



Solvents Regulations Ireland

Identification of Activities Covered by the Solvents Regulations in Ireland

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EXECUTIVE SUMMARY

URS Ireland Ltd., was contracted by the Environmental Protection Agency to complete EPA Project Reference NWPP-2004-05: "The Development of a Methodology and Identification of Activities covered by the Solvents Regulations".

This project was funded by the National Waste Prevention Programme. For more information see www.epa.ie/ourenvironment/waste

This project relates to the Emissions of Volatile Organic Compounds from Organic Solvents Regulations 2002, S.I. No. 543 of 2002 (the Solvents Regulations). The aim of the project was to identify and compile a database of companies, which may be subject to the requirements of the Solvents Regulations. The purpose of the database was to provide a tool for the following reasons:

- *To assist activities to achieve compliance with the Solvents Regulations;*
- *To provide a tool for Accredited Inspection Contractors (AICs);*
- *To assist Local Authorities in their role in enforcing the Solvents Regulations by providing an initial listing of activities potentially covered by the Solvents Regulations.*

Note that "Activities" are, for the purpose of this report, called 'Installations' (or companies) and Activities in the context of the Solvents Regulations are types of activity, such as vehicle refinishing.

The Local Authorities are responsible for the enforcement of the Regulations. The EPA contracted URS to carry out this project in order for help the Local Authorities to prepare for the implementation of the Regulations. The EPA will not be responsible for the maintenance or updating of the database. Local Authorities may compile and maintain their own internal database using the URS prepared preliminary database.

Throughout the report, there is reference to companies that 'definitely fall under the Solvents Regulations', are 'scheduled activities but below relevant solvent consumption thresholds', etc. This refers to such installations as being thus identified. However, it is important to note that such statements are based on information provided to URS by installations and other third parties.

This project comprised four phases:

- ***Phase 1: Project Methodologies:*** - *As part of the initial phase of this project, URS submitted a detailed written methodology detailing the scope of work required to complete Phases 2 to 4. The methodology statement included a detailed Functional Design Specification (FDS) that defined the build, features and delivery of a project-supporting database.*
- ***Phase 2: Design, compilation and quality check of the project database.*** *URS used Kompass as the main business directory to identify installations, which could potentially be covered by the requirements of the Solvent Regulations. URS extensively filtered the Kompass database (containing details on over 149,000 companies in Ireland) by business sector in order to identify companies which carried out Solvent Activities, for example, Activity*

6 – Vehicle Coating & Refinishing, Activity 11 – Dry Cleaning). Other business databases were used to supplement and cross-check the Kompass records, for example, Golden Pages, SIMI Vehicle Refinishers Database & the EPA Pre-IPPC Database. URS designed a project database in accordance with the specifications outlined in the FDS, including a web-based form for ease of data input and to prevent duplication of database entries. URS then populated the database with companies identified. In total, just under 5,000 companies were selected for the database. Any other lists of potential installations were screened against these entries to ensure all companies were entered into the database. During this phase, URS carried out various tasks to increase the awareness of the Solvents Regulations and the project itself, e.g., URS produced an article which was published in the national newspapers and sent to various business organisations. URS also contacted all Local Authorities to discuss the Regulations and the project. URS used database tools to generate a questionnaire and cover letter for every company on the database. Questionnaires were sent to all 5,000 companies on the database. Questionnaire responses were entered into the web-based form as companies returned them.

- **Phase 3: Database Verification.** URS produced a detailed verification methodology outlining the number of phone calls to be made to companies per Solvent Activity and based on responses received from companies during Phase 2. Once the methodology was agreed with the Agency, URS phoned approximately 115 companies who responded to the questionnaire and approximately 350 companies who did not respond to the questionnaire and visited a further 10 companies. URS also sent out a list of companies on a 'per county' basis to the Local Authorities requesting them to submit any relevant information regarding the Solvents Regulations for any of the companies. Nine Local Authorities out of thirty-six prepared a response to the mail out. The database was adapted with some of these responses where appropriate. URS also attended a conference in Tullamore on the 9th November 2005 hosted by the EPA. One of the aims of the conference was to increase the awareness of the Solvents Regulations and the project to the Local Authorities. URS presented the initial project findings to the Local Authority representatives and useful feedback on the project, and the Solvents Regulations implementation generally, was obtained from the Local Authorities.
- **Phase 4: Reporting & Final Database.** URS produced two Progress Reports during the course of the project. This final report details how the project was carried out and the outcome of the various project stages. URS has provided the Local Authorities and the EPA with a copy of the final project Microsoft Access® (Access) Database. This database contains all installations originally identified during the project and additional installations identified during the course of the project. The database allows one to search for those installations who definitely fall under the Solvents Regulations, those who carry out a solvent activity but do not use solvent quantities above the threshold limits and those companies that URS have no information on. The database has been designed with a number of search and list options, including for those installations identified as being definitely covered by the Solvents Regulations. The Access database has also been designed with limited edit functionality. URS has also provided the EPA with a Microsoft Excel® listing of companies who definitely fall under the requirements of Solvent Regulations. This database will be published on the EPA website (www.epa.ie).

It is noted that the accuracy of the final project database is limited by a number of factors. These include:

- Approximately a 16% response rate to the questionnaire issued during Phase 2;*
- Substantial variation in the quality of information in responses received during Phase 2;*
- A limited written and verbal response rate from the Local Authorities and installations during verification (Phase 3);*
- The variation in quality of information in the verbal responses received during verification process Phase 3.*

1. INTRODUCTION

URS is pleased to present this final report to the Environmental Protection Agency (EPA) regarding the Emissions of Volatile Organic Compounds from Organic Solvents Regulations 2002. S.I. No. 543 of 2002 (Solvents Regulations). Specifically, this report concerns the project completed by URS on the identification of activities in the Republic of Ireland covered by the Solvents Regulations.

This project was funded by the National Waste Prevention Programme. For more information see www.epa.ie/ourenvironment/waste

The aim of the project was to identify and compile a database of installations, or companies, which may be subject to the requirements of these regulations. The purpose of the database was to provide a tool for the following purposes:

1. To assist activities to achieve compliance with the Solvents Regulations;
2. To provide a tool for Accredited Inspection Contractors (AICs);
3. To assist Local Authorities in their role in enforcing the Solvents Regulations by providing an initial listing of activities potentially covered by the Solvents Regulations.

The EPA will not be responsible for the maintenance or updating of the database. The Local Authorities may compile and maintain their own internal database using the URS database deliverable.

Further information on the Solvents Regulations can be found in various useful guidance documents¹ located on the EPA website:

www.epa.ie/TechnicalGuidanceandAdvice/SolventRegulations

The project started in February 2005 with a written methodology outlining the following four phases of the project:

- Phase 1: Preparation of a Project Methodology (completed in February 2005);
- Phase 2: The design, compilation and quality check of the project database, including identification of installations (completed from March to August);

¹ Guidance documents include (but not limited to):

Environmental Protection Agency, 2003. Solvent Regulations 2002 & the Accredited Inspection Contractor (AIC) system, A Plain Guide, Version 1.0 26/05/2003.

Environmental Protection Agency, 2005. Best Practice Guidelines for Dry Cleaners.

Environmental Protection Agency, 2005. Best Practice Guidelines for Vehicle Coating & Refinishing.

- Phase 3: Database Verification (completed August to November);
- Phase 4: Preparation of interim progress reports, this final report and the final database deliverable.

Throughout the report, there is reference to companies that ‘definitely fall under the Solvents Regulations’, are ‘scheduled activities but below relevant solvent consumption thresholds’, etc. This refers to such installations as being thus identified. However, it is important to note that such statements are based on information provided to URS by installations and other third parties.

2. PHASE 1: PREPARATION OF A PROJECT METHODOLOGY

The project commenced on the 17th of February 2005 with a kick-off meeting attended by key URS and EPA project team members.

