

Collex Pty Ltd
Christine Hodgkiss

Clyde Waste Transfer Terminal

Odour Audit



Document No. 746244_TRP_003576_00
21/2/05

The logo for VIPAC features a thick red jagged line that starts from the left, goes up, down, and up again, forming a stylized 'V' shape. To the right of this line, the word "VIPAC" is written in bold, black, uppercase letters.


VIPAC



Clyde Waste Transfer Terminal Odour Audit

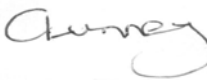
<p>DOCUMENT NO: 746244_TRP_003576_00</p> <p>PREPARED FOR: Collex Pty Ltd Level 4, 65 Pirrama Road Pymont NSW 2009 Australia</p> <p>Contact: Christine Hodgkiss ☎ (02) 8571 0211 Fax: (02) 8571 0210</p>	<p>LIBRARY CODE: B 73</p> <p>PREPARED BY: Vipac Engineers & Scientists Ltd 6/524 Milton Road (PO Box 436) Toowong, QLD. 4066 Australia</p> <p>☎ +61 7 3870 0400 Fax : +61 7 3870 0106</p>
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PREPARED BY:


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Jerome Rivory
GM – Northern Region
Date: 21/2/05

REVIEWED BY:


.....

Chris Lunney
Reviewing Engineer
Date: 21/2/05

RELEASED BY:


.....

Christina Dally Watkins
QA Representative
Date: 21/2/05

REVISION HISTORY

Revision No.	Date Issued	Reason/Comments
0	21/2/05	Initial Issue

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KEYWORDS:

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EXECUTIVE SUMMARY

Vipac Engineers & Scientists Ltd (VIPAC) has been commissioned by Collex to carry out the first odour audit.

The Odour Audit has been prepared in compliance with conditions 48 (f) of the Conditions of Consent for the Clyde Transfer Terminal and outlines procedures used and results for the odour audit carried out for the first three months of operation.

Due to operational constraints the odour audit for the first three months was carried out in February 2005, after the three months period had elapsed. Therefore the odour audit concentrated on the procedural aspects of the odour management plan.

The largest non-conformance relates to training and record keeping of training. A number of suggestions have been made on the audit document and within the Odour Audit Report.

There are minor non-conformance issues relating to documentation control. The Hippo Station system provides the appropriate framework and should be utilised for some of the documents that are circulating. A number of actions have been made.

A number of observations have been made. These typically relate to operational issues that could be improved or improved and formalised with appropriate documentation.

It is apparent that the CWTT facility was under going some teething issues within the first three months of operation. It is accepted that it will take some time for operational issues to be bedded down. The first odour audit has highlighted a number of issues that can be improved.



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1. INTRODUCTION

Vipac Engineers & Scientists Ltd (VIPAC) has been commissioned by Collex to carry out the first odour audit.

The Odour Audit has been prepared in compliance with conditions 48 (f) of the Conditions of Consent for the Clyde Transfer Terminal and outlines procedures used and results for the odour audit carried out for the first three months of operation.

Due to operational constraints the odour audit for the first three months (September, October and November 2004) was carried out in February 2005, after the three months period had elapsed. Therefore the odour audit concentrated on the procedural aspects of the odour management plan.

1.1 Conditions of consent

48. *The Odour Management Plan must address, but is not necessarily limited to, the following issues:*

- (f) *An odour audit program which provides for a comprehensive odour audit of the premises and nearby commercial and residential areas, by an independent, appropriately qualified and experienced person, to be conducted 3-monthly for the initial 24 months of receiving uncontainerised waste at the terminal, and 6-monthly thereafter, unless otherwise approved in writing by the Director-General.*

2. METHODOLOGY

A methodology document reflecting general principles of environmental auditing and specific odour was prepared (VIPAC ref 746244_GCO_003536_00). This document is able to be fine tuned for further odour audits.

3. RESULTS

The completed odour audit document for the first three months of operation is presented in Appendix A.

The most apparent non-conformance issue relates to the training of staff and record keeping of training. The management of odour impacts on operations within the Clyde Waste Transfer Terminal (CWTT) and it is essential that staff be trained in odour prevention practices and that records of such training be recorded. It is understood that the many of the CWTT operational staff are casually employed and this further reinforces the need for formal training and training records. It is accepted that some training does occur, it is therefore a matter of ensuring that training occurs uniformly across all staff and making sure that training records are kept in a central location.

