

# **Risk Assessment Method for LAPC Stage 2 - Trial of the Risk Assessment Method**

## **Final Report**

For Department for Environment, Food and Rural  
Affairs in partnership with National Assembly for  
Wales and Department of Trade and Industry

Contract Reference: LAPC1

***RPA***

**April 2002**

## ***RISK ASSESSMENT METHOD FOR LAPC***

### ***STAGE 2 - TRIAL OF THE RISK ASSESSMENT METHOD***

Revised Final Report - April 2002

prepared for

Department for Environment, Food and Rural Affairs

by

Risk & Policy Analysts Limited,  
Farthing Green House, 1 Beccles Road, Loddon, Norfolk, NR14 6LT, UK  
Tel: 01508 528465 Fax: 01508 520758  
Email: [post@rpaltd.demon.co.uk](mailto:post@rpaltd.demon.co.uk)  
Web: [www.rpaltd.co.uk](http://www.rpaltd.co.uk)

<b>RPA REPORT - ASSURED QUALITY</b>	
Project: Ref/Title	J364/LAPC2
Approach:	In accordance with project specification, RPA tender and associated discussions
Report Status:	Final Report (revised)
Prepared by:	Dr Jan Vernon, Business Development Director Caspar Corden, Consultant
Approved for issue by:	Dr Jan Vernon, Business Development Director
Date:	14 April 2002

This report is printed on 100% recycled, chlorine-free paper



## EXECUTIVE SUMMARY

### 1. INTRODUCTION

In June 2000, Risk & Policy Analysts Ltd (RPA) was commissioned to carry out a study to develop a risk assessment method for use in connection with the local air pollution control regime (LAPC). The study was commissioned by the Department of the Environment, Transport and the Regions (now the Department for the Environment, Food and Rural Affairs, DEFRA) in partnership with the National Assembly for Wales and the Department of Trade and Industry (DTI). The background to the study was a wish to target regulatory effort more effectively and efficiently, and to provide a basis for an amended charging scheme.

Stage 1 of the study, completed in November 2000, involved evaluation of a range of risk assessment methods in use for environmental protection and in other fields. Four possible risk assessment methods for LAPC were developed. These varied in their complexity and the length of time and expert judgement required to apply them. They also varied in the relative importance given to the two key attributes of process risk; the inherent environmental impact of a process and the operator's performance in managing environmental pollution. The output of each of the methods was an assessment of the 'regulatory effort' required by each process<sup>1</sup>. Regulatory effort can be linked to the cost of regulation, in terms of inspector time, which in turn can be used to determine the level of charges payable.

Following consultation with industry, local authorities and central government, the costs and benefits of each of the methods were assessed. This assessment addressed their potential impacts on regulator and industry costs, their replicability, given the large number of different local authorities with regulatory responsibilities and the extent to which they provide an incentive for more efficient regulation and improved environmental performance. On the basis of this analysis, one of the methods was selected as most appropriate for use in the context of LAPC.

Stage 1 of the study concluded that a risk based method for LAPC would have benefits both for local authorities and for regulated businesses. The selected method was recommended for further evaluation of its use as a risk assessment method for LAPC, with the proviso that an improved method of ranking the inherent environmental risk of processes should be developed<sup>2</sup>. The Department formally consulted on the proposed risk assessment method from November 2000; responses were received from over 20 organisations, including trade associations representing LAPC process

---

<sup>1</sup> The term 'regulatory effort' refers to the time taken to regulate a process that is dependent upon the process characteristics. This includes both the time spent on inspections and time in the office preparing for inspections, writing reports and reviewing data supplied by process operators.

<sup>2</sup> Risk & Policy Analysts Ltd (2000): **Risk Assessment Method for Local Air Pollution Control: Final Report**, prepared for the Department of the Environment, Transport and the Regions in partnership with the National Assembly for Wales and the Department of Trade and Industry, October 2000 (available at <http://www.defra.gov.uk/environment/airquality/riskam/index.htm>).

operators. Respondents generally supported further evaluation of a risk based method and some made suggestions for issues that the pilot trial should address. These suggestions were taken into account in designing the pilot trial.

In response to the recommendations of the Stage 1 study and the responses to consultation, the Department convened an Advisory Panel on Risk Ranking (APRR), with the task of agreeing a ranking for process categories based on their inherent environmental impact potential. The panel consisted of six inspectors with experience in regulating a wide range of processes, drawn from different authorities to provide a balance of views and avoid any appearance of bias. The panel also involved the Department's local authority unit. Consultation on the APRR ranking was carried out with industry associations and other relevant parties during March 2001. Following receipt of comments, a final version of the ranking was agreed by the panel.

## **2. TRIAL OF THE RISK BASED METHOD**

The aim of Stage 2 of the study was to establish whether the method recommended in Stage 1, incorporating the revised risk rating developed by the APRR, provided a practical basis for work planning and eventual charging for LAPC. The trial also sought to establish the method's benefits and disadvantages in comparison with current practice. Work on Stage 2 of the study began in May 2001, with the selection of the 14 authorities to carry out the trial. Selection criteria were set to ensure that authorities within the trial were reasonably representative of the population of authorities within England and Wales. The criteria were:

- numbers of processes regulated under LAPC (to include authorities with both large and small numbers of processes within their responsibility);
- geographical spread (covering all main regions of England and Wales); and
- types of authority (including unitary authorities, district councils and at least one Port Health Authority).

The trial ran from July 2001 to the end of November 2001. At the commencement of the trial, each of the participating authorities was presented with an information pack outlining the purposes of the trial, the role of participants and containing a description of the method and various feedback forms. The trial protocol set out seven steps that participating authorities would be required to undertake:

1. Identify up to 50 processes, depending upon the number of processes regulated under LAPC, to which the risk based method can be applied. No more than 20% of these should be of the same process type.
2. Score each of the selected processes using the method, based on information held in the files together with officers' knowledge of the process.
3. Complete a scoring feedback form, which asks questions about the scoring process and its results.

4. Use the score sheet as a basis for discussion with operators during visits. Show the completed score sheet to the operator and discuss the scores with them, together with any action that could be taken to reduce their scores and risk category.
5. Ask each operator visited to complete a Process Operator feedback form, which asks questions about the Process Operator's views of the risk based method.
6. After each visit, complete a post-visit feedback form. This asks questions about use of the score sheet during the visit and about whether views on the results of the method have changed following the visit.
7. Provide general feedback at the end of the trial.

The trial protocol was designed to be self-explanatory, and no additional training was provided to participating authorities. However, a helpline was maintained throughout the trial to assist with any queries arising. All such queries and comments were logged. Each of the feedback forms also contained provision for inspectors or operators to add their general comments on the method and/or the trial in general. Trade Associations representing operators of LAPC processes were informed that the trial was taking place and of which authorities were participating in the trial. The operator feedback form encouraged operators to provide a copy of their completed form to their trade association. Trade Associations were encouraged to contact RPA with any views on the trial, and/or to co-ordinate the responses of their members.

In order to obtain general feedback from trial participants, and to examine ways in which the risk-based method could be improved, a feedback workshop was held in January 2002 to which the participating authorities, representatives of DEFRA, the DTI, the Environment Agency and the devolved administrations were invited.

### **3. RESULTS OF THE TRIAL**

Authorities participating in the trial applied the method to a total of 173 processes. During the trial, visits were made to 141 of these processes and 96 of the process-operators visited completed feedback forms. The 173 processes covered by the trial included a total of 39 different process types. The results of feedback from the trial are summarised in Tables 1,2 and 3. In addition, one authority that was not involved in the trial has independently implemented the risk assessment method in its region. The method was applied to all LAPC processes regulated by the authority, over 100.

The distribution of scores awarded during the trial was analysed. The Environmental Impact Appraisal (EIA) scores were distributed roughly evenly around the mid-range value. However, the distribution of the Operator Performance Appraisal (OPA) scores was skewed heavily towards the low end of the range, representing a high level of performance (a zero score reflects full compliance and no complaints or enforcement action). The range of scores was generally higher for the OPA components than for the EIA components. In total, 55% of processes fell into the 'low' regulatory effort category, 42% into the 'medium' category and only 3% into the 'high' category.

There were eight process types to which the risk assessment method was applied by five or more authorities. The EIA component of the score for a particular process type was fairly similar across authorities, whereas the OPA component was much more variable. Because of the small size of the sample for each process type, it is difficult to determine whether the variation in OPA scores reflected a lack of consistency in scoring or genuine variations in operator performance between authorities. However, no authority appeared consistently to award higher OPA scores than the others.

Question	Answers	Number	Percent
1. How long did it take to apply the risk-based method to the process?	15 minutes	120	70.6%
	< 15 minutes	22	12.9%
	>15 minutes	28	16.5%
2. Was all the information needed readily available	No	49	28.8%
	Yes	121	71.2%
3. Was the risk category in line with inspector's knowledge of the risks?	No	24	14.3%
	Yes	144	85.7%
4. How did the regulatory effort indicated by the risk category compare to that currently spent?	Less	23	13.7%
	More	32	19.0%
	Same	113	67.3%
<i>Numbers of responses do not always add up to the total, not all questions were answered in every case</i>			

Question	Answers	Number	Percent
1. Did the method form a useful basis for discussion with operator?	No	7	5.0%
	Yes	134	95.0%
2. Did the method omit any significant areas affecting regulation?	No	120	85.7%
	Yes	20	14.3%
3. Did the inspector wish to amend any scores following visit?	No	118	83.7%
	Yes	23	16.3%
4. Following the visit, was the risk category in line with inspector's knowledge of the risks?	No	22	16.1%
	Yes	115	83.9%
5. Following the visit, how did the suggested regulatory effort compare to that currently spent?	Less	22	15.7%
	More	33	23.6%
	The same	85	60.7%

<b>Question</b>	<b>Answers</b>	<b>Number</b>	<b>Percent</b>
1. Did the method form a useful basis for discussion with inspector?	No	5	5.2%
	Yes	91	94.8%
2. Does the risk category reflect the resources required to regulate the process?	No	12	12.5%
	Yes	84	87.5%
3. Could any actions be taken to allocate process to a lower category?	No	62	65.3%
	Yes	33	34.7%

#### **4. FEEDBACK FROM THE TRIAL**

The comments and queries received from participants and others during the trial were collated and formed an input to discussion at the post-trial Feedback Workshop. The comments received from participants (and the other local authority applying the method) fell into four main types:

- suggestions and questions on application of the method in general, including exclusion from the method of processes to which a lower charging rate currently applies because of their low risk;
- comments and queries on specific aspects of the regulatory impact assessment and operator performance assessment including addition or modification of components and adjustment to weighting;
- comments on the suitability of the scoring system and the categorisation of processes, including amendments to category boundaries; and
- views on how the method could be applied in practice, including the need for additional guidance on some aspects of the method.

These comments were discussed extensively at the workshop; the sensitivity of the method to proposed changes were assessed and appropriate amendments to the method were made.

Despite Trade Associations being informed about the trial and invited to comment, and operators encouraged to copy their feedback forms to their associations, only two comments were received from trade associations. One trade association, representing process operators, was concerned that the trial's coverage of heavily industrialised authorities was limited, as none of its members were located in authorities covered by the trial. The association believed this could make the trial unrepresentative. Our response to this comment is that, although this particular process sector was not included within the trial, similar processes were represented. It therefore seems unlikely that the chance exclusion of one process type will significantly bias the trial findings.

Another trade association, representing pollution control equipment manufacturers, was concerned that the risk-based method could lead to a dilution of regulatory effort, with processes ranked as low risk believing that regulatory compliance was no longer necessary. In response to these concerns, a meeting was held with the trade association to explain the objectives of the risk based method further. The trial results indicate that the method provides an incentive, rather than a disincentive for improved performance by operators. However, it was agreed that it would be helpful to include guidance in the method on the continued need for regular inspection of all processes.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

The main conclusions that can be drawn from the trial are that:

- in general, the trial provided an effective basis for testing the practicality of the method and suggesting improvements;
- the method is practical and simple to use and covers the key risk areas;
- the method has the potential to achieve benefits in terms of reduced burdens on regulators and industry, improved consistency, transparency and value for money and providing an incentive for improved performance; and
- the method is unlikely to have a disproportionate impact on small and medium enterprises.

The practicality of the method was demonstrated by the responses from inspectors and operators received during the trial and the subsequent discussions at the workshop. It requires little training to use, takes only a short period of time to apply and relies largely on information already available to the authorities. It also covers the key areas of risk posed by LAPC processes, providing a robust basis for evaluating overall risk.

The trial demonstrated that the method has the potential to achieve the benefits of a risk-based approach identified at the outset of the trial. These were:

- a reduced burden on local authorities, enabling more effective delivery of their obligations under the best value regime, without loss of environmental protection;
- reduced regulatory burden on business through targeting of resources to those which pose most of a risk (whilst retaining proper environmental regulation), without loss of environmental protection;
- an incentive for improved environmental performance;
- improved transparency and value for money for regulated businesses, since regulatory effort and fees would better reflect the risk to air pollution posed by individual processes or process categories; and
- improved consistency in regulation.

On the basis of these conclusions, a number of recommendations were made on how the risk-based method could be taken forward. Recommendations concerning suggested amendments to the method were to:

- exclude small waste oil burners and unloading of petrol at service stations from the risk assessment method (Scenario B);
- keep the score for Component 1 (inherent environmental impact) unchanged (changes to the score for this component comprised Scenario C, which has not been taken forward);
- increase the maximum score of Component 5 (compliance assessment) from 40 to 50 (Scenario F);
- add an additional element, breach of authorisation not leading to formal action, to Component 5 (Scenario F);
- keep the score for failure to monitor in line with the authorisation (part of Component 6 on maintenance, monitoring and records) unchanged;
- modify the score for management systems to subtract five points for presence of a system rather than adding five points for its absence (Scenario E); and
- modify the score boundaries between regulatory effort categories so that processes scoring below 40 points are classified as low risk and those above 80 points as high risk (Scenario D).

These changes have been incorporated into the final version of the method. Table 4 summarises the implications of each of those possible changes, and combinations of changes, for the distribution of the trial processes between the regulatory effort categories. The combination of Scenarios B,D,E and F represents the final version of the method. Scenario C, changes to the score for Component 1, was rejected and is therefore not included in the table below.

<b>Table 4: Distribution of Categories Following Suggested Changes to the Method</b>			
<b>Scenarios</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
A	55%	43%	3%
B	49%	47%	3%
D	34%	55%	11%
B and D	31%	56%	13%
B and E	56%	37%	7%
B ,D and E,	42%	47%	10%
B, D, E and F	41%	48%	11%

*Scenario A: the original method; Scenario B excludes processes with PG Notes PG1/1 and PG1/14; Scenario D: revised boundaries risk categories (<40, 40-80 and >80 points for high, medium and low respectively); Scenario E: -5 awarded where an appropriate management system is present (rather than +5 if not present); Scenario F: maximum score for Compliance Assessment increased to 50 points (instead of 40) and an element for “breach of authorisation not leading to formal action” added (estimated assuming that this change will move 2% of processes from low to medium category and 1% from medium to high).*

Our recommendations on application of the method in practice are that:

- the method should be rolled out to all local authorities responsible for LAPC to provide a basis for planning of regulation;
- scores should be reviewed on a regular basis and discussed with process operators;

- DEFRA should review the distribution of risk categories amongst local authorities to identify any apparent inconsistencies and to check the appropriateness of boundaries;
- local authorities should investigate opportunities for co-operation in application of the method;
- consideration is given to maintaining a minimum inspection frequency regardless of risk category; and
- DEFRA should modify its methods for measuring the performance of local authorities to take account of the method.

Our recommendations on linking the method to charging are that:

- the method should be linked to charging by increasing or reducing the current subsistence charge for high and low risk processes respectively. The extent of reduction or increase will need to be evaluated, based on practical experience with the method; and
- application of the method should not be delayed until legislation linking it to charging can be adopted; the interim period should be used to monitor the impacts and provide a sound basis for a future charging regime.

We also recommend that DEFRA examines the options for a more sophisticated performance measurement system, based on the method, than the current measure of numbers of visits per process per year. Measurement options include:

- whether the method has been applied to all relevant processes regulated by the authority;
- whether rankings have been reviewed at least annually;
- whether scores have been discussed with process operators; and
- how many visits have been made to low, medium and high ranked processes.

## TABLE OF CONTENTS

	<u>Page</u>
<b>1. INTRODUCTION</b>	
1.1 Background	1
1.2 Outputs of Stage 1	1
1.3 Objectives of Stage 2	4
<b>2. TRIAL OF THE RISK-BASED METHOD</b>	
2.1 Selection of Participating Authorities	5
2.2 Operation of the Trial	5
2.3 The Feedback Workshop	7
<b>3. ANALYSIS OF INITIAL TRIAL RESULTS</b>	
3.1 Overview	9
3.2 Feedback on the Method	10
3.3 Scores Awarded	16
3.4 Overview of Results from an Additional Authority	21
<b>4. FEEDBACK ON THE RISK-BASED METHOD</b>	
4.1 Comments and Queries Received During the Trial	25
4.2 Discussion During the Workshop	30
4.3 Implications of Suggested Changes to Scores and Category Boundaries	32
<b>5. CONCLUSIONS AND RECOMMENDATIONS</b>	
5.1 Conclusions	37
5.2 Recommendations	42
<b>ANNEX 1: PROPOSED RISK ASSESSMENT METHOD</b>	
<b>ANNEX 2: MATERIALS PROVIDED TO PARTICIPANTS</b>	
<b>ANNEX 3: PROCESS TYPES INCLUDED IN THE TRIAL</b>	
<b>ANNEX 4: COPY OF CONTRACT SPECIFICATION</b>	
<b>ANNEX 5: THE ADVISORY PANEL ON RISK RANKING</b>	
<b>ANNEX 6: PROPOSED GUIDANCE ON ‘APPROPRIATE MANAGEMENT SYSTEMS’</b>	



## **GLOSSARY OF ACRONYMS**

APRR	Advisory Panel on Risk Ranking
AQMA	Air Quality Management Area
BACT	Best Available Control Technology (US)
BAT	Best Available Techniques
BATNEEC	Best Available Techniques Not Entailing Excessive Cost
BPEO	Best Practicable Environmental Option
CIEH	Chartered Institute of Environmental Health
COMAH	Control of Major Accident Hazards
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions (now DEFRA)
DTI	Department of Trade and Industry
EHO	Environmental Health Officer
EIA	Environmental Impact Appraisal
ELV	Emission Limit Value
EMAS	Eco Management and Audit Scheme
EMS	Environmental Management System
EPA	Environmental Protection Agency
EU	European Union
FTE	Full Time Equivalent
H&S	Health and Safety
HSE	Health and Safety Executive
IMPEL	European Union Network for the Implementation and Enforcement of Environmental Law
IPC	Integrated Pollution Control
IPPC	Integrated Pollution Prevention and Control
LAPC	Local Air Pollution Control
LGA	Local Government Association
MBC	Metropolitan Borough Council
OPA	Operator Performance Appraisal
OPRA	Operator and Pollution Risk Appraisal
PGN	Process Guidance Note
PHA	Pollution Hazard Appraisal
RPA	Risk & Policy Analysts Ltd.
SEIPH	South East Institute for Public Health (now Environmental Research Group)
SEPA	Scottish Environment Protection Agency
SMEs	Small and Medium Sized Enterprises
SSSI	Site of Special Scientific Interest
WID	Waste Incineration Directive



## **1. INTRODUCTION**

### **1.1 Background**

In June 2000, Risk & Policy Analysts Ltd (RPA) was commissioned by the Department of the Environment, Transport and the Regions (now the Department for Environment, Food and Rural Affairs, DEFRA) in partnership with the National Assembly for Wales and the Department of Trade and Industry (DTI) to carry out a study to develop a risk assessment method for use in connection with the local air pollution control regime (LAPC). The background to the study was a wish to target regulatory effort more effectively and efficiently and to provide a basis for an amended charging scheme. The potential advantages of such a risk-based scheme include:

- a reduced burden on local authorities, enabling more effective delivery of their obligations under the best value regime, without loss of environmental protection;
- reduced regulatory burden on business through targeting of resources to those which pose most risk, whilst retaining proper environmental regulation;
- an incentive for improved environmental performance;
- improved transparency and value for money for regulated businesses, since regulatory effort and fees would better reflect the risk to air pollution posed by individual processes or process types; and
- improved consistency in regulation.

### **1.2 Outputs of Stage 1**

Stage 1 of the study, completed in November 2000, involved evaluation of a range of risk assessment methods in use for environmental protection and in other fields. Criteria that could be used for LAPC processes were then considered, taking into account the many variables in the LAPC system and differences between LAPC and other fields.

Four possible risk assessment methods were developed, which varied in their complexity and the length of time and expert judgement required to undertake the assessment. They also varied in the relative importance given to the two key attributes of process risk; the inherent environmental impact of a process and the operator's performance in managing environmental pollution. The output of each of the methods was an assessment of the 'regulatory effort' required by each process. The term 'regulatory effort' refers to the time taken to regulate a process that is dependent upon the process characteristics. This includes both the time spent on inspections and time in the office preparing for

inspections, writing reports and reviewing data supplied by process operators<sup>1</sup>. Regulatory effort can be linked to the cost of regulation, in terms of inspector time, which in turn can be used to determine the level of charges payable.

A seminar attended by representatives of industry, local authorities and central government was held to discuss the potential application of these methods and to consider which might prove the most suitable. The costs and benefits of each methods were assessed in terms of their potential impacts on regulator and industry costs, their replicability, given the large number of the different local authorities with regulatory responsibilities and the extent to which they provide an incentive for more efficient regulation and improved environmental performance. On the basis of this analysis, one of the methods was selected as most appropriate for use in the context of LAPC.

Stage 1 of the study therefore concluded that a risk based method for LAPC would have benefits for both local authorities and regulated businesses. The selected method was recommended for further evaluation of its use as a risk assessment method for LAPC, with the proviso that an improved method of ranking the inherent environmental risk of processes should be developed<sup>2</sup>. The Department formally consulted on the proposed risk assessment method from November 2000; responses were received from over 20 organisations, including trade associations representing LAPC process operators. The main comments included within the responses are summarised in Table 1.1 (some respondents made no comments).

Respondents generally supported further evaluation of a risk based method and some made suggestions for issues that the pilot trial should address. These suggestions were taken into account in designing the pilot trial. Where a preference for a particular method was stated, Method 3 was generally the one preferred. Detailed comments on the methods varied; the most common comment was the need for further refinement of the inherent risk rating of processes and for the scale of processes to be taken into account in this rating. This issue was addressed by the setting up of an expert panel, described below. Otherwise, the main recommendations from the consultation concerned the need for additional guidance on use of the method to help ensure consistency in its application. This was taken into account in development of the trial protocol, described in Section 2 of this report. Other, more general comments for the consultation were addressed, together with comments received during the trial, at the post-trial workshop described in Section 4 of this report.

---

<sup>1</sup> The Stage 1 report assumed that high risk processes would require 50% more time to regulate than medium risk processes and low risk processes 50% less time to regulate. Ranges for the time required for regulation of a process were identified from previous work for DEFRA by KPMG on time spent on LAPC regulation and from the Local Government Association's estimates of the time required for effective regulation.

<sup>2</sup> Risk & Policy Analysts Ltd (2000): **Risk Assessment Method for Local Air Pollution Control: Final Report**, prepared for the Department of the Environment, Transport and the Regions in partnership with the National Assembly for Wales and the Department of Trade and Industry, October 2000 (available at <http://www.defra.gov.uk/environment/airquality/riskam/index.htm>).

<b>Table 1.1: Summary of Responses to Consultation on Stage 1 Report</b>			
Type of Organisation	Support Risk Based Approach ?	Suggestions for Modification	Comments
Local Authority	Yes		Final model should take account of large number of processes; suitable guidance should be provided for its introduction
Trade Association	Yes (with caveat)	Take account of evidence of reducing VOC usage	Reliance on imprecise baseline flawed. Need mechanism to ensure uniformity across LAs
NGO			Interesting and informative report
Trade Association	No – will lead to increased costs	Flat rate charge system preferable, with discounts for accredited EMS	Unhappy that risk-based methods involve an element of ‘rough justice’; concerned about baseline risk rating; more account should be taken of EMS
Trade Association	Yes (Method 3)		Coatings manufacture and coatings use should not be awarded the same risk rating
Local Authority	Yes (with comments)		Concerns regarding transparency, regulatory burden and consistency of regulation
Environment Regulator	Yes (Method 3)	Scale of impact should be taken into account	Trial needs to address consistency, ability of process operators to take action to reduce overall ranking, regulatory effort and training needs to implement the method
Local Authority	Yes (Method 4)		Suggests minimum inspection frequency is maintained. Greater clarification needed on compliance assessment
Environment Regulator	Yes (Method 3)		Experience shows the benefits of a risk-based approach. Essential to include a range of LAs in the pilot trial
Local Authority	Yes		Trial should not be limited to authorities carrying out cost accounting
Local Authority	Yes (Method 3)	Need for flexibility on management systems; they are problematic for SMEs	Need for extensive field-testing before charging is linked to the method. Compliance assessment scores will be affected by LA’s enforcement policy. Needs revised risk rating. Guidance needed on minimum inspection frequency
Local Authority	Yes		Time taken to complete Method 3 could exceed 15 minutes. Guidance needed on minimum inspection frequency
Trade Association	Yes (Method 3)		Happy that report recognises that EMS are not always relevant to SMEs. Method 3 could lead to inconsistencies – guidance should be given. Need for expert panel on risk rating
Trade Association			Comments regarding risk rating of its members’ processes. Concern that companies will be penalised when residential areas are developed adjacent to existing sites
Local Authority	Yes	Should take account of process scale	Should not award points for upgrading before PGN deadline or for exceeding BATNEEC. Concerns over risk rating. Need for more guidance on using the method
Local Authority	Yes (Method 3)		Conclusions sound on all four methods. Questions time required to complete Method 3

In response to the recommendations of the Stage 1 study and the responses to consultation, the Department convened an Advisory Panel on Risk Ranking (APRR), with the task of agreeing a ranking for processes based on their inherent environmental impact potential. The panel consisted of six inspectors with experience in regulating a wide range of processes, drawn from different authorities to provide a balance of views and avoid any appearance of bias. The panel also involved the Department's local authority unit. Consultation on the APRR ranking was carried out with industry associations and other relevant parties during March 2001. Following receipt of comments, a final version of the ranking was agreed by the panel. The work of the APRR is described further in Annex 5 to this report.

### **1.3 Objectives of Stage 2**

Following finalisation of the APRR ranking, and having taken account of the responses to consultation on the Stage 1 report, Stage 2 of the study commenced. The objective of Stage 2 was to carry out full testing of the method on a larger number of processes than had been possible during Stage 1 of the study. The aim of Stage 2 was to establish whether the method recommended by Stage 1, incorporating the revised risk rating developed by the APRR, provides a practical basis for work planning and eventual charging for LAPC, to establish its benefits and disadvantages in comparison with current practice and in addition to determine:

- whether the allocation of scores between high, medium and low risk categories is appropriate;
- what intervals are appropriate for revision of risk assessments;
- the costs and benefits of the method across a range of authorities with different characteristics; and
- the applicability of the method across different process types.

The approach adopted for the trial is discussed in Section 2 of this report, whilst the trial findings are outlined in Section 3. Section 4 describes feedback received during the trial from participants and other interested parties and analyses the implications of suggested changes to the method. Section 5 presents conclusions and recommendations on the application of the risk assessment method in practice.