Out of that meeting, and in keeping with the URS proposal, URS prepared a Methodologies document that describes in some detail the approach that URS took to complete the project. The document also contains a 'Functional Design Specification' (FDS) that provided a technical basis for the actual database design and how it would function once the project was completed. The key provisions of the FDS are:

- Using Microsoft Access® 2000 (MS Access) as the database platform;
- The database was first designed with one 'Back end' database which was accessed only by selected URS project team members via the Internet using 'Webforms'. These webforms were designed specifically for data entry and editing;
- The final database was to have limited functionality, restricted to search, list, edit and add (new installations).

During the kick-off meeting, certain technical matters were agreed, mainly relating to the final database presentation, and the EPA also provided, both at the meeting and shortly after, valuable information to assist in initial database population.

URS submitted the Methodologies document to the EPA for approval on the 18th March 2005 and, following some discussion by email and phone with the EPA, the final go-ahead for implementing the methodology was agreed in mid-April 2005.

3. PHASE 2: DESIGN, COMPILATION AND QUALITY CHECK OF THE DATABASE

3.1. Database Design

The URS Information Technology Team, based in London, designed the main MS Access database structure in accordance with the FDS and any amendments following various communications with the EPA Information Technology Department.

The project database resided on a secure URS server in London. The URS team in Ireland could access the database via the Internet and make adjustments to the installation information contained in the database using 'Webforms'. Screen-shots of the database Webform approach can be viewed in Appendix A.

3.2. Initial Database Population and Project Database Screening

URS was commissioned by the EPA to identify installations within the Republic of Ireland that could potentially fall under the following activities as outlined in Schedule 2 of S.I. No. 543 of 2002:

- Activity 4: Surface cleaning using compounds with risk phrases R45, R46, R49, R60, R61 or R40 and halogenated compounds,
- Activity 5: Other surface cleaning,
- Activity 6: Vehicle coating and vehicle refinishing,
- Activity 8: Other coating, including metal, plastic, textile, fabric, film and paper coating,
- Activity 9: Winding wire coating,
- Activity 11: Dry cleaning,
- Activity 12: Wood Impregnation,
- Activity 14: Footwear manufacture,
- Activity 15: Wood and plastic lamination,
- Activity 16: Adhesive coating,
- Activity 17: Manufacturing of varnishes and inks,
- Activity 18: Rubber Conversion,
- Activity 19: Vegetable oil and animal fat extraction and vegetable oil refining activities,

- Activity 20: Manufacturing of pharmaceutical products.

The resulting database was to exclude installations which held a licence with the Agency, particularly Integrated Pollution Control (IPC) or Integrated Pollution Prevention and Control (IPPC) licences or who were in the process of preparing an application for an IPPC licence.

Some activities, notably printing, also listed in Schedule 2 to the Solvents Regulations were not considered in this project as they are covered by the current IPPC system.

Following the design of the VOC database, URS decided that the database would be populated using other database sources. The main sources of information used to populate the database were:

- The Kompass database,
- An IDA database,
- A Shannon Development Database,
- A SIMI vehicle refinishing/repairer database (those facilities that are SIMI registered),
- Dry cleaners database from the EPA,
- Pre-IPPC database from the EPA,
- A list of companies identified by Dublin City Council.

Other data sources considered and used, where possible, were:

- The Golden Pages,
- IBEC (and associated trade organisations such as ISPE Ireland and the Irish Chemical Marketeers Association),
- Central Statistics Office
- Enterprise Ireland,
- Solvent and paint suppliers,
- Completed EPA research projects, especially "Estimation of Emissions of Non-Methane Volatile Organic Compounds from Snap Sector 06".

The main database source used by URS was the Kompass Business Directory, carefully selecting companies according to set criteria such as business sector. This database contains details on over 149,000 companies in Ireland and is available on CD. The CD format facilitated good search and filter functionality using various business sector headings. Various output files were generated using Kompass and then 'credits' were

purchased which allowed the direct download of Kompass records to Microsoft Excel® files for subsequent import into the MS Access project database.

Records from other sources of information listed above were screened against the populated database records to ensure the companies were already present in the database and, if not present, then additional records supplemented the Kompass data.

At the end of this task, the project database was populated with just under 5,000 company records.

3.3. Project Promotion

3.3.1. Preparation of an Article and Advertisement

URS compiled a simple one-page article (Appendix B) briefly detailing:

- The background to the Solvent Regulations;
- An introduction to this project;
- A request for the participation of companies in this project by responding to a questionnaire or by contacting URS by email.

URS published this article on the EPA and Department of the Environment and Local Government websites (including Enterprise Ireland) and emailed it to trade associations (e.g. Munster Dry Cleaners) and Business Representation Groups such as IBEC and trade associations.

URS also published an edited version of the article presented in Appendix B as an advertisement in three National Broadsheets (The Irish Times, The Examiner and The Irish Independent).

3.3.2. Other Means of Project Promotion

URS contacted a large number of organisations and companies with the aim of gathering available information on installations, which could be covered under the Regulations. URS offered to attend several business seminars (e.g. IBEC Western Region Environment, Health & Safety Forum) and attended two of these seminars:

- The Institute of Metal Finishing EHS Seminar for the Surface Finishing Industries (April 2005);
- A Society for Irish Motoring Industry (SIMI) seminar (June 2005).

As previously mentioned the simple one-page article was used to promote the project among the business community.

URS set up an email address specifically for this project (solvents@urscorp.com) and this contact was detailed in the one page article presented in Appendix B. Response to the email address was poor. This indicated that either companies were not actively

responding to the promotional information or were accessing the EPA website (or other information sources such as suppliers) rather than communicating with URS through the email address. It is also possible that a large number of the target companies did not have internet/email access as following the mail out to companies a large number of phone calls were received by URS with the majority of companies indicating that they did not have internet/email access.

URS also contacted all Local Authorities in Ireland using a database of Local Authority contacts supplied by the EPA. URS sent further information regarding the Solvent Regulations and the work that URS was carrying out on behalf of the EPA to the Local Authorities when requested. URS requested the Local Authorities to send on any internally prepared installation lists to allow a comparison against the database. Dublin City Council supplied one such list. The outcome of communications with the Local Authority was very positive and useful at that stage in the project. Benefits of this task included:

- Preparation of a more up to date list of contact details within the Local Authorities,
- Increased confidence that the responsible person within the Local Authority would receive the mail out sent by URS during the verification phase,
- Increased awareness in the Local Authorities of the Solvent Regulations and the URS project,
- The development of open communications between the Local Authorities and URS with many Local Authorities contacting URS for further information and guidance during the various project stages.

3.4. Mail Out to Installations

Once URS had populated the database with potential installation records, questionnaires were generated using the project database. The design brief was for a simple 2 page questionnaire to include:

- Company name, telephone & fax number, address and email contact details;
- Tick-box questions on scheduled activities and solvent consumption threshold;
- Yes/No on IPPC status;
- Details on solvent usage; and
- Any steps taken, where applicable, on compliance with the Solvents Regulations.

This questionnaire was sent out to every installation listed on the project database (in total just under 5,000 questionnaires were issued) at that time along with the Appendix B article and a one page cover letter, with both EPA and URS letterheads, requesting the participation of companies in the project. A sample of the mail out to installations can be

found in Appendix C. The letterhead incorporated both the EPA enforcement and URS letterheads.

A total of 4,910 companies were sent the questionnaire; this was approximately 2,000 more than the original numbers of installations anticipated (3,000) during URS's preparation of the tender for this project. URS indicated on the cover letter that they were allowing 20 working days for the return of the questionnaire. URS requested companies to respond in writing (completed questionnaire) either by post or by fax. Following the sending out of questionnaires, URS received phone calls from numerous companies regarding the questionnaire and the Solvents Regulations. The cut-off date for responses from companies was extended during the project to a final receipt date, the 8th July 2005.

URS received a total of 695 written responses to the questionnaire (a response rate of 14%) before the verification process commenced. An additional 83 questionnaires were received during the verification (i.e. these companies were not on the verification call lists). This increased the percentage response rate to the mail out questionnaire alone to 15.8%.

Information from the completed questionnaires was input to the project database using the Internet Webforms.