Documentation control is not quite up to an appropriate standard and warrants a minor non-conformance (examples are training records, production memos, etc). The Collex documentation system "Hippo Station" is comprehensive and allows good documentation control. There are however a number of operational memos or working practices which have evolved since the start of operations of the CWTT that exist only as external documents to the Hippo Station system. It is suggested that such documents be formalised and uploaded to the Hippo Station system.

A number of observations have been made. These typically relate to operational issues that could be improved or improved and formalised with appropriate documentation.



It is apparent that the CWTT facility was under going some teething issues within the first three months of operation. It is accepted that it will take some time for operational issues to be bedded down. The first odour audit has highlighted a number of issues that can be improved. Table 3.1 presents a summary of actions.

Table 3.1 – Corrective action summary

Item Number	Action Type	Importance	Issue Description	Corrective action required
1	N/C	High	There are a number of document that are not formalised or contained within Collex's Hippo Station document system	Formalise documents Place documents on Hippo Station
2	N/C	High	The Standard Operating Praticce contained in the OMP has not been embodied into an operational plan. It is understood that operations differ to those originally intended. The SOP should be modified appropriately and place on Hippo Station system	Review SOP in light of current operations. Formalise SOP. Place documents on Hippo Station
3	N/C	High	Training for operational odour management could be improved. Training records are not kept in a systematic fashion.	Training material should be updated to reflect the importance of operational constraints and odour management. Training records should be maintained in a systematic fashion.
4	N/C	High	There is no central Monitoring Data Management System.	The central Monitoring Data Management system should be established
5	M/N/C	Medium	The operations contingency program is contained within a July 2004 waste management plan (Maunsell document).	It may be necessary to review this document in light of current operational practices. Place documents on Hippo Station.
6	M/N/C	Medium	An overall register of Pollution Complaints Forms does not exist.	Establish an overall register of Pollution Complaints Register.
7	M/N/C	Medium	Completed Pollution Complaints Forms do not record a unique complaint number.	Establish a numbering system for completed Pollution Complaint Forms. Record complaint number within overall register
8	M/N/C	Medium	Completed Pollution Complaints Forms do not record weather conditions and plant conditions that were occurring at the time.	Update Pollution Complaints Forms to allow recording of the weather data and plant status that were occurring at the time.



4. CONCLUSIONS

The largest non-conformance relates to training and record keeping of training. A number of suggestions have been made on the audit document and within the Odour Audit Report.

There are minor non-conformance issues relating to documentation control. The Hippo Station system provides the appropriate framework and should be utilised for some of the documents that are circulating. A number of actions have been made.

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APPENDIX A

ODOUR AUDIT CHECKLIST – COLLEX WASTE TRANSFER TERMINAL

GENERAL CATEGORY	REQUIREMENT	COMMENTS	COMPLIANCE *
ODOUR MANAGEMENT PLAN	1. Are the goals of the OMP well understood? Are there written site procedures?	<p>Procedures written from OMP are kept electronically. Hippo Station documentation control system (Collex Documentation Management System). When a document is added to Hippo Station a documentation control number is issued and is used for reference.</p> <p>A list of current documents was printed off and reviewed for relevancy. Documents thought to relate to Odour Management were printed for review.</p> <p>There are also a number of draft documents that form part of the operation documentation which are not on Hippo Station. An example is "Odour Containment Process – Memo dated 16/9/04". It is recommended that such documents be formalised and put on Hippo Station.</p>	M/N/C
	2. Are the responsibilities for the implementation of the OMP well understood? Is there a written record of training in Odour Management	<p>There is a draft Safe Work Method Statement named Odour Containment. It has been discussed with staff during a toolbox meeting on 7/12/04, there was an agenda and minutes issued but formal training records were not kept. The minutes were displayed on the noticeboard. Only a fraction of current staff has attended the toolbox discussion.</p> <p>It is noted that the Induction Review Checklist for Award Related Employees (Doc TRG-NSW-219-003-1) does not allow for any Environmental or Odour Management Procedures. Yet the training plan does allow for an "Environmental Induction" and a check of one staff file does confirm the existence of "Environmental Training" and "Environmental Quiz". The Environmental Quiz does not contain any specific references to odour. The Environmental Induction and quiz were carried out by an employment agency. It is suggested that specific training on the operational aspects of odour management occur and that this training be aligned with OMP requirements.</p> <p>A training matrix was reviewed. Informal training does occur on an ad hoc basis and Odour Management is one of the topics discussed. Training records are not maintained in a systematic fashion. It is recommended that training record keeping be improved.</p>	M/N/C

