Environmental Pollution Incidents
National Dataset User Guide

Version 2.0.0
1st January 2009
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1.0 Record of amendment

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2.0 Introduction

This document provides information to accompany the Environment Agency’s Environmental Pollution Incidents dataset. It can be used to gain a better understanding of the Pollution Incident data when used in conjunction with the current data release. For information relating to national datasets in general, please refer to the National Dataset Generic Text document.

Details of our distribution policy can be found in the National Dataset Generic Text document, along with contact details for the Data Management Team.

Information about our web site can also be found in the National Dataset Generic document. The Environmental Pollution Incidents web site is located at:

http://www.environment-agency.gov.uk/yourenv/eff/1190084/pollution/296030/

The site contains useful information and links to other pages of interest.

2.1 Description of the Environmental Pollution Incidents dataset

Details of all pollution incidents reported to the Environment Agency are held on the National Incident Recording System (NIRS2), an Oracle based system (see section 11 for a detail definition of an incident). NIRS2 data ranges from 2001 to the present. Data is extracted quarterly from NIRS2 using SQL code, and is released as a Microsoft Access database (‘NIRS2_DDMMYYYY’).

The data is a filtered version of all incidents held on NIRS2. Data supplied includes only substantiated, environmental protection incidents, where the environmental impact level is either category 1 (major) or category 2 (significant), to at least one media (i.e. water, land or air). Data is geo-referenced and the pollutant category is included. Data is entered onto the system using a ‘point and click’ GIS front-end, which means the base scale of data capture is now standardised at 1:10k.

2.2 Related data sources

The Pollution Inventory dataset provides data about pollution emissions from regulated industrial sites. Currently Pollution Inventory data relating to IPC processes is available for external use.
3.0 Public Register data and non Public Register data

For a general description of what constitutes public register and non-public register data please refer to the National Dataset Generic Text document. Pollution Incident data is not taken from a public register.

3.1 National Security

A discussion of national security issues can be found in the Generic Text Document. There have been no exceptions from this dataset due to National Security.

3.2 Legislation relevant to the Environmental Pollution Incidents data

A pollution incident is defined as 'A specific event, which is being brought to the attention of the Agency, and is within the Agency’s areas of responsibility and which may have an environmental and/or operational impact.' For explanatory notes on this definition, please see appendix 2. Investigations of pollution incidents are carried out using both our general statutory powers and those specific to the particular circumstances of the incident.

The Environment Agency has general duties to collect information under the Environment Act 1995 section 5 [General functions with respect to pollution control] sub section (2), in order to facilitate the carrying out of its pollution control functions and to enable it to form an opinion of the general state of pollution of the environment. Under Section 5(3) we also carry out assessments of the effect, or likely effect, on the environment of existing or potential levels of pollution of the environment. We report our findings to ministers.

NIRS (the National Incident Recording System) is one of the tools the Environment Agency uses to carry out its general duties under section 5. There is no specific legislation requiring us to maintain this database or prescribing access rights to it.

The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 apply to all data and information held by the Environment Agency, including NIRS. The Re-Use of Public Sector Information Regulations 2005 apply to the part of NIRS that we have approved for external use.

We have a duty under the Water Resources Act 1991 Section 203 (1) to provide to water undertakers information on pollution incidents to water.
4.0 Data structure

The database consists of three tables, as shown in the entity relationship diagram below. The detailed data structure of the Environmental Pollution Incidents dataset is given in the National Dataset Field Attribute document.
5.0 Data quality

5.1 Data standards

For data standards applicable to a number of national datasets please consult the National Dataset Generic Text document.

5.2 Reporting errors

Methods of reporting errors are included in the Generic Text document. A feedback form can be found at the end of this user guide.

5.3 Validation rules and completeness checks

Every effort is made to minimise data errors occurring in the Environmental Pollution Incidents data release. For background information on the data validation process and general completeness checks that we carry out, please refer to the Generic Text document.

5.4 Validation checks specific to the Environmental Pollution Incidents data

Following is an outline of the validation checks specific to the Environmental Pollution Incidents dataset.

5.4.1 Data entry stage validation

Most fields in the NIRS database have some form of validation attached to them, such as limiting the field to a particular data type with specified sizes or drop-down lists. All of the locational fields provided in the Environmental Pollution Incidents data have been auto-populated by the GIS front end, and the remaining fields, except date (which must be in the correct format but is typed by the user), are populated using pick lists.

5.4.2 Individual verification of data

One an incident has been opened, the data in the record can be reviewed and updated as necessary, for example if new information becomes available. Incidents can be re-opened if details need to be changed.

5.4.3 National verification of data

The data is subject to a Quality Assurance process before it is approved for public access. In particular, this is to ensure that incidents have been closed or completed, and that only substantiated category 1 & 2 incidents are supplied.

5.5 Known quality issues

There is a data quality issue that is currently being addressed relating to the incorrect allocation of public face areas in a small proportion of incidents.
6.0 Frequently Asked Questions (FAQ)

**Q: What filters if any have been applied to the NIRS data?**

The Environmental Pollution Incidents dataset consists of all substantiated Environmental Protection Category 1 and 2 incidents that have been either completed or closed. The latter is an administrative distinction relating to whether the records on the system have had a final QA or not. Further filtering limits the data supplied in relation to an incident to details of the date, location, impact and pollutant category.