4. PHASE 3: DATABASE VERIFICATION

4.1. Verification Matrix Development Methodology (Company verifications)

A detailed verification methodology was submitted to the EPA and approved (Appendix D). The verification process involved site visits and phone calls to companies. Installations assigned to Activity 6 (Vehicle Coating) and Activity 11 (Dry Cleaning) were excluded from the verification process as correspondence with the Environmental Protection Agency during the project indicated that all such installations would initially remain on the database, regardless of their status relating to the Solvents Regulations. The exception to this was where information from Local Authorities included records on such installations.

In order to carry out the verification process, URS matched companies with a Kompass sector code against an appropriate Solvent Activity number. All companies that were sourced from the SIMI Vehicle Refinishers Membership List or Vehicle Refinisher's databases were assumed to be Solvent Activity 6. Any installations, which were sourced from dry cleaner databases, were assumed to be Solvent Activity 11. Companies were chosen at random using detailed sample frames.

Briefly, the verification methodology agreed, included:

Verification of Responses Received

Verification of those companies that returned a completed questionnaire, noting that many companies failed to complete all parts of the questionnaire or failed to provide enough information as to why the Solvents Regulations were not applicable.

This involved the verification of:

- 5 installations who indicated that they are 'subject to the regulations,'
- 60 installations who indicated that they are 'not subject to the regulations',
- 50 installations who indicated that they 'may be subject to the requirements of the solvent regulations'. Such companies generally did not know if they were subject to the Solvents Regulations or did not have enough information gathered to determine their status.

Verification of Non-Respondents

This involved the verification of 350 installations who did not respond to the questionnaire and thus URS did not have any information on their status relating to the Solvents Regulations.

4.2. Company Visits

It was agreed with the Agency that up to 10 company visits would be made. Originally, a total of 50 visits were anticipated and 200 phone calls. However, it became apparent during the progress of the project that it would be more effective to maximise the number of phone calls and limit the number of company visits with much the same information being gathered over the telephone as on site.

In general, the site visits confirmed the information on the project database. Some specific observations are related to discussion in Section 5.2.2 of this report and are not repeated in this section.

4.3. Telephone Verifications

URS contacted 455 companies by phone as per the sample frame submitted as part of the Verification Methodology. 125 of these companies were contacted three times without a response, with the result that no further information could be gained from the company to establish whether the company fell under the requirements of the Solvent Regulations.

The Phase 2 questionnaires were used to record information from the verification calls. URS then updated the database with information gained during verification, ticking off a check box to distinguish those companies that were “verified”.

4.4. Mail out to Local Authorities

URS merged local authority contact lists prepared by the EPA, Clean Technology Centre (CTC) and URS to form a consolidated list of local authority contacts. A consolidated list of contacts can be found in Appendix E. URS Information Technology professionals generated the mail outs to the Local Authorities on a per county basis. In the case of different functional area (e.g. Tipperary North Riding versus Tipperary South Riding), cities (City Councils and County Councils) one list for the whole county was prepared as it was not practicable to identify with reasonable accuracy which listed companies belonged to which functional area. The mail out list detailed the name of the company, contact details, possible Scheduled Solvent Activity and a comments section to be filled in by the local authority. A cover letter was sent with this mail out detailing the main objectives of the mail out, summarised as follows:

- To assist each Council to prepare for the practical implementation of the Regulations;
- Facilitate Councils to handle enquiries that companies may already be making by providing a list of reference companies if there is not already an internal list present;
- Provide important feedback to URS in verifying the preliminary database.

The mail outs were sent to the Local Authorities on the 1st of September 2005. The Local Authorities were given a 4-week period to respond to the mail out. URS made a round of follow-up phone calls to the Local Authorities to determine the status of progress on the

lists and to gain an update from the Local Authorities as to how they were progressing with the Solvent Regulations. As experienced during previous communications responses varied. Some feedback is summarised as follows:

- Some Local Authorities are writing to companies in their functional areas using the list provided by URS and some are visiting companies on the list provided (Kildare County Council, Kilkenny County Council, Dundalk County Council);
- Many Local Authorities are unaware of the Solvent Regulations or have done little to prepare for them;
- Some Local Authorities are aware of the Regulations but do not plan to do much about them due to resource issues;
- Only a handful of Local Authorities are receiving enquiries from installations in their functional areas with enquiries mainly from the Vehicle Refinishers.

Eleven Local Authorities made an attempt to respond to the mail out, a response rate of 26 %. Some interesting feedback is as follows:

- Monaghan and Clare County Council indicated the number of companies that are definitely covered by the Solvent Regulations. Eleven percent of companies listed for Monaghan County are covered by the Regulations. 9% of companies listed for Clare County are covered by the Regulations. Kildare County Council indicated in a preliminary response that 3 % of listed companies were covered under the Regulations with 19% of companies definitely not covered by the Regulations. Leitrim County Council indicated that approximately 23% of companies listed were potentially covered by the Regulations. For those companies which the Councils found not to be covered by the Regulations, the main reasons reported were:
 - companies not carrying out a scheduled activity;
 - companies using solvent quantities below the solvent consumption threshold;
 - companies holding an IPC/IPPC licence.
- Most of the other returns from the County Councils were not particularly useful with little detail that might assist in determining if a listed company is covered by the Solvents Regulations. There were some additional companies added to our database that were not originally listed, these were mainly from the dry cleaning and vehicle-refinishing sector.
- A further 139 companies were considered as 'verified' based on information obtained from the Local Authorities. Corresponding project database records were then upgraded.

4.5. Tullamore Conference

During the verification phase of the project, URS gave a presentation to Local Authorities on the progress of the project at a briefing session on the Solvent Regulations hosted by the EPA Office of Environmental Enforcement in Tullamore, Co. Offaly on the 8th November 2005. Feedback obtained from the audience included:

- The Local Authorities are concerned about their own resources needed to ensure compliance with the Solvent Regulations and especially regarding assessing completed AIC reports. The fear is that Local Authorities will effectively 'rubber stamp' reports with little understanding of their contents and possible consequences. The answer generally given to this is that Local Authorities have had ample notification of the need to prepare for these regulations and that, unfortunately, the regulations are complex with the need to resource accordingly;
- There is little move from some industry players to get compliant and also a large variation in local authority preparation for the regulations;
- The question was raised during the conference about compliance dates for the Reduction Scheme. Clearly, the compliance date for existing installations has passed (31st October, 2005) and clearly many vehicle refinishers (in particular) want to go down the Reduction Scheme compliance route. So technically, if this is so, they are non-compliant with the Regulations and need to consider the Emission Limit Value route. The Compliant Decorative Paints Directive (2004/42/EC) may, in time, allow some vehicle refinish operators to comply by way of exemption from the Solvents Directive. However, Directive 2004/42/EC has not yet been transposed into Irish law.

Table 5.1 – Statistics on Solvents Regulations Database Project.

Solvent Activity	No. of companies identified who fall under the Solvent Regulations (Note 1)	No. of companies identified who do not fall under the Solvent Regulations (Note 1)	No. of companies identified who reportedly carry out a Solvent Activity but do not use solvents above threshold limits (Note 1)	Total no. of companies per sector (*) (Note 1)
Activity 4 & 5: Surface Cleaning	18	325	72	1456
Activity 6: Vehicle Refinishing	26	88	53	857
Activity 8: Other Coating	7	102	6	309
Activity 9: Winding Wire Coating	1	10	1	49
Activity 11: Dry Cleaning	51	63	0	779
Activity 12: Wood Impregnation	0	25	8	128
Activity 14: Footwear Manufacture	0	4	0	20
Activity 15: Wood and Plastic Lamination	1	110	36	564
Activity 16: Adhesive Coating	2	49	8	150
Activity 17: Manufacturing of Coating Preparations, Varnishes, Inks and Adhesives	0	6	0	18
Activity 18: Rubber Conversion	0	16	2	46

Solvent Activity	No. of companies identified who fall under the Solvent Regulations (Note 1)	No. of companies identified who do not fall under the Solvent Regulations (Note 1)	No. of companies identified who reportedly carry out a Solvent Activity but do not use solvents above threshold limits (Note 1)	Total no. of companies per sector (*) (Note 1)
Activity 19: Vegetable Oil and Animal Fat Extraction and Vegetable Oil Refining Activities	0	2	0	14
Activity 20: Manufacturing of Pharmaceutical Products	3	18	8	64
Pre-IPC listing (EPA listing companies not assigned to solvent activities)	0	42	40	378

(*) Note: Companies were assigned using professional judgement to match Kompass business sector to Solvent Activity

Note 1: Refer to Bold Font limitation on interpretation of data provided in the Introduction to this report.