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ODOUR AUDIT CHECKLIST – COLLEX WASTE TRANSFER TERMINAL

GENERAL CATEGORY	REQUIREMENT	COMMENTS	COMPLIANCE *
ODOUR MANAGEMENT PLAN (CONT)	3. Are procedures and protocols aligned with OMP requirements?	Generally the procedures and protocols are aligned with the OMP requirements. There are some procedures that are in draft form and have not made the Hippo Station document register. It is also difficult to ascertain whether staff have been trained in these procedures. The SOP contained within the OMP has not embodied into a SOP for the site. It is apparent that the site is not being operated in strict accordance with the intent of the OMP.	N/C
	4. Do procedures for the management of waste at the premises aim to minimise the generation of odours?	Procedure PRO-NSW-219-015-2 is the reference document. This document does aim to minimise the generation of odour. "Odour Containment Process – Memo dated 16/9/04 also applies and was the general terms of the December 2004 "toolbox" talk. Training records may be updated more rigorously.	M/N/C
	5. Is there a protocol for the operation of the odour control mechanisms to minimise the risk of any adverse impacts?	Protocol PRO-NSW-219-014-2 is reference document and there is a daily checklist (FOR-NSW-219-007) which one operator fills out. The Site Manager keeps these records and copies were sighted.	C
	6. Are there procedures for the maintenance and repair of the forced air extraction and odour filtration system, including the replacement of filters and odour adsorption material?	Odour testing currently carried out on a monthly basis to check odour emissions. The intention was that carbon filters would be replaced on an as required basis following odour testing. However there have been some mechanical issues associated with the carbon adsorption system and this has been the basis for replacement. Dust filters are inspected daily. It suggested that the daily checklist (FOR-NSW-219-007) be improved to incorporate the step that <i>"if pressure readings cannot be reduced below a certain level, the action is to replace the relevant filter"</i>	O
	7. Is there a written record of training for personnel involved in items 4,5, 6 and 7?	Training record keeping is not carried out in a systematic fashion. It is suggested that this be improved.	N/C
	8. Has there been an emission monitoring program designed to determine the odour generation rates from the waste in the terminal building, to establish the capture and removal efficiency of the forced air system and to determine appropriate equipment maintenance schedules?	VIPAC has developed an emission monitoring program to determine the odour generation rates from the waste in the terminal building, to establish the capture and removal efficiency of the forced air system and to determine appropriate equipment maintenance schedules. The reference document is the OMP (VIPAC ref 746244_TRP_002867_03). The study is not yet completed, but preliminary results have been published in various documents (VIPAC refs 746244_TRP_003232_01, 746244_TRP_003223_00 and 746244_TRP_003329_00).	C
	9. Is there an operations contingency program that specifies actions in the event of equipment failure, industrial action or any other situation which prevents the containerisation of waste that has been in the building in excess of 18 hours?	There is a July 2004 waste management plan (Maunsell document). Section 4.3.5 contains the appropriate contingency plan. It is recommended that this document be placed on the Hippo Station documentation system. It may be necessary to update the document to reflect current operational practices.	M/N/C