## **2. TRIAL OF THE RISK BASED METHOD**

### **2.1 Selection of Participating Authorities**

Work on Stage 2 of the study, comprising practical evaluation of the selected risk assessment method, began in May 2001, with selection of the 14 authorities to carry out the trial. Within the resources available for the trial, it was decided that 14 authorities would give a sufficiently broad indication of the method's applicability.

Selection criteria were set to ensure that authorities within the trial were reasonably representative of the population of authorities within England and Wales. The criteria were:

- numbers of processes regulated under LAPC (to include authorities with both large and small numbers of processes within their responsibility);
- geographical spread (covering all main regions of England and Wales); and
- types of authority (including unitary authorities, district councils and at least one Port Health Authority).

Using these criteria, three lists of 14 authorities were randomly selected on a stratified basis by the Department's statistical division from its database of authorities. These comprised a main list and two reserve lists. Each of the authorities on the main list was then contacted by letter from the Department (addressed to the Head of Pollution Control) and asked whether they wished to participate in the trial. The letters were followed up by telephone calls by RPA. If the selected authority did not wish to participate, an authority from the reserve list with the same characteristics was contacted and asked to join the trial. If the second authority declined, an authority from the second reserve list with the same characteristics could be contacted. In the event, it proved unnecessary to contact any authorities from the second reserve list and 14 authorities were recruited to the trial from the main list and first reserve list.

### **2.2 Operation of the Trial**

The trial ran from July 2001 to the end of November 2001. At the commencement of the trial, each of the participating authorities was presented with an information pack outlining the purposes of the trial, the role of participants and containing description of the method and various feedback forms. This information pack is reproduced in Annex 2 to this report. The pack comprised:

- the trial protocol, setting out the background to the trial and the tasks that trial participants would be required to undertake;
- a description of the method;
- a score sheet;

- a scoring feedback form;
- a post visit feedback form; and
- an operator feedback form.

The trial protocol set out seven steps that participating authorities would be required to undertake. These are summarised in Table 2.1.

<b>Table 2.1: Steps for Participating Authorities to Undertake During the Trial</b>
1. Identify up to 50 processes, depending upon the number of processes regulated under LAPC, to which the risk based method can be applied. No more than 20% of these should be of the same process type.
2. Score each of the selected processes using the method, based on information held in your files together with officers' knowledge of the process.
3. Complete a scoring feedback form, which asks questions about the scoring process and its results.
4. Use the score sheet as a basis for discussion with operators during visits. Show the completed score sheet to the operator and discuss the scores with them, together with any action that could be taken to reduce their scores and risk category.
5. Ask each operator visited to complete a Process Operator feedback form, which asks questions about the Process Operator's views of the risk based method.
6. After each visit, complete a post-visit feedback form. This asks questions about use of the score sheet during the visit and about whether your views on the results of the method have changed following the visit.
7. Provide general feedback at the end of the trial

The trial protocol was designed to be self-explanatory, and no additional training was provided to participating authorities. However, a helpline was maintained throughout the trial to assist with any queries arising. All such queries and comments were logged. Each of the feedback forms also contained provision for inspectors or operators to add their general comments on the method and/or the trial in general.

During operation of the helpline, there were 27 occasions where issues required clarification. In around two thirds of these, authorities required clarification on the application of the method. The other third were queries from RPA on the way in which the scoring had been interpreted and undertaken. The most common query concerned how an 'appropriate management system' should be defined, other queries are outlined in Section 4. These queries were received by a combination of telephone, e-mail and fax and were generally responded to on the day of query. The queries raised indicated several areas where additional guidance or refinement may be needed; these are addressed in Sections 4 and 5.

Trade Associations representing operators of LAPC processes were informed that the trial was taking place and of which authorities were participating in the trial. The operator feedback form encouraged operators to provide a copy of their completed form to their trade association. Trade Associations were encouraged to contact RPA with any views on the trial, and/or to co-ordinate the responses of their members.

## 2.3 The Feedback Workshop

In order to obtain general feedback from trial participants, and to examine ways in which the risk-based method could be improved, a feedback workshop was held in January 2002. All participating authorities were invited to the workshop, together with representatives of DEFRA, the DTI, the Environment Agency and the devolved administrations. Prior to the workshop, invitees were provided with a preliminary analysis of the results of the trial, together with a list of questions to consider. These questions are reproduced in Table 2.2.

The workshop included discussion of the general merits and disadvantages of the method, the details of the approach to environmental impact appraisal (EIA) and operator performance appraisal (OPA), the suitability of the scores and relative weights and the risk categories and the use of the method in practice. The conclusions of the workshop, together with other feedback received during the trial, and the implications for use of the risk-based method in practice are discussed in Section 4 of the report.

Some participating local authorities were unable to attend the workshop. These authorities were provided with the presentation material from the workshop and lists of discussion topics, and asked to provide any additional feedback they might have by telephone or in writing.

<b>Table 2.2: Questions for Consideration at the Post-Trial Workshop</b>
<p><b>General Value of the Method</b></p> <ul style="list-style-type: none"><li>• What were the main advantages and drawbacks of the method?</li><li>• Does it provide the basis for more effective management of LAPC regulation within your authority?</li><li>• Would the method provide a basis for charging that is acceptable to operators?</li></ul>
<p><b>Adequacy of Guidance</b></p> <ul style="list-style-type: none"><li>• Did the method description provide sufficient information to apply the method effectively?</li><li>• Was the basis of the method readily understandable by Inspectors?</li><li>• Were there particular aspects of the method where more guidance would have been helpful?</li><li>• Would more training have enabled you to use the method more effectively?</li></ul>
<p><b>Wider Application of the Method</b></p> <ul style="list-style-type: none"><li>• How frequently, and on what basis, should process scores be reviewed?</li><li>• Should operators be able to request a review of their scores? If so, what would the resource implications of this be?</li><li>• How can consistency of scoring between authorities best be ensured?</li><li>• What are the overall implications of the risk-based method for local authority resources and prioritisation, including the need to monitor regulatory effort against risk category?</li></ul>



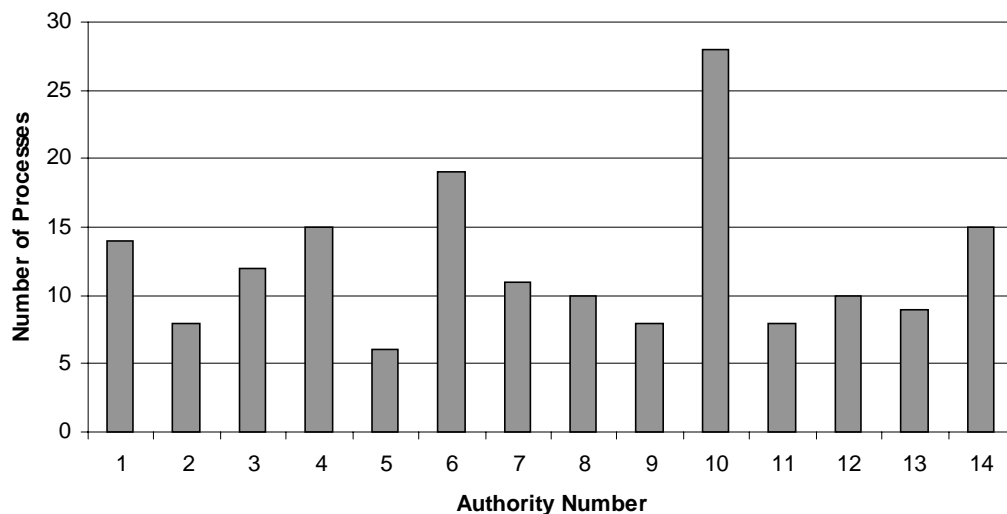
### 3. ANALYSIS OF INITIAL TRIAL RESULTS

#### 3.1 Overview

Authorities participating in the trial applied the method to a total of 173 processes. During the trial, visits were made to 141 of these processes and 96 of the process-operators visited completed feedback forms. Table 3.1 summarises the number of processes to which the method was applied and the number of feedback forms received from authorities and from process operators.

Number of processes included in the trial	173
Score sheets returned	183 *
Scoring feedback forms returned	170
Post-visit feedback forms returned	141
Operator feedback forms returned	96
* Includes forms for 10 processes where scores were amended following the inspector’s visit	

The 173 processes covered by the trial included a total of 39 different process types. Annex 3 provides a list of the types of processes assessed by each of the authorities. The total number of processes included by each of the authorities is detailed in Figure 3.1.



**Figure 3.1: Numbers of Processes Included by Each Authority (total 173)**

The following sections provide an overview of the feedback received from authorities following desk-based scoring and visits to processes (at which the method was discussed), and feedback from process operators on the risk based method. The overall

distribution of scores and associated regulatory effort categories is then analysed and the scores awarded across the authorities are compared. Finally, a brief overview of results from another authority that has implemented the risk assessment method (outside the trial) is provided. The implications of the feedback received for the method, together with comments made during the trial and at the post-trial workshop, are discussed in Section 4 of this report.

## 3.2 Feedback on the Method

### 3.2.1 Feedback on Scoring from Local Authority Inspectors

Table 3.2 presents an overview of the results from the inspectors on the scoring process (a copy of the feedback form for scoring is provided in Annex 2).

Question	Answers	Number	Percent
1. How long did it take to apply the risk-based method to the process?	About 15 minutes	120	70.6%
	Below 15 minutes	22	12.9%
	Over 15 minutes	28	16.5%
2. Was all the information needed readily available	No	49	28.8%
	Yes	121	71.2%
3. Was the risk category in line with inspector's knowledge of the risks?	No	24	14.3%
	Yes	144	85.7%
4. How did the regulatory effort indicated by the risk category compare to that currently spent?	Less	23	13.7%
	More	32	19.0%
	Same	113	67.3%

*Note: Numbers of responses do not always add up to the total, since responses were not received for certain questions in a few cases.*

In addition:

- for question 1, there was no apparent link between the amount of time taken to complete the risk assessment method and either the overall score awarded or the environmental impact score for the process;
- in relation to question 2, the main types of information that were not readily available concerned parts 5 and 7 of the method (procedures and systems in place on site); and
- in relation to question 3, around two thirds of inspectors who thought the method placed the process in the wrong category ( 15 inspectors) thought the method placed the process in a higher risk category than their knowledge of the risks indicated.

For question 4, local authorities were asked to compare the current time spent regulating each process with the regulatory effort expected to be required for high, medium and low-ranked processes. Ranges for regulatory effort, in terms of hours per process per year, were derived during the Stage 1 study. They were based on the assumption that high risk processes would require 50% more time than medium risk processes to regulate whilst low risk processes would require 50% less. Because of the limited development of cost accounting for LAPC amongst local authorities, there is little reliable data on current time inputs for regulation. A 1999 KPMG survey for DEFRA suggested that, on average, there were 83 authorised LAPC processes per full-time equivalent (FTE) EHO. On the assumption of an average of 1500 hours per FTE per year, this gives an annual time-input per process of 18 hours. By contrast, the Local Government Association (LGA) estimated that a level of 50 processes per FTE was required for effective regulation, equivalent to 30 hours per process per year. On this basis, the suggested ranges for regulatory effort for high, medium and low risk processes were:

- low: 9-15 hours per year;
- medium: 18-30 hours per year; and
- high: 27-45 hours per year.

It should be noted, however, that these figures may underestimate the total level of regulatory effort required, since it is uncertain whether all 'indirect' inputs to regulatory effort were taken into account. Other elements of regulatory effort, such as administrative support, should also be taken into account in developing future levels of fees and charges.

Most of the cases where the regulatory effort currently spent was more than that indicated by the risk category concerned 'problem' processes (those with complaints or non-compliance<sup>3</sup>) with some others related to recent changes in the authorisation. These cases included all five processes in the 'high' regulatory effort category; only 22% of the cases involved processes in the 'low' category, whereas the 'low' category accounted for 55% of processes overall.

Where the regulatory effort currently spent was less than that indicated by the risk category, one third of processes were categorised as 'low' and the remaining two thirds as 'medium'. In several cases, the processes in question were small ones ;around half were small waste oil burners, petrol stations or road vehicle re-sprayers. A large proportion of processes where the suggested regulatory effort was higher than current effort (13 out of 32) were within a single authority<sup>4</sup>. This may indicate that the authority is particularly efficient in regulation or that inadequate resources are being devoted to the regulation of LAPC processes.

---

<sup>3</sup> The average score for component 6 (Compliance Assessment) for these processes was 16 out of 40, compared to the overall average of 3.4 out of 40.

<sup>4</sup> Authority 10, which has a large number of processes.

### 3.2.2 Feedback on Method Following Site Visits by Inspectors

Feedback from inspectors following site visits was obtained through the post-visit feedback forms (Annex 2). Table 3.3 summarises the main results of this feedback.

Question	Answers	Number	Percent
1. Did the method form a useful basis for discussion with operator?	No	7	5.0%
	Yes	134	95.0%
2. Did the method omit any significant areas affecting regulation?	No	120	85.7%
	Yes	20	14.3%
3. Did the inspector wish to amend any scores following visit?	No	118	83.7%
	Yes	23	16.3%
4. Following the visit, was the risk category in line with inspector's knowledge of the risks?	No	22	16.1%
	Yes	115	83.9%
5. Following the visit, how did the regulatory effort indicated by the risk category compare to that currently spent?	Less	22	15.7%
	More	33	23.6%
	The same	85	60.7%

A total of 141 post-visit feedback forms were received:

- there were seven instances where the inspector did not consider that the method formed a useful basis for discussion with the operator. Reasons given for this were :
  - (i) the company was an established, well run business where the inspector spent the majority of his time checking documentation;
  - (ii) the method was found to be useful as an 'aide-memoire' only;
  - (iii) the method led to little discussion because the company in question was happy with its systems;
  - (iv) the operator thought that the absence of complaints negated the need for anything less than low regulatory effort<sup>5</sup>; and
  - (v) the method was not seen as relevant by the operator.
- of the 20 instances where the risk assessment method was thought to omit significant areas affecting regulation, six related to the size of the process (e.g. amounts of substances stored/used); in a further five, the area omitted was the presence of other

---

<sup>5</sup> It should be noted that LAPC regulation is intended to minimise air emissions, which may not cause a local nuisance and may not have any potential impacts locally. Complaints should not, therefore, be seen as the sole indicator of risk and their absence should not be seen as an indicator that less regulatory effort is required. DEFRA has now issued Guidance to local authorities on this subject as AQ1(02).

processes on site that require regulation<sup>6</sup>; and the others related to a range of factors including the timing of upgrading, informal enforcement action and confidence in the operator;

- whilst where inspectors indicated that they wished to amend the scores following the visit in 23 instances, revised score sheets were only received for 10 processes. Of these process, the score was increased in six cases and reduced in four. In seven of the ten, the risk category also changed;
- for question 4, views on the appropriateness of the risk category changed in three instances following the visit, as compared to views before the visit (question 3 of the scoring feedback), although the total number of processes where inspectors disagreed with the category changed by only two; and
- similarly, in relation to question 5, of the 22 processes where the inspector thought the suggested regulatory effort was less than that currently spent, 21 were the same processes as those falling under this category in question 4 of the scoring feedback. Likewise, 28 of the 33 processes for which ‘more’ regulatory effort was indicated were the same as those indicated as requiring ‘more’ regulatory effort in the scoring feedback.

### 3.2.3 Feedback from Process Operators

Overall results of feedback from operators are presented in Table 3.4.

<b>Question</b>	<b>Answers</b>	<b>Number</b>	<b>Percent</b>
1. Did the method form a useful basis for discussion with inspector?	No	5	5.2%
	Yes	91	94.8%
2. Does the risk category reflect the resources required to regulate the process?	No	12	12.5%
	Yes	84	87.5%
3. Could any actions be taken to allocate process to a lower category?	No	62	65.3%
	Yes	33	34.7%

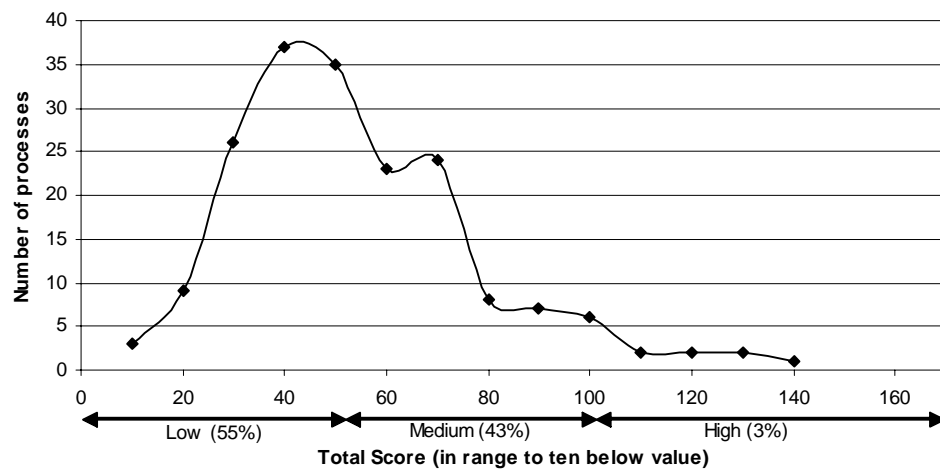
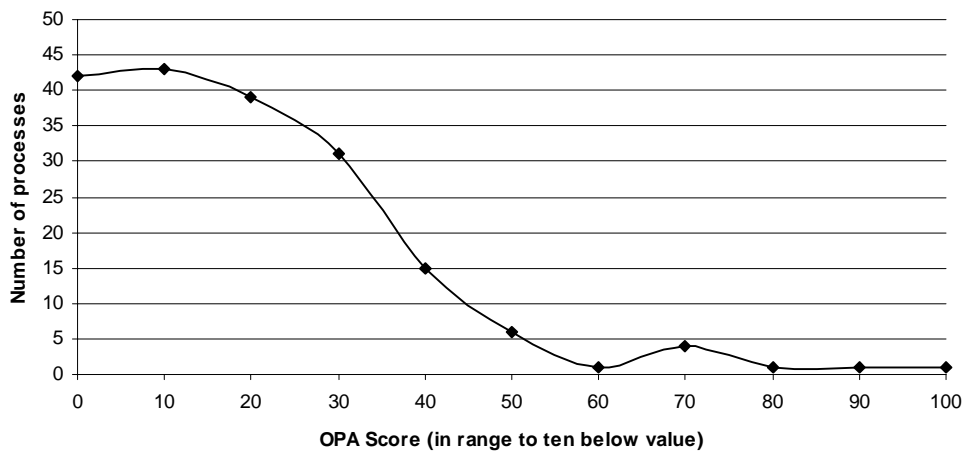
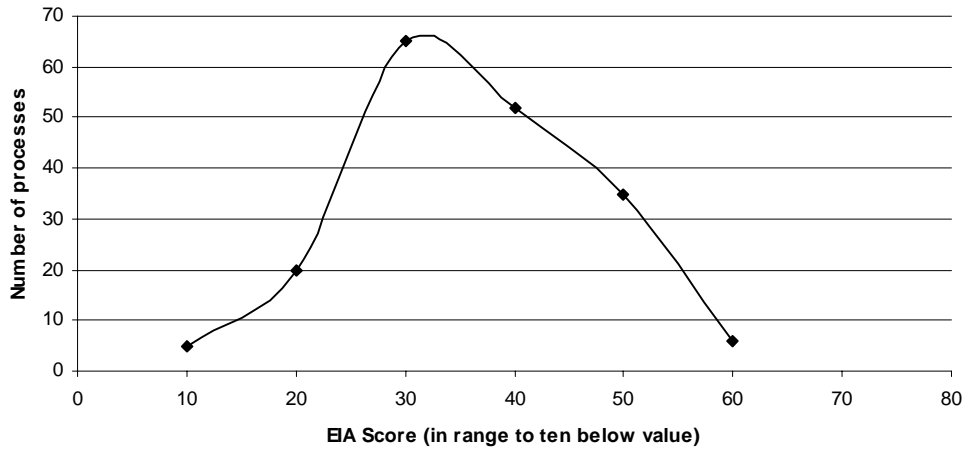
A total of 96 of the process operators who were visited as part of the trial provided feedback, 68% of the total visited:

- of the five operators who indicated that the method did not form a useful basis for discussion with the inspector, only one provided a reason (that their process was too simple). However, many of the operators provided reasons why they thought the

<sup>6</sup> Some authorities gave a single score to multi-process sites, whereas others scored each process individually. Further consideration of this is given in Section 5, including translating the outputs into regulatory effort.

method was a useful basis for discussion; mainly that the method gave the operator a more structured understanding of what is required by the regulator and also indicated areas where action could be taken to improve the environmental performance of the process;

- 12 operators thought that the risk category did not reflect the resources required to regulate their process (almost exclusively thinking that the risk category should be lower). The main reasons given were:
  - that they believed unjustified or historical complaints had unfairly increased their risk category; and
  - they believed some of the aspects of the method were not applicable to their process (in particular Component 7, management training and responsibility);
  
- 33 operators believed that they could take actions to reduce their risk category. Of these, around two thirds indicated that actions would comprise changes to management practices, such as record keeping or training. The remaining third indicated that introduction of new technologies (e.g. abatement equipment) could reduce their risk category. The costs for the former were generally estimated as a few hundred pounds, with improved emissions control technologies costing from around £1,000 up to £100,000. Some of the control technology improvements may involve technologies where the costs are deemed excessive. These technologies are not, therefore, required to be implemented to meet the general requirements of the authorisation. In some cases, however, use of the risk based method may have identified areas where the operator could implement improvements that the inspector decides would not entail excessive cost.



Figures 3.2a, b and c: Distribution of Scores (EIA, OPA, Total)

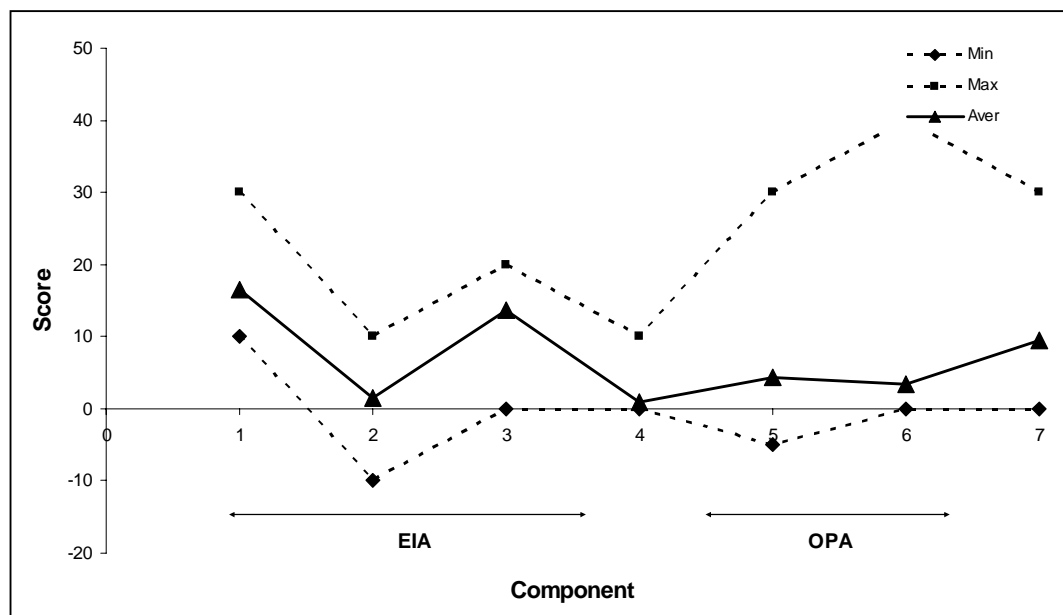
### 3.3 Scores Awarded

#### 3.3.1 Overall Distribution of Scores

Figures 3.2a, b and c present the distribution of scores under the EIA and OPA components of the risk assessment method. The EIA scores are distributed roughly evenly around the mid-range value. However, the distribution of the OPA scores is skewed heavily towards the low end of the range, representing a high level of performance (a zero score reflects full compliance and no complaints or enforcement action). As operators have greater scope to influence OPA than EIA scores, this raises the question of whether the current scoring system provides sufficient incentive for improved performance by operators. This issue is considered further in Section 4 of this report.

Figure 3.2c shows that 55% of processes fell into the 'low' regulatory effort category, 42% into the 'medium' category and only 3% into the 'high' category. This distribution of scores raises an issue as to the effect of applying the risk assessment method on the overall level of regulatory effort. This was discussed with trial participants at the workshop and is considered further in Section 4.

Figure 3.3 presents the average scores awarded and the theoretical maximum and minimum scores for each of the seven main components of the risk assessment method. The range of scores is generally higher for the OPA components than for the EIA components (this may be because the theoretical range is higher, but it may also reflect a wider variation between operators).