5. PHASE 4: REPORTING AND PROJECT OUTPUTS

5.1. Interim Reports

URS submitted two interim reports to the EPA outlining the progress of the project in July and August 2005 respectively. These were submitted electronically in Acrobat® format.

5.2. Project Output: Final Database to the Local Authorities

5.2.1. The MS Access Database Deliverable

A final review of the database was carried out to remove companies that were IPPC/IPC licensed and in order to remove any companies which may have been duplicated. There is a total of 4,720 companies listed in the final database.

URS has issued the final database in Microsoft Access® 2000 format to the Local Authorities. The database contains details of all companies originally identified in Phase 2 of this project as well as added to, and removed, during the course of Phase 3. The database entries fall under four broad classifications:

1. Those companies that were identified as definitely falling under the Solvents Regulations. This group comprises those companies that so stated via questionnaire replies and companies that URS subsequently identified as being subject via the verification process (including Local Authority provided information). It does not include all Dry Cleaners as many Dry Cleaners provided no information at all and so it was not possible to determine if these companies were dry cleaners or simply laundrettes with contract dry cleaning;
2. Those that do not fall under the Solvents Regulations. This group comprises companies who provided information to state that they were not subject to the Solvents Regulations and provided good reasons for this and those companies verified by URS as being in this group;
3. Those companies that could potentially fall under the regulations. This group consists of companies who were identified as carrying out a scheduled activity but:
 - a. Whom have either indicated that they do not use solvents in excess of the relevant thresholds and whose information has not been verified;
 - b. Where the verification process has indicated any uncertainty relating to solvent consumption; or
 - c. Where companies indicated that they do not have enough information to determine solvent consumption.
4. Those companies who did not respond at all to the questionnaire and who were not verified.

With the search and list functionality of the database, it is possible to identify those companies that have been identified as being definitely subject to the requirements of the Solvents Regulations and to identify those companies that are scheduled activities but have reported that they do not use solvents above the appropriate thresholds.

The MS Access database deliverable features:

1. The ability to search under various criteria, notably, County, Company Name and Solvent Activity;
2. The ability to edit database records;
3. The ability to add or subtract database records;
4. The ability to export search records data to printable lists.

This final database will not be published on the EPA website and instead will be issued, by CD, to the EPA and to all Local Authorities. This database will not be updated regularly by the EPA but can be adjusted as required by Local Authorities.

5.2.2. Assessment of Database Statistics

Although the final database will still retain all of the companies that were initially input to the database in Phase 2, as well as added during the verification process, it is useful to consider the breakdown of the database under various headings. The results of this exercise are presented in Table 5.1.

The largest sector group found in the database is the surface cleaning sector. The vehicle coating & refinishing sector along with the dry cleaner sector are the next biggest sectors in the database. The vehicle coating and refinishing industry account for the greatest number of definite 'yes the regulations apply' received from companies followed by the dry cleaning and surface cleaning industries. There was only one company under Activity 20 – Manufacturing of Pharmaceutical Product who responded stating the Solvent Regulations applied to them. Of those companies that responded to the questionnaire there were none who indicated that the solvent regulations are applicable from the following sectors; winding wire coating, footwear manufacture, manufacture of coating preparations, rubber conversion, vegetable oil and animal fat extraction and vegetable oil refining activities and vegetable oil and animal fat extraction and vegetable oil refining activities.

The following interesting points were noted during the verification process:

- The printed circuit board manufacturing industry, although much smaller in Ireland than it was perhaps a decade ago (due to competition from other nations), uses solvent based flux solutions to prepare the surface for soldering. Whilst some surface cleaning takes place in this situation, this is not the purpose of the solution addition. It would appear that the activity could be described as a Schedule 8 activity under the Solvent Regulations (other coating). Clarity is needed with respect to such companies.

- There are several examples of substantial solvent usage but where such activities are not scheduled activities under the Solvent Regulations. Examples include:
 - Testing of equipment in solvent baths;
 - Situations where solvent is blended into product or added to product. The diagnostic industry, quite large in Ireland, is typical of this situation;
 - Solvent use in cleaning equipment, but not product. Many medical device companies, again, a large sector in Ireland, come under this scenario;
 - Larger art studios and related industry where moulds are made using solvent based materials. Technically it is difficult to classify activities here as scheduled solvent activities, the nearest being 'other coating'.

5.3. Spreadsheet for the EPA Website

URS will issue to the EPA, a Microsoft Excel® spreadsheet of those companies only that have been identified as definitely being subject to the Solvents Regulations as well as a full list of all identified dry cleaners and vehicle refinishers, regardless of their status under the Solvents Regulations. This list will provide details of:

- Company Name;
- Whether the company has been 'verified';
- Company contact details, where available;
- Company address;
- County;
- Solvent Activity number (e.g., Activity 11 – Dry Cleaning).

This list will be published on the EPA website. This list will not be updated regularly by the EPA.

6. CONCLUSION

The aim of the project was to identify and compile a database of companies which may be subject to the requirements of the Volatile Organic Compounds from Organic Solvents Regulations 2002, S.I. No. 543 of 2002 (the Solvents Regulations). The purpose of the database was to provide a tool for the following reasons:

1. To assist activities to achieve compliance with the Solvents Regulations;
2. To provide a tool for Accredited Inspection Contractors (AIC's);
3. To assist Local Authorities in their role in enforcing the Solvents Regulations by providing an initial listing of activities potentially covered by the Solvents Regulations.

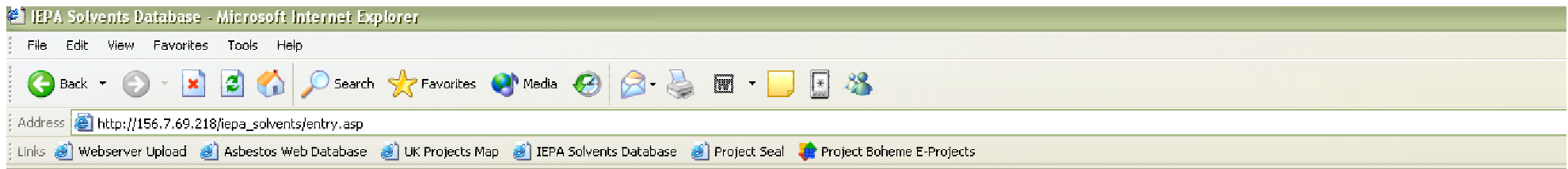
The database project achieved the primary objective of providing a first pass at attempting to understand how many companies in Ireland may be affected by the Solvents Regulations. The resulting product, an electronic database, contains over 4,700 records with 100 companies identified as reportedly being definitely subject to the Solvents Regulations. However, many more companies listed are likely to be subjected to the Solvents Regulations but this could not be stated without verification of each companies operations.

It is important to note that the accuracy of the final project database is limited by a number of factors. These include:

- Approximately a 16% response rate to the questionnaire issued during the database compilation phase;
- Substantial variation in the quality of information in responses received during the same phase;
- A limited response rate from the Local Authorities and installations during database verification

Nonetheless, as time progresses, it is hoped that Local Authorities can themselves use the deliverable from this project (i.e., the database) as a baseline with future accuracy enhancement inevitable. The variation in quality of information in the responses received during verification process Phase 3.

