This section provides a list of some of the risk assessment software models available. The models are described and a source contact given. The models are divided into risk assessment/management models (category 1), exposure assessment/transport/fate models (category 2), and hazard identification/release assessment models (category 3). It is recognised that the list cannot, in any way, be considered comprehensive. There are probably well over 500 such models in existence world-wide. The models presented here are examples.

Sources of information include personal contact with vendors/developers, literature searches and work carried out by UK Environment Agency (HMIP), DNV Technica, and Imperial College London (Link Research Project – Pollution Risk Assessment Techniques for Non-Routine Releases from Industrial Processes, 1995).
## Category 1 - Risk assessment/management

<table>
<thead>
<tr>
<th>Model/Tool</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>@RISK</td>
<td>Quantitative risk analysis software.</td>
<td>Pallisade Corporation, 31 Decker Road, Newfield, NY 14867, USA, Tel: (+1 607) 277 8000</td>
</tr>
<tr>
<td>3DTIM</td>
<td>Tool for evaluating the effect of different releases.</td>
<td>VTT, Manufacturing Technology, PO Box 1700, FIN-02044 VTT, Finland. Tel: (+358 0) 4561</td>
</tr>
<tr>
<td>ACNTRS</td>
<td>Transport risk assessment tool for chemicals. Assess risks to humans and the environment.</td>
<td>Arthur D. Little Ltd, Berkeley Square House, Berkley Square, London W1X 6EY, UK, Tel: (+44 171) 406 2277</td>
</tr>
<tr>
<td>APPRAISE</td>
<td>Database and calculation tool to assess the environmental impact of industrial releases.</td>
<td>WRc and Intere - WRc, Henley Road, Medmenham, Marlow, Bucks. SL7 2HD, UK, Tel: (+44 1491) 571 531</td>
</tr>
<tr>
<td>BioSYE</td>
<td>Contaminated land remediation model.</td>
<td>Available from Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA, Tel: (+1 703) 520 9214</td>
</tr>
<tr>
<td>CCEU</td>
<td>Quantitative method to calculate consequence of industrial emissions.</td>
<td>DNW Technica, Palace House, 3 Cathedral Street, London SE1 9DE, UK, Tel: (+44 171) 3576080</td>
</tr>
<tr>
<td>CCNDDR</td>
<td>Probabilistic risk assessment - consequence of accidental radioactive release.</td>
<td>AEA, NPRI - AEA Technology, 329 Hanwell, Didcot, Oxfordshire OX11 0RA, UK, Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>DOE#1</td>
<td>Risk assessment and risk management methodology.</td>
<td>DOE</td>
</tr>
<tr>
<td>DRANC</td>
<td>Risk assessment for new chemicals (human, ecological).</td>
<td>RIVM, Postbox 1, NL-3720 BA Bilthoven, Netherlands, Tel: (+31 30) 274 9111</td>
</tr>
<tr>
<td>DSS</td>
<td>Exposure and Risk Assessment Decision Support System - estimates human exposure and risk from sites contaminated with petroleum products.</td>
<td>American Petroleum Institute, 1220 L Street, Northwest, Washington DC 20005-4070, USA, Tel: (+1 202) 682 8000</td>
</tr>
<tr>
<td>EAPEARP</td>
<td>Methodology using environmental indices to rank risk potential.</td>
<td>Debeil-Myren</td>
</tr>
<tr>
<td>ELF#1</td>
<td>Risk rating system utilising fault tree analysis.</td>
<td>RPS</td>
</tr>
<tr>
<td>Model/Tool</td>
<td>Description</td>
<td>Source</td>
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</tr>
<tr>
<td>Enviro V</td>
<td>Hazard identification and risk assessment.</td>
<td>Enviro</td>
</tr>
<tr>
<td>EPicode</td>
<td>Risk assessment of concentrations resulting from atmospheric release.</td>
<td>Homann</td>
</tr>
<tr>
<td>ETX</td>