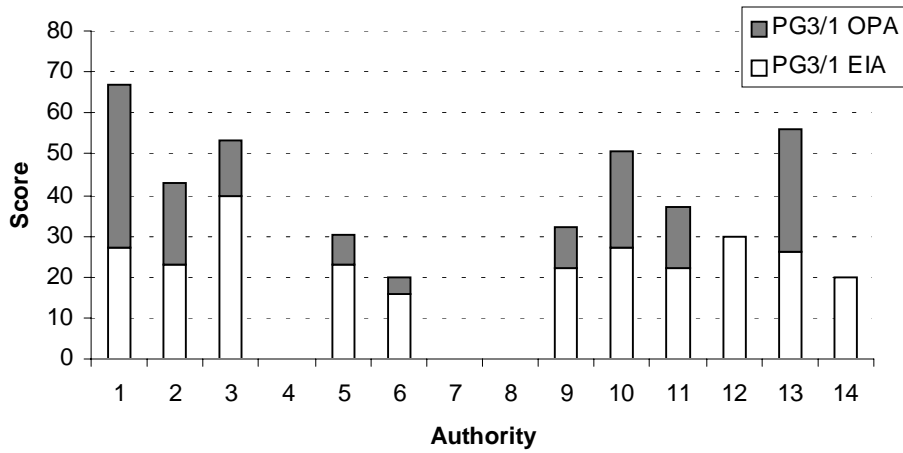
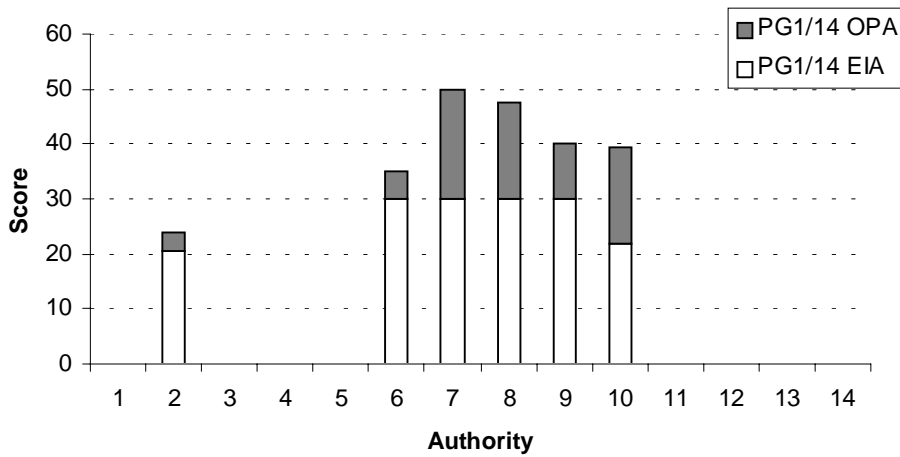
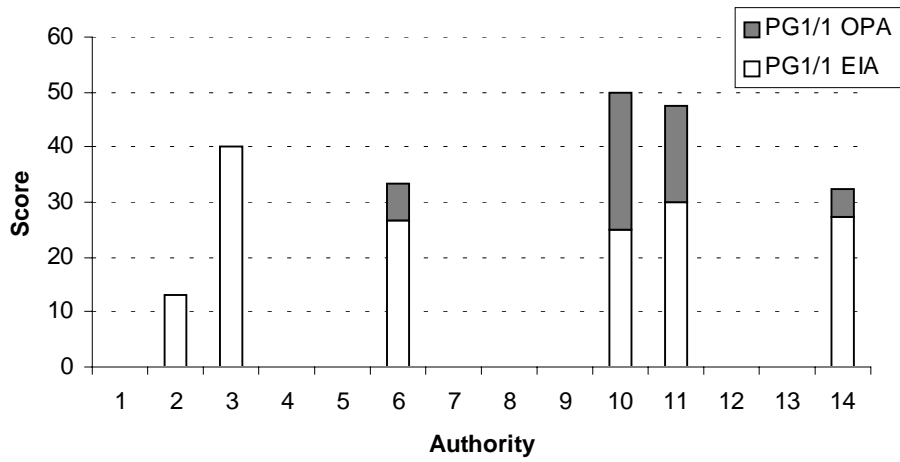


**Figure 3.3: Average, Maximum and Minimum Scores Awarded by Component**

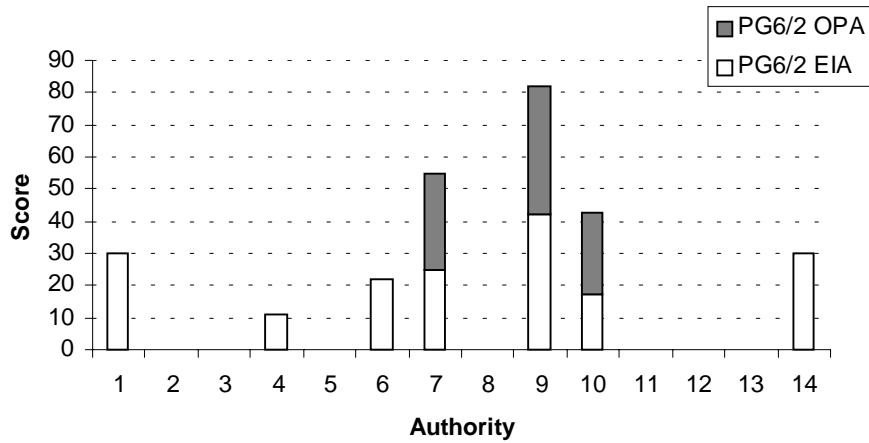
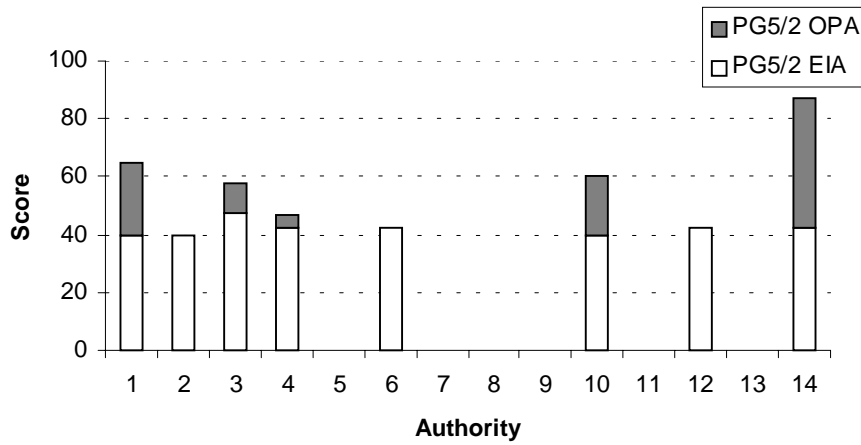
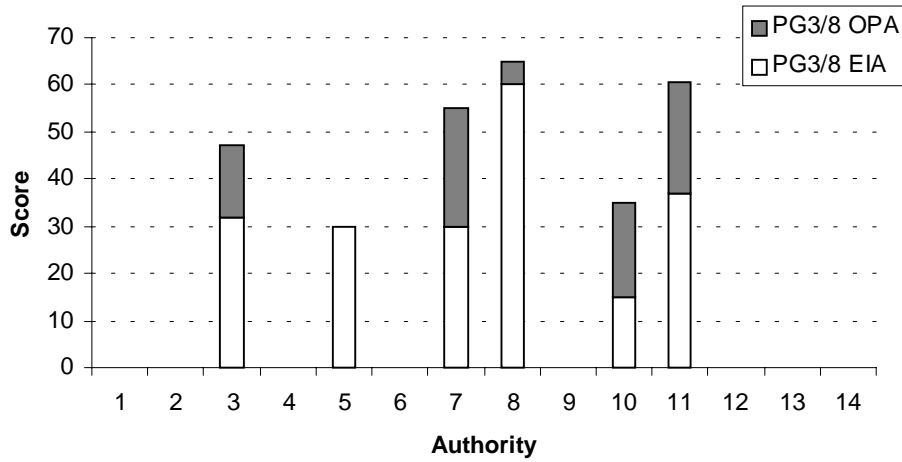
### **3.3.2 Comparison of Scores Awarded Across Authorities**

There were eight process types (PG Notes) to which the risk assessment method was applied by five or more authorities. Figures 3.4a to 3.4h compare the average OPA, EIA and total scores awarded by different authorities for each of the PG Note types. The EIA component of the score for a particular process type tends to be fairly similar across authorities, whereas the OPA component tends to be much more variable. This is significant as, in some cases, the higher OPA score can increase the overall score significantly, changing the regulatory effort category applicable to the process.

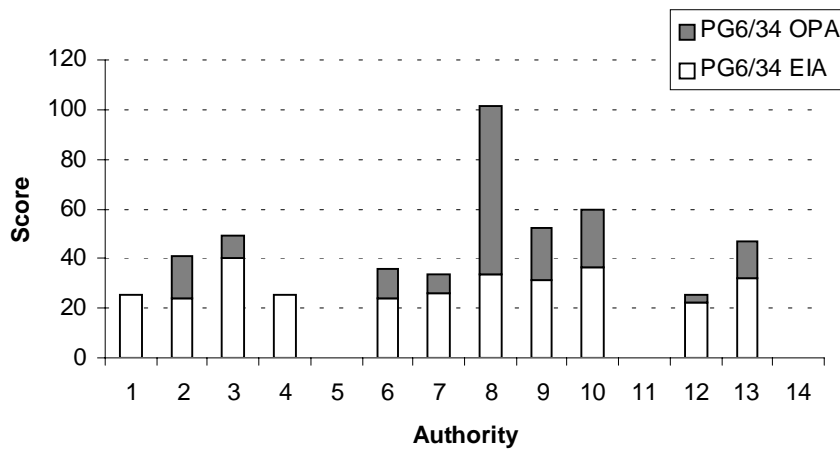
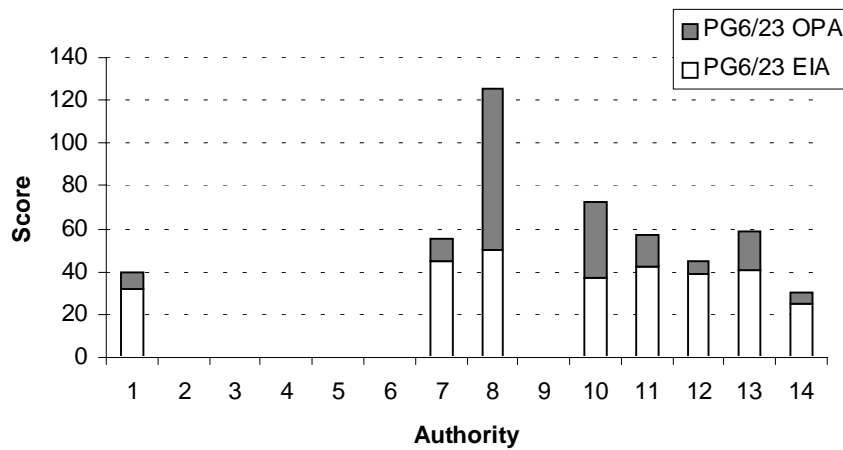
Because of the small size of the sample for each process type, it is difficult to determine whether the variation in OPA scores reflects a lack of consistency in scoring or genuine variations in operator performance between authorities. No authority appears consistently to award higher OPA scores than the others; for example, Authority 8 has awarded much higher OPA scores for PG6/23 and PG6/34 than other authorities but significantly lower OPA scores for PG3/8 and average OPA scores for PG1/14. Similarly, Authority 10 awarded the highest OPA score for PG1/1 but only average OPA scores for other processes. This indicates that the variation may reflect genuine differences in operator performance. However, the issue of consistency in scoring is recognised as a significant one for the method, and is discussed further in Sections 4 and 5 of this report.



**Figures 3.4a to 3.4c: Cross-authority Comparison of Scores (PG1/1, PG1/14 and 3/1)**



Figures 3.4d to 3.4f: Cross-authority Comparison of Scores (PG3/8, PG5/2 and PG6/2)



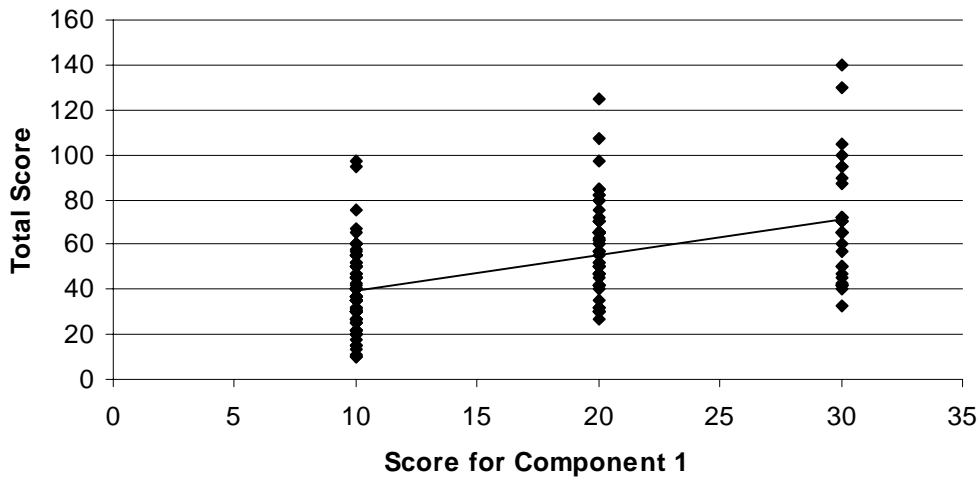
**Figures 3.4g and 3.4h: Cross-authority Comparison of Scores (PG6/23 and PG6/34)**

### 3.3.3 Contribution of Component 1 to Overall Scores

Component 1 of the risk assessment method comprises a score awarded on the basis of the type of process alone. As detailed in Section 2, the scores for this component were allocated by the Advisory Panel on Risk Ranking. Figure 3.5 presents the overall scores for all processes according to the score for Component 1 (from 10 points for a process with low inherent impact potential to 30 points for a process with high inherent impact potential).

Based upon Figure 3.5, processes in Category 2 (20 points) appear to have greater total scores than those in Category 1 (10 points) and likewise for Category 3. Indeed, the Category 2 scores are statistically higher than the Category 1 scores, at the 1% level of significance. However, the Category 3 scores are statistically higher than the Category 2 scores only at the 10% level<sup>7</sup>.

<sup>7</sup> Using a two-tailed t-test, assuming equal variances.



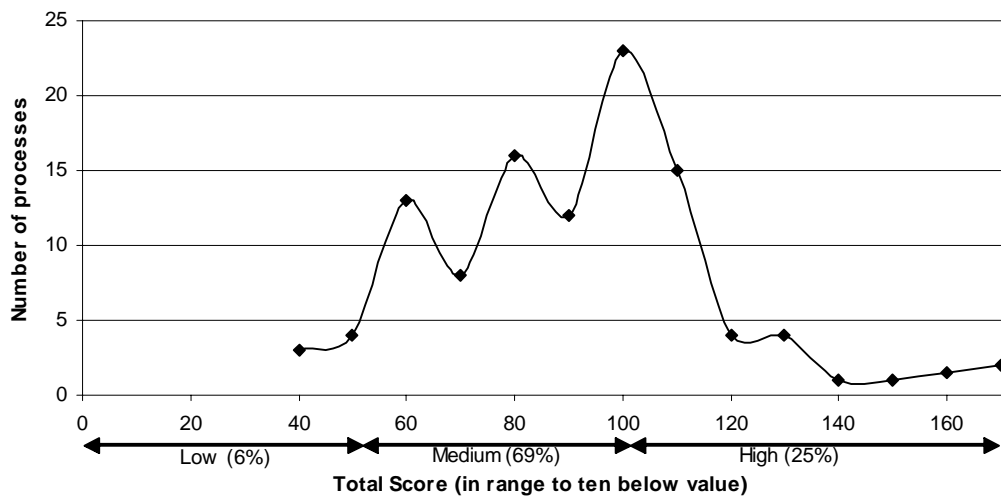
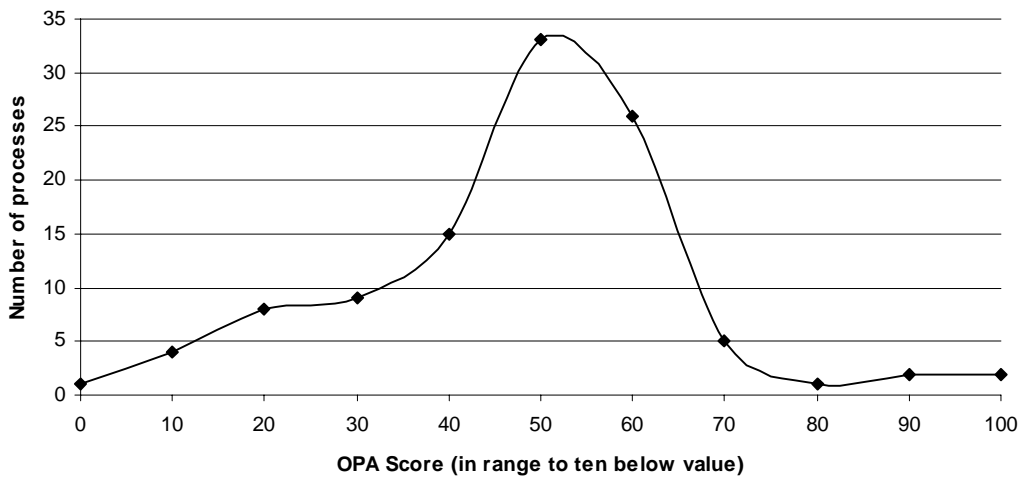
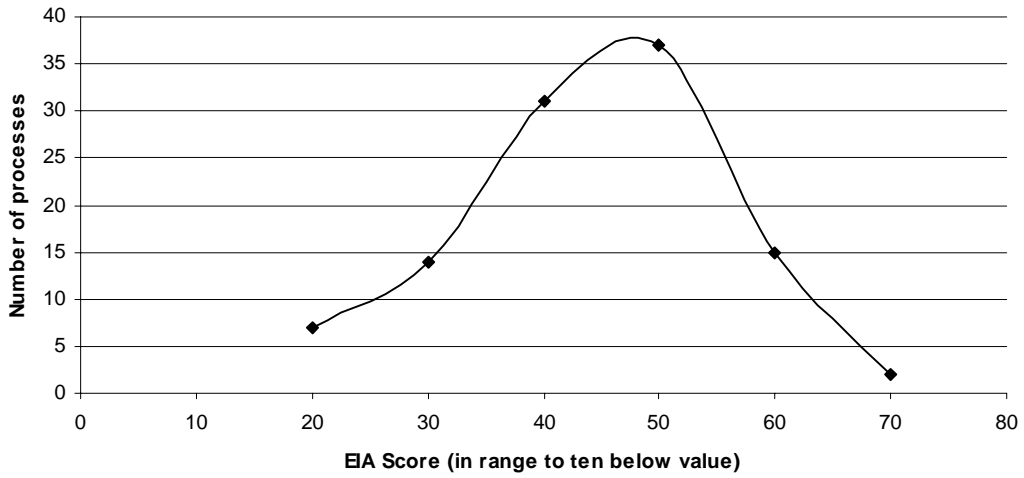
**Figure 3.5: Comparison of Component 1 Scores with Overall Scores**

Of particular importance to use of the method in practice, however, is that the total scores awarded for Category 2 and Category 3 processes span all three levels of regulatory effort. Given that inspectors generally agreed with the level of effort suggested by the method, this appears to indicate that the APRR category alone would not be a suitable indicator of the required regulatory effort.

### 3.4 Overview of Results from an Additional Authority

One authority that was not involved in the trial has independently implemented the risk assessment method in its region. The method was applied to all LAPC processes regulated by the authority (of which there are over 100).

Figures 3.6a to 3.6c detail the distribution of OPA, EIA and total scores for this authority. These graphs are equivalent to Figures 3.2a to 3.2c for the trial itself.



**Figures 3.6a, b and c: Distribution of Scores for Additional Authority**

Figure 3.6a shows that the EIA scores for this authority are higher than those for the processes covered by the trial. This is likely to be mainly explained by the fact that the processes covered by the scoring did not include any petrol stations (PG1/14) or small waste oil burners (PG1/1). As detailed in Section 4, these process types may warrant exclusion from the risk assessment method.

From Figure 3.6b, it can be seen that the OPA scores allocated by this authority are distributed relatively evenly around the mid-range score. This is in sharp contrast to the scores awarded during the trial itself, indicating that operators within this authority may manage their processes more poorly than those covered by the trial. It may also, however, be indicative of other factors, such as a greater number of complaints (the authority is heavily populated), or indeed because the authority is stricter in terms of the conditions included in its authorisations.



## **4. FEEDBACK ON THE RISK BASED METHOD**

### **4.1 Comments and Queries Received During the Trial**

#### **4.1.1 Introduction**

Throughout the trial, participants were invited to contact RPA with any comments or questions they had concerning the trial. Trade associations and other interested organisations were also informed about the trial by DEFRA, and process operators were encouraged to share their comments on the method with associations to which they belonged. The comments and queries received from participants and others were collated and formed an input to discussion at the Feedback Workshop held on 30 January 2002.

The comments received from participants (and the local authority applying the method outside the trial) fell into four main types:

- suggestions and questions on application of the method in general;
- comments and queries on specific aspects of the regulatory impact assessment and operator performance assessment;
- comments on the suitability of the scoring system and the categorisation of processes; and
- views on how the method could be applied in practice.

These comments are discussed further below.

Despite Trade Associations being informed about the trial and invited to comment, and operators encouraged to copy their feedback forms to their associations, only two comments were received from trade associations.

One trade association, representing process operators, was concerned that the trial's coverage of heavily industrialised authorities was limited, as none of its members were located in authorities covered by the trial. The association believed this could make the trial unrepresentative.

Our response to this comment is that, although this particular process sector was not included within the trial, similar processes were represented. It was clearly not possible for the trial to cover processes of every type subject to LAPC regulation. The random selection of authorities for the trial was designed to ensure that both industrial and non-industrial areas were included. In addition, the other authority that applied the risk-based method outside the trial was located in a heavily-industrialised area, widening the scope of processes subject to the trial still further. It therefore seems unlikely that the chance exclusion of one process type will significantly bias the trial findings.

Another trade association, representing pollution control equipment manufacturers, was concerned that the risk-based method could lead to a dilution of regulatory effort, with processes ranked as low risk believing that regulatory compliance was no longer necessary. The association was concerned that use of the method could provide an

excuse for a further reduction in the regulatory effort devoted to LAPC, which in its view was already inadequate. It also believed that any robust risk assessment methodology would require significant resources to implement.

In response to these concerns, a meeting was held with the trade association to explain the objectives of the risk based method further. It was explained that use of the method does not affect the legal obligations of process operators to comply with their authorisation conditions. Any such breaches will result in an increased score for OPA and, potentially, a change in the risk category allocated to the process. Indeed, the trial shows that the method has the potential to provide an incentive for improved performance by operators and a clearer basis for understanding regulatory requirements. In addition, the trial results discussed in Section 3 of this report demonstrate that the method enables a robust assessment of the risks associated with a process with relatively little time and effort.

The impacts of the method on overall regulatory effort, together with the need for guidance on the minimum level of inspection, are discussed further in Section 5 of the report. This will help to ensure that appropriate resources are devoted to low risk processes, whilst enabling authorities to be more efficient by focussing their attention on the most problematic processes. As Section 3 indicates, on the basis of the trial it appears unlikely that the method would lead to a reduction in regulatory effort. Indeed, as discussed below, some authorities believed that use of the method would provide a robust justification for increasing the level of resources devoted to LAPC regulation compared with other demands on inspectors' time. The method also gives authorities a clearer and more focussed framework for LAPC work and provides a more robust framework for benchmarking under best value.

#### **4.1.2 Suggestions and Questions on the Method in General**

Suggestions and questions received on the method in general are outlined in Table 4.1. These suggestions and questions were discussed further at the workshop. The Table also shows the recommended responses to the comments following this further discussion.

<b>Source</b>	<b>Comment</b>	<b>Response</b>
Participant	Grave reservations about incorporating petrol stations and waste oil burners within the method.	Exclusion of these processes recommended
Participant	Waste oil burners require far less regulation than normal processes and this is reflected in the annual charge	Exclusion of these processes recommended
Participant	If there is more than one process on a site, do you take the highest score or add together?	Guidance on this matter to be added (see A1.1)
Non-participant Local Authority	If there is more than one PG Note applicable to a single process, the highest score should be taken.	Guidance on this matter to be added (see A1.1)
Participant	If there is more than one authorisation at a site, it is important they are looked at separately	Guidance on this matter to be added (see A1.1)
Participant	If any issue is not applicable to a particular process then award lowest score available	Guidance on this matter to be added (see A1.1)
Participant	If officer does not know process attach a higher score during benchmarking exercise then amend at next inspection	Not accepted, as this could lead to distortion of scoring

Two participants indicated that the method should not be applied to certain categories of process, waste oil burners and petrol stations. This suggestion was discussed further at the workshop. There was also a series of questions about how multiple processes on a single site should be addressed. This was also discussed further at the workshop.

#### 4.1.3 Comments and Queries on Specific Aspects of the Method

Table 4.2 outlines comments and suggestions received on the EIA portion of the method and Table 4.3 summarises comments and suggestions covering OPA.

Questions and comments on the EIA focused on three main issues:

- whether further indication of the scale of processes could be incorporated into the APRR ranking;
- the appropriateness of the method for certain process types; and
- questions concerning application of the criterion on proximity to receptors.

<b>Table 4.2: Comments and Queries on EIA</b>		
<b>Source</b>	<b>Comment</b>	<b>Response</b>
Participant	Should an indication of amount of solvent used be included for coating processes?	Issue addressed by APRR; guidance given on scale factors
Participant	Is it possible to reduce the APRR category to incorporate very low risk sites, e.g. offset lithographic?	Discussed further at workshop; agreed that APRR categories should not be changed at this point
Operator	Although dealing with a medium/high risk material, there are other regulators and controls in place i.e. fire service and trading standards	Discussed further at workshop; agreed that other regulations did not focus on air pollution control
Participant	No consideration given to the fact that waste oil burners are incinerating a product that could cause problems to the environment if not disposed of correctly	Discussed further at workshop; exclusion of these processes recommended
Participant	Can you reduce score due to local topography (e.g. if in a quarry)?	Discussed further at workshop; agreed that such a reduction would over-complicate the method
Participant	Should 'proximity' be measured from site perimeter or polluting activity?	Agreed at workshop that measure should be from polluting activity
Participant	Unnecessary to multiply proximity distances by 4 for some processes. Also, item 4 will almost inevitably be weak for these process categories	Discussed further at workshop, consensus was to retain multiplication

<b>Table 4.3: Comments and Queries on OPA</b>		
<b>Source</b>	<b>Comment</b>	<b>Response</b>
Participant	Should be able to have “n/a” for where monitoring activity could not be reduced in any case.	Guidance to be clarified (see A1.3.2)
Participant	Should be made clear that complaints must be justified	Guidance to be clarified (see A1.3.1)
Participant	Should a score be awarded for a ‘reasonable’ complaint, which was later found to be unjustified?	Guidance to be clarified (see A1.3.1)
Participant	Does not account for processes with large numbers of complaints (>40 points). Can the score be reduced if, after complaint received, company provides evidence to show problem rectified immediately?	Discussed further at workshop; guidance to be clarified (see A1.3.1)
Participant	Company achieved compliance by solvent reduction not emission control - times when toluene can be smelled leading to complaints. Hard to explain to public that firm is compliant	A general regulation issue rather than specific to the method
Participant	Complaints about odour - not measurable, therefore much time spent carrying out olfactory assessments over large areas	Discussed further at workshop; recognised that method cannot reflect all permutations
Participant	Some processes receive more attention due to active residents group and political pressure of elected members	Scoring takes account only of justified complaints
Non-participant Local Authority	In Compliance Assessment; Enforcement Notice to carry same weight as Final Warning Letter; Prohibition Notice to carry same weight as Prosecution or Official Caution	Discussed further at workshop; revised weighting suggested (see section 4.3.5)
Operator	Remove score for past unintentional non-compliance (a one-off) and category changes	Only non-compliance within the last year should be scored; unintentional non-compliance is still non-compliance
Participant	Issue of upgrading and compliance – doesn’t take into account track record where informal action taken and deadlines not met	Discussed at workshop; revised weighting suggested (see 4.3.5)
Participant	Status of upgrading – process missed the deadline but is now ‘just’ compliant (no score for this)	Discussed at workshop; revised weighting suggested (see 4.3.5)
Participant	Perhaps the method leans too much toward having documentation in place.	Discussed at workshop; revised weighting suggested (see 4.3.5)
Participant	Query whether having a formal management system is desirable or beneficial	Guidance given on evaluating management systems (A1.3.3)
Participant	Unclear if last section is necessary/applicable for waste oil burners. Can they be scored zero for this?	Exclusion of these processes recommended
Participant	Disadvantages small firms that do not have auditable management systems	Guidance given on evaluating management systems (A1.3.3)
Participant	Section 7 seems most subjective (e.g. many processes won’t have documentation in relation to all categories, even though activities are indeed undertaken)	Guidance given on evaluating management systems (A1.3.3)
Participant	The solvent usage of this company is very low (just over the threshold) – their score is increased because of documentation etc. and not because of emissions	Guidance given on evaluating management systems (A1.3.3)
Operator	Section 7 is not relevant – misleading and can be improved in many ways	Guidance given on evaluating management systems (A1.3.3)
Participant	Changes in management, necessitating frequent visits in response to queries and training needs. Company has experienced difficulty with compliant coatings	Guidance given on evaluating management systems (A1.3.3)

Table 4.3 shows that the number of comments and suggestions on OPA was much higher than on EIA. The main issues concerned:

- indication that a score for ‘not applicable’ was needed in some cases;
- problems in determining the number of complaints and whether they are justified;
- how to score different types of enforcement action;
- the balance between scores for systems and procedures and actual performance; and
- the relevance of management systems for small/low risk processes.

