAGNESIUM	F15	
CALCIUM AND LITHIUM	F 90	
INORGANIC COMPOUNDS:		
SODIUM AND POTASSIUM CYANIDES	H11	Solid cyanide wastes storage only; treatment on site not permitted, except where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
SOLUBLE COMPLEX CYANIDES	H12	
FERRO AND FERRI CYANIDES	H13	
OTHER CYANIDES	H19	
SELENIDES, TELLURIDES AND ARSENIDES	H21	Treatment only permitted where a concentration limit or method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
CHLORATES, PERCHLORATES, BROMATES, IODATES, PERIODATES, PERSULPHATES AND PERMANGANATES	H32	Treatment only permitted where a concentration limit or method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
PEROXIDES	H33	
ARSENATES AND ARSENITES	H43	Treatment only permitted where a concentration limit or method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
CARBIDES	H91	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
PEROXIDES	K30	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
TRICHLOROETHYLENE	K41	
PERCHLOROETHYLENE	K42	
TRICHLOROETHANE	K43	
PCBS AND ANALOGUES	K51	

OTHER HALOGENATED HYDROCARBONS	K52	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
ORGANO-METALLIC COMPOUNDS	K60	
NITROGEN, SULPHUR, OR PHOSPHORUS-CONTAINING ORGANIC COMPOUNDS:		
NITRO COMPOUNDS	K72	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
NITRILES	K73	Except fully polymerised treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan
ISOCYANATES	K74	Except fully polymerised treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan
OTHER ORGANO NITROGEN COMPOUNDS	K75	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
FINE CHEMICALS AND BIOCIDES:		
PHARMACEUTICALS AND COSMETIC PRODUCTS	N10	Pharmaceuticals treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
PHARMACEUTICAL PRODUCTS IN RETAIL PACKAGES	N11	
PHARMACEUTICAL PRODUCTS IN BULK AND PRODUCTS IN BULK CONTAINERS	N13	
BIOCIDES	N20	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan.
PESTICIDES	N21	
HERBICIDES	N22	
FUNGICIDES	N23	
LABORATORY CHEMICALS:		
LABORATORY CHEMICALS: ANY WASTE PERMITTED IN PACKAGES UP TO 2.5 LITRES CAPACITY ONLY	P 90	Storage only permitted except where treatment permitted for the specific waste type listed within this Annex.
USED FILTER MATERIALS (INCLUDING CARBON, KIESELGUHR)	Q10	Permitted only where all chemical contamination is permitted within this Annex
CONTAMINATED RUBBISH (INCLUDING BAGS & SACKS)	Q20	
EMPTY USED PACKAGING	Q30	
INDUSTRIAL EFFLUENT TREATMENT SLUDGE	Q40	
CONTAMINATED SAND, SAWDUST, VERMICULITE, WATER AND OTHER SIMILAR INERT AND NON-HAZARDOUS MATERIAL	Q40	
FILTER CAKE	Q40	
INTERCEPTOR WASTES, TARS, PAINTS, DYES AND PIGMENTS:		
TANK CLEANING SLUDGE	R10	Permitted only where all chemical contamination is permitted within this annex.

INTERCEPTOR PIT WASTES	R20	Permitted only where all chemical contamination is permitted within this annex.
DISTILLATION RESIDUES	R50	Permitted only where all chemical contamination is permitted within this annex.
ACID TARS OR SLUDGES ARISING FROM THE REFINING OF PETROLEUM PRODUCTS USING OLEUM	R60	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan
BATTERIES	S90	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan
FLUORESCENT TUBES	S90	Treatment only permitted where a method statement has been agreed in writing by the Environment Agency and incorporated into the Working Plan
PRESSURISED GAS CYLINDERS CONTAINING OR CONTAMINATED WITH :BUTANE, PROPANE, OXYGEN, AMMONIA, HYDROGEN SULPHIDE, CARBON DIOXIDE , NITROGEN, CFCs		Treatment on site not permitted
OTHER PRESSURISED GAS CYLINDERS		Storage only permitted only in accordance with the written agreement of the Environment Agency. Treatment on site not permitted.

## NORTH WEST REGION ADDRESSES

### REGIONAL OFFICE

Environment Agency  
PO Box 12  
Richard Fairclough House  
Knutsford Road  
Warrington WA4 1HG  
Tel: 01925 653 999  
Fax: 01925 415 961

### NORTH AREA OFFICE

Environment Agency  
Ghyll Mount  
Gillan Way  
Penrith 40 Business Park  
Penrith  
Cumbria CA11 1BP  
Tel: 01768 866 666  
Fax: 01768 865 606

### CENTRAL AREA OFFICE

Environment Agency  
Lutra House  
Dodd Way  
Walton Summit  
Bamber Bridge  
Preston PR5 8BX  
Tel: 01772 339 882  
Fax: 01772 627 730

### SOUTH AREA OFFICE

Environment Agency  
Appleton House  
430 Birchwood Boulevard  
Birchwood  
Warrington WA3 7WD  
Tel: 01925 840 000  
Fax: 01925 852 260



- Area Administrative Boundaries
- Regional Boundary
- Area Office
- ▲ Regional Headquarters

For general enquiries please call your local Environment Agency office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

**ENVIRONMENT AGENCY  
GENERAL ENQUIRY LINE**

**0645 333 111**

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

**ENVIRONMENT AGENCY  
EMERGENCY HOTLINE**

**0800 80 70 60**



**ENVIRONMENT  
AGENCY**