Appendix A - Screen-shots of the project database



Identification of Activities Covered by the Solvent Regulations in Ireland

Login Name:

Password:

Release Notes & General Information

Version

- Version 1.0 (beta)

Minimum System Requirements

To use this website, you will require:

- Microsoft Internet Explorer version 5 or later with JavaScript enabled.
To get the latest version of Internet Explorer, please visit: <http://www.microsoft.com/windows/ie/default.msp>
- Microsoft Word 2000 or later

Help & Support

- For help, please contact:
 - Guy Underhill,
Data Solutions (London),
URS Corporation
+44 (0)208 944 3479
guy_underhill@urscorp.com

Emissions of Volatile Organic Compounds From Organic Solvents Regulations 2002 (S.I. 543 of 2002)

Company Name:

Contact Name:

Address1:

Address2:

Address3:

Address4:

Phone:

Fax:

Email: (you must specify your email program in 'Tools', 'Internet Options', 'Programs', 'Email first')

Are you involved in any of the following 14 activities (as per Schedule 2 of Regulations)?
Further descriptions of the activities are included in the attached extract from the Regulations.

Schedule 2 Reference¹

- 4 Surface cleaning using solvent compounds with risk phrases R45, R46, R49, R60, R61, or R40 and halogenated compounds;
- 5 Other surface cleaning;
- 6 Vehicle coating and vehicle refinishing;
- 8 Other coating, including metal, plastic, textile, fabric, film and paper coating;
- 9 Winding wire coating;
- 11 Dry cleaning;
- 12 Wood impregnation;
- 14 Footwear manufacture;
- 15 Wood and plastic lamination;
- 16 Adhesive coating;
- 17 Manufacturing of varnishes and inks;
- 18 Rubber conversion;
- 19 Vegetable oil and animal fat extraction and vegetable oil refining activities;
- 20 Manufacturing of pharmaceutical products.

(please ✓ appropriate box);

<input type="checkbox"/>	4
<input type="checkbox"/>	5
<input type="checkbox"/>	6
<input type="checkbox"/>	8
<input type="checkbox"/>	9
<input type="checkbox"/>	11
<input type="checkbox"/>	12
<input type="checkbox"/>	14
<input type="checkbox"/>	15
<input type="checkbox"/>	16
<input type="checkbox"/>	17
<input type="checkbox"/>	18
<input type="checkbox"/>	19
<input type="checkbox"/>	20

Name of Organic Solvent's² Used

Quantity/year, Kilograms/year or Litres/year

Summary of process(es) where organic solvent containing substances are used,

Save Details

Do you exceed any of the following Solvent consumption thresholds (tonnes/year), as specified in Schedule 2 of the Solvent Regulations?

Schedule 2 Reference¹

		Y/N	
4	Surface cleaning using solvent compounds with risk phrases R45, R46, R49, R60, R61, or R40 and halogenated compounds;	>1	<input type="checkbox"/> 4
5	Other surface cleaning;	>2	<input type="checkbox"/> 5
6	Vehicle coating and vehicle refinishing;	>0.5	<input type="checkbox"/> 6
8	Other coating, including metal, plastic, textile, fabric, film and paper coating;	>5	<input type="checkbox"/> 8
9	Winding wire coating;	>5	<input type="checkbox"/> 9
11	Dry cleaning;	-	<input type="checkbox"/> 11
12	Wood impregnation;	>25	<input type="checkbox"/> 12
14	Footwear manufacture;	>5	<input type="checkbox"/> 14
15	Wood and plastic lamination;	>5	<input type="checkbox"/> 15
16	Adhesive coating;	>5	<input type="checkbox"/> 16
17	Manufacturing of varnishes and inks.	>100	<input type="checkbox"/> 17
18	Rubber conversion;	>50	<input type="checkbox"/> 18
19	Vegetable oil and animal fat extraction and vegetable oil refining activities;	>10	<input type="checkbox"/> 19
20	Manufacturing of pharmaceutical products.	>50	<input type="checkbox"/> 20

If you exceed any of the above activity thresholds the solvent regulations apply to your company. Further information on the regulations can be found on the EPA website (www.epa.ie) or by contacting URS at solvents@urscorp.com, or tel: (01) 4155100 and ask for Sarah Corcoran, Peter Hassett or Ian Mamane.

Certain types of facilities are required to hold a licence from the EPA. Does your facility hold an IPC/IPPC3 licence or are you in the process of applying for a licence?

Yes

No

If the solvent regulations apply, but you are not required to hold an IPFC licence and you do not hold (or are not applying for) an IPC/IPPC licence, then you must comply with the regulations through the Accredited Inspection Contractor(AIC) system. Further information on the AIC system is available at www.epa.ie or from solvents@urscorp.com.

If the solvent regulations apply, have you taken steps to comply to date, if so describe?

On completion of the questionnaire please return to URS Ireland (attn: Solvents) at 4th Floor, Iveagh Court, 6 – 8 Harcourt Road, Dublin 2, and/or fax to URS at (01) 4155101

1. Emissions of Volatile Organic Compounds from Organic Solvent Regulations 2002 – Schedule 2

2. An organic solvent is a hydrocarbon liquid that has the ability to dissolve, suspend or extract other materials without causing a chemical change to the material or to the organic solvent. Organic solvents make it possible to process, apply, clean or separate materials. Organic solvents may not only be used in their pure state but may be present in materials such as paints/glues/cleaning materials in varying quantities. Please name and quantify pure organic solvent use and organic solvent containing substances used.

3. Integrated Pollution Prevention and Control (IPPC) licenses are to prevent or reduce emissions to air, water and land, and to reduce waste and to use energy efficiently. IPPC replaces Integrated Pollution Control (IPC) as the licensing regime applied to certain activities in Ireland

Save Details

Description of Activities

Activity 4 and 5: Surface Cleaning

Any activity except dry cleaning using organic solvents to remove contamination from the surface of material including degreasing. A cleaning activity consisting of more than one step before or after any other activity shall be considered as one surface cleaning activity. This activity does not refer to the cleaning of the equipment but to the cleaning of the surface products.

Activity 6: Vehicle Refinishing (see also 'coating activity' definition below)

Any industrial or commercial coating activity and associated degreasing activities performing:

- the coating of road vehicles as defined in Directive 70/156/EEC, or part of them, carried out as part of vehicle repair, conservation or decoration outside of manufacturing installations, or
- the original coating of road vehicles as defined in Directive 70/156/EEC or part of them with refinishing-type materials, where this is carried out away from the original manufacturing line, or
- the coating of trailers (including semi-trailers) (category O).

Activity 8: Other Coating (see 'coating activity' definition below)

Activity 9: Winding Wire Coating (see also 'coating activity' definition below)

Any coating activity of metallic conductors used for winding the coils in transformers and motors, etc.

Activity 11: Dry Cleaning

Any industrial or commercial activity using VOCs in an installation to clean garments, furnishing and similar consumer goods with the exception of the manual removal of stains and spots in the textile and clothing industry.

Activity 12: Wood Impregnation

Any activity giving a loading of preservative in timber.

Activity 12: Wood Impregnation

Any activity giving a loading of preservative in timber.

Activity 6, 8 and 9: Coating Activity

Any activity in which a single or multiple application of a continuous film of a coating is applied to:

1. vehicles as listed below:
 1. new cars, defined as vehicles of category M1 in Directive 70/156/EEC3, and of category N1 in so far as they are coated at the same installations as M1 vehicles,
 2. truck cabins, defined as the housing for the driver, and all integrated housing for the technical equipment, of vehicles of categories N2 and N3 in Directive 70/156/EEC,
 3. vans and trucks, defined as vehicles of categories N1, N2 and N3 in Directive 70/156/EEC, but not including truck cabins.
 4. buses defined as vehicles of categories M2 and M3 in Directive 70/156/EEC,
2. trailers, defined in categories O1, O2, O3 and O4 in Directive 70/156/EEC
3. metallic and plastic surfaces including surfaces of airplanes, ships, trains, etc.,
4. wooden surfaces,
5. textile, fabric, film and paper surfaces,
6. leather

It does not include the coating of substrate with metals by electrophoretic and chemical spraying techniques. If the coating activity includes a step in which the same article is printed by whatever technique used, that printing step is considered part of the coating activity. However, printing activities operated as a separate activity are not included, but may be covered by the Directive if the printing activity falls within the scope thereof.

Activity 14: Footwear Manufacture

Any activity of producing complete footwear or parts thereof.

Activity 15: Wood and Plastic Lamination

Any activity to adhere together wood and/or plastic to produce laminated products.