#### **4.1.4 Comments on the Suitability of the Scoring System and Categorisation of Processes**

Table 4.4 outlines comments on the suitability of scores and categories received from participants in the trial and operators of processes that were assessed during the trial.

<b>Source</b>	<b>Comment</b>	<b>Response</b>
Participant	“Should be high risk although because of being a conscientious company, scores low”	Demonstrates the ability of the method to take account of good operator performance
Participant	Brick making is a high risk process – the scope for particulate emissions and dust from site is ever present however is controlled in this instance by good management	Demonstrates the ability of the method to take account of good operator performance
Participant	I would like to have given it a higher score but no relevant score to amend – may need additional conditions in authorisation (Component 5.1)	Demonstrates the wider benefits of using the method by pointing up gaps in authorisation
Operator	Need more elapsed time to get a true score on all questions	Will be addressed by regular review of scores
Operator	Category was inappropriate because of doubts over the standard that could be achieved	Discussion of the scores between inspectors and operators should help to resolve this issue

The first two comments indicate that the method does reflect the effectiveness of management of a process, in that processes with an inherently high risk received lower scores because of good management practices. The third comment is interesting in that it indicates that use of the method may encourage inspectors to look critically at authorisation conditions and to evaluate their scope. The comments from operators indicate that there are some uncertainties about what is expected from them, which use of the method may help to clarify.

#### **4.1.5 Views on How the Method could be Applied in Practice**

Table 4.5 details views of trial participants and operators on how the risk-based method could be applied in practice.

<b>Source</b>	<b>Comment</b>	<b>Response</b>
Participant	For some low risk processes, the method may overestimate regulatory effort but for medium/high ones, it may significantly underestimate	Discussed further at workshop; revised weighting suggested (see 4.3.5)
Participant	Petrol stations require no monitoring data to be looked at and due to the nature of the authorisation only 1 visit per year	These processes now excluded from the method
Participant	Premises operating without authorisation so fast track programme of upgrading required and additional site inspections during first year to monitor compliance	Discussed further at workshop; revised weighting suggested (see 4.3.5)
Participant	Prosecutions, new/re-applications, upgrading all take significant amount of time [reason for indicated regulatory effort being less than currently spent]	Discussed further at workshop; revised weighting suggested (see 4.3.5)
Participant	There is low potential for severe emissions due to systems and self-monitoring which are in place. The standard annual subsistence charge is excessive for such operations	Method provides potential for reduced charges for low-risk processes
Operator	Any further burden in terms of licence fee would cause me to abandon this process	Method provides potential for reduced charges for low-risk processes

Comments on use of the method in practice indicate that there is a link between regulatory effort and the risk associated with the process, but that this link can be complicated by site-specific factors such as breaches of authorisations. Inspectors also recognised that there should be a link between regulatory effort and fees charged. One operator (of a small waste oil burner), however, indicated that any increase in charges would be unacceptable, causing him to abandon the process.

## **4.2 Discussion During the Workshop**

### **4.2.1 Background**

The comments and questions raised during the trial formed the basis of discussion at the workshop held on 30 January 2002 and attended by representatives of nine of the authorities participating in the trial. The aim of the trial was to gather further feedback on use of the method in practice and to identify potential ways in which the method could be improved. The output of the Workshop included both general suggestions on the use of the risk-based method in practice and specific suggestions on how scores and category boundaries could be changed to provide a more accurate link between risk and regulatory effort. These specific changes are discussed further in Section 4.3.

### **4.2.2 Use of the Risk Based Method in Practice**

There was general agreement amongst trial participants that the method was easy to follow. Operator Performance Appraisal (especially Component 7) required the largest

amount of work, as this is not a requirement of the current legislation and some judgement is required in applying the scores. Further guidance would be useful on what constitutes an 'appropriate' management system. It was agreed that, overall, the level of judgement required in applying the method was about right.

In most cases, the regulatory effort indicated by the method was reasonably in line with the time currently spent regulating processes. There were some complexities associated with complaints; processes receiving many complaints required additional regulatory effort, even where the complaints were unjustified. It was agreed, however, that processes should not be penalised for unjustified complaints and thus regulatory effort associated with unjustified complaints should not be charged to the process. Similarly, the fact that the time taken to travel to process sites varied considerably should not be a consideration in evaluating regulatory effort requirements. Managing travel time was part of the overall management of LAPC regulation within an authority.

On frequency of revision of scores, it was agreed that, when used for charging purposes, categories could only be revised annually. This would give certainty to process operators of the fees due and to local authorities on budgets. For management purposes, however, scores should be reviewed as the occasion demands and certainly revisited following visits or factors such as incidents and upgrading.

In relation to the fear that categorising a process as low risk could provide a disincentive for good performance, raised by one trade association, inspectors felt that this could only happen until the next visit when any lapses would be picked up. It might, though, be useful to retain the idea of a minimum inspection frequency, below which even the lowest risk processes should not fall (as desk-based scores need to be verified by a visit).

In terms of the overall implications of using the method, feedback was very positive. Inspectors felt it would provide a good basis for justifying the level of resources required for LAPC. The method should not increase overall workload and would be useful as a working tool for inspection planning (which is an element of the EU Recommendation on inspections). The method provides a more structured approach to planning, which should help to improve efficiency.

Some concern was expressed about linking charging to the method, given the element of subjectivity, especially in relation to OPA. It was thought that there were ways to ensure consistency between authorities, through regional groupings and/or through DEFRA keeping a watch on how scores for certain process types varied across the country. The Best Value approach encourages co-operation of this type between authorities.

It was agreed that, at present, the scores awarded to individual processes should not be publicised in a 'name and shame' programme; they provide greater value as a positive basis for encouraging better performance. This use should not be ruled out in future, though, and there was some question as to whether scores might in future need to be released under EU requirements on access to environmental information.

### **4.3 Implications of Suggested Changes to Scores and Category Boundaries**

#### **4.3.1 Overview**

During the Workshop, participants suggested a number of potential changes to component scores and category boundaries. Below we analyse the sensitivity of the method to some of these changes in terms of the overall balance of scores awarded and the regulatory effort allocated by local authorities. The suggested changes that have been analysed are:

- exclusion of certain types of processes from the risk assessment method;
- increasing the relative score for Component 1;
- altering the score boundaries for regulatory effort categories;
- increasing the relative importance (maximum possible score) of Component 6;
- adding an additional element to Component 6;
- increasing the score for failure to monitor in line with the authorisation (part of Component 5); and
- modification of the score for presence or absence of management systems.

#### **4.3.2 Exclusion of Certain Types of Processes**

Under the LAPC regime, small waste oil burners (PG1/1) and unloading of petrol at service stations (PG1/14) are recognised to require significantly less regulatory effort than other processes, due to their simplicity and the presence of controls under other regulatory regimes (such as the Petroleum Regulations).

During the workshop, there was a general consensus that the risk assessment method was not appropriate for these two types of process. Table 4.6 compares the percentage of processes falling under each of the three regulatory effort categories including and excluding these processes.

<b>Regulatory Effort Category</b>	<b>Including PG1/1 and PG1/14</b>	<b>Excluding PG1/1 and PG1/14</b>
Low (less than 50 points)	55%	49%
Medium (50 to 100 points)	43%	47%
High (over 100 points)	3%	3%

*Note: Percentage figures may not add up to 100 due to effects of rounding.*

The majority of these processes were in the ‘low’ regulatory effort category, so their exclusion reduces the proportion of processes in this category.

A further issue was raised at the workshop concerning the inclusion of processes covered by PG3/16 (mobile crushing and screening). However, the comment related mainly to the problems of regulating mobile plant in general, rather than their specific inclusion under the method and thus no additional analysis is provided here.

### 4.3.3 Increasing the Score for Component 1

It was also suggested at the workshop that greater range of scores should be given to the process type, to reflect the difference in risk between the categories. Under Component 1, a category is assigned to each process type based upon its ‘inherent environmental impact potential’. Processes with a low potential (Category 1) are awarded 10 points, those with a medium potential (Category 2) 20 points and those with a high potential (Category 3) 30 points.

At the workshop, some participants suggested that the scores awarded could be amended to give this Component a greater importance in terms of total score:

- Category 1 processes would retain a score of 10 points for Component 1;
- Category 2 processes would be awarded 30 points instead of 20; and
- Category 3 processes would be awarded 50 points instead of 30.

Table 4.7 presents the percentages of processes falling under each of the regulatory effort categories if this suggested change is adopted. The table also includes the implications of excluding certain process types, as considered in the previous section.

<b>Regulatory Effort Category</b>	<b>Including PG1/1 and PG1/14</b>	<b>Excluding PG1/1 and PG1/14</b>
Low (less than 50 points)	44%	37%
Medium (50 to 100 points)	50%	56%
High (over 100 points)	6%	7%

As would be expected, this change results in an increase in the proportion of the processes in the ‘medium’ category, as compared to Table 4.6. Altering the scores in this manner would mean that process types that are considered to have low inherent impact potential (APRR Category 1) would still tend to remain in the low regulatory effort category, with some exceptions. However, certain processes could fall into the medium regulatory effort category solely on the basis of their type and location<sup>8</sup>. This would make operator performance relatively less important in determining regulatory effort, changing the balance between EIA and OPA and providing less of an incentive to operators to improve their performance.

### 4.3.4 Amending the Score Boundaries

Based upon the analysis in Section 3, it is evident that a relatively large proportion of processes fall into the ‘low’ regulatory effort category, with only a small number in the ‘high’ category. This raised concern at the workshop as to whether the boundaries of the

---

<sup>8</sup> For example, a company manufacturing printing ink, which is located close to a residential area would immediately fall into the ‘medium’ regulatory effort category, even if the process presents a relatively low risk according to other components of the method.

scores were appropriate. Since these boundaries were initially set without experience of using the method in practice, they may require amendment in order to ensure that the method does not result in an unjustified reduction in regulatory effort. Table 4.8 presents the proportions of processes falling into each category with the score boundaries revised as follows:

- processes scoring less than 40 points (rather than 50) would be classed as ‘low’;
- those scoring 40 to 80 points would be ‘medium’; and
- those with a score greater than 80 (rather than 100) points would be ‘high’ category.

Table 4.8 also presents the implications of the possible revised scores for Component 1 (see previous section), as combined with the revised boundaries for total scores.

Reg. Effort Category	Including PG1/1 and 1/14		Excluding PG1/1 and 1/14	
	Initial Comp. 1	Revised	Initial Comp. 1	Revised
Low (less than 40 points)	34%	30%	31%	25%
Medium (40 to 80 points)	55%	51%	56%	52%
High (over 80 points)	11%	20%	13%	23%

*Note: Revised Comp. 1 scores relate to the possible changes suggested in the previous section*

By comparing the results in Table 4.8 with those in Tables 4.6 and 4.7, it is evident that the balance of scores is shifted towards the higher regulatory effort categories, both by revising the score boundaries and by revising the scores for Component 1.

In most cases, inspectors felt that the regulatory effort category suggested by the risk assessment method was reasonably in line with expectations, as indicated in Section 3. Nevertheless, there was concern that the small number of processes falling into the high risk category could limit the potential for operators to improve performance and might be seen as indicating that the method would result in less effective regulation overall. The workshop participants considered that, based on experience, the appropriate balance of scores would probably be one where around 10% of processes fell into the ‘high’ regulatory effort category. There are two possible revisions that would lead to this outcome (assuming petrol stations and small waste oil burners are excluded):

1. Revise the overall score boundaries, leaving the Component 1 scores as initially set; or
2. Revise the Component 1 scores leaving the score boundaries as initially set.

As discussed above, revising the Component 1 scores could lead to an inappropriate level of regulatory effort being allocated to certain processes. The first option may, therefore, be preferable.

#### **4.3.5 Increasing the Relative Importance and Adding an Element to Component 6**

It was generally agreed at the workshop that Component 6 (compliance assessment) should provide a greater contribution to the overall possible score, since breaches in the authorisation conditions are a key indicator of risk and also of regulatory effort requirements. Component 6 represents actual performance, whereas Components 5 and 7 evaluate the presence of documentation and systems that underpin performance. Workshop participants considered that performance should be given a similar weight to documentation and systems in OPA.

It was also agreed at the workshop that an additional element should be included under Component 6 of the method. This would score 10 points for an incident leading to “breach of authorisation not leading to formal action”, being considered more serious than a complaint but less serious than an incident leading to formal action.

During the trial, only seven processes were awarded the maximum score for Component 6. Authorities participating in the trial were asked, after the workshop, for their views on whether increasing the relative score for Component 6 to a maximum of 50 points, rather than 40 would make a difference to the OPA scores awarded for any of the processes they included in the trial. They were also asked whether adding the additional element to Component 6 would make any difference to the OPA scores awarded. Around half of the authorities indicated that some of their scores would change significantly and it is estimated that scores would increase for around 7% of processes. In some cases, this would have led to an increase in the regulatory effort category. Additionally, authorities generally indicated that the suggested changes would be welcomed and would improve the value of the risk assessment method.

Whilst this change is unlikely to make a significant alteration to many of the scores awarded (e.g. enough to increase the regulatory effort category), it will allow the risks associated with certain specific processes that are under-performing to be properly taken into account, allowing for the method by which authorities tend to take action.

#### **4.3.6 Increased Score for Failure to Monitor in Line with Authorisation**

At the workshop, the possibility of increasing the score for element 1 of Component 5<sup>9</sup> was discussed, as failure to monitor in line with conditions is a serious breach of the authorisation. However, no analysis of the implications of this change is provided here because such a failure is likely to result in award of a score under Component 6. Thus, failure to monitor would be given relatively more importance by increasing the overall possible score for Component 6 (and adding the additional element, as described above).

---

<sup>9</sup> Whether all monitoring is undertaken to the degree required in the authorisation.

#### 4.3.7 Modification of the Score for an Appropriate Management System

The last element of Component 6 of the method relates to the presence of an appropriate environmental management system<sup>10</sup>. DEFRA is currently introducing guidance relating to appropriate management systems as PG Notes are revised, but no guidance notes containing this requirement have yet been issued.

Workshop attendees therefore questioned whether it was appropriate to award a score of five where such a management system is not in place, as this would penalise the absence of a management system before it becomes a requirement of LAPC. It was therefore agreed that the method should be altered such that a score of -5 is awarded for the presence of a management system, rewarding action going beyond current requirements, (with zero where there is no system), until the relevant PG Note is amended. After amendment of the PG Note, the scoring system would revert to the current situation. It is evident from Table 4.9 that this change would make a difference to the overall scores and reduce the regulatory effort category is reduced for some of the processes.

<b>Reg. Effort Category</b>	<b>With Initial Score Boundaries</b>	<b>With Revised Score Boundaries</b>
Low	56%	42%
Medium	37%	47%
High	7%	10%

*Note: Revised score boundaries are as described above i.e. <40 for 'low' regulatory effort, 40 to 80 for 'medium' and >80 for 'high'. Figures exclude processes under PG1/1 and PG1/14. Percentage figures may not add up to 100% due to effect of rounding.*

---

<sup>10</sup> Note that, due to the small nature of many Part B processes, such a management system should be “tailored to the nature and size of the particular process”, rather than necessarily being an externally verified system such as ISO 14001 or EMAS.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

#### **5.1.1 Introduction**

This section of the report outlines the main conclusions that can be drawn from the trial. These are that:

- in general, the trial provided an effective basis for testing the practicality of the method and suggesting improvements;
- the method is practical and simple to use and covers the key risk areas;
- the method has the potential to achieve benefits in terms of reduced burdens on regulators and industry, improved consistency, transparency and value for money and providing an incentive for improved performance; and
- the method is unlikely to have a disproportionate impact on small and medium enterprises.

Recommendations on how the method should be taken forward are outlined in Section 5.2.

#### **5.1.2 The Effectiveness of the Trial in Testing the Method**

Thanks to the work of the participating authorities and operators, the trial provided an effective basis for testing the practicality of the method and for identifying areas for improvement. During the trial, the risk-based method for LAPC was applied by 14 different local authorities to 173 processes covered by 39 out of a total of 80 Process Guidance Notes. In addition, feedback was also obtained from a further authority that decided to make use of the method outside the context of the trial. This authority applied the method to all of the processes (over 100) that it regulated under LAPC.

Criticism of the trial was received from one trade association, because none of its members were located in any of the local authorities included within the trial. It is unlikely, though, that the chance exclusion of one process type will significantly bias the trial findings, especially as similar processes were included. It was clearly not possible for the trial to cover processes of every type subject to LAPC regulation. The random selection of authorities for the trial was designed to ensure that both industrial and non-industrial areas were included. In addition, the other authority that applied the risk-based method outside the trial was located in a heavily-industrialised area, widening the scope of processes subject to the trial still further.

Of the 172 processes to which the method was applied as a desk exercise, 130 processes were visited during the trial. This enabled inspectors to re-evaluate their initial scoring of the process in the light of practical experience and to evaluate the use of the score sheet as a basis for discussion with operators. This meant that for over three quarters of the processes covered by the trial, the method's use as a tool in regulation of processes could be evaluated. The fact that feedback forms were received from 96 operators, representing

over 55% of processes included within the trial and 74% of those visited, enabled the views of industry on the method and its use as a tool in regulation to also be evaluated.

What the trial could not do was to provide a quantitative assessment of the implications of the method for the overall cost-effectiveness of LAPC regulation by local authorities, although trial participants provided their qualitative assessment of this. Neither could it evaluate quantitatively the potential incentive impact of the method on operator behaviour. Although operators did provide feedback on whether they could identify actions that would reduce their risk category, no evaluation could be made of whether such steps would be taken in practice. Finally, within the context of the trial it was not, of course, possible to evaluate in any depth the impacts of charging linked to risk category, although both participating local authorities and operators were asked to consider this issue. Such matters can only be evaluated following wider use of the method over a longer period of time. Our recommendations in Section 5.2 include suggestions that use of the method in practice should be monitored by DEFRA.

### **5.1.3 Practicality and Comprehensiveness of the Method**

The practicality of the method was demonstrated in the responses from inspectors and operators received during the trial and the subsequent discussions at the workshop. It requires little training to use, takes only a short period of time to apply and relies largely on information already available to the authorities. It also covers the key areas of risk posed by LAPC processes, providing a robust basis for evaluating overall risk.

The fact that participating authorities were able to apply the method without training, relying only on the written protocol, indicated that the method was easy to understand and to apply. The workshop identified a few areas where further guidance would be helpful; these suggestions have been incorporated into the final version of the method set out in Annex 1.

The scoring feedback forms indicate that, for 85% of processes, initial scoring of processes using the method took 15 minutes or less. Bearing in mind that the method was new to the authorities and was being applied for the first time, sometimes by inspectors with limited experience, this indicates that it is unlikely to present a significant burden on authorities. It is likely that subsequent review and revision of the scoring of processes will take even less time.

In 70% of cases, adequate information to score processes was already available within records held by the authorities. The biggest gap was in relation to 'appropriate' management systems, an area that had not previously formed part of the LAPC process, although in most cases this gap could readily be filled during visits. The small number of revisions to scores following visits, 15%, indicated that records and inspector knowledge of processes provided an adequate basis for accurate scoring in most cases.

Finally, a high proportion (98%) of inspectors felt that the method covered all significant areas of risk and in 89% the risk category determined by the method was in line with inspectors' knowledge of the risks associated with a process. Importantly, 89% of operators also felt that the risk category reflected the effort required to regulate their

process, indicating a high degree of consensus that the method formed an effective way of quantifying process risk.

#### **5.1.4 Potential Benefits from Applying the Method**

The trial demonstrates that the method has the potential to achieve the benefits of a risk-based approach identified at the outset of the trial. These were:

- a reduced burden on local authorities, enabling more effective delivery of their obligations under the best value regime, without loss of environmental protection;
- reduced regulatory burden on business through targeting of resources to those which pose most of a risk (whilst retaining proper environmental regulation), without loss of environmental protection;
- an incentive for improved environmental performance;
- improved transparency and value for money for regulated businesses, since regulatory effort and fees would better reflect the risk to air pollution posed by individual processes or process categories; and
- improved consistency in regulation.

The performance of the method against each of these criteria is evaluated below.

##### ***Reduced Burden on Local Authorities***

The method can reduce the burden on local authorities by improving regulatory effectiveness whilst requiring only limited resources to apply. As Section 5.1.3 outlines, application of the method generally required only 15 minutes or less per process for the initial scoring and it is likely that this would reduce over time.

Participating authorities provided qualitative information on the impact of the method on regulatory effectiveness at the feedback workshop. The consensus was that:

- the method will be useful as a working tool for inspection planning;
- it provides a more structured approach to planning, which should help improve efficiency; and
- it would provide a good basis for justifying the level of resources required for LAPC regulation.

Concern was expressed by one trade association that use of the method might lead to a loss of environmental protection, because operators of low risk processes might conclude that they need no longer ensure compliance and would not be inspected frequently enough to identify breaches of regulation. This concern was rejected by the participating local authorities. The aim of the method is that low-risk processes should continue to be

inspected, with time allocated to regulation appropriate to their level of risk. One of the recommendations outlined in Section 5.2 is that further guidance on this point should be considered. Inspections will highlight any areas where operators are failing to meet their obligations under LAPC, leading to a revision of their score and potentially a change to their risk ranking.

***Burden on Business***

The results of the trial demonstrate that the method is unlikely to increase the overall burden on business. Instead, additional regulatory resources will be targeted at higher risk processes and less effort on those posing lower risk.

Feedback from authorities participating in the trial indicates that the method could help in more effective regulation of LAPC processes, which should have benefits for process operators. Feedback from operators during the trial indicated that 87% of operators felt that the risk category to which their process was assigned reflected the required regulatory effort. This demonstrates consensus between authorities and business that the method indicates the broadly ‘correct’ level of regulation for each process.

When the risk-based method is linked to charging, costs for some process operators will rise compared to current costs. The extent of the increase will depend on the relative charges applied to different risk categories; this is discussed further in Section 5.2. However, the burden on processes with good operator performance will be reduced and the nature of the scoring system means that operators will have the opportunity to reduce their risk category by improving the management of their process.

***Incentive for Improved Environmental Performance***

When linked to a charging regime, the method should provide an economic incentive for improved environmental performance, as higher-risk processes will face higher charges. Stage 1 of the study indicated that subsistence charges for LAPC formed only a small proportion of total air pollution costs faced by process operators; it was nevertheless concluded that linking charges to risk could provide a useful economic signal to operators. Under the revised method outlined in Annex 1, over half of the maximum total score (105 out of 175 points) is accounted for by OPA . This provides operators with significant opportunity to influence their score and risk category through improved management performance.

It was not possible during the trial, of course, to test the incentive effect of linking charges to risk category. Nevertheless, feedback from both inspectors and operators (almost 95% of respondents agreed) indicated that the method provided a useful basis for discussion of the risks posed by a process and what could be done to reduce them. A third of the operators who returned feedback forms were able to identify measures that they could take to reduce their risk ranking. This indicates that the method had already prompted some operators to think about ways in which risk could be reduced, even without the economic incentive of reduced charges.

### ***Improved Transparency and Value for Money***

The method has the potential to provide improved transparency by linking charging directly to environmental risk. Even without the link to charging, it provides transparency by justifying the level of regulatory effort devoted to each process. Use of score sheets as a basis for discussion between inspectors and operators provides an explicit indication to operators of how their performance is viewed by regulators and identifies any areas of concern. It also gives operators the opportunity to comment in cases where they believe that inspectors may have misinterpreted certain aspects of their process or performance. The majority of inspectors and operators found that the scores provided a useful basis for discussion of risk and performance.

The improved transparency provided by the method gives the opportunity for better value in regulation, by enabling both inspectors and operators to focus on the key aspects of the process or its management that give rise to risk. A number of inspectors also indicated that using the method had caused them to look again at the way in which certain authorisations had been drafted, and to consider amendments to the requirements that would better reflect the risks posed by the process.

### ***Improved Consistency in Regulation***

The issue of consistency is one that has been raised by a number of trade associations in relation to LAPC. The method addresses this issue in two ways. Firstly, the method provides an explicit link between risk and regulatory effort. This should bring greater consistency in terms of the amount of time devoted to regulation of processes with similar levels of risk.

Secondly, use of a common, simple and open, method for assessing risk should enable reasonable consistency between authorities in judging the risk associated with processes under their control. Consistency will be enhanced where the basis of scoring is discussed with operators, giving operators in different local authority areas the opportunity to compare their rankings.

The results of the trial indicate a reasonable level of consistency in scores between local authorities; the issue of consistency was also discussed at the feedback workshop. The conclusion drawn was that a range of mechanisms exists to ensure and improve consistency between local authorities in applying the method. These include DEFRA monitoring the variation in scores for particular process types across the country and the use of regional groupings of authorities. The Best Value approach encourages co-operation of this type between authorities. Recommendations on ways to ensure consistency are included within Section 5.2.

## **5.1.5 The Potential Impacts on Small and Medium Enterprises**

Discussion with inspectors at the feedback workshop indicated that the majority of LAPC processes appeared to be operated by small and medium enterprises (SMEs); however, the ultimate ownership of an enterprise may not always be apparent to an inspector. It is estimated that around 60% of the processes included in the trial were SMEs, with the

remaining 40% having over 50 employees. It should be noted, however, that many of the sites have relatively small workforces, with the parent company being a larger company (this is the case with many petrol stations, for example).

There is no evidence, from the trial, that processes operated by SMEs fall disproportionately into the higher-risk categories and would therefore face potential increases in charges if charging were linked to risk category. In discussion at the workshop, the existence of a clear link between the size of the business operating a process and the degree of risk was explicitly rejected. Furthermore, there is no statistically significant difference between the overall distribution of scores and that for companies with more than 50 employees.

There is therefore no reason to believe that use of the method would have an adverse effect on SMEs as compared to larger enterprises. Indeed, if SMEs form the majority of operators of LAPC processes, they could benefit disproportionately from the overall business benefits associated with use of the method.

## **5.2 Recommendations**

### **5.2.1 Introduction**

This section of the report provides recommendations on how the risk-based method could be taken forward. The recommendations cover:

- suggested amendments to the method, including changes to the scoring, category boundaries and guidance within the method;
- how local authorities could apply the method in practice, including frequency of revision of scores, measures to ensure consistency and the implications of the method for measuring the performance of local authorities; and
- linking the method to charging.

### **5.2.2 Suggested Amendments to the Method**

Section 4 of this report examined the impacts of a number of suggested modifications to the method arising from the trial. Our recommendations concerning these are that:

- small waste oil burners and unloading of petrol at service stations are excluded from the risk assessment method;
- the relative score for Component 1 remains unchanged;
- the maximum possible score of Component 6 is increased from 40 to 50;
- adding an additional element, breach of authorisation not leading to formal action, to Component 6;
- no change to the score for failure to monitor in line with the authorisation (part of Component 5);

- modifying the score for management systems to subtract five points for presence of a system rather than adding five points for its absence; and
- the score boundaries between regulatory effort categories are modified so that processes scoring below 40 points are classified as low risk and those above 80 points as high risk.

These suggestions have been taken into account in developing the revised version of the method, contained in Annex 1.