**Q: Why have some of the records been ‘lost’ since the last data release?**

There could be one of several reasons:
1) As part of renewed agreements, all Category 4 (No impact) and Category 3 (Minor) incidents have been removed from the dataset.
2) The incident’s status may have been altered, typically from ‘completed’ to ‘uncompleted’ or ‘completed’ to ‘re-opened’ to allow an Environment Agency officer to amend/add to incident details. These would not appear in subsequent data pulls because only closed and completed incident details are included.
3) As part of any re-assessment/amendment as above, the environmental impact levels may have been altered. If an incident has been downgraded from category 1 or 2 for all the assessed media, it will no longer appear in the results.
4) The incident has been identified as a duplicate since the last release. This can occur when one incident is reported by several individuals or at differing locations.

Incidents dropped between data releases are now recorded in the table ‘Incidents Dropped sinceDDMMYY’.

**Q: What is the unique key in Environmental Pollution Incidents?**

In table EP_Incidents_Nirs2, the unique key is NOT_ID (Notification ID). This is the reference issued when the incident is first logged on NIRS, and follows the event through its entire life history.

Please note that in the table EP_Pollutants_Nirs2, NOT_ID is not unique, and cannot be used as a key. This is because each record in NIRS can only hold one pollutant. If an incident has more than one pollutant, a new record is created for each pollutant, using the same NOT_ID. For example, if incident number 1 has the pollutants oil, diesel and kerosene, it will appear in the pollutants table three times, once for each pollutant. The correct unique key for this table is using all three fields, NOT_ID, POLL_TYPE and POLLUTANT.

**Q: Are there any known dump codes in the dataset?**

There are no known dump codes in this subset of data. There are a number of non-mandatory fields (including the impact level fields) but these are unlikely to be blank for category 1 or 2 incidents.
7.0 Useful information when using the data

You should take into account the following information when analysing the data. This section also points out information that is not included in the data, as well as any limitations on interpreting the data.

7.1 What is not included in the data

The data is a filtered version of all incidents held on NIRS2. This filtering process removes all data that are not: substantiated, environmental protection incidents, where the environmental impact level is either category 1 (major) or category 2 (significant) to at least one media (i.e. water, land or air).

7.2 Recommendations on how to use or analyse the data

When using the data, it is useful to bear in mind that the data held on NIRS has been designed to:

- Provide information about pollution incidents from all sources, ranging from large industrial plants to domestic dwellings.
- Aid on reporting data against particular sector performance and assessing the impact of our awareness campaigns.
- Help to protect the environment by providing information on incidents that occur. As such, it does not record permitted releases of pollutants, even if the permitted release exceeds permitted levels.
- Assist the Government to meet national and international commitments and obligations for monitoring and dealing with pollution incidents.

7.3 Changes in the data

Any major changes identified in the Environmental Pollution Incidents data will be highlighted in this section and an explanation of why the change had occurred is also provided. If you have any questions relating to these changes please contact us.

7.3.1 Change to supplied incidents

Prior to January 2004, incidents from categories 1 to 4 were supplied in the data. After this date only incidents with environmental impact levels of 1 or 2 to at least one media were supplied. This has resulted in a smaller number of records in the dataset.

7.3.2 New tables supplied

Since July 2005, the dataset has consisted of three tables (EP_Incidents_Nirs2, EP_Pollutants_Nirs2 and Incidents Dropped sinceDDMMYY). Previously, only one table (EP_Incidents_Nirs2) was supplied.

7.3.3 Change dataset name

Prior to January 2009, this dataset was known as the NIRS dataset.
### 8.0 Glossary

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<th>Description</th>
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<td>Environmental Protection</td>
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<tr>
<td>IEC</td>
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<td>IPC</td>
<td>Integrated Pollution Control</td>
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<td>NGR</td>
<td>National Grid Reference</td>
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<td>NIRS2</td>
<td>National Incident Reporting System. This is the system on which the Environmental Pollution Incidents data is held.</td>
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9.0 Feedback form

We welcome feedback on our data. If you have any comments please complete the form below and return to us:

Name:                                            Organisation:
Phone:                                            Email:
Fax:

National Dataset .................................................................
(Please enter dataset to which your feedback relates)

Comments:

Feedback on contents of documentation:

Feedback on data content:

General feedback:

Information Enterprise Centre
Environment Agency
Government Buildings
Burghill Road
Westbury on Trym
Bristol, BS10 6BF

Tel: 0117 915 2194
E-mail: iec@environment-agency.gov.uk
10.0 Appendix 1

Complete list of all amendments ever made to the document

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11.0 Appendix 2: Explanatory notes on the definition of a pollution incident

11.1 Definition of an Incident

For the purposes of the Environment Agency an incident is:

'A specific event, which is being brought to the attention of the Agency, and is within the Agency's areas of responsibility and which may have an environmental and/or operational impact.'

11.2 Explanatory notes to accompany incident definition

a) A specific event is a single incident or occurrence, not an ongoing situation of which the Agency is already aware. It includes for example, the initial reporting to the Agency of a long term or ongoing problem.

b) Such events will be brought to the attention of the Agency following reports from members of the public, emergency services, local authorities, other regulators, industry and Agency staff. The latter includes receipt of automated information and alarms e.g. from telemetry.

c) This covers incidents within the Agency's areas of responsibility.

d) Examples may include reports of: pollution affecting land air and water; fish kills; illegal fishing; illegal abstraction; low river flows; speeding vessels; and flooding. The incident does not actually need to result in an environmental impact. (See notes on classification of impact and Category 4.) It does not include reports of other matters of interest to the Agency, e.g. death of a member of staff, complaints about staff.