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ODOUR AUDIT CHECKLIST – COLLEX WASTE TRANSFER TERMINAL

GENERAL CATEGORY	REQUIREMENT	COMMENTS	COMPLIANCE *
ODOUR MANAGEMENT PLAN (CONT)	10. Has there been a testing program designed to determine the appropriate maintenance schedules for replacement of odour adsorption material in the containers?	VIPAC has designed a testing program designed to determine the appropriate maintenance schedules for the replacement of odour adsorption material in the containers. The reference document is the OMP (VIPAC ref 746244_TRP_002867_03). The study is on going and an appropriate maintenance schedule has not yet been determined.	C
	11. Is there a procedure for the maintenance and repair of the odour adsorption and pressure relief vents (DG has removed pressure relief vent requirement) of waste containers?	A Container Maintenance procedure exists and document PRO-NSW-219-012-2 is the reference. Following publication of results of the study on replacement of odour adsorption material for the containers, it may be an idea to update this procedure. Access database controls the container filter replacement program and Woodlawn administers this database. The Site Manager is responsible for the replacement of the filters. The manifest from Woodlawn identifies physically damaged containers.	O
	12. Is there a community consultation program on odour? Are there meeting minutes? Has there been a community survey?	There is a community consultation committee which meets monthly. Odour is one of the topics discussed and results from odour testing are tabled by Collex. Minutes of meeting no 11 were viewed. There has been few complaints regarding odour and the committee has not discussed the need for a community odour survey.	C
	13. Is the forced air extraction and odour system able to operate in a proper and efficient manner under continuous duty?	Yes. There have been some problems with carbon adsorption filter banks that have failed mechanically. Also the amount of dust is higher than estimated at the design stage. As a result some of the dust filters are overloaded. Collex has undertaken short term operational changes to address this issue. Collex is studying various proposals to address these issues. This will need to be reviewed at a later audit.	O
	14. Is the forced extraction and odour filtration system able to efficiently contain odours and dust within the building and that before discharging through to atmosphere fine particles and odours are removed efficiently?	The forced extraction and odour filtration system was designed to efficiently contain odours and dust within the building. At present there have only been a small number of complaints. These complaints are from the closest industrial premises. Currently there is no consensus on where the odours come from within the Collex operations. It is recommended that continued dialogue be maintained between Manildra and Collex to determine the source of the odour complaints. Stack testing carried out to date indicates that odour and particulates are removed efficiently (VIPAC ref 746244_TRP_003232_01).	O

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ODOUR AUDIT CHECKLIST – COLLEX WASTE TRANSFER TERMINAL

GENERAL CATEGORY	REQUIREMENT	COMMENTS	COMPLIANCE *
ODOUR MANAGEMENT PLAN (CONT)	15. Is the forced air extraction and odour filtration operated whenever there is waste in the building? If not, produce records of non compliance, corrective actions and evidence of follow up.	There is a clear procedural requirement for Collex operators to operate the forced air extraction and odour filtration system whenever there is waste in the building. Eric Le Provost (Environmental Manager) is to be informed if fans are to be turned off at any time and he makes the decision. The requirement to turn off fans may be required for maintenance actions. It is suggested that if there is waste on the floor at the time that fans be turned off one at a time. A procedure outlining such requirements should be elaborated and uploaded on the Hippo Station document system	O
	16. Have results of any odour performance testing been made available to the Community Consultative Committee, the EPA, the Director General and be made publicly available within 8 weeks of such testing	Odour performance testing results have presented to the Committee Consultative Committee. Emailed to EPA and DG in early December 2004.	C
	17. Are all odour monitoring and management plans available to the public on request? Have there been any requests? If so, who?	Yes but there have not been any requests.	C
	18. Is any containerised waste exposed to the atmosphere at site, except via a pressure release mechanism (DG has removed pressure release requirement) and odour filtration system? If not, produce records of non compliance, corrective actions and evidence of follow up.	No	C
	19. Has the design of the pressure release mechanism (DG has removed this requirement) and odour filtration system on the waste containers been approved by the Director General?	Yes	C
	20. Is any containerised waste re-exposed to the atmosphere at site except via the pressure release mechanism and odour filtration system? If yes, produce records of non compliance, corrective actions and evidence of follow up.	No	C
	21. Do the design parameters for the discharge points meet the requirements of condition 84?	Yes – drawings 104070001-805 shows the exhaust height at least 14 m off the ground. Exhaust stack diameter is 700 mm	C