***Excluding Small Waste Oil Burners and Unloading of Petrol at Service Stations***

Small waste oil burners (PG1/1) and unloading of petrol at service stations (PG1/14) should be explicitly excluded from the scope of the method. These processes are recognised under the LAPC regime as requiring significantly less regulatory effort than other processes, due to their simplicity. This already reflects a form of charging related to regulatory effort and risk, so that their inclusion within the method is inappropriate.

***No Change to the Relative Score for Component 1***

Our recommendation is that the range of scores for Component 1 (inherent environmental impact, determined by the APRR) remains unchanged. This is because increasing the range of scores for this component would mean that certain processes could be allocated to medium or high categories solely on the basis of their APRR score, changing the balance between EIA and OPA in determining the overall score. This contradicts the general view of trial participants and the workshop that OPA should be given greater weight in determining the overall score than EIA. It would also limit the scope for process operators to influence their score through improved management, thus reducing the incentive effect of the method. In addition, some concerns continue to be expressed about the applicability of the APRR ranking in all cases; increasing the range of scores of this components has the potential to increase the impact of anomalies within the ranking.

***Increasing the Maximum Score for Component 6 and Adding an Additional Element***

Two changes were suggested to the former Component 6 - compliance assessment (now re-ordered as Component 5 in Annex 1). These were to increase the overall maximum score for this component from 40 to 50, to take account of processes with a high number of incidents leading to action, and to add another type of incident, a breach of authorisation not leading to formal action. These changes reflect the variation in practice in enforcement actions and the additional regulatory effort associated with a small number of 'problem' processes. They also increase the weight attached to operators' actual performance in controlling risk as opposed to the presence of risk management systems. It is recommended that both of these be incorporated within the revised version of the method.

***No change to the Score for Failure to Monitor in Line with the Authorisation***

It was also suggested that the score for failure to monitor in line with authorisation requirements (part of the former Component 5, now re-ordered as Component 6) should

be increased, as this represented a breach of the authorisation. It is recommended that this suggestion is not carried forward, as any monitoring failure resulting in a breach of the authorisation should also lead to an increased score in the compliance component, reflecting its seriousness.

### ***Modifying the Score for Management Systems***

The modification suggested in relation to the score for an appropriate environmental management system arose because such a requirement is not yet included within published Process Guidance Notes. Under these circumstances, the presence of such a management scheme should be rewarded, with a score of minus five points, rather than its absence being penalised with a score of plus five points. We recommend that this change is incorporated into the revised version of the method, until such time as Guidance Notes including a requirement for an appropriate environmental management system come into force, when scoring should revert to the previous format.

### ***Changing the Score Boundaries Between Categories***

Some concern was expressed during feedback on the trial that the distribution of processes between the risk categories, as indicated by the trial, might result in an apparent overall reduction of regulatory effort. The general consensus was that around 10% of processes posed a high level of risk. For this reason, the sensitivity of the method to changing the boundaries between risk categories was tested. As Section 4 shows, a relatively minor change in boundaries resulted in a distribution of processes between risk categories that was more in line with this expectation, whilst retaining the agreed balance between scoring categories. As the basis for selecting the original cut-off points between categories was tentative and one of the objectives of the trial was to test the boundaries, it is therefore recommended that these boundary changes are adopted so that:

- processes with a score below 40 are categorised as low risk;
- those scoring between 40 and 80 are categorised as medium risk; and
- processes scoring above 80 points are categorised as high risk.

We also recommend that, once the method is rolled out to all local authorities, DEFRA monitors the distribution of processes between categories on a regular basis, to determine whether the boundaries appear to be appropriate.

### ***Other Modifications***

In addition to the specific changes made to the method, various points were highlighted at which additional guidance would be helpful to inspectors applying the method. As far as possible, such additional guidance has been incorporated into the revised version of the method. This includes guidance on the scoring of multi-process sites, where it is recommended that each process should be scored separately where they are covered by separate authorisations.

***Implications of Suggested Amendments***

The implications of changes that have been suggested to the method were discussed in Section 4 in terms of their impacts on the distribution of processes between the regulatory effort categories. Table 5.1 summarises the implications of each of those possible changes and combinations of changes, indicating the percentage that would fall into each of the regulatory effort categories. The final Scenario, a combination of F, E, D and B, represents the recommended final version of the method. It can be seen that this results in a distribution of scores broadly in line with the expectations of inspectors and other experts.

<b>Scenarios</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
A	55%	43%	3%
B	49%	47%	3%
C	44%	50%	6%
C and B	37%	56%	7%
D	34%	55%	11%
D and C	30%	51%	20%
D and B	31%	56%	13%
D, C and B	25%	52%	23%
E and B	56%	37%	7%
E, D and B	42%	47%	10%
F, E, D and B	41%	48%	11%

*Scenario A relates to the unchanged method; Scenario B excludes processes with PG Notes PG1/1 and PG1/14; Scenario C includes revised scores for Component 1 (10, 30 and 50 points, instead of 10,20 and 30); Scenario D includes revised boundaries for determining the risk category from overall scores (<40, 40-80 and >80 points for high, medium and low respectively); Scenario E includes an altered score for appropriate management systems, whereby -5 is awarded where such a system is present (rather than +5 if a system is not present); finally, Scenario F includes an increased maximum possible score for Compliance Assessment to 50 points (instead of 40) and adding an element for “breach of authorisation not leading to formal action” (this has been estimated assuming that 2% of processes will move from the low to the medium regulatory effort category and 1% will move from medium to high).*

Consideration was also given to testing the sensitivity of the impacts of suggested changes to the Components ‘on monitoring, maintenance and records’ and on ‘management, training and responsibility’. However, the scores for these components are generally low (see Figure 3.3) with processes scoring zero for several components, indicating that performance is generally good. Altering the scores for these components, therefore, would have little effect upon the overall balance of scores.

### **5.2.3 Application of the Method in Practice**

Our recommendations on application of the method in practice are that:

- the method should be rolled out to all local authorities responsible for LAPC to provide a basis for planning of regulation;
- scores should be reviewed by local authorities on a regular basis;
- both initial scores and revisions should be discussed with process operators;
- DEFRA should review the distribution of risk categories amongst local authorities to identify any apparent inconsistencies and to check the appropriateness of boundaries;
- local authorities should investigate opportunities for co-operation in application of the method;
- consideration should be given to maintaining a minimum inspection frequency regardless of risk category; and
- DEFRA should modify its methods for measuring the performance of local authorities to take account of the method.

#### ***Rolling Out the Method to All Local Authorities***

The trial of the risk-based method has indicated that it can be used readily by local authorities with limited additional training or guidance. It is therefore recommended that the method be rolled out to all authorities responsible for LAPC. Initially, this would involve local authorities applying the method to all process that they currently regulate under LAPC in a desk-based exercise, drawing on information already available to them. The trial confirmed that the time required to do this would be 15 minutes or less per process in most cases. The scores derived would then be used as a basis for planning of regulation.

Initially, it will not be possible to link the method to charging, as this will require primary legislation. This matter is discussed further in Section 5.2.4 below.

#### ***Reviewing Scores Regularly and Discussing the with Operators***

It is recommend that risk categories for charging purposes are assessed annually. More frequent amendment of scores is likely to provide an unacceptable level of uncertainty for both operators and local authorities, as well as increasing administrative complexity. For management purposes, however, scores should be reviewed as the occasion demands and certainly revisited when new sources of information are received, for example from visits or incidents.

Initial and revised scores should normally be discussed with operators during each visit, as the trial has shown that the scores provide a useful basis for identifying key risk areas and measures that can be taken to reduce risks. Such discussions will also maintain the transparency of the method as a basis for charging in future.

### ***DEFRA Review of the Distribution of Risk Categories***

A number of measures were suggested in order to ensure consistency in application of the method between different authorities. During initial application of the method, it is recommended that DEFRA reviews the distribution of risk categories (i.e. the proportion of processes assessed as posing low, medium and high risk) amongst local authorities to identify any apparent inconsistencies.

This could be done, for example, by requiring authorities as part of the annual LAPC Statistical Survey to submit a breakdown of the percentage of processes falling into the high, medium and low categories and publish data on this. Authorities with percentages significantly different from the norm could then be asked to provide information on the types of processes falling into each category. This would enable account to be taken of authorities with a large number of processes with inherently high environmental impact potential. Where risk categories still appeared to be anomalous, further investigation could be carried out to determine whether the method was being applied incorrectly. The distribution of risk categories would also provide DEFRA with the basis for evaluating the appropriateness of the score boundaries.

### ***Local Authority Co-operation***

It is also recommended that authorities investigate and pursue opportunities for co-operation in application of the method, for example through joint training sessions, scoring of each other's processes or other forms of peer reviews. The regional groupings of local authorities that operate successfully in some areas could provide a basis for such co-operation. There may also be a potential role for professional associations, which should be examined by DEFRA and the associations.

### ***Maintaining a Minimum Inspection Frequency***

To ensure that there continues to be an adequate level of regulation for all processes, regardless of risk category, we recommend that consideration be given to maintaining a minimum inspection frequency regardless of risk category. Regulatory effort for even the low risk category should be sufficient for at least one visit per process. During the workshop, the importance of visits in verifying desk-based scores was stressed. There may also be a need for additional guidance on the content of an effective inspection; we understand that discussions on this matter are under way between DEFRA and the professional association.

## **5.2.4 Linking the Method to Charging**

Our recommendations on linking the method to charging are that:

- the method should be linked to charging by increasing or reducing the current subsistence charge for high and low risk processes respectively; and
- application of the method should not be delayed until legislation linking it to charging can be adopted; the interim period should be used to monitor its impacts.

***Increasing or Reducing the Current Subsistence Charge for High and Low Risk Processes***

The report on Stage 1 of the study indicated that the most practical way to link risk category to charging, in the absence of an accurate breakdown of local authority costs per hour of regulatory effort, was to maintain the current subsistence charge for medium risk processes and apply increases or reductions for high and low risk processes respectively. The Stage 1 report evaluated the implications of a 50% reduction in charges for low risk processes, reflecting the 50% lower regulatory effort required and a 50% increase for high risk processes, reflecting a 50% higher level of regulatory effort. Table 5.2 examines the implications of such a breakdown for the proportion of processes allocated to each risk category during the trial.

<b>Table 5.2: Implications of the Method for Total Subsistence Charge Income</b>					
	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>PG1/1,1/14</b>	<b>Total</b>
Number of processes	3,899	4,685	1,089	8,470	<b>18,142</b>
Current charges	£3,103,254	£3,729,037	£866,621	£1,024,870	<b>£8,723,782</b>
Risk based-charges	£1,551,627	£3,729,037	£1,299,932	£1,024,870	<b>£7,605,466</b>

*Note: Numbers of processes are based upon the 2000/2001 Statistical Survey. A standard subsistence charge of £791 per annum is assumed for processes to be covered by the method for the 'current charges' with the charge for petrol stations and small waste oil burners unchanged. It should be noted that these figures should be seen as indicative because they do not include, for example, the implications of multi-process sites. Actual subsistence income for 2000/2001 was £8,413,160. Numbers of processes based on 40.31% in 'low' category, 48.42% medium and 11.26% high.*

It can be seen that, based on this allocation of subsistence charges between the risk categories, the total income derived from subsistence charges would be reduced by 14.5%. This may or may not be indicative of the overall impacts of such a charging system for England and Wales, depending on whether the processes included within the trial are representative of all processes regulated under LAPC. It may, of course, be the case that the increased efficiency of inspection resulting from use of the method will enable local authorities to regulate LAPC processes more cost-effectively. This may become clearer once the method has been applied more widely by local authorities.

An alternative option would be to link risk category only to that proportion of the subsistence charge that relates to activities influenced by process risk. As the Stage 1 report indicated, there are other activities not influenced by process risk, such as training, administration, identifying processes operating without authorisation and checking the public register. Travel to processes, which can vary significantly depending upon the size and level of industrialisation of authorities, is also uninfluenced by process risk. Under this option, the proportion of total regulatory time associated with such activities would be identified; a similar proportion of the subsistence fee would be allocated to these activities. Risk-related reductions and increases in subsistence charges would then only relate to the remaining proportion of the subsistence charge. In the absence of accurate data on the relative time spent on risk-related and non risk-related activities, however, it is difficult to say what the overall impacts of this option would be.

The need for primary legislation will inevitably result in a delay in the introduction of charging based on risk ranking. We therefore recommend that DEFRA and local authorities should:

- apply the method to all their processes for management purposes, notwithstanding the initial absence of a link to charging;
- monitor the resulting distribution of processes between the three risk categories across authorities in England and Wales;
- monitor the impacts of using the method on the cost-effectiveness of LAPC regulation, to identify whether real resource savings are being made; and
- investigate further the potential impacts on local authority LAPC incomes of increasing or reducing subsistence charges in proportion to regulatory effort.

Clearly, local authorities that undertake cost accounting for time spent on LAPC regulation will be best placed to provide information on the impacts of the method on the time and resource implications of linking the method to charging.

#### ***Measuring the Performance of Local Authorities***

Currently, the main measure of local authority performance in regulating LAPC processes is the number of visits made to each process each year, compared with the DEFRA target of two visits per year. We recommend that DEFRA examines the options for a more sophisticated performance measurement system, based on the method. Potential measures that could be adopted include:

- whether the method has been applied to all relevant processes regulated by the authority;
- whether rankings have been reviewed at least annually;
- whether scores have been discussed with process operators; and
- how many visits have been made to low, medium and high ranked processes.

Data on the number of processes ranked, whether these have been reviewed annually and whether scores have been discussed with operators will provide information on whether the method is being applied as envisaged. These data could be collected through the annual Statistical Survey. If DEFRA wished to verify the extent of discussion between authorities and operators over scores it would be possible, for example, to ask a sample of operators to complete the Operator Feedback Forms developed for the trial and return them to DEFRA. There may also be a role for trade associations, for example by distributing the Operator Feedback forms to their members or otherwise canvassing their members' views.

Measuring the link between the number of visits and the rank awarded to processes is an imperfect measure, as the number of visits provides only a partial proxy for regulatory effort. However, in the absence of accurate time recording by many local authorities, it will be difficult to link risk category to actual regulatory effort directly. Linking

frequency of visits, which is already included within the Statistical Survey, to risk category, which we have recommended should be included in future, at least provides a crude indication of whether risk category is being used as a basis for regulatory planning.

**ANNEX 1**

**PROPOSED RISK ASSESSMENT METHOD**



## **A1.1 Introduction**

### **A1.1.1 Overview of the Risk Assessment Method**

This risk assessment method is intended for use by local authorities in determining the relative level of risk associated with processes regulated under the Local Air Pollution Control regime. The method assigns a level of proposed 'regulatory effort' to individual processes (high, medium or low) according to their relative risks. The method relates to effort expended in regulating processes once they have been authorised (i.e. what is covered by the *subsistence* element of the LAPC fees and charges).

Risk assessment using this method is based upon both the nature of the process and the way in which it is managed; it is divided into two parts:

1. **Environmental Impact Appraisal (EIA)**, which concerns the potential environmental impacts of a process according to its type, level of upgrading to meet regulatory requirements, and its location.
2. **Operator Performance Appraisal (OPA)**, which relates to how well the operator manages the potential environmental impact of the process.

Each of these aspects is evaluated by scoring the process against a number of different components. These components are listed below, together with guidance on how they should be applied and their implications for regulatory planning. Where a component is not relevant, a score of zero should be awarded. An example score sheet is provided to record the scores for each process<sup>1</sup>.

Under the LAPC regime, small waste oil burners (PG1/1) and unloading of petrol at service stations (PG1/14) are recognised to require significantly less regulatory effort than other processes. This is due to the relative simplicity of these processes and because specimen applications and authorisations are provided for authorities. DEFRA already categorises these processes in a lower charging band and also expects that the frequency of inspection should be less than for other processes. Therefore, the method should not be applied to these two process types.

### **A1.1.2 Use of the Risk Assessment Method**

Set out below is the proposed approach that local authorities should take in applying the risk assessment method and utilising the results in determining regulatory effort.

**Step 1 Desk-based scoring of processes.** All of the Part B processes under an authority's control should be scored using the risk assessment method, based on information held on file, together with officers' knowledge of the processes concerned. The output will be a series of scores for different attributes and allocation of the process to a risk category, which is linked to the regulatory effort required by the process.

---

<sup>1</sup> Each of the possible scoring options is given a unique scoring identifier. Thus, a process falling into risk rating 'category 2' under component 1 and with highly sensitive receptors less than 100m away can be identified as 1-B, 3-A-x.

**Step 2 Use the score sheets during visits to selected processes.** Where scheduled visits to processes are undertaken, the scoring should be used as a basis for discussion with operators. Where possible, a copy of the methodology and draft completed score sheet should be provided to the operator prior to the visit. The completed score sheet should be shown to the operator and the scores discussed with them, together with any action that could be taken to reduce their scores and risk category. It is envisaged that this should not add significantly to the length of the visit but should provide a focus for discussion.

**Step 3 Use the scoring to determine regulatory effort.** Section A1.4 provides guidance on how the results of the risk assessment method should normally be used in determining the level of resources to be devoted to the subsistence activities of processes.

**Step 4 Review scores on a regular basis.** Scores for each process should be reviewed on a regular basis, and at least annually. In particular, scores should be reviewed following visits, any changes to the authorisation, receipt of complaints or when enforcement action is taken.

In cases where an operator carries out activities requiring more than one authorisation at any given location, a separate assessment should be carried out for each authorisation. However, where a single authorisation covers more than one process type (Process Guidance Note), only one assessment is required.

## **A1.2 Environmental Impact Appraisal**

### **A1.2.1 Component 1: Inherent Environmental Impact Potential of Process**

This component of the methodology reflects the fact that certain *process types* have inherently greater potential environmental impacts than others and may thus require greater regulatory effort.

The Advisory Panel on Risk Ranking (APRR) has rated the various processes, as defined by the relevant PG Note(s), into three categories according to their inherent environmental impact potential. The rating is provided in the Appendix to this Annex.

Where more than one PG Note is used in deriving a single authorisation, authorities should base the assessment on the PG Note that is the main one used for the purposes of determining BAT/BATNEEC for the process. However, where there are combined processes as provided for in the rules in Schedule 2 of the Environmental Protection (Prescribed Processes and Substances) Regulations, the PG Note with the highest risk rating should be used.

<b>Risk Rating</b>	<b>Score Awarded</b>
(A) Category 1	10
(B) Category 2	20
(C) Category 3	30

### **A1.2.2 Component 2: Progress with Upgrading**

This component of the methodology assesses the extent to which a process has been upgraded to comply with the BATNEEC requirements set out in the process's authorisation. Not only may processes that have not completed upgrading pose a greater potential risk; they are also likely to require more regulatory effort in monitoring progress with the upgrading. Conversely, processes that exceed current BATNEEC requirements will pose reduced risks and may require less regulatory effort.

There are four possible classifications for scoring of processes:

- upgrading to meet the requirements of the authorisation is not yet complete, due to the Guidance Note deadline not yet having been reached;
- upgrading is not yet complete for other reasons, such as variations to the process and the Guidance Note deadline has passed;
- upgrading is complete and the process meets all of the current applicable BATNEEC requirements; or
- emissions control not only meets current BATNEEC requirements but goes beyond those requirements, resulting in lower emissions (for example, where improved emissions arrestment plant has been adopted voluntarily in plant already meeting BATNEEC requirements or where Process Guidance Note requirements are met over a year before the due date).

The nature and extent of upgrading required, or the degree to which BATNEEC is exceeded, may vary considerably amongst processes. However, to ensure objectivity and consistency, the same scores should be awarded on regardless of the magnitude these factors. Past failure to complete upgrading within the required time should not be included in this Component.

<b>Status of Upgrading</b>	<b>Score</b>
(A) Upgrading not complete but PG Note deadline has yet to be reached	5
(B) Upgrading not yet complete and PG Note deadline has passed	10
(C) Upgrading complete and meets BATNEEC Requirements	0
(D) Emissions control exceeds BATNEEC Requirements	-10

### **A1.2.3 Component 3: Sensitivity and Proximity of Receptors**

This component assesses the extent to which any ‘receptors’ in the vicinity of a process could be impacted by emissions from the process. This will be determined by the sensitivity of the receptors in question (their number or the particular importance attached to them) and also by their proximity to the process. This component is not intended to reflect the nuisance potential of a process, and thus the potential for complaints (this is included under the ‘Compliance Assessment’ component below), but rather the potential for *physical* harm to the receptors in question.

The sensitivity of receptors is classified as high, medium or low:

- **high** - schools, residential areas, hospitals, designated environmental areas (e.g. SSSIs);
- **medium** - offices, isolated residences, major roads, footpaths/cycle paths, agricultural land; and
- **low** - public open space, minor roads, industrial areas, car parks, derelict land.

The distances used to determine proximity are based upon the distances up to which statutory consultation is required where SSSIs are near to Part B processes (based on General Guidance Note GG3). Whilst in practice the distances at which different receptors are affected will vary according to the receptor and the pollutant in question, these standard distances are used in order to assure simplicity and consistency in application of the method.

Scores are awarded according to a combination of the sensitivity of receptors and their proximity to the emission source. The highest possible score is awarded, which may not necessarily be the score for the most sensitive receptor. For example, where there is a high sensitivity receptor 300m away and a medium sensitivity receptor 150m away, the respective scores are 5 and 10 and the latter is the score awarded.

<b>Table A1.3: Scoring for Component 3 - Sensitivity and Proximity of Receptors</b>			
<b>Proximity to Emission Source</b>	<b>Sensitivity of Receptors</b>		
	<b>(x) High</b>	<b>(y) Medium</b>	<b>(z) Low</b>
(A) < 100m*	20	12	5
(B) 100 - 250m*	12	10	3
(C) 250 - 500m*	5	3	1
(D) >500m*	0	0	0

\* All distances should be multiplied by a factor of 2 for mineral and cement & lime processes and by a factor of 4 for combustion, incineration (not cremation), iron & steel and non-ferrous metal processes.  
 Note: Distances should be measured from the process itself, rather than the site boundary.

**A1.2.4 Component 4: Other Targets**

An additional 10 points should be scored if there are particular air pollution problems in the local area to which the process is a potential contributor; for example, where an Air Quality Management Area has been established for a pollutant that is emitted from the process in question.

<b>Table A1.4: Scoring for Component 4 - Other Targets</b>	
	<b>Score</b>
(A) Other air pollution problems in the local area to which process is a potential contributor	10
(B) No such air pollution problems	0

## A1.3 Operator Performance Appraisal

### A1.3.1 Component 5: Compliance Assessment

This section relates to any incidence of non-compliance that has occurred in the twelve months immediately preceding the assessment or review of the assessment. Compliance is assessed in terms of individual incidents; a single incident that led to a number of justified complaints should be scored as being one incident. For each incident, a score is awarded according to the level of regulatory action required<sup>2</sup>. If there has been no non-compliance, a score of zero is awarded.

For example, a hypothetical cement process received three justified complaints on three separate occasions around eight months ago from local residents. The emissions leading to the justified complaints were caused by repeated failures of a bag filter, which was remedied by the operator replacing the filter bags. The process also received an enforcement notice nine months ago in relation to a failure to record emissions in the log book. The score would be 15 points for the justified complaints and 15 points for the enforcement notice, giving a total of 30 points.

- The maximum possible score is 50 points; for example, a score of 50 points will be awarded even where there have been more than ten incidents leading to justified complaints. This is to ensure that scores for non-compliance do not distort the overall scores.
- Only air pollution related incidents should be included under this component (i.e. general nuisance or noise related incidents are not covered).
- All incidents that have occurred within the twelve months immediately preceding the assessment or review of the assessment should be included.
- Where a justified complaint has been received but no incident leading to non-compliance has occurred, no score should be awarded. The process operator should not be penalised under this component if they are in compliance with the authorisation and the general/residual BATNEEC condition.

<b>Table A1.5: Scoring for Component 5 - Compliance Assessment</b>	
<b>Scale of Non-Compliance</b>	<b>Score</b>
(A) Incident leading to justified complaint but no breach of any specific authorisation condition or of the general/residual BATNEEC condition	0 points
(B) Incident leading to a justified complaint*	5 per incident
(C) Breach of authorisation not leading to formal action	10 per incident
(D) Incident leading to formal caution, Enforcement Notice or prosecution	15 per incident
(E) Incident leading to a Prohibition Notice	20 per incident
<b>Total</b>	<b>(Max. 50)</b>
* <i>Unjustified complaints may be e.g. those considered by the inspector to be unreasonable or which cannot be clearly linked to an incident at the process.</i>	

<sup>2</sup> For administrative purposes, processes may be identified using the number of incidents under each category. For example, a process having two incidents leading to a justified complaint and one leading to a formal caution would be identified as 5-B2,D1.

**A1.3.2 Component 6: Monitoring, Maintenance and Records**

This component concerns the monitoring activity required to be undertaken by the process operator, the maintenance programme for pollution control equipment (as specified in the authorisation), and the record keeping undertaken by the operator

Where any of the elements is not applicable, a score of zero should be awarded. Where the authority has chosen to undertake monitoring itself, operators should not be awarded an adverse score (unless they have failed to meet **their own** obligations).

<b>Table A1.6: Scoring for Component 6 - Assessment of Monitoring, Maintenance and Records</b>			
<b>Criterion</b>	<b>Score</b>		
	<b>(x) Yes</b>	<b>(y) No</b>	<b>(z) N/A</b>
(A) All monitoring undertaken to the degree required in the authorisation? <sup>1</sup>	0	10	0
(B) Monitoring requirements reduced because results over time show consistent compliance?	-5	0	0
(C) Process operation modified where any problems indicated by monitoring?	0	5	0
(D) Fully documented and adhered to maintenance programme, in line with authorisation?	0	5	0
(E) Full documented records as required in authorisation available on-site?	0	5	0
(F) All relevant documents forwarded to the authority by date required? <sup>1</sup>	0	5	0
<b>Total score</b>	<b>(-5 to 30)</b>		
<sup>1</sup> <i>These aspects relate to the operator's performance within the <u>twelve months</u> immediately preceding the assessment or review of the assessment. Failure to monitor to the degree required or to forward documents on time more than twelve months ago should be excluded.</i>			

### **A1.3.3 Component 7: Management, Training and Responsibility**

This component assesses whether documented procedures for implementing all aspects of the authorisation are in place, with responsibility allocated to particular staff members. The extent of documentation may vary, particularly for smaller processes.

Additional points are awarded where an ‘appropriate’ environmental management system is in place. Guidance on what constitutes an ‘appropriate’ management system is given below.