Activity 16: Adhesive Coating

Any activity in which an adhesive is applied to a surface, with the exception of adhesive coating and laminating associated with printing activities.

Activity 17: Manufacturing of Coating Preparations, Varnishes, Inks and Adhesives

The manufacture of the above final products, and of intermediates where carried out at the same site, by mixing of pigments, resins and adhesive materials with organic solvent or other carrier, including dispersion and pre-dispersion activities, viscosity and tint adjustments and operations for filling the final product into its container.

It should be noted that due to the thresholds specified in the Regulations, the AIC system applies only to the manufacture of varnishes and inks (and only where the production capacity is less than 1,000 litres per week, at greater than 1,000 litres per week the IPPC licensing system would apply).

Activity 18: Rubber Conversion

The manufacture of the above final products, and of intermediates where carried out at the same site, by mixing of pigments, resins and adhesive materials with organic solvent or other carrier, including dispersion and pre-dispersion activities, viscosity and tint adjustments and operations for filling the final product into its container.

Activity 18: Rubber Conversion

An activity of mixing, milling, blending, calendaring, extrusion and vulcanisation of natural or synthetic rubber and any ancillary operations for converting natural or synthetic rubber into a finished product.

Activity 19: Vegetable Oil and Animal Fat Extraction and Vegetable Oil Refining Activities

Any activity to extract vegetable oil from seeds and other vegetable matter, the processing of dry residues to produce animal feed, the purification of fats and vegetable oils derived from seeds, vegetable matter and/or animal matter.

Manufacturing of Pharmaceutical Products (activity 20 in Table 1)

The chemical synthesis, fermentation, extraction, formulation and finishing of pharmaceutical products and where carried out at the same site, at the same site, the manufacture of intermediate products.

Appendix B - Sample mail out to installations: Cover letter, Questionnaire & Article

24th June 2005

Attention : General Manager

Re: Emissions of Volatile Organic Compounds from Organic Solvents Regulations 2002 (S.I. No. 543 of 2002) - ARE YOU PREPARED?

Dear Sir or Madam,

Your company may already be aware of the Emission of Volatile Organic Compounds from Organic Solvents Regulations 2002 (S.I. No. 543 of 2002) (the Solvents Regulations) and the requirements of the regulations. Indeed your company may be actively working on compliance with the regulations if they apply.

URS Ireland Limited, has been commissioned by the Environmental Protection Agency (the EPA) to prepare a comprehensive database of those companies that may fall under the Solvents Regulations. Further information on the Solvents Regulations can be found in a one-page explanation leaflet enclosed.

There are several reasons for the preparation of the database but the two key reasons are:

- To help companies to whom the regulations may apply to be aware of the regulations and to start preparing for them;
- To help local authorities to determine the companies in their functional areas to which the regulations may apply, noting that local authorities will enforce the regulations.

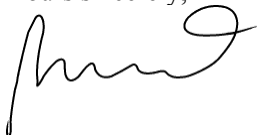
In order to assist the EPA and URS project team to complete the database as accurately as is practicable, a straightforward questionnaire has been enclosed. We would be grateful if the questionnaire could be completed and returned **within 20 working days** of the receipt of this letter. The questionnaire can be faxed or posted to the address provided at the bottom of this page.

If any of the details (e.g. contact name, telephone number) are incorrect, *please amend them*. If there is not enough space to fully answer the questions, please write these on additional sheets.

If the Solvents Regulations don't apply to your company, please return the enclosed questionnaire so stating.

Your assistance will be greatly appreciated and we look forward to a reply,

Yours sincerely,



Peter Hassett
Project Director

Registered in Ireland No. 107912



EMISSIONS OF VOLATILE ORGANIC COMPOUNDS FROM ORGANIC SOLVENTS REGULATIONS 2002 (S.I. 543 OF 2002)

The Solvents Regulations have been in force since November 2002. The regulations require a large section of Irish business, which use solvents or solvent containing materials, especially the small and medium sized enterprises (SME's), to hold Certificates of Compliance and report annually, adopt restrictions on solvent emissions and in many cases reduce emissions. This applies **immediately** to new enterprises and will shortly affect existing enterprises.

The following 14 activities out of a possible 20 activities listed in Schedule 2 of the Solvents Regulations 2002 are expected to be affected;

- Surface cleaning using compounds with risk phrases R45, R46, R49, R60, R61, or R40 and halogenated compounds;
- Other surface cleaning;
- Vehicle coating and vehicle refinishing;
- Other coating, including metal, plastic, textile, fabric, film and paper coating;
- Winding wire coating;
- Dry cleaning;
- Wood impregnation;
- Footwear manufacture;
- Wood and plastic lamination;
- Adhesive coating;
- Rubber conversion;
- Vegetable oil and animal fat extraction and vegetable oil refining activities;
- Manufacturing of pharmaceutical products.
- Manufacturing of varnishes and inks.

For all activities listed above, apart from the dry cleaning industry, there are solvent consumption thresholds. The Regulations apply to all dry cleaners regardless of solvent consumption.

URS Ireland Ltd. is working with the Environmental Protection Agency and Local Authorities to prepare a database of all enterprises that may fall under the remit of the Solvents Regulations. The purpose of this project is to assist companies to comply with the Solvents Regulations and therefore the co-operation of enterprises potentially listed in the database will be of benefit to all concerned.

If you think that your company may fall within the remit of the Solvents Regulations 2002, contact; solvents@urscorp.com. You will then be issued with further information, containing details on dates of Regulations application, solvent usage thresholds for activities, etc.

Further information is also available on the EPA web site:
(<http://www.epa.ie/TechnicalGuidanceandAdvice/SolventRegulations/>)



Emissions of Volatile Organic Compounds From Organic Solvents Regulations 2002 (S.I. 543 of 2002)

Company Name:

Contact Name:

Address:

Phone/Fax No.:

Email address:

**Are you involved in any of the following 14 activities (as per Schedule 2 of Regulations)?
Further descriptions of the activities are included in the attached extract from the Regulations.**

Schedule 2 Reference¹

(please ✓ appropriate box)

4	Surface cleaning using solvent compounds with risk phrases R45, R46, R49, R60, R61, or R40 and halogenated compounds;	<input type="checkbox"/>	4
5	Other surface cleaning;	<input type="checkbox"/>	5
6	Vehicle coating and vehicle refinishing;	<input type="checkbox"/>	6
8	Other coating, including metal, plastic, textile, fabric, film and paper coating;	<input type="checkbox"/>	8
9	Winding wire coating;	<input type="checkbox"/>	9
11	Dry cleaning;	<input type="checkbox"/>	11
12	Wood impregnation;	<input type="checkbox"/>	12
14	Footwear manufacture;	<input type="checkbox"/>	14
15	Wood and plastic lamination;	<input type="checkbox"/>	15
16	Adhesive coating;	<input type="checkbox"/>	16
17	Manufacturing of varnishes and inks.	<input type="checkbox"/>	17
18	Rubber conversion;	<input type="checkbox"/>	18
19	Vegetable oil and animal fat extraction and vegetable oil refining activities;	<input type="checkbox"/>	19
20	Manufacturing of pharmaceutical products.	<input type="checkbox"/>	20

Name of Organic Solvents² Used
Quantity/year

(e.g. Trichloromethane, 50l per year)

Summary of process(es) where organic solvent containing substances are used;

Do you exceed any of the following Solvent consumption thresholds (tonnes/year), as specified in Schedule 2 of the Solvent Regulations?