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ODOUR AUDIT CHECKLIST – COLLEX WASTE TRANSFER TERMINAL

GENERAL CATEGORY	REQUIREMENT	COMMENTS	COMPLIANCE *
ODOUR MANAGEMENT PLAN (CONT)	22. Have the measured discharges exceeded 1740 OU/m ³ in testing regime? If yes, produce records of non compliance, corrective actions and evidence of follow up.	Stack testing carried out to date indicates that odour and particulates are removed efficiently and that the measured discharges have remained below 1740 OU/m ³ (VIPAC ref 746244_TRP_003232_01).	C
	23. Have two odour impact assessments (ventilation system operating and ventilation system not operating) been submitted to the Director General and Auburn Council within 30 days of the completion of testing?	At this stage only one odour impact assessment has been carried out, for the ventilation system operating (VIPAC ref 746244_TRP_003329_00). Work is ongoing for the ventilation system not operating. Collex informed us that the VIPAC document was issued within 30 days of receiving the VIPAC report.	C
	24. Is there a meteorological station at site? Does it provide the required meteorological parameters as listed in condition 91?	Yes – this was confirmed by Eric Le Provost (Collex) and later checked by a physical inspection of the weather station	C
	25. Is there a Monitoring Data Management System? Does it contain the following information? Automatic weather data, odour emission rate data, estimate of wast surface area on tipping floor, upset conditions records, complaints register, weighbridge information and compactor information.	The information is available but it is not collated within a central Monitoring Data Management System. This item is under review. There is on going discussion with the requirements for the natural ventilation scenario.	N/C
	26. Is the Standard Operating Procedure (SOP) contained on page 11 of the OMP applied? Are operators aware of this SOP? Are there training records?	The SOP is not applied. There is some misunderstanding with what it actually means (ie. what does is the amount if waste > 25% mean). There is a need to review this SOP in light of current operations. By the same token, there may be a need to review operations in light of the requirements of the OMP. There are no training records associated with the SOP contained on page 11 of the OMP. It is recommended that the SOP be reviewed in light of operational constraints.	N/C
	27. What maintenance schedule is being used on the extraction system? Is there documentary evidence of maintenance occurring?	Yes there is a maintenance schedule for the extraction system. This is a daily activity and the Daily Terminal Building Filter Checklist (document FOR-NSW-219-007 is the reference).	C
	28. What replacement schedule is being used for the carbon filters on the extraction system? Is there documentary evidence of this?	The replacement schedule for the carbon filters on the extraction system is still under investigation. However there has been a change already made as mechanical failure was noticed on some of the carbon filters. Currently, there would be no changes in the filters unless Collex staff notice any mechanical failure of the carbon filters, in which case these are replaced on an as required basis. There was no register of the change out of carbon filters, it is recommended that a register be established and maintained on the Hippo Station system.	M/N/C

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GENERAL CATEGORY	REQUIREMENT	COMMENTS	COMPLIANCE *
ODOUR MANAGEMENT PLAN (CONT	29. What replacement schedule is being used for the carbon filters on the containers? Is there documentary evidence of this?	Collex uses an Access database and currently filters are being changed out every 6 weeks. This is currently under review, but the Access database was presented.	C

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ODOUR AUDIT CHECKLIST – COLLEX WASTE TRANSFER TERMINAL

REVIEW OF COMPLAINTS REGISTER Sept 04 to Nov 04	1. Is there a central location for the complaints register?	Yes - The Pollution Complaints Register is located in the Site Manager's office. It is noted that the "Pollution Complaints Form" is not contained within the Hippo Station system. The register is a hard copy folder and contains completed pollution Complaints Forms, however there is no overall register. It is highly suggested that a register of Pollution Complaints Forms be established.	M/N/C
	2. Who ensures that the complaints are registered and followed up?	The Site Manager. There is evidence that the Site Manager has registered all received complaints and that these have been followed up.	C
	3. Have there been any complaints?	Yes Six odour complaints were received between 5 th September 2004 (official plant opening) and 30 th November 2004. Typically complaints received some time after alleged offence took place. 5 complaints from Manildra Sugar and 1 from Wallaby Motor Homes. Collex confirmed that there have been no complaints that have originated from EPA. It is noted that the 17 th November complaint from Manildra Sugar contained a list of alleged complaint dates ranging from 1/9/04 to 16/11/04 with a total of 32 dates and times noted.	O
	4. What actions have been taken?	<p>Site Manager talks to the complainants and tries to resolve the issue. Collex Site Manager has discussed the issue of timely complaints with the Manildra. Collex staff determines what weather conditions existed at the time of the complaint but this information is not recorded in the complaints register.</p> <p>Other specific actions undertaken include:-</p> <ul style="list-style-type: none"> • Site Manager responds to complaints by walking around the site to try and determine possible causes. • Increased use of neutraliser around the compactor pit area. • Review of cleaning practices. • Use of neutralisers on stored containers. <p>It is noted that complaints are not given a complaint number. It is suggested that a numbering system be instigated and that this be recorded on the register of Pollution Complaints Forms.</p> <p>It is also recommended that weather conditions that were occurring at the time of the complaint and the plant conditions (waste on floor, number and location of full and empty) be added to the Pollution Complaints Form.</p>	M/N/C

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