***Interpretation of ‘appropriate’ management systems***

*“It is ... desirable that processes put in place some form of structured environmental management approach, whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme [EMAS]) or by setting up an environmental management system (EMS) tailored to the nature and size of the particular process. Process operators may also find that EMS will help identify business savings.*

*Local enforcing authorities should use their discretion, in consultation with individual process operators, in agreeing the appropriate level of environmental management. Simple systems which ensure that LAPC considerations are taken account of in the day-to-day running of a process may well suffice, especially for small and medium-sized enterprises. While authorities may wish to encourage wider adoption of EMS, it is outside the legal scope of an LAPC authorisation/LAPPC permit to require an EMS for purposes other than LAPC/LAPPC compliance.”*

*Source: Process Guidance Note Draft PG3/8(2001) - Quarry Processes. 02/11/2001. DEFRA website ([www.defra.gov.uk](http://www.defra.gov.uk)). (The full text included in the proposed amendments to the PG Notes is included in Annex 6 to this report).*

**Table A1.7: Scoring for Component 7 - Assessment of Management, Training and Responsibility**

<b>Criterion</b>	<b>Score</b>		
	<b>(x) Yes</b>	<b>(y) No</b>	<b>(z) N/A</b>
(A) Documented procedures in place for implementing all aspects of the authorisation?	0	5	0
(B) Specific responsibilities assigned to individual staff for these procedures?	0	5	0
(C) Completion of individual responsibilities checked and recorded by the company?	0	5	0
(D) Documented training records for all staff with air pollution control responsibilities?	0	5	0
(E) Trained staff on site throughout periods where potentially air-polluting activities take place?	0	5	0
(F) Is an ‘appropriate’ environmental management system in place?	-5	0	0
<b>Total</b>	<b>(-5 to 25)</b>		

*Note: In relation to the last criterion, when the relevant PG Note has been updated to include guidance on ‘appropriate’ management systems, processes should be scored zero (0) if such a system is in place and five (+5) if such a system is **not** in place. DEFRA and NAW envisage that guidance on appropriate management systems be standard in all of the next generation PG Notes (these will have effect by the end of 12 months from the date of publication of the relevant PG Note).*

## **A1.4 Overall Scoring and Determining Regulatory Effort**

### **A1.4.1 Overall Scoring**

The overall score for a process is obtained by summing the scores for each component. The table below summarises the maximum possible scores under each of the components. The total maximum score is 175.

<b>Assessment Component</b>	<b>Minimum Score</b>	<b>Maximum Score</b>
<i>Environmental Impact Appraisal</i>		
1. Inherent Environmental Impact Potential of Process	10	30
2. Progress with Upgrading	-10	10
3. Sensitivity and Proximity of Receptors	0	20
4. Other Targets	0	10
<i>Operator Performance Appraisal</i>		
5. Compliance Assessment	0	50
6. Monitoring, Maintenance and Records	-5	30
7. Management, Training and Responsibility	-5	25
<b>Total</b>	<b>-10</b>	<b>175</b>

### **A1.4.2 Determining the Level of Regulatory Effort**

The result of the risk assessment can then be used to determine the appropriate level of 'regulatory effort' to be devoted to the *subsistence* aspects of a process. The total score awarded places the process in one of three *regulatory effort categories*, as follows:

1. A process scoring less than 40 points is categorised as 'Low'.
2. A process scoring between 40 and 80 is 'Medium'.
3. One scoring over 80 points is 'High'.

The table below gives an indication of the amount of regulatory effort that could be devoted to the process in question, depending upon the regulatory effort category.

<b>Overall Score</b>	<b>Regulatory Effort</b>	
	<b>Category</b>	<b>Hours per Year*</b>
Less than 40	Low	9 to 15
40 to 80	Medium	18 to 30
Over 80	High	27 to 45

*\* Estimated average regulatory time per process varies from 18 to 30 hours per year*

Regulatory effort refers to the time taken to regulate a process that is dependent upon the process characteristics. This includes both time spent on inspections and time spent at the office preparing for inspections, writing reports and reviewing data supplied by operators. The average regulatory time spent per process varies from 18 to 30 hours per year.

Where a process requires 'high' regulatory effort, this may imply longer and/or more frequent visits; for example visits twice a year rather than annually. Where 'low' regulatory effort is required, this may imply shorter and/or less frequent visits. Inspectors will need to judge for each process how the estimated regulatory time can best be spent to maximise the efficiency of regulation. Note that it is not intended that application of the risk-based method should lead to a significant reduction in overall regulatory effort; rather effort should be prioritised towards those processes posing the greatest risk of environmental pollution.

**Appendix: Classification of Processes by Advisory Panel on Risk Ranking (APRR)**

Table A1.10, below, provides a ranking of processes based on their inherent environmental impact potential. Process categories are placed in one of the following three categories, taking into account potential for contained and/or fugitive emissions, for health impacts, for environmental impacts and potential for ‘offensiveness’ impacts:

**Category 1** Processes with an inherent environmental impact potential that was lower/below average when compared with other Part B processes.

**Category 2** Processes with an inherent environmental impact potential that was medium/average when compared with other Part B processes.

**Category 3** Processes with an inherent environmental impact potential that was higher/above average when compared with other Part B processes.

<b>Table A1.10: Risk Rating of LAPC Processes According to APRR</b>	
<b>Process guidance note</b>	<b>Category</b>
PG1/1(95)-waste oil burners, <0.4MW	1
PG1/2(95)- waste recovered oil burners, less than 3MW	2
PG1/3(95)-boilers and furnaces, 20-50MW	1 - gas fed 2 - other fuel
PG1/4(95)-gas turbines, 20-50MW	1
PG1/5(95)-compression ignition engines, 20-50MW	1
PG1/10(92)-waste derived fuel combustion <3MW	3
PG1/11(96)-reheat, heat treatment furnaces, 20-50MW	2
PG1/12(95)-combustion of solid waste 0.4 to 3MW	3 - WID 2 - non-WID
PG1/13(96) storage, loading, unloading petrol at terminals	3
PG1/14(96)-unloading petrol into storage at service stations	1
PG1/15(97)-odorising natural gas, liquefied petroleum gas	1
PG2/1(96)-furnaces to extract non-ferrous metal from scrap	3
PG2/2(96)-hot dip galvanising	2
PG2/3(96)-electrical and rotary furnaces	Reverberatory/Rotary - 3 Gas/electric fed - 1* Crucible oil fed - 2 Crucible gas fed - 1
PG2/4(96)-iron, steel, non-ferrous metal foundry processes	3 - core making, chemically bonded moulds, thermally reclaimed sand 2* - all other processes
PG2/5(96)-hot and cold blast cupolas	3
PG2/6(96)-aluminium and aluminium alloy processes	2 - ingots and in house clean scrap used 3 - other scrap used

<b>Table A1.10: Risk Rating of LAPC Processes According to APRR</b>	
<b>Process guidance note</b>	<b>Category</b>
PG2/7(96)-zinc and zinc alloy processes	2 - ingots and in house clean scrap used 3 - other scrap used
PG2/8(96)-copper and copper alloy processes	2 - ingots and in house clean scrap used 3 - other scrap used
PG2/9(96)-metal decontamination processes	3
PG3/1(95)-blending, packing, loading and use of bulk cement	1
PG3/2(95)-manufacture of heavy clay and refractory goods	3
PG3/3(95)-glass (exc. lead glass) manufacturing processes	3
PG3/4(95)-lead glass manufacturing processes	3
PG3/5(95)-coal, coke, coal product and petroleum coke	1 - Bagging plant 2 - all others processes
PG3/6(95)-polishing, etching of glass etc using HF acid	3
PG3/7(95)-exfoliation of vermiculite and expansion of perlite	1
PG3/8(96)-quarry processes	1*
PG3/12(95)-plaster processes	1
PG3/13(95)-asbestos processes	3
PG3/14(95)-lime processes	1
PG3/15(96)(a)- roadstone coating	3 - WID 2 - non-WID/non gas fed 1 - gas fed
PG3/15(96)(b)-mineral drying	2 - non gas fed 1 - gas fed
PG3/16(96)-mobile crushing and screening	1
PG3/17(95)-china and ball clay +spray drying of ceramics	1 - spray dryers 2 - Ball/China clay processes
PG4/1(95)o- surface treatment of metals	2
PG4/2(96)o- manufacture of fibre reinforced plastics	3
PG5/1(95)-clinical waste incineration < 1 tonne/hour	3
PG5/2(95)- crematoria	3
PG5/3(95)-animal carcass incineration < 1 tonne an hour	3
PG5/4(95)-general waste incineration < 1 tonne an hour	3
PG5/5(91)-sewage sludge incineration < 1 tonne an hour	3
PG6/1(00)-processing of animal remains and byproducts	3
PG6/2(95)-manufacture of timber and wood-based products	1
PG6/3(97)-chemical treatment, timber, wood-based products	1
PG6/4(95)- manufacture of particleboard and fibreboard	3
PG6/5(95)-maggot breeding	3

<b>Table A1.10: Risk Rating of LAPC Processes According to APRR</b>	
<b>Process guidance note</b>	<b>Category</b>
PG6/7(97)-printing and coating of metal packaging	2
PG6/8(97)-textile and fabric coating and finishing	2
PG6/9(96)-manufacture of coating powder	2
PG6/10(97)-coating manufacturing	2
PG6/11(97)-manufacture of printing ink	2
PG6/12(91)-production of natural sausage casings, tripe, etc	2
PG6/13(97)-coil coating	2
PG6/14(97)-film coating	2
PG6/15(97)-coating in drum manufacture and reconditioning	2
PG6/16(97)-printworks	2*
PG6/17(97)-printing of flexible packaging	2
PG6/18(97)-paper coating	2
PG6/19(97)-fish meal and fish oil	3
PG6/20(97)-paint application in vehicle manufacturing	2
PG6/21(96)-hide and skin	2
PG6/22(97)-leather finishing	2
PG6/23(97)-coating of metal and plastic	2
PG6/24(96)-pet food manufacturing	2 - cooking involved in process 1 - no cooking involved in process
PG6/25(97)-vegetable oil extraction, fat and oil refining	2 - vegetable oil processes 3 - heat refining processes
PG6/26(96)-animal feed compounding	2
PG6/27(96)-vegetable matter drying	2
PG6/28(97)-rubber	3 - carbon black used in process 2 - all others processes
PG6/29(97)-di-isocyanate	3
PG6/30(97)-production of compost for mushrooms	2
PG6/31(96)-powder coating (including sheradizing)	1
PG6/32(97)-adhesive coating	2
PG6/33(97)-wood coating	2
PG6/34(97)-respraying of road vehicles	1*
PG6/35(96)-metal and other thermal spraying	2
PG6/36(97)-tobacco processing	2
PG6/40(94)-coating, recoating of aircraft and components	2
PG6/41(94)o-coating and recoating of rail vehicles	2

<b>Process guidance note</b>	<b>Category</b>
PG6/42(94)o-bitumen and tar	3 - coal tar, oxidised bitumen and cutback bitumen processes 1 - asphalt processes
IPR 4/17 Chemical storage	3
<i>WID - Process will come under the Waste Incineration Directive</i> <i>Non WID - Process will not come under the Waste Incineration Directive</i> <i>* - Where a particular process is large for the sector and, in the judgement of the EHO, this has significant impacts for risk, the ranking should be increased by one category.</i>	



# Risk Assessment Method for Local Air Pollution Control Score Sheet

Name of Process Operator \_\_\_\_\_

PG Note \_\_\_\_\_

Inspector's Name \_\_\_\_\_

Date \_\_\_\_\_

## Environmental Impact Appraisal

Component 1 - Inherent Environmental Impact Potential		
APRR Risk Rating Category	Possible Scores	Score Awarded
(A) Category 1	10	
(B) Category 2	20	
(C) Category 3	30	

Component 2 - Progress with Upgrading		
Status of Upgrading	Possible Scores	Score Awarded
(A) Upgrading not complete but PG Note deadline has yet to be reached	5	
(B) Upgrading not yet complete and PG Note deadline has passed	10	
(C) Upgrading complete and meets BATNEEC Requirements	0	
(D) Emissions control exceeds BATNEEC Requirements	-10	

Component 3 - Sensitivity and Proximity of Receptors (circle appropriate score)			
Proximity to Emission Source	Sensitivity of Receptors		
	(x) High	(y) Medium	(z) Low
(A) < 100m*	20	12	5
(B) 100 - 250m*	12	10	3
(C) 250 - 500m*	5	3	1
(D) >500m*	0	0	0

\* All distances should be multiplied by a factor of 2 for mineral and cement & lime processes and by a factor of 4 for combustion, incineration (not cremation), iron & steel and non-ferrous metal processes.  
Note: Distances should be measured from the process itself, rather than the site boundary.

Component 4 - Other Targets		
	Possible Scores	Score Awarded
(A) Other air pollution problems in the local area to which process is a potential contributor	10	
(B) No such air pollution problems	0	

<b>Total Score for Environmental Impact Appraisal</b>	<b>Range 0 to 70</b>	
---	----------------------	--

## Operator Performance Appraisal

Component 5 - Compliance Assessment		
Scale of Non-Compliance	Possible Scores	Scores Awarded
(A) Incident leading to justified complaint but no breach of specific authorisation condition or of general/residual BATNEEC condition	0 points	
(B) Incident leading to a justified complaint*	5 per incident	
(C) Breach of authorisation not leading to formal action	10 per incident	
(D) Incident leading to formal caution, Enforcement Notice or prosecution	15 per incident	
(E) Incident leading to a Prohibition Notice	20 per incident	
<b>Total</b>	<b>(Max. 50)</b>	

\* *Unjustified complaints may be e.g. those considered by the inspector to be unreasonable or which cannot be clearly linked to an incident at the process.*

Scoring for Component 6 - Assessment of Monitoring, Maintenance and Records				
Criterion	Possible Scores			Score Awarded
	(x) Yes	(y) No	(z) N/A	
(A) All monitoring undertaken to the degree required in the authorisation?	0	10	0	
(B) Monitoring requirements reduced because results over time show consistent compliance?	-5	0	0	
(C) Process operation modified where any problems indicated by monitoring?	0	5	0	
(D) Fully documented and adhered to maintenance programme, in line with authorisation?	0	5	0	
(E) Full documented records as required in authorisation available on-site?	0	5	0	
(F) All relevant documents forwarded to the authority by date required?	0	5	0	
<b>Total score</b>	<b>(-5 to 30)</b>			

Component 7 - Assessment of Management, Training and Responsibility				
Criterion	Possible Scores			Scores Awarded
	(x) Yes	(y) No	(z) N/A	
(A) Documented procedures in place for implementing all aspects of the authorisation?	0	5	0	
(B) Specific responsibilities assigned to individual staff for these procedures?	0	5	0	
(C) Completion of individual responsibilities checked and recorded by the company?	0	5	0	
(D) Documented training records for all staff with air pollution control responsibilities?	0	5	0	
(E) Trained staff on site throughout periods where potentially air-polluting activities take place?	0	5	0	
(F) Is an 'appropriate' environmental management system in place?	-5	0	0	
<b>Total</b>	<b>(-5 to 25)</b>			

<b>Total Score for Operator Performance Appraisal</b>	<b>Range -10 to 105</b>	
---	-------------------------	--

<b>OVERALL SCORE FOR THE PROECSS</b>	<b>Range -10 to 175</b>	
<b>REGULATORY EFFORT CATEGORY</b>	<b>LOW, MED, HIGH</b>	

**ANNEX 2**

**MATERIALS PROVIDED TO PARTICIPANTS**



Head of Pollution Control

PAUL BARRETT  
POLICY ADVISOR  
AIR & ENVIRONMENTAL QUALITY DIVISION

DEPARTMENT FOR ENVIRONMENT,  
FOOD AND RURAL AFFAIRS  
4/G9  
ASHDOWN HOUSE  
123 VICTORIA STREET  
LONDON SW1E 6DE

DIRECT LINE: 020 7944 6333  
FAX: 020 7944 6329  
GTN CODE: 3533 6333  
E-MAIL: paul.barrett@defra.gsi.gov.uk

OUR REF: AQ 1/1/142

20 JUNE 2001

Dear Head of Pollution Control,

**Environmental Protection Act 1990, Part I –  
Trial of risk based method for Local Air Pollution Control (LAPC)**

This letter relates to the work of your **air pollution team**. I am seeking your authority's participation in a trial of a risk assessment method for LAPC, which is intended to target regulatory effort where it is most needed. You will shortly be receiving a phone call from Risk and Policy Analysts Ltd, consultants employed by the Department, to talk to you about the trial and to explain what is involved.

The trial follows up work started last year to design a method for the risk assessment of LAPC processes. An executive summary of this work is attached in **Annex A**. A full copy of the report can be found at: <http://www.environment.detr.gov.uk/consult/airq/laqm/lapc1/index.htm> (a paper copy can be provided upon request).

The report recommends a practical evaluation of Method 3, set out in the previous report, to be done by a selected number of authorities. We raised the issue at the last IPLC meeting with local authorities on 15 May 2001 who endorsed our proposal to seek 14 authorities to take part in the trial.

**Annex B** briefly outlines what will be involved in the trial. Risk and Policy Analysts Ltd., will send detailed information about the trial if you agree to take part.

The CIEH have confirmed that **Core CPD points** will be available for taking part in an end of trial consultation with authorities to assess their experience with the method (see Annex B).

The information that you provide will be used for the above-mentioned purpose, and summaries of the information provided from all 14 authorities may be publicly available. But we will at no stage identify any of the information as connected with your authority except (unless you specifically ask that we do not) we may share your data with the Local Government Association.



INVESTOR IN PEOPLE

We would be grateful if you were to agree to your LAPC officers being involved. The work is important to the future of LAPC and would give your authority foresight and experience of the risk based method we intend authorities to use to deliver their LAPC duties. Your authority will have the advantage of doing this work with full technical support from our consultants. The group of authorities taking part will be called the ***Risk Based Method Trials Group***. We will of course send you a copy of the report, which ought to be helpful to you in terms of benchmarking against the other authorities taking part.

Please contact me if you wish to clarify any of these details.

Yours sincerely,

**PAUL BARRETT**

## EXECUTIVE SUMMARY

### 1. Overview

This report provides the results of Stage 1 of a study conducted by Risk & Policy Analysts Ltd. (RPA) for the Air and Environment Quality Division of the Department of the Environment, Transport and the Regions (DETR) in partnership with the National Assembly for Wales and the Department of Trade and Industry. The study is concerned with the development of a risk assessment method for use by local authority inspectors under the local air pollution control (LAPC) regime.

DETR wishes to consider options for changing the essentially standard current rates of fees and charges for LAPC processes to a system whereby fees and charges are levied based on a risk assessment system linked to regulatory effort. The advantages of such a risk-based scheme include the following:

improved transparency and value for money for regulated businesses, since regulatory effort and fees would better reflect the risk to air pollution posed by individual processes or process categories;

reduced regulatory burden on business through targeting of resources to those which pose most of a risk (although proper environmental regulation would need to be retained);

a reduced burden on local authorities, enabling more effective delivery of their obligations under the best value regime; and

improved consistency in regulation.

### 2. Approach to the Study

Various risk assessment methods in use for environmental protection and in other fields have been appraised in terms of their applicability to the LAPC regime. Criteria that could be used for LAPC processes were then considered, taking into account the many variables in the LAPC system and differences between LAPC and other fields.

Four possible risk assessment methods have been developed which vary according to their complexity and the length of time required to undertake the assessment. They also vary according to the degree to which expert judgement is required. Furthermore, the methods vary according to the relative importance given to two key attributes of process risk which are an operator's performance in managing environmental pollution and the inherent environmental impact potential of a process. These four methods are as follows:

*Method 1* involves a crude risk rating of process categories based upon available statistical data. The relative ratings of processes are not considered to be robust but are used as a basis for illustration of the use of such an approach.

*Method 2* is a simple screening approach, involving the use of the risk rating in Method 1 for allocation of a baseline score for the various process categories. Individual processes are then

further classified according to the number of complaints received and the degree of compliance with the process authorisation.

*Method 3* again employs Method 1's risk rating for a baseline score. However, various further attributes are used to address aspects of a process's potential environmental impact and the performance of the operator. This method reflects the methodology of Operator and Pollution Risk Appraisal (OPRA) for IPC (Integrated Pollution Control) processes but is based upon criteria that are less open to subjective judgements, in line with the approach used in 'OPRA for Waste'.

*Method 4* is essentially the same as OPRA for IPC processes, with modifications to take into account the differences between IPC and LAPC processes.

A seminar was held to discuss the potential application of these methods and to consider which might prove the most suitable. This was attended by representatives of industry, local enforcing authorities and central government.

The output of each of the methods is an assessment of the level of 'regulatory effort' required by each process or type of process. This is then linked to the costs of regulation, in terms of inspector time, which in turn can be used to determine the level of charges payable. The costs and benefits of the different methods are assessed in terms of their potential impacts on regulator and industry costs and the extent to which they provide an incentive for more efficient regulation and improved environmental performance.

### **3. Conclusions and Recommendations**

An overall analysis of each method has been carried out against various assessment criteria. On the basis of this analysis, together with the findings of the seminar, it is recommended that further practical evaluation of the use of a risk assessment method for LAPC is carried out. The most appropriate method for further testing is Method 3.

The key change required to the method would be the development of an alternative approach to the current risk rating of process categories (as in Method 1, which also provides an input to Method 3). The suggested alternative is to draw together a panel of experts, including representatives of local authorities with experience in LAPC enforcement, to agree a ranking for process categories based on their inherent environmental impact potential.

It is understood that amendments to primary legislation would be required in order to change the basis of charges under LAPC to be risked-based. In the first instance, therefore, the emphasis of the guidance should be on using the risk assessment method in resource allocation for regulatory effort. This will enable the accuracy of the method in linking risk assessment to regulatory effort to be evaluated, before it is used to determine charge rates. It will also enable certain questions regarding the applicability of the assessment method to be addressed, such as whether allocation of scores between risk categories is appropriate and to determine the appropriate intervals for revision of risk assessments.

It is clear from our analysis, and the seminar findings, that a range of factors may influence the costs and benefits associated with use of a risk assessment method. One key factor is the number and range of processes regulated by a local authority (and, related to this, the number and

experience of staff). Practical evaluation should therefore be designed to ensure that it includes a range of authorities with different characteristics.

Because full testing of the method will require accurate accounting for time spent on inspection, it may be simpler to focus practical evaluation on local authorities that have already introduced cost accounting. This, however, might skew the testing towards the more efficient authorities. Whilst this could be helpful in demonstrating best practice in use of the method, it would limit the potential to judge whether use of the method could help improve inspection efficiency.

It has so far only been possible to test the methodology on a small number of (fictional) processes. The practical evaluation should also aim to cover as full a range of process types as possible. It should also cover both 'good' and 'poor' operators in terms of environmental performance; this can best be achieved by applying the method to all of the processes regulated by selected local authorities.

The applicability of the method to the full range of inspector activities, including new applications as well as existing processes, should also be tested as far as possible.

**Outline of trial**

Fourteen authorities have been selected today (chosen as a random stratified sample), including yourselves, to ask for your help in the trials of a risk based method for LAPC. This trial provides the opportunity for your authority to help develop LAPC policy and the final risk based method.

Our selected consultants, Risk and Policy Analysts Limited, will carry out the trial. The trial will take place over a period of five months from July, and will involve local authorities using the risk based method on up to 50 of their authorised Part B processes, depending upon the number your authority has. Authorities will then report back to the consultants using a simple questionnaire for each process. Where visits are due to be made during the trial period to processes on which the risk based methods have been used, local authorities will be asked to use the method as a basis for discussion with the operator. Both the operator and the authority will then complete a simple questionnaire.

There will be initial consultation between the consultants and each authority to outline the method and to explain the record keeping procedures that will be required during the assessment. The consultants will be available to answer any queries you have concerning the method during the trial. There will also be an end of trial consultation with authorities to assess their experience with the method. This may include a one-day meeting in London to provide an opportunity to share experiences.

**Consultants contact details:**

Risk & Policy Analysts Ltd  
Farthing Green House  
1 Beccles Road, Loddon  
Norfolk, NR14 6LT, UK  
Telephone: 01508 528465  
Fax: 01508 520758  
Email: [caspar@rpaltd.demon.co.uk](mailto:caspar@rpaltd.demon.co.uk)

## **1. TRIAL OBJECTIVES AND SCOPE**

### **1.1 Objectives**

In November 2000, Risk & Policy Analysts Ltd (RPA) reported to the Department for Environment, Food and Rural Affairs (DEFRA, then DETR) on the results of a study<sup>1</sup> to develop a risk based method for Local Air Pollution Control (LAPC). The report recommended that further practical evaluation of the use of a risk assessment method for LAPC should be carried out.

The objective of the risk based method trial is to establish whether the method recommended by the report provides a practical basis for work planning and eventual charging for LAPC and to establish its benefits and disadvantages in comparison with current practice. In particular, it will test whether the method provides:

- a reduced burden on local authorities, enabling more effective delivery of their obligations under the best value regime, without loss of environmental protection;
- reduced regulatory burden on business through targeting of resources to those which pose most of a risk (whilst retaining proper environmental regulation), without loss of environmental protection;
- an incentive for improved environmental performance;
- improved transparency and value for money for regulated businesses, since regulatory effort and fees would better reflect the risk to air pollution posed by individual processes or process categories; and
- improved consistency in regulation.

The report also highlighted a need to test the sensitivity of the method to numerical scores and cut-off points.

### **1.2 Scope**

The trial is planned to last until 30 November 2001. The Risk Based Method Trials Group membership will comprise up to 15 authorities with responsibility for LAPC enforcement, with a range in the number and type of processes regulated and covering different geographical locations in England and Wales.

The trial will be managed by RPA on behalf of DEFRA, with support from the National Assembly for Wales and the Department of Trade and Industry. Contact details for RPA and DEFRA are given at the end of this document.

At the end of the trial, RPA will collect and analyse the results of the trial, including feedback from Risk Based Method Trials Group members and process operators, and prepare a report for DEFRA setting out our conclusions and recommendations for use of

---

<sup>1</sup> Risk & Policy Analysts Ltd (2000): *Risk Assessment Method for Local Air Pollution Control: Final Report*, prepared for the Department of the Environment, Transport and the Regions with the National Assembly for Wales and the Department of Trade and Industry.

(Available at <http://www.defra.gov.uk/environment/consult/airq/laqm/lapc1/index.htm>)

the risk based method. This report will then be the subject of public consultation by DEFRA but will not identify the individual participating authorities.

## **2. RISK BASED METHOD TRIAL ACTIVITIES**

### **2.1 Actions for Trials Group Members**

#### ***Step 1: Identify processes to be included within the trial***

Identify up to 50 processes, depending upon the number of processes you regulate under LAPC, to which the risk based method can be applied. It is important that a range of processes is covered and thus it is suggested that no more than 20% of these should be of the same process type (RPA may suggest particular types of processes that should be included in your selection if possible).

You should also identify which of these processes you are scheduled to visit during the trial period.

*Once the processes have been selected, please inform RPA of your selection so that we can be aware of any overlaps or gaps.*

#### ***Step 2: Score each selected process using the method***

This stage of the trial is intended to be desk-based only. Each of the selected processes should be scored using the method, based on information held in your files together with officers' knowledge of the process. The output will be a series of scores for different attributes and allocation of the process to a risk category, which is linked to the regulatory effort required by that process.

Scoring does not need to be carried out on all selected processes at once; instead, it can be carried out when files are being reviewed, in anticipation of visits or for other purposes.

A score sheet (copy attached) should be completed for each process scored; the score sheet includes basic information on the process so that we can link score sheets to other information on the process. Where appropriate, processes should be divided amongst different officers within the pollution team, to check ease of use of the method by officers with different levels of experience and its consistency between different users. It is, therefore, important that you complete the sections concerning your name, level and length of experience.

*Scoring should take approximately 15 minutes per process.*

#### ***Step 3: Complete a scoring feedback form***

After the score sheet has been completed, please complete a scoring feedback form. This asks a small number of simple questions about the scoring process and its results. It also repeats the basic information on the process that is contained on the score sheet.