Schedule 2 Reference¹

	Threshold	Y/N	
4 Surface cleaning using solvent compounds with risk phrases R45, R46, R49, R60, R61, or R40 and halogenated compounds;	>1	<input type="checkbox"/>	4
5 Other surface cleaning;	>2	<input type="checkbox"/>	5
6 Vehicle coating and vehicle refinishing;	>0.5	<input type="checkbox"/>	6
8 Other coating, including metal, plastic, textile, fabric, film and paper coating;	>5	<input type="checkbox"/>	8
9 Winding wire coating;	>5	<input type="checkbox"/>	9
11 Dry cleaning;	-	<input type="checkbox"/>	11
12 Wood impregnation;	>25	<input type="checkbox"/>	12
14 Footwear manufacture;	>5	<input type="checkbox"/>	14
15 Wood and plastic lamination;	>5	<input type="checkbox"/>	15
16 Adhesive coating;	>5	<input type="checkbox"/>	16
17 Manufacturing of varnishes and inks.	>100	<input type="checkbox"/>	17
18 Rubber conversion;	>50	<input type="checkbox"/>	18
19 Vegetable oil and animal fat extraction and vegetable oil refining activities;	>10	<input type="checkbox"/>	19
20 Manufacturing of pharmaceutical products.	>50	<input type="checkbox"/>	20

If you exceed any of the above activity thresholds the solvent regulations apply to your company. Further information on the regulations can be found on the EPA website (www.epa.ie) or by contacting URS at solvents@urscorp.com, or tel: (01) 4155100 and ask for Sarah Corcoran, Peter Hassett or Ian Marnane.

Certain types of facilities are required to hold a licence from the EPA. Does your facility hold an IPC/IPPC³ licence or are you in the process of applying for a licence? Yes No

If the solvent regulations apply, but you are not required to hold an IPPC licence and you do not hold (or are not applying for) an IPC/IPPC licence, then you must comply with the regulations through the Accredited Inspection Contractor(AIC) system. Further information on the AIC system is available at www.epa.ie or from solvents@urscorp.com.

If the solvent regulations apply, have you taken steps to comply to date, if so describe? If the Solvent Regulations do not apply to your activity please state.

On completion of the questionnaire please return to URS Ireland (attn: Solvents) at 4th Floor, Iveagh Court, 6 – 8 Harcourt Road, Dublin 2, and/or fax to URS at (01) 4155101

1. Emissions of Volatile Organic Compounds from Organic Solvent Regulations 2002 – Schedule 2
2. An organic solvent is a hydrocarbon liquid that has the ability to dissolve, suspend or extract other materials without causing a chemical change to the material or to the organic solvent. Organic solvents make it possible to process, apply, clean or separate materials. Organic solvents may not only be used in their pure state but may be present in materials such as paints/glues/cleaning materials in varying quantities. Please name and quantify pure organic solvent use and organic solvent containing substances used.
3. Integrated Pollution Prevention and Control (IPPC) licenses prevent or reduce emissions to air, water and land and encourage the reduction of waste and the efficient use of energy. The IPPC system replaces Integrated Pollution Control (IPC) as the licensing regime applied to certain activities in Ireland.

Appendix C - Verification Matrix Development Methodology

Verification Matrix Development Methodology

Introduction

After completion of the preliminary database, a mail-out questionnaire was issued to approximately 4,900 companies, requesting return of the completed questionnaire within a defined period. One weeks grace was allowed for return of completed questionnaires (until August 9th 2005) before the progressing to the next stage of the project, namely:

- Mail-out to Local Authorities;
- Verification.

The mail-out to the Local Authorities will consist of a cover letter and spreadsheet of companies in their area. A copy of the letter will be forwarded to the EPA prior to issue for approval. This document deals specifically with the development of the methodology for the verification phase, and has been submitted to the EPA for approval.

Based on experience gathered during the project and on URS experience gathered from similar projects in the UK, it is now proposed to concentrate the verification phase on phone contact with companies, allowing the number of verifications to be increased. Based on the time allocated in the project budget for the verification stage, URS now propose to complete up to 15 site visits and contact up to 450 companies by phone (i.e. approximately 10 % of the preliminary database total population). The verification phase will be divided between those companies who have responded to the questionnaire and those who have not responded. The expected breakdown in relation to each of these sectors is detailed below.

Based on the available budget for the verification phase of the project, it is proposed to carry out a maximum of three call attempts to each company, after which no further contact will be attempted.

Verification of Responses Received

As of August 15th 2005, 656 responses (13 % response rate) have been received from the questionnaire mail-out. In relation to the verification phase of the project, it is proposed to allocate the following verifications to this group of companies:

- Approximately 5 site visits;
- Approximately 110 phone verifications.

This represents approximately 25 % of the total proposed verification sample frame. While this is proportionally higher than the response rate of 13 %, it is considered that further investigation of a number of these facilities is warranted, especially those who have indicated that they are not subject to the regulations or who as a result of incomplete information may be considered as potentially subject to the regulations.

The received responses to the questionnaire have been divided into three categories based on the information provided:

- Not subject to the requirements of the Solvents Regulations;
- Subject to the requirements of the Solvents Regulations;
- May be subject to the requirements of the Solvents Regulations (insufficient data returned with the questionnaire, typically only a small number of the required fields completed).

The majority of the responses have indicated that they would not be subject to the regulations (75 %), with a small number indicating they are subject to the regulations (< 8 %, most of which were vehicle refinishers or dry cleaners), with the remainder potentially being subject to the regulations (~ 17 %).

Of the 115 verifications allocated to the respondents, the following verification sample breakdown is therefore proposed (based approximately on the above response percentages):

- 5 verifications of those indicated as 'subject to the regulations' (~ 4%)
- 60 verifications of those indicated as 'not subject to the regulations' (~ 52 %)
- 50 verifications of those indicated as 'may be subject to the requirements of the solvents regulations' (~ 44 %)

The weighting of the above verification has not been based on the relative proportions of 'yes', 'no' and 'maybe' responses as it is considered that additional benefit could be gained by contacting a higher proportion of the 'maybe' sector and talking through the questionnaire with the company.

Some responses have been received from dry cleaners and vehicle refinishers, however it is proposed to minimise the number of verifications of these types of

facilities, as correspondence with the EPA (Gerry Byrne) has indicated that all such facilities should initially remain on the database, hence it is considered a more effective use of resources to investigate other Solvents Regulations activities.

A more detailed sample frame of the responses (by solvent regulations activity sector) is presented below. Excluding the dry cleaning and vehicle refinishing sectors, the % of companies in each sector is presented. Applying these percentages to the total proposed number of verifications (115) provides the suggested verification sample frame as presented.

Solvent Regs. Activity	Activity Description	No. Of Companies	% excl VR and DC	Sample Frame
4/5	Surface Cleaning	253	56.7%	65
6	Vehicle Refinishing	86		0
8	Other coating	36	8.1%	9
9	Winding wire coating	7	1.6%	2
11	Dry cleaning	85		0
12	Wood impregnation	24	5.4%	6
14	Footwear manufacture	1	0.2%	0
15	Wood and plastic lamination	65	14.6%	17
16	Adhesive coating	20	4.5%	5
17	Manufacture of varnishes and inks	9	2.0%	2
18	Rubber conversion	10	2.2%	3
19	Oil/fat extraction and oil refining	2	0.5%	1
20	Manufacture of pharmaceutical products	19	4.3%	5
Total		617	100	115

The categorisation of companies in the above table is based on the following:

- Conversion of Kompass business sector codes to Solvents Regulations activity based on comparison of the activities involved;
- All members of SIMI Vehicle Refinishers Membership List assumed as Solvents Regulations activity 6, along with data from any other VR related databases;
- Any facility names sources from dry cleaner databases assumed as Solvents Regulations activity 11.

39 companies were not classified automatically, as these were sourced from the pre-IPPC application database and were not easily classified (with even manual assessment of the companies not proving successful). However, it is considered that the classification of the other 617 companies above provides a suitable reference frame from which to develop a generic verification methodology for the responses received. A number of the 39 companies identified from the pre-IPPC database will



be included within the verification, as the activity classification for a small number of the companies can be provisionally identified.

The companies chosen for verification within each sector will be chosen at random. Where information is available from the Kompass database on the number of employees, the verification will ensure that a range of company sizes (based on number of employees) is included in the assessment.

No specific criteria has been developed for deciding which facilities will be visited. This will likely be determined during the phone verification phase based on the preliminary information received.

Verification of Non-Respondents

350 verifications (465 – 115) will be carried out on those facilities which did not respond to the questionnaire. The allocation of the verifications between the various sectors will be carried out based on the number of facilities identified in each of the 14 activity classes from the solvents regulations considered as part of the current project. This will exclude facilities from the vehicle refinishing and dry cleaning sector for the same reasons as stated earlier.

The approximate breakdown of facilities in each of the solvents regulations activities has been calculated by URS and is presented below. Excluding the dry cleaning and vehicle refinishing sectors, the % of companies in each sector is also presented. Applying these percentages to the total proposed number of verifications (350) provides the suggested verification sample frame.

Solvent Regs. Activity	Activity Description	No. Of Companies	% excl VR and DC	Sample Frame
4/5	Surface Cleaning	1233	52.2%	183
6	Vehicle Refinishing	794		0
8	Other coating	178	7.5%	26
9	Winding wire coating	43	1.8%	6
11	Dry cleaning	729		0
12	Wood impregnation	119	5.0%	18
14	Footwear manufacture	19	0.8%	3
15	Wood and plastic lamination	546	23.1%	81
16	Adhesive coating	109	4.6%	16
17	Manufacture of varnishes and inks	13	0.6%	2
18	Rubber conversion	38	1.6%	6
19	Oil/fat extraction and oil refining	12	0.5%	2
20	Manufacture of pharmaceutical products	53	2.2%	8
		3,886	100	350

The categorisation of companies in the above table is based on the following:

- Conversion of Kompass business sector codes to Solvents Regulations activity based on comparison of the activities involved;
- All members of SIMI Vehicle Refinishers Membership List assumed as Solvents Regulations activity 6, along with data from any other VR related databases;
- Any facility names sources from dry cleaner databases assumed as Solvents Regulations activity 11;

367 companies were not classified automatically, as these were sourced from the pre-IPPC application database and were not easily classified (with even manual assessment of the companies not proving successful). However, it is considered that the classification of the other 3,886 companies above provides a suitable reference frame from which to develop a generic verification methodology for the responses received. A number of the 367 companies identified from the pre-IPPC database will be included within the verification, as the activity classification for a small number of the companies can be provisionally identified.

The companies chosen for verification within each sector will be chosen at random. Where information is available from the Kompass database on the number of employees, the verification will ensure that a range of company sizes (based on number of employees) is included in the assessment.

No specific criteria has been developed for deciding which facilities will be visited (10 visits in total), however it is proposed to visit companies in a number of different sectors. This will likely be determined during the phone verification phase based on the preliminary information received.

Outcome of Verification Phase

After completion of the verifications, the information gathered will be employed as follows:

- Remove those companies from the list who are considered definitely not covered by the requirements of the regulations based on the quality of the information received during the verification phase. If there is any doubt as to the companies status with regard to the regulations, the company details will not be removed from the database;
- Based on the verification responses for different activity sectors, provide an indication of the confidence level for the database information for that sector. Whilst this cannot be used to 'filter' the unverified facilities, it will provide a useful indication of the likely number of activities in each sector covered by the requirements of the regulations. All companies who have not responded to either the mail-out questionnaire or the verification phase will remain on the database.

Upon completion of these tasks the matrix will be finalised, with an explanatory memorandum attached detailing the confidence levels for each activity sector based on the verification responses. Additional information received from the Local Authority mail-out will also be included in the final database.



Verification Questionnaire

A set list of questions will be used for the purposes of both the phone based verifications and the small number of site visits. A copy of the proposed form to be used is attached below.

This questionnaire is based primarily on the original verification questionnaire, with some minor modifications.

Additional questions have also been included at the request of the Clean Technology Centre, in relation to another solvents related project being carried out by CTC on behalf of the EPA.

Questionnaire for internal URS use during completion of verification phase

This questionnaire is intended to be used for gathering information during the verification phase of the project, during both phone based verifications and also for site visits.

When talking to a facility operator, briefly introduce the project and the regulations to the company and indicate that a questionnaire has initially been sent to the company as they have been identified as potentially being required to comply with the regulations. Indicate that talking through the questionnaire will also be of benefit to the company.

Once the project has been introduced begin to ask the following questions, noting down as much information as possible:

Question	Response
Company Name	
Contact Person	
Phone Number	
Are you aware of the Solvents Regulations?	
Have to taken any compliance steps?	
Provide a brief description of the activities carried out at the site	
What solvents or solvent containing substances are employed at the site and for what purpose? Explain what type of materials solvents may be contained in (e.g. paints, glues, degreasers, other cleaning agents, other coating materials).	
Is this activity covered under the regulations(URS internal question)	
What quantities of solvents or solvent containing substances are used per annum	
Do you hold an IPC/IPPC licence from the EPA	
Were you in operation before 1 st July 2003? If not, when did you go into operation?	
Have you expanded your installation in terms of the relevant solvent activity since 1st July 2003 [for example, installation of additional capacity (such as an additional dry cleaning machine, or an additional bodyshop booth) or carrying out work that required planning permission]? If so, brief details of what and when?	

Appendix D - Consolidated list of local authority contacts.

Name	Address 1	Address2	Address 3	Address 4
Paula Neilon	Carlow County Council	Athy Road	Carlow	
Brendan Cooney	Cavan County Council	Courthouse	Farnham Street	Cavan
Mary Burke	Clare County Council	Gort Road	Ennis	Co. Clare
Eddie Barry	Cork City Council	City Hall	Cork	
Mary Stack/John Twomey	Cork County Council	Cork County Council Headquarters	County Hall	Cork
Joe Ferry	Donegal County Council	Donegal Co Co Laboratory	Maghereenan	Letterkenny. Co. Donegal
Michael Whelan	Dun Laoghaire Rathdown County Council	County Hall	Marine Road	Dun Laoghaire, Co. Dublin
Barbara Halpenny	Dublin City Council	Civic Offices	Wood Quay	Dublin 8
John Healy	Fingal County Council	46 - 49 O'Connell Street	Dublin 1	
John Frawley	Galway County Council	Aras An Chontae	Prospect Hill	Galway
Sara Kennelly	Galway City Council	City Hall	College Road	Galway
Mick Boyce	Kerry County Council	Rathass	Tralee	Co. Kerry
Edwina Moore	Kildare County Council	St Mary's	Naas	Co. Kildare
Tony Flynn	Kilkenny County Council	County Hall	John Street	Kilkenny
Martin Byrne	Laois County Council	Aras An Chontae	Portlaoise	Co. Laois
Eileen Gibbons	Leitrim County Council	Aras An Chontae	Carrick-On-Shannon	Leitrim
Ann Goggin	Limerick County Council	County Hall	Dooradoyle	Co. Limerick
Stuart Roche	Limerick City Council	Second Floor	City Hall	Limerick
Angela Brady	Longford County Council	Great Water Street	Longford	
Ben Gallagher	Louth County Council	County Hall	Millenium Centre	Dundalk
Margaret Sweeney	Mayo County Council	Aras an Chontae	The Mall	Castlebar
Dave Byrne	Meath County Council	County Hall	Navan	Co. Meath
Aileen Gavin	Monaghan County Council	The Glen	Monaghan	
John Connolly	Offaly County Council	Aras an Chontae	Charleville Road	Tullamore, Co. Offaly
John O'Gorman	Roscommon County Council	Roscommon County Council Headquarters	The Courthouse	Co. Roscommon
Emer Concannon	Sligo County Council	County Hall	Riverside	Sligo
David O'Brien/Gillian Wynne	South Dublin County Council	P.O. Box 4122	Town Centre	Tallaght, Dublin 24
Frank O'Halloran	Tipperary (NR) County Council	Machinery Yard	Limerick Road	Nenagh, Co. Tipperary
Denis Maguire	Tipperary (SR) County Council	County Hall	Clonmel	Co. Tipperary
Denis McCarthy	Waterford County Council	Civic Offices	Dungarvan	Co. Waterford

Name	Address 1	Address2	Address 3	Address 4
Ella Ryan	Waterford City Council	City Hall	The Mall	Waterford City
Ann Bonner	Westmeath County Council	County Building	Mount Street	Mullingar, Co. Westmeath
Yvonne Mullooly	Wexford County Council	County Hall	Spawell Road	Wexford
David Harrington	Wicklow County Council	County Buildings	Whitegates	Wicklow Town