*Please return the score sheet and the scoring feedback form to RPA as soon as possible. Do not wait until all the selected processes have been scored.*

***Step 4: Use the score sheets during visits to selected processes***

Where you have scheduled visits to selected processes during the trial period, use the score sheet as a basis for discussion with operators during the visit. The completed score sheet should be shown to the operator and the scores discussed with them, together with any action that could be taken to reduce their scores and risk category (you may also want to show the operator a copy of the guidance for scoring of processes).

The purpose of the trial can be explained to the Process Operator using the following description:

*“The Department for Environment, Food and Rural Affairs (DEFRA, formerly DETR) and the National Assembly for Wales are carrying out a trial of a Risk Based Approach for LAPC with 14 randomly selected authorities.*

*The aim of a risk based approach is to:*

- *reduce the regulatory burden on operators where necessary;*
- *in the long-term reduce financial burden on operators in line with regulatory effort;*
- *target local authority resources where they are most needed; and*
- *provide an open and transparent approach to regulation in line with the Best Value principles.*

*The Department would be grateful for your co-operation in this exercise, which will require you to complete a simple, short feedback form.”*

Using the score sheet should not add to the length of the visit but should provide a focus for discussion.

***Step 5: Ask the Process Operator to complete a feedback form***

Ask each operator visited to complete a Process Operator feedback form (copy enclosed). You should complete the basic information on the process at the top of the form.

The feedback form asks a few simple questions about the Process Operator’s views of the risk based method. It is self-explanatory.

*The feedback form should be returned to RPA directly by the Process Operator.*

***Step 6: Complete a post-visit feedback form***

After each visit, complete a post-visit feedback form. This asks a few simple questions about use of the score sheet during the visit and about whether your views on the results of the method have changed following the visit.

Once again, the form repeats the basic information about the process, so that it can be matched to the score sheet and scoring feedback form.

Following the visit, you may wish to amend the scores you initially awarded to the process. If so, please amend the initial score sheet and return it to RPA together with the post-visit feedback form.

*Please return the post-visit feedback form (and revised score sheet, if appropriate) to RPA as soon as possible.*

**Step 7: Provide feedback to RPA at the end of the trial**

RPA will contact you at the end of the trial period to ask for general feedback about:

- your general views on suitability of the seven components that comprise the method;
- their relative weighting and subjectivity;
- the treatment of processes at the margins of scoring bands;
- the advantages and disadvantages of the risk based method compared to the approach you used previously;
- the implications of the method for costs and resources; and
- any comments on the method that you have received from Process Operators or other stakeholders.

*We will develop a detailed approach to seeking such feedback during the trial, to reflect the information that you and other Risk Based Method Trials Group Members send to us.*

**2.2 Resources and Assistance**

Enclosed with this document are copies of the following (copies are also available online at <http://www.rpaltd.co.uk/lapc.htm>):

- A description of the risk based method and guidance on how to apply it;
- A score sheet to record the results of applying the method to each process covered;
- A scoring feedback form to be completed by officers after each process is scored;
- An operator feedback form to be handed to operators of scored processes during visits; and
- A post visit feedback form to be completed by officers after each visit to a scored process.

Completed score sheets and feedback forms can be returned to RPA either electronically or by post.

RPA will provide a helpline throughout the trial, to assist with any queries arising from the trial. Contact details for RPA are given below.

Caspar Corden	Telephone:	01508 528465
Risk & Policy Analysts Ltd	Fax:	01508 520758
Farthing Green House	Email:	caspar@rpaltd.demon.co.uk
1 Beccles Road, Loddon	Internet:	www.rpaltd.co.uk/lapc
Norfolk, NR14 6LT, UK		

If you wish to contact DEFRA regarding any aspect of the trial, please contact:

Paul Barrett  
4/G9 Ashdown House  
123 Victoria Street  
London, SW1E 6DE

Telephone: 020 7944 6333



## **RISK ASSESSMENT METHOD FOR LAPC**

### **Introduction**

The risk assessment method determines the relative level of risk (high, medium or low) associated with each LAPC process and thus the effort required to regulate the process. The overall risk is evaluated by:

- determining the **potential environmental impact** of the process; that is, the degree of risk that the process poses and the sensitivity of its location; and
- **Operator performance appraisal**; that is, how well does the operator manage the potential environmental impact of the proposal.

Each of these aspects is judged by scoring the process against a number of different components. These components are listed below, together with an explanation of how they were derived, guidance on how they should be applied and the implications for regulatory planning. A separate score sheet is provided to record the scores for each process.

**Stage 1: Environmental Impact Appraisal**

The components for appraising the potential environmental impact of processes are:

- inherent environmental impact potential (component 1);
- progress with upgrading (component 2);
- sensitivity and proximity of receptors (component 3); and
- other targets (component 4).

**Component 1: Inherent Environmental Impact Potential of Process**

This component of the methodology reflects the fact that certain process types have inherently greater potential environmental impacts than others and may thus require greater regulatory effort.

The DETR Advisory Panel on Risk Ranking (APRR) has rated the various processes , as defined by the relevant PG Note(s), into three categories according to their inherent environmental impact potential. The rating is provided in Annex 1 to this document.

<b>Scoring for Component 1: Inherent Environmental Impact</b>	
<b>Risk Rating</b>	<b>Score Awarded</b>
Category 1	10
Category 2	20
Category 3	30

## Component 2: Progress with Upgrading

This second component of the methodology assesses the extent to which a process has been upgraded to comply with the BATNEEC requirements set out in their authorisation. Not only may processes that have not completed upgrading pose a greater potential risk; they are also likely to require more regulatory effort in monitoring progress with the upgrading. Conversely, processes that exceed BATNEEC requirements will pose reduced risks and may require less regulatory effort.

There are three possible classifications for scoring of processes:

- upgrading to meet the requirements of the authorisation is not yet complete, due either to updating of the guidance note or variations to the process;
- upgrading is complete and the process meets all of the current applicable BATNEEC requirements; and
- emissions control technology not only meets current BATNEEC requirements but goes beyond those requirements, resulting in lower emissions (for example, where improved emissions arrestment plant has been adopted voluntarily in plant already meeting BATNEEC requirements or where process guidance note requirements are met over a year before the due date).

*The nature and extent of upgrading required, or the degree to which BATNEEC is exceeded, may vary considerably amongst processes. However, to ensure objectivity and consistency, the same scores should be awarded on regardless of the magnitude these factors*

<b>Scoring for Component 2: Progress with Upgrading</b>	
<b>Status of Upgrading</b>	<b>Score</b>
Upgrading not complete because Guidance Note deadline has yet to be reached	5
Upgrading not yet complete for other reasons	10
Upgrading complete and meets BATNEEC Requirements	0
Emissions control exceeds BATNEEC Requirements	-10

### Component 3: Sensitivity and Proximity of Receptors

This component assesses the extent to which any receptors in the vicinity of a process could be impacted by emissions from the process. This will be determined by the sensitivity of the receptors in question (their number or the particular importance attached to them) and also by their proximity to the process. This criterion is not intended to reflect the nuisance potential of a process, and thus the potential for complaints (this is included under the 'Compliance Assessment' section below), but rather the potential for *physical* harm to the receptors in question.

The sensitivity of receptors is classified as high, medium or low:

- **high** - schools, residential areas, hospitals, designated environmental areas (e.g. SSSIs);
- **medium** - offices, isolated residences, major roads, footpaths/cycle paths, agricultural land; and
- **low** - public open space, minor roads, industrial areas, car parks, derelict land.

The distances used to determine proximity are based upon the distances up to which statutory consultation is required where SSSIs are near to Part B processes (based on DETR's General Guidance Note GG3). Whilst in practice the distances at which different receptors are affected will vary according to the receptor and the pollutant in question, these standard distances are used in order to assure simplicity and consistency in application of the method.

*Scores are awarded according to a combination of the sensitivity of receptors and their proximity to the emission source. The highest possible score is awarded, which may not necessarily be the score for the most sensitive receptor. For example, where there is a high sensitivity receptor 300m away and a medium sensitivity receptor 150m away, the respective scores are 5 and 10 and the latter is the score awarded.*

Scoring for Component 3: Sensitivity and Proximity of Receptors			
Proximity to Emission	Sensitivity of Receptors		
	High	Medium	Low
< 100m*	20	12	5
100 - 250m*	12	10	3
250 - 500m*	5	3	1
>500m*	0	0	0

\* All distances should be multiplied by a factor of 2 for mineral and cement & lime processes and by a factor of 4 for combustion, incineration (not cremation), iron & steel and non-ferrous metal processes.

**Component 4: Other Targets**

An additional 10 points should be scored if there are particular air pollution problems in the local area to which the process is a potential contributor; for example, where an Air Quality Management Area has been established for a pollutant emitted from the process.

## Stage 2. Operator Performance Appraisal

The components for operator appraisal are:

- monitoring, maintenance and records (component 5);
- compliance assessment (component 6); and
- management, training and responsibility (component 7).

### Component 5: Monitoring, Maintenance and Records

Scores are awarded on the basis of:

- whether an operator has undertaken any monitoring specified in the authorisation;
- whether the operator responds to remedy the causes of problems indicated by monitoring;
- whether there is a documented maintenance programme, that has been adhered to and that has been adjusted to take account of any signs of deterioration with potential adverse effects upon emissions;
- whether fully-documented records are available on-site; and
- whether these records have been submitted to the local enforcing authority within the required timescales.

*Where any of the elements is not applicable, a score of zero should be awarded.*

Scoring for Component 5: Assessment of Monitoring, Maintenance and Records		
Criterion	Score	
	Yes	No
All monitoring undertaken to the degree required in the authorisation?	0	10
Monitoring requirements reduced because results over time show consistent compliance?	-5	0
Process operation modified where any problems indicated by monitoring?	0	5
Fully documented and adhered to maintenance programme, in line with authorisation?	0	5
Full documented records as required in authorisation available on-site?	0	5
All relevant documents forwarded to the authority by date required?	0	5
<b>Total score</b>	<b>(-5 to 30)</b>	

## Component 6 Compliance Assessment

This section relates to any incidence of non-compliance that has occurred in the past year. Compliance is assessed in terms of individual incidents, such as those where a complaint has been received which can be identified as being linked to the process but which may or may not have breached a specific condition. A single incident that led to a number of complaints should be scored as being one incident. For each incident, a score is awarded according to the level of action required. If there has been no non-compliance, a score of zero is awarded. For example, a hypothetical cement process received three complaints on three separate occasions around eight months ago from local residents. The emissions leading to the complaints were caused by repeated failures of a bag filter, which was remedied by the operator replacing the filter bags. The process also received an enforcement notice nine months ago in relation to a failure to record emissions in the log book. The score would be 15 points for the complaints and 15 points for the enforcement notice, giving a total of 30 points.

*The maximum possible score is 40 points; for example, a score of 40 points will be awarded even where there have been more than eight incidents leading to complaints. This is to ensure that scores for non-compliance do not distort the overall scores*

<b>Scoring for Component 6: Compliance Assessment</b>	
<b>Scale of Non-Compliance</b>	<b>Score</b>
Incident leading to a complaint*	5 per incident
Incident leading to formal caution, Enforcement Notice or prosecution	15 per incident
Incident leading to a Prohibition Notice	20 per incident
<b>Total</b>	<b>(Max. 40)</b>
* This should not include, for example, complaints that are considered by the inspector to be unreasonable or which cannot be clearly linked to an incident at the process.	

### Component 7: Management, Training and Responsibility

This component assesses whether documented procedures for implementing all aspects of the authorisation are in place, with responsibility allocated to particular staff members. It also assesses whether completion of these responsibilities is checked and that staff with pollution control responsibilities are on site when polluting activities take place, have been given the degree of training specified in the authorisation and that there are documented and implemented programmes for staff training. The extent of documentation may vary, particularly for small processes. Any element that is not applicable to a process should be scored as zero.

*The standard paragraphs for authorisations being introduced through the latest revisions of process guidance notes require operators to have in place 'appropriate' environmental management systems, tailored to the nature and size of the particular process. The key elements of an environmental management system, identified in ISO 14001, include:*

- *an environmental policy, issued to all employees;*
- *objectives for improvement of environmental performance, with specific targets where relevant;*
- *a programme to ensure compliance with the policy and to meet the objectives;*
- *allocation of responsibility to staff, with provision of appropriate training;*
- *measures to control the environmental impacts of operations;*
- *ways to track progress, check compliance and take corrective actions where necessary;*  
*and*
- *regular review of the effectiveness of the management system.*

Scoring for Component 7: Assessment of Management, Training and Responsibility		
Criterion	Score	
	Yes	No
Documented procedures in place for implementing all aspects of the authorisation?	0	5
Are specific responsibilities assigned to individual staff for these procedures?	0	5
Is completion of individual responsibilities checked and recorded by the company?	0	5
Are there documented training records for all staff with pollution control responsibilities?	0	5
Trained staff on site throughout periods where potentially-polluting activities take place?	0	5
Is there an 'appropriate' environmental management system in place	0	5
<b>Total</b>	<b>(0 to 30)</b>	
Any element that is not applicable to a process should be scored as zero		

## Overall Scoring and Determining Regulatory Effort

The overall score for a process is obtained by summing the score for each component. The table below summarises the maximum possible scores under each of the components. The total maximum score is 170.

<b>Overall Maximum Scores</b>	
<b>Assessment Component</b>	<b>Maximum Score</b>
<i>Environmental Impact Appraisal</i>	
Inherent Impact of Process	30
Progress with Upgrading	10
Sensitivity and Proximity of Receptors	20
Other Targets	10
<i>Operator Performance Appraisal</i>	
Monitoring, Maintenance and Records	30
Compliance Assessment	40
Management, Training and Responsibility	30
<b>Maximum Total</b>	<b>170</b>

The total score awarded can then be used to determine the appropriate level of 'regulatory effort' to be devoted to the subsistence aspects of a process, as shown in the table below.

<b>Determination of Regulatory Effort from Scores</b>		
<b>Overall Score</b>	<b>Regulatory Effort</b>	
	Category	Hours per Year*
Less than 50	Low	9 (15)
50 to 100	Medium	18 (30)
Over 100	High	27 (45)
* Estimated average regulatory time per process varies from 18 to 30 hours per year		

Regulatory effort refers to the time taken to regulate a process that is dependent upon the process characteristics. This includes both time spent on inspections and time spent at the office preparing for inspections, writing reports and reviewing data supplied by operators. The average regulatory time spent per process varies from 18 to 30 hours per year; your evaluation of the regulatory effort required per process should be based upon your own average regulatory time.

Where a process requires 'high' regulatory effort, this may imply longer and/or more frequent visits; for example visits twice a year rather than annually. Where 'low' regulatory effort is required, this may imply shorter and/or less frequent visits. Inspectors will need to judge for each process how the estimated regulatory time can best be spent to maximise the efficiency of regulation.

**Annex 1: Classification of Processes by Advisory Panel on Risk Ranking (APRR)**

Table A1, below, provides a ranking of processes according to their based on their inherent environmental impact potential. Process categories are placed in one of the following three categories, taking into account potential for contained and/or fugitive emissions, for health impacts, for environmental impacts and potential for 'offensiveness' impacts:

- Category 1** processes with an inherent environmental impact potential which was lower/below average when compared with other Part B processes.
- Category 2** processes with an inherent environmental impact potential which was medium/average when compared with other Part B processes.
- Category 3** processes with an inherent environmental impact potential which was higher/above average when compared with other Part B processes.

<b>Table A1: Risk Rating of LAPC Processes According to APRR</b>	
<b>Process guidance note</b>	<b>Category</b>
PG1/1(95)-waste oil burners, <0.4MW	1
PG1/2(95)- waste recovered oil burners, less than 3MW	2
PG1/3(95)-boilers and furnaces, 20-50MW	1 - gas fed 2 - other fuel
PG1/4(95)-gas turbines, 20-50MW	1
PG1/5(95)-compression ignition engines, 20-50MW	1
PG1/10(92)-waste derived fuel combustion <3MW	3
PG1/11(96)-reheat, heat treatment furnaces, 20-50MW	2
PG1/12(95)-combustion of solid waste 0.4 to 3MW	3 - WID 2 - non-WID
PG1/13(96) storage, loading, unloading petrol at terminals	3
PG1/14(96)-unloading petrol into storage at service stations	1
PG1/15(97)-odorising natural gas, liquefied petroleum gas	1
PG2/1(96)-furnaces to extract non-ferrous metal from scrap	3
PG2/2(96)-hot dip galvanising	2
PG2/3(96)-electrical and rotary furnaces	Reverberatory/Rotary - 3 Gas/electric fed - 1* Crucible oil fed - 2 Crucible gas fed - 1
PG2/4(96)-iron, steel, non-ferrous metal foundry processes	3 - core making, chemically bonded moulds, thermally reclaimed sand 2* - all other processes
PG2/5(96)-hot and cold blast cupolas	3
PG2/6(96)-aluminium and aluminium alloy processes	2 - ingots and in house clean scrap used 3 - other scrap used
PG2/7(96)-zinc and zinc alloy processes	2 - ingots and in house clean scrap used 3 - other scrap used
PG2/8(96)-copper and copper alloy processes	2 - ingots and in house clean scrap used 3 - other scrap used

<b>Table A1: Risk Rating of LAPC Processes According to APRR</b>	
<b>Process guidance note</b>	<b>Category</b>
PG2/9(96)-metal decontamination processes	3
PG3/1(95)-blending, packing, loading and use of bulk cement	1
PG3/2(95)-manufacture of heavy clay and refractory goods	3
PG3/3(95)-glass (exc. lead glass) manufacturing processes	3
PG3/4(95)-lead glass manufacturing processes	3
PG3/5(95)-coal, coke, coal product and petroleum coke	1 - Bagging plant 2 - all others processes
PG3/6(95)-polishing, etching of glass etc using HF acid	3
PG3/7(95)-exfoliation of vermiculite and expansion of perlite	1
PG3/8(96)-quarry processes	1*
PG3/12(95)-plaster processes	1
PG3/13(95)-asbestos processes	3
PG3/14(95)-lime processes	1
PG3/15(96)(a)- roadstone coating	3 - WID 2 - non-WID/non gas fed 1 - gas fed
PG3/15(96)(b)-mineral drying	2 - non gas fed 1 - gas fed
PG3/16(96)-mobile crushing and screening	1
PG3/17(95)-china and ball clay +spray drying of ceramics	1 - spray dryers 2 - Ball/China clay processes
PG4/1(95)o- surface treatment of metals	2
PG4/2(96)o- manufacture of fibre reinforced plastics	3
PG5/1(95)-clinical waste incineration < 1 tonne/hour	3
PG5/2(95)- crematoria	3
PG5/3(95)-animal carcass incineration < 1 tonne an hour	3
PG5/4(95)-general waste incineration < 1 tonne an hour	3
PG5/5(91)-sewage sludge incineration < 1 tonne an hour	3
PG6/1(00)-processing of animal remains and byproducts	3
PG6/2(95)-manufacture of timber and wood-based products	1
PG6/3(97)-chemical treatment, timber, wood-based products	1
PG6/4(95)- manufacture of particleboard and fibreboard	3
PG6/5(95)-maggot breeding	3
PG6/7(97)-printing and coating of metal packaging	2
PG6/8(97)-textile and fabric coating and finishing	2
PG6/9(96)-manufacture of coating powder	2
PG6/10(97)-coating manufacturing	2
PG6/11(97)-manufacture of printing ink	2

<b>Table A1: Risk Rating of LAPC Processes According to APRR</b>	
<b>Process guidance note</b>	<b>Category</b>
PG6/12(91)-production of natural sausage casings, tripe, etc	2
PG6/13(97)-coil coating	2
PG6/14(97)-film coating	2
PG6/15(97)-coating in drum manufacture and reconditioning	2
PG6/16(97)-printworks	2*
PG6/17(97)-printing of flexible packaging	2
PG6/18(97)-paper coating	2
PG6/19(97)-fish meal and fish oil	3
PG6/20(97)-paint application in vehicle manufacturing	2
PG6/21(96)-hide and skin	2
PG6/22(97)-leather finishing	2
PG6/23(97)-coating of metal and plastic	2
PG6/24(96)-pet food manufacturing	2 - cooking involved in process 1 - no cooking involved in process
PG6/25(97)-vegetable oil extraction, fat and oil refining	2 - vegetable oil processes 3 - heat refining processes
PG6/26(96)-animal feed compounding	2
PG6/27(96)-vegetable matter drying	2
PG6/28(97)-rubber	3 - carbon black used in process 2 - all others processes
PG6/29(97)-di-isocyanate	3
PG6/30(97)-production of compost for mushrooms	2
PG6/31(96)-powder coating (including sheradizing)	1
PG6/32(97)-adhesive coating	2
PG6/33(97)-wood coating	2
PG6/34(97)-respraying of road vehicles	1*
PG6/35(96)-metal and other thermal spraying	2
PG6/36(97)-tobacco processing	2
PG6/40(94)-coating, recoating of aircraft and components	2
PG6/41(94)o-coating and recoating of rail vehicles	2
PG6/42(94)o-bitumen and tar	3 - coal tar, oxidised bitumen and cutback bitumen processes 1 - asphalt processes
IPR 4/17 Chemical storage	3
<p>WID - Process will come under the Waste Incineration Directive  Non WID - Process will not come under the Waste Incineration Directive  * - Where a particular process is large for the sector and, in the judgement of the EHO, this has significant impacts for risk, the ranking should be increased by 1 category.</p>	

**Your Details**

Name: \_\_\_\_\_ Authority: \_\_\_\_\_  
Grade: \_\_\_\_\_ No of years Experience: \_\_\_\_\_

**Details of the Process**

Process type (main PG Note): \_\_\_\_\_ Date scoring undertaken: \_\_\_\_\_  
Operator name: \_\_\_\_\_  
Operator address: \_\_\_\_\_

---

Guidance on completing this score sheet is provided in the paper entitled 'Description of Risk Assessment Method'.

**Environmental Impact Appraisal**

- 1. *What is the APRR Category?* Score \_\_\_\_\_
  
- 2. *What is the status of upgrading* Score \_\_\_\_\_
  
- 3. *What is the most sensitive/close-by receptor (highest score)?* Score \_\_\_\_\_
  
- 4. *Are there any other relevant air quality targets?* Score \_\_\_\_\_
  
- Total Score for Environmental Impact Appraisal (Out of 70)** **Score** \_\_\_\_\_

*Please turn over ...*

**Operator Performance Appraisal**

**5. Monitoring, Maintenance and Records**

Monitoring to degree required in authorisation?	(10 if no)	Score _____
Monitoring requirements reduced if consistent compliance over time?	(-5 if yes)	Score _____
Process operation modified where any problems indicated by monitoring?	(5 if no)	Score _____
Fully documented and adhered to maintenance prog, in line with authorisation?	(5 if no)	Score _____
Full documented records as required in authorisation available on-site?	(5 if no)	Score _____
All relevant documents forwarded to the authority by date required?	(5 if no)	Score _____
<b><u>SUBTOTAL (MAX = 30)</u></b>		<b><u>SCORE</u></b> _____

**6. Compliance Assessment**

Number of incidents leading to a complaint?	(5 each)	Score _____
No. leading to formal caution, Enforcement Notice or prosecution	(15 each)	Score _____
No. of incidents leading to a Prohibition Notice	(20 each)	Score _____
<b><u>SUBTOTAL (MAX = 40)</u></b>		<b><u>SCORE</u></b> _____

**7. Management, Training and Responsibility**

Documented procedures for implementing all aspects of the authorisation?	(5 if no)	Score _____
Specific responsibilities assigned to individual staff for these procedures?	(5 if no)	Score _____
Completion of responsibilities checked and recorded by company?	(5 if no)	Score _____
Documented training records for staff with pollution control responsibilities?	(5 if no)	Score _____
Trained staff on site whenever potentially-polluting activities take place?	(5 if no)	Score _____
'Appropriate' environmental management system in place?	(5 if no)	Score _____
<b><u>SUBTOTAL (MAX = 30)</u></b>		<b><u>SCORE</u></b> _____

**Total Score for Operator Performance Appraisal (Out of 100)** **Score** \_\_\_\_\_

<b><u>OVERALL SCORE FOR THE PROCESS (OUT OF 170)</u></b>	_____
<b><u>REGULATORY EFFORT CATEGORY (HIGH, MEDIUM, LOW)</u></b>	_____

Please return the completed score sheet to:

Caspar Corden  
 Risk & Policy Analysts Ltd  
 Farthing Green House  
 1 Beccles Road, Loddon  
 Norfolk, NR14 6LT, UK

Telephone: 01508 528465  
 Fax: 01508 520758  
 Email: caspar@rpaltd.demon.co.uk  
 Further copies: www.rpaltd.co.uk/lapc.htm

This form should be completed following scoring of a process. Inspectors should complete details about themselves and the process scored.

**Your Details**

Name: \_\_\_\_\_ Authority: \_\_\_\_\_  
Grade: \_\_\_\_\_ No of years Experience: \_\_\_\_\_

**Details of the Process**

Process type (main PG Note): \_\_\_\_\_ Date scoring undertaken: \_\_\_\_\_  
Operator name: \_\_\_\_\_  
Operator address: \_\_\_\_\_  
Overall score: \_\_\_\_\_ Risk category: \_\_\_\_\_

1. How long did it take you to apply the risk based method to this process?  
 Below 15 minutes  About 15 minutes  
 More than 15 minutes (please specify) \_\_\_\_\_

2. Was all the information needed to complete the risk based method readily available in the files or in your personal experience?  
 Yes: please go to Question 3  No:  
If no, what information was missing? (please describe briefly) \_\_\_\_\_  
\_\_\_\_\_  
Where did you find the missing information? \_\_\_\_\_  
\_\_\_\_\_

3. Do you think that the risk category indicated by the risk based method is in line with your knowledge of the risks posed by this process?  
 Yes: please go to Question 4  
 No: please give brief reasons for your answer \_\_\_\_\_  
\_\_\_\_\_

4. Do you think that the regulatory effort suggested by the risk based method is the same, less than or more than that which is currently spent on this process?  
 The same  More than current regulatory effort  
 Less than current regulatory effort  
Please give brief reasons for your answer: \_\_\_\_\_  
\_\_\_\_\_

Thank you very much for completing the feedback form. Please tell us if you think that the above questions miss something important, or if you have any other comments on the Risk Based Method.

Please return the questionnaire to:

Caspar Corden  
Risk & Policy Analysts Ltd  
Farthing Green House  
1 Beccles Road, Loddon  
Norfolk, NR14 6LT

Telephone: 01508 528465  
Fax: 01508 520758  
Email: caspar@rpaltd.demon.co.uk  
Further copies: www.rpaltd.co.uk/lapc.htm

This form should be completed following visiting a site included in the trial. Inspectors should complete details about themselves and the process.

**Your Details**

Name: \_\_\_\_\_ Authority: \_\_\_\_\_  
Grade: \_\_\_\_\_ No of years Experience: \_\_\_\_\_

**Details of the Process**

Process type (main PG Note): \_\_\_\_\_ Date site visit undertaken: \_\_\_\_\_  
Operator name: \_\_\_\_\_  
Operator address: \_\_\_\_\_  
Overall score: \_\_\_\_\_ Risk category: \_\_\_\_\_

1. Did the risk based method score sheet form a useful basis for discussion with the operator?  
 Yes  No:  
Please give brief reasons for your answer: \_\_\_\_\_  
\_\_\_\_\_
2. Did the risk based method omit any significant areas affecting regulation of the process?  
 No: please go to Question 3  
 Yes: what areas were omitted (please describe briefly) \_\_\_\_\_  
\_\_\_\_\_
3. Following the visit, do you wish to amend the scores you initially awarded to the process?  
 No: please go to Question 4  
 Yes: please amend score sheet and return to RPA together with this feedback form
4. Following the visit, do you think that the risk category indicated by the risk based method is in line with your knowledge of the risks posed by the process?  
 Yes: please go to Question 5  
 No: please give brief reasons for your answer \_\_\_\_\_  
\_\_\_\_\_
5. Following the visit, do you think that the regulatory effort suggested by the risk based method is the same, less than or more than that which is currently spent on this process?  
 The same  More than current regulatory effort  
 Less than current regulatory effort  
Please give brief reasons for your answer: \_\_\_\_\_  
\_\_\_\_\_

Thank you very much for completing the feedback form. Please tell us if you think that the above questions miss something important, or if you have any other comments on the Risk Based Method.

Please return the questionnaire to:

Caspar Corden  
Risk & Policy Analysts Ltd  
Farthing Green House  
1 Beccles Road, Loddon  
Norfolk, NR14 6LT, UK

Telephone: 01508 528465  
Fax: 01508 520758  
Email: caspar@rpaltd.demon.co.uk  
Further copies: www.rpaltd.co.uk/lapc.htm

The Department for Environment, Food and Rural Affairs (DEFRA, formerly DETR) and the National Assembly for Wales are carrying out a trial of a Risk Based Approach for LAPC with 14 randomly selected authorities. The aim of the risk-based approach is to:

- reduce the regulatory burden on operators where necessary;
- in the long-term reduce financial burden on operators in line with regulatory effort;
- target local authority resources where they are most needed; and
- provide an open and transparent approach to regulation in line with the Best Value principles.

The Department would be grateful for your co-operation in this exercise, which will require you to complete this simple, short feedback form.

**Details of the Process**

Company name: \_\_\_\_\_

Company address: \_\_\_\_\_

Name of person completing the form \_\_\_\_\_

Process type (main PG Note): \_\_\_\_\_ Date site visited by inspector: \_\_\_\_\_

---

1. Did the risk based method score sheet form a useful basis for discussion with the inspector?

- Yes  No:

Please give brief reasons for your answer: \_\_\_\_\_  
\_\_\_\_\_

2. Do you believe that the risk category to which your process is allocated reflects the resources required to regulate your process?

- Yes  No:

Please give brief reasons for your answer: \_\_\_\_\_  
\_\_\_\_\_

3. Are there actions that you could take that would allocate your process to a lower risk category?

- No  Yes:

If yes, please describe briefly \_\_\_\_\_  
\_\_\_\_\_

What would be the approximate costs of these actions? £ \_\_\_\_\_  
\_\_\_\_\_

Thank you very much for completing the feedback form. Please tell us if you think that the above questions miss something important, or if you have any other comments on the Risk Based Method.

Please return the questionnaire to:

Caspar Corden, Risk & Policy Analysts Ltd  
Farthing Green House  
1 Beccles Road, Loddon  
Norfolk, NR14 6LT

Telephone: 01508 528465  
Fax: 01508 520758  
Email: caspar@rpaltd.demon.co.uk  
Further copies: www.rpaltd.co.uk/lapc.htm

Your Trade Association is aware that this trial is taking place and may appreciate receiving a copy of the completed questionnaire.

**ANNEX 3**

**PROCESS TYPES INCLUDED IN THE TRIAL**



Table A3.1 presents the range of process types included in the trial, broken down according to the number in each authority. Details of the processes to which these refer are provided below.

<b>Table A3.1: List of PG Notes Included in the Trial</b>							
<b>Authority</b>	<b>PG1/</b>	<b>PG2/</b>	<b>PG3/</b>	<b>PG4</b>	<b>PG5/</b>	<b>PG6/</b>	<b>No of Processes</b>
<b>1</b>			1*2, 16*1		2*1	2*1, 16*1, 23*2, 26*1, 27*1, 29*1, 34*2, 41*1	14
<b>2</b>	1*1, 14*2		1*1		2*1	34*2, 40*1	8
<b>3</b>	1*3		1*3, 8*1		2*2	34*3	12
<b>4</b>		2*1, 4*2			2*1	2*1, 8*2, 11*1, 17*1, 28*1, 29*1, 31*1, 32*1,	15
<b>5</b>		2*1	1*2, 8*1, 15b*1, 16b*1			1*1, 26*1	6
<b>6</b>	1*3, 14*4	9*1	1*4, 2*1		2*1	1*1, 2*1, 34*3	19
<b>7</b>	14*1	3*1	8*1			2*2, 23*2, 33*2, 34*2	11
<b>8</b>	14*2		8*1, 15b*1	1*1, 2*1	1*2, 23*1, 24b*1, 34*2		10
<b>9</b>	14*1, 12b*1		1*2			2*1, 34*4	8
<b>10</b>	1*2, 14*2	4*2	1*3, 5*1, 8*1, 9*1, 15*1		2*1	2*2, 16*1, 23*3, 29*1, 31*1, 33*1, 34*5	28
<b>11</b>	1*1	6*1	1*1, 8*3			3*1, 23*1	8
<b>12</b>		9*1	1*1	1*1, 2*1, 3b*1, 23*4,			10
<b>13</b>		2*1	1*2, 2*1			23*2, 34*1, 40*1, fishbait *1	9
<b>14</b>	1*3	2*1	1*4, 5*1, 15*1, 16*2		2*1	2*1, 23*1	15
<b>Total</b>							173

*Key: The figures in the cells indicate the sub-category of the PG Note and the number of processes of that type within the authority that were included in the trial. For example, Authority 1 included two processes covered by PG3/1 and one covered by PG3/16. Where numbers are suffixed by "b", this relates to a multi-process site, where the process in question is also present at a site with one of the other processes in the authority.*

- PG1/1(95) waste oil burners, <0.4MW
- PG1/12(95) combustion of solid waste 0.4 to 3MW
- PG1/14(96) unloading petrol into storage at service stations
- PG2/2(96) hot dip galvanising
- PG2/3(96) electrical and rotary furnaces
- PG2/4(96) iron, steel, non-ferrous metal foundry processes
- PG2/6(96) aluminium and aluminium alloy processes
- PG2/9(96) metal decontamination processes
- PG3/1(95) blending, packing, loading and use of bulk cement
- PG3/2(95) manufacture of heavy clay and refractory goods

PG3/5(95)	coal, coke, coal product and petroleum coke
PG3/8(96)	quarry processes
PG3/15(96)(b)	mineral drying
PG3/16(96)	mobile crushing and screening
PG4/1(95)	surface treatment of metals
PG4/2(96)	manufacture of fibre reinforced plastics
PG5/1(95)	clinical waste incineration < 1 tonne/hour
PG5/2(95)	crematoria
PG5/3(95)	animal carcass incineration < 1 tonne an hour
PG6/1(00)	processing of animal remains and byproducts
PG6/2(95)	manufacture of timber and wood-based products
PG6/3(97)	chemical treatment, timber, wood-based products
PG6/8(97)	textile and fabric coating and finishing
PG6/11(97)	manufacture of printing ink
PG6/16(97)	printworks
PG6/17(97)	printing of flexible packaging
PG6/23(97)	coating of metal and plastic
PG6/24(96)	pet food manufacturing
PG6/26(96)	animal feed compounding
PG6/27(96)	vegetable matter drying
PG6/28(97)	rubber
PG6/29(97)	di-isocyanate
PG6/31(96)	powder coating (including sheradizing)
PG6/32(97)	adhesive coating
PG6/33(97)	wood coating
PG6/34(97)	respraying of road vehicles
PG6/40(94)	coating, recoating of aircraft and components
PG6/41(94)	coating and recoating of rail vehicles

**ANNEX 4**

**COPY OF CONTRACT SPECIFICATION**



## **CONTRACT SPECIFICATION**

- 1. ASSESSMENT OF THE OPTIONS FOR A RISK ASSESSMENT METHOD FOR LOCAL AIR POLLUTION CONTROL**
- 2. SURVEY OF THE OPERATION OF THE RISK ASSESSMENT METHOD AND ASSESSMENT OF ITS EFFICACY**

### **Background**

#### ***The Current Regulatory Framework***

1.1 The Local Air Pollution Control regime (LAPC) was established under Part 1 of the Environmental Protection Act 1990.

1.2 Under LAPC, operators of “prescribed” processes (commonly referred to as “Part B” processes) must have an authorisation to operate. The authorisation must contain conditions aimed at securing BATNEEC (Best Available Techniques Not Entailing Excessive Cost) to prevent, minimise and render harmless air emissions. The objective is set out in section 7 of the 1990 Act.

1.3 Regulatory responsibility for LAPC rests with the appropriate district, borough or unitary authority, or port health authority, in England and Wales and with the Scottish Environmental Protection Agency (SEPA) in Scotland. Because SEPA regulates in Scotland, GB regulators are now referred to generally as local enforcing authorities.

1.4 Background information on LAPC is provided by the LAPC briefing note, the latest version of which may be found on the Internet at:

<http://www.aeat.co.uk/netcen/airqual/info/labrief.html>

Further background can be found in “Local Air Pollution Control in England and Wales, Five Year Report 1991-96”, Department of the Environment, December 1996 (Annex A). The Environment Agency and SEPA in Scotland regulate a separate set of prescribed (“Part A”) processes under the Integrated Pollution Control (IPC) regime.

#### ***The Future Regulatory Framework***

1.5 Part 1 of the Environmental Protection Act 1990 will be replaced by regulations under the Pollution Prevention and Control (PPC) Act 1999. The PPC Regulations, to be made later this year, will transpose into domestic law the European Union Directive 96/91 on integrated pollution prevention and control (IPPC). The new legislation will repeal Part I of the Environmental Protection Act 1990 and provide a single regulatory framework to replace the IPC and LAPC regimes.

1.6 The new legislation will extend integrated control - covering releases to air, water and land - to approximately 1,000 of the 21,000 processes currently regulated under the LAPC regime. The regulations will provide for transitional arrangements with processes phased into the new regime over a period of six or seven years. Local authorities will retain regulatory responsibilities for the bulk of these processes, which are known as “A2 Processes”; with the Environment Agency having a key role in

setting the conditions relating to releases into water. Since a bespoke charging scheme will need practical experience before being developed, A2 Processes will be subject to an interim charging scheme, options for which will be published shortly. A copy of the [Fifth] Consultation Paper on the Implementation of the IPPC Directive can be found on the DETR website at [[www.environment.detr.gov.uk//consult/ippc4](http://www.environment.detr.gov.uk//consult/ippc4).]

1.7 The remaining 20,000 processes that will not be subject to integrated control will also transfer to the new regulatory regime, probably starting in 2002. There will be some minor procedural changes to the way that these processes are regulated but will not require any significant changes to regulatory activities.

### ***Fees and charges***

1.8 Under section 8(6) of the 1990 Act the Secretary of State is required to set fees and charges to “so far as practicable, secure that the fees and charges payable under the scheme are sufficient, taking one financial year with another, to cover the relevant expenditure attributable to authorisations.” “Relevant expenditure” is defined in section 8(7) as being “the expenditure incurred by the local enforcing authorities in exercising their functions under this part in relation to authorisations.” This requirement will be continued under the new PPC legislation.

1.9 The current LAPC charging structure is largely unchanged from that established at the inception of LAPC: a flat rate with lower fees for some categories of process that require much less effort to regulate. A copy of the most recent charging scheme is enclosed (Annex B) together with the consultation letter on the proposed charging levels for next year (Annex C). This letter explains the reasons for our proposals and how they relate to the findings of a study on LAPC costs that the DETR, DTI and the National Assembly for Wales commissioned KPMG to carry out in 1999 (Annex D). The principal aims of this study were (i) to reach view on the level of service necessary for a local authority to discharge its LAPC responsibilities; and (ii) to establish the level of fees and charges necessary to deliver the necessary level of service.

### ***LAPC Functions***

1.10 The Secretary of State has issued a series of General Guidance Notes to local enforcing authorities on the operation of the LAPC system. These include guidance on procedure for applications for an authorisation, variations and appeals, as well as the establishment, content and access to the public registers. General Guidance Number 1 (ISBN 0-11-752423-9) which introduces Part 1 of the Act will be of particular relevance to this study. Details of where to obtain this and other notes can be found in the LAPC briefing note on the Internet at the address given in paragraph 1.4

1.11 *Ad hoc* additional guidance on performance of local authority functions is also issued by the Air and Environment Quality Division. The enclosed additional guidance note AQ11(98) provides information on the 4-year review of authorisations, file management, and consistency of inspections (Annex E). Also enclosed is AQ3/99 which lists all the additional guidance notes published up to the end of 1998 (Annex F).

## **Purpose the Review**

2.1 A number of alternative charging structures have been considered since LAPC was established and these are summarised in the enclosed 1998 DETR paper at Annex G. The response to this paper and previous consultations by the IPLC and Industry Forum showed a consensus to retain the current system on the grounds that it was simple and cheap to administer. Since then, however, there has been increasing pressure from industry to improve the transparency of the charging system and the value for money for the regulated businesses. Government, meanwhile, has been seeking to reduce the regulatory burden for businesses by ensuring that resources are targeted most effectively while maintaining proper environmental regulation.

2.2 Having considered the alternatives, we have concluded that the charging structure most likely to meet the above aims is one based on a risk assessment system linked to inspection frequency. Such a system could offer the additional advantages of reducing the burdens on local authorities and providing a tool for the more effective delivery of their obligations under the Best Value regime.

2.3 Should the Departments decide to proceed with the introduction of a risk assessment system, local authorities will be invited to use risk assessment to prioritise regulatory effort before it is linked to the charging system. We believe it is important to run any proposed system before linking it to charges to give regulatory authorities and process operators experience of the system and to iron out any flaws in it. This will minimise future conflicts between individual process operators and local authorities over the level of fees and charges applied. (SEPA and EA currently use risk assessment systems not linked to charging).

2.4 The review of the charging system will potentially be conducted in two stages; an initial option assessment and design stage and a second assessment stage. **The conduct of the second stage may be dependent on the outcome of the first stage and tenderers are invited to submit tenders for each stage separately.**

2.5 The main objectives of Stage 1 of the study are to:

- a) establish options for a risk assessment method that could be used to determine the relative levels of fees and charges for individual industrial processes or industrial sectors according the time spent on inspection and other variable costs
- b) assess costs and benefits of each option
- c) establish which option is likely to provide the best balance of costs and benefits and to draw up a workable assessment method.

2.6 The Departments' decision to undertake Stage 2 will depend on the outcome of Stage 1, the recommendations of the contractor and the results of subsequent consultations with industry and local authorities.

2.7 The purpose of Stage 2 is to:

- a) test the efficacy of the selected risk assessment method for deciding how local authority resources should be targetted and to assess, on the basis of practical experience, the method's suitability for use as a basis on which to decide the level of fees for individual processes or industrial sectors
- b) establish the final design of a risk assessment based charging system.

### **Previous Studies and Other Risk Assessment Systems**

3 Various commissioned studies or papers of relevance to this study include:

- two sounding board meetings with selected local authority environmental health officers. A copy of the report by the DETR to the Industrial Pollution Liaison Committee (IPLC) is enclosed (Annex H).
- Cardinal Environment Ltd audit of local authority performance covering all aspects of progress in implementing LAPC (Annex I).
- an Action Plan and Response to the auditors' recommendations with regular progress reports. This is enclosed together with the latest progress report (Annex J).
- Paper for the IPLC and Industry Forum reviewing options for amending the structure of the LAPC charging structure (Annex G).
- KPMG Investigation of Local Air Pollution Control Regime Costs in England and Wales (Annex D)
- "OPRA for Waste" – A DETR consultation paper on risk assessment inspection frequencies for Waste Management Licensing (on the DETR website at [www.environment.detr.gov.uk/opra/index.htm](http://www.environment.detr.gov.uk/opra/index.htm)).
- the 1998 LGA Report to the IPLC on the LAAPC Enforcement Code
- Council of the European Union Proposal for a Council Recommendation Providing for Minimum Inspection Criteria in the Member States.
- Operator and Pollution Risk Appraisal Version 2 – Environment Agency (Annex K)
- 1997 Code of Practice No.9: Food Hygiene Inspections: Annex 1 Inspection Rating – The Priority Classification of Food Premises
- Operator Performance Appraisal Workshop Handbook – Scottish Environment Protection Agency (Annex L)
- HM Treasury's Fees and Charges guide  
(see also list on Annexes for these and other documents)

## **Detailed Specification**

### **STAGE 1: THE STUDY**

#### **Objective A**

4.1 The contractor will design a number of viable options for a risk based assessment method, having regard to their use in determining the level of fees and charges for individual industrial processes or industrial sectors. For each option the contractor will establish a mechanism for assessing risk and propose how regulatory effort could be adjusted to reflect the results of risk assessment for individual processes or industrial sectors\*.

#### **Objective B**

4.2 Appraisal of the options should include the following:

- an estimation of the financial costs and savings to regulators based on the additional time expended and time saved
- an estimation of the financial costs and savings to industry and whether costs would disproportionately fall on SMEs
- an assessment of the incentive to businesses to improve their environmental management
- an assessment of extent that options would improve consistency of enforcement between LAPC regulators
- an assessment of any other costs and benefits which the contractors identify

In all cases cost assessments should include one-off or start-up costs as well as on going costs.

#### **Objective C**

4.3 To consider all options assessed in Stage 2 together with a “do nothing” option to establish which is likely to provide the best balance of costs and benefits and meet the overall purpose of the review bearing in mind the need to maintain proper environmental control.

4.4 The contractor will be required to conduct this stage of the study in consultation with stakeholder organisations. Tenderers are asked to include information about how they would undertake this in their bid.

### **STAGE 2: SURVEY AND ASSESSMENT OF THE SCHEME**

4.5 If Ministers decide to issue guidance on a risk assessment method, Stage 2 will be carried out between six months and a year after it has been introduced. The contractor will be required to:

---

\* Under the current system DETR recommends that most standard processes should normally be inspected twice a year and that petrol stations and waste oil burners should be inspected once a year. However, DETR statistics show that the average inspection frequency is falling and is now marginally under one per process annually, and that nearly one quarter of inspections are less than 30 minutes long.

- a) report on the experiences of the participating authorities and a representative sample of the businesses assessed using the method.
- b) recommend a final design for the risk assessment based charging structure, drawing on experiences of local authorities and process operators.

### **Payment**

5 Payment will be on completion of each stage as agreed by the DETR project officer.

### **Output**

#### **Stage 1:**

6.1 Fifty hard copies of a report and an electronic copy which will include:

- a summary of the study methodology
- options for a risk assessment method that could be used to determine the relative levels of fees and charges for individual industrial processes or industrial sectors according to the time spent on inspection and other variable costs
- an appraisal of the options
- a recommended design for a workable system for introduction
- a summary of consultees' views (these may not identify any organisation or individual without their permission)

#### **Stage 2:**

6.2 Fifty hard copies of a report and an electronic copy which, subject to a more detailed specification following Stage 1, will include:

- a report on the results of the survey including a summary of responses (these may not identify any organisation or individual)
- an assessment of the effectiveness of the system
- a final recommendation for the design of the risk assessment based charging structure based on the above assessment.

6.3 The names of individual organisations involved in the study shall at all times remain confidential, other than to the Departments.

### **Information Required in the Tender**

7.1 Contractors are expected to include the following for initial contract (Stage 1):

- a detailed work plan showing projected phases of work and approximate dates of meetings with the project officer
- an outline method, including arrangements to be made for consulting stakeholders
- a programme of work and costs broken down for key staff by tasks and showing costs under specific headings including staff costs, overheads travel and subsistence etc.

- an indication of the quality assurance procedures used by the contractor
- the members of staff who will carry out the work, with details of each person's experience and expertise for the relevant tasks and including experience of work related to IPC or LAPC
- confirmation that the contractor has read and understood the Department's standard conditions of contract.

7.2 For the possible additional work – Stage 2, contractors should include:

- and indicative work plan showing projected phases of work
- an outline method
- a programme of work and costs broken down for key staff by tasks and showing costs under specific headings including staff costs, overheads travel and subsistence etc.
- the members of staff who are likely to carry out the work and, for staff not included in the information for Stage 2, details of each person's experience and expertise for the relevant tasks

### **Timetable**

8.1 Tenders must be submitted by **11.00am on Tuesday 23 May** and the Department may hold interviews with some or all of the tenderers during the week commencing 30 May. Tenderers will be informed of the tender results on or before 7 June. Dates for two steering meetings will be agreed at the inception meeting which will be held on or before 9 June.

### **Stage 1**

8.2 The draft final report will be submitted to the Departments by 8 September 2000 and the final report submitted by 22 September.

### **Stage 2**

8.3 The Departments aim to inform the successful tenderer on whether it intends to proceed with the second stage by 12 January 2001. The assessment will take place at an agreed date between six months and one year after local authorities are invited to run the scheme, which is likely to be from 1 April 2001.



**ANNEX 5**

**THE ADVISORY PANEL ON RISK RANKING**



## **A5.1 Background**

The Stage 1 report on a risk assessment method for local air pollution control recommended that an improved method of ranking the inherent environmental risk of processes should be developed. The Department therefore established an Advisory Panel on Risk Ranking (APRR) to carry out this task. The panel consisted, on the recommendations of the Stage 1 report, of six inspectors with experience in regulating a wide range of processes, drawn from different authorities to provide a balance of views and avoid any appearance of bias. The panel also involved the Department's local authority unit. The panel's task was to agree a ranking for LAPC process categories, based on their inherent environmental impact.

## **A5.2 Findings**

The panel concluded that a ranking based on inherent environmental impact needed to take account of:

- potential for contained and/or fugitive emissions;
- potential for health impacts;
- potential for environmental impacts; and
- potential for 'offensiveness' impacts.

The panel decided that it should allocate a rating to each process guidance note sector and that there should be three categories:

**Category 1:** processes with an inherent environmental impact potential that was lower/below average when compared with other Part B processes

**Category 2:** processes with an inherent environmental impact that was medium/average when compared with other Part B processes

**Category 3:** processes with an inherent environmental impact that was higher/above average when compared with other Part B processes

The classification was therefore in terms of comparison with other Part B processes; it was not an absolute rating of a process sector as a high, medium or low polluter. A table set out the findings of the APRR.

The APRR also made a number of specific proposals:

- some processes involve the application of more than one Process Guidance Note. In these circumstances, the APRR proposes that the highest risk ranking should apply;

- processes that are caught under the EU Waste Incineration Directive should, as a matter of course, be allocated to Category 3;
- processes that involve degreasing using chlorinated solvents should all be in Category 3, but comments on this were specifically invited;
- processes under PG 2/6, 2/7 and 2/8 that use ingots and in-house clean scrap should be in Category 2, those that use other types of scrap should be in Category 3, again comments were invited on this;
- for those processes marked with an asterisk in the table, the ranking should be increased by one category where the process is particularly large for the sector and , in the judgement of the inspector, this has significant impacts for risk.

A further consultation was then held with trade associations representing LAPC process operators and other interested parties. Following this consultation, the APRR took account of the comments received in finalising its rating. The final rating is included in the description of the risk assessment method described in Annex 1 of this report.

**ANNEX 6**

**PROPOSED GUIDANCE ON 'APPROPRIATE MANAGEMENT SYSTEMS'**



## **A6.1 Background**

The following section provides details of the proposed Guidance on appropriate management systems that has been included in the recent draft revisions to Process Guidance Notes.

DEFRA and NAW advise that they envisage these paragraphs being standard in all the next generation of PG notes and that they will have effect by the end of 12 months from the date of the publication of the relevant revised guidance note.

## **A6.2 Proposed Wording on Appropriate Management Systems**

### **A6.2.1 Guidance in Main Text**

#### *Management techniques*

Important elements for effective control of emissions include:

- proper management, supervision and training for process operations;
- proper use of equipment;
- effective preventative maintenance on all plant and equipment concerned with the control of emissions to the air; and
- it is good practice to ensure that spares and consumables are available at short notice in order to rectify breakdowns rapidly. This is important with respect to arrestment plant and other necessary environmental controls. It is useful to have an audited list of essential items.

#### *Appropriate management systems*

Effective management is central to environmental performance; it is an important component of BAT and of achieving compliance with permit conditions. It requires a commitment to establishing objectives, setting targets, measuring progress and revising the objectives according to results. This includes managing risks under normal operating conditions and in accidents and emergencies. It is therefore desirable that processes put in place some form of structured environmental management approach, whether by adopting published standards (ISO 14001 or the EU Eco Management and Audit Scheme [EMAS]) or by setting up an environmental management system (EMS) tailored to the nature and size of the particular process. Process operators may also find that EMS will help identify business savings.

Regulators should use their discretion, in consultation with individual process operators, in agreeing the appropriate level of environmental management. Simple systems which ensure that LAPC considerations are taken account of in the day-to-day running of a process may well suffice, especially for small and medium-sized enterprises. While authorities may wish to encourage wider adoption of EMS, it is outside the legal scope of an LAPC authorisation/LAPPC permit to require an EMS for purposes other than

LAPC/LAPPC compliance. For further information/advice on EMS refer to EMS Additional Information in Section 9.

### ***Training***

Staff at all levels need the necessary training and instruction in their duties relating to control of the process and emissions to air. In order to minimise risk of emissions, particular emphasis should be given to control procedures during start-up, shut down and abnormal conditions.

- ◆ Training of all staff with responsibility for operating the process should include:
  - awareness of their responsibilities under the authorisation / permit;
  - minimising emissions on start up and shut down;
  - action to minimise emissions during abnormal conditions.
- ◆ The operator should maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment. These documents should be made available to the regulator on request.

### ***Maintenance***

Effective preventative maintenance should be employed on all plant and the equipment concerned with the control of emissions to air. In particular:

- ◆ A written maintenance programme should be provided to the regulator with respect to pollution control equipment; and
- ◆ A record of such maintenance should be made available for inspection.

## **A6.2.2 EMS Additional Information**

Further information/advice on EMS may be found from the following:

- Envirowise at [www.envirowise.gov.uk](http://www.envirowise.gov.uk) and [www.energy-efficiency.gov.uk](http://www.energy-efficiency.gov.uk) and Environment and Energy Helpline freephone 0800 585794.
- ISO 14001 [www.bsi.org.uk](http://www.bsi.org.uk) or telephone BSI information centre (020 8966 7022).
- EU Eco Management and Audit Scheme (EMAS) [www.emas.uk](http://www.emas.uk) or telephone the Institute of Environmental Management and Assessment (01522 540069).

Regulators and process operators may also like to be aware of:

**Project Acorn** has been developed by the British Standards Institution and the DTI with assistance from a range of partners in business to help SMEs implement an EMS by offering a five-stage approach which can lead to accreditation to one of the formal

standards. The aim is to achieve an EMS standard specifically for SMEs. Contact the Project Co-ordinator at the British Standards Institution on telephone 0208 996 7665 or the web site [www.bsi.org.uk](http://www.bsi.org.uk).

Some of the **High Street banks**, such as NatWest and the Coop now offer preferential loan rates to organisations that can demonstrate they are committed to improving their environmental performance. The NatWest also produce a self help guide for SMEs, “The Better business Pack”, focusing on waste, utilities, transport and supply chain issues. It gives tools, guidance and examples. Contact: WWF-UK on 01483 426444.