<td>Risk assessment - calculation of percentage of unprotected species at a given exposure.</td>
<td>RIVM, Postbox 1, NL-3720 BA Bilthoven, Netherlands. Tel: (+31 30) 274 9111</td>
</tr>
<tr>
<td>HAZARD</td>
<td>Ecological risk assessment - probability of a species affected at a given PEC.</td>
<td>TNO, Lijn van Westenenk 501, PO Box 342, 7300 AH Apeldoorn, Netherlands. Tel: (+31 15) 269 6969</td>
</tr>
<tr>
<td>HAZTRAC</td>
<td>Hazard management software using HAZOP results.</td>
<td>DNV Technica, Palace House, 3 Cathedral Street, London SE1 9DE, UK. Tel: (+44 171) 357 6080</td>
</tr>
<tr>
<td>HazTrans</td>
<td>Multi-modal hazardous materials management tool - transport risk.</td>
<td>Abkowitz and Associates Inc.</td>
</tr>
<tr>
<td>IIASA</td>
<td>Impact, ecological and technological risk assessment and hazardous substance management.</td>
<td>IIASA</td>
</tr>
<tr>
<td>MASCOT</td>
<td>Calculates radiological risks from groundwater pathways.</td>
<td>Nirex, Allerdale Court, Greengarth Hall, Holmrook, Cumbria CA19 1UL, UK. Tel: (+44 1235) 825 518</td>
</tr>
<tr>
<td>OHRHA</td>
<td>Offshore hazard and risk analysis.</td>
<td>DNV Technica, Palace House, 3 Cathedral Street, London SE1 9DE, UK. Tel: (+44 171) 357 6080</td>
</tr>
<tr>
<td>OLF#1</td>
<td>Environmental risk caused by acute spills - acceptability criteria.</td>
<td>OLF</td>
</tr>
<tr>
<td>RBCA</td>
<td>Risk Based Corrective Action Tool Kit for contaminated land and water.</td>
<td>Groundwater Services Inc. (Geraghty and Miller International Inc. - distributors)</td>
</tr>
<tr>
<td>REFEREE</td>
<td>Ecological risk assessment using effect models linked to ecological and ecotoxicological databases.</td>
<td>TNO, Lijn van Westenenk 501, PO Box 342, 7300 AH Apeldoorn, Netherlands. Tel: (+31 15) 269 6969</td>
</tr>
<tr>
<td>RISKAT</td>
<td>Tool to quantify risks to people living in the vicinity of major hazard sites.</td>
<td>UK HSE, Baynards House, 1 Chepstow House, Westbourne Grove, London W2 4TF, UK. Tel: (+44 171) 243 6000</td>
</tr>
<tr>
<td>Model/Tool</td>
<td>Description</td>
<td>Source</td>
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<tr>
<td>Riskplot II</td>
<td>Risk assessment software for human and environmental risks from acute releases of hazards at industrial installations.</td>
<td>Four Elements Ltd., 8 Cavendish Square, London W1M 0ER, UK, Tel. (+44 171) 465 7200</td>
</tr>
<tr>
<td>RISKPRO</td>
<td>Software which predicts the impacts of environmental releases.</td>
<td>GSC</td>
</tr>
<tr>
<td>RISKWIT</td>
<td>Risk assessment software for accidental release of toxic, flammable or explosive material.</td>
<td>VTT, Manufacturing Technology, PO Box 1700, FIN-02204 VTT, Finland, Tel: (+358 0) 4561</td>
</tr>
<tr>
<td>RIVPACS</td>
<td>Water quality prediction and classification scheme.</td>
<td>UK Environment Agency, Rivers House, Waterside Drive, Aztec West, Almondsbury, Bristol BS12 4UD, Tel: (+44 1454) 624400</td>
</tr>
<tr>
<td>SAFETI</td>
<td>Risk assessment, discharge, consequence and risk modelling.</td>
<td>DNV Technica, Palacia House, 3 Cathedral Street, London SE1 9DE, UK, Tel: (+44 171) 3576080</td>
</tr>
<tr>
<td>SARAH</td>
<td>Risk assessment, accidental release of hazardous material into the atmosphere.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 0RA, UK, Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>SENSES1</td>
<td>Risk assessment model.</td>
<td>SENSES Consultancy</td>
</tr>
<tr>
<td>Simplebox</td>
<td>Dispersion, risk assessment.</td>
<td>RIVM, Postbox 1, NL-3720 BA Bilthoven, Netherlands, Tel: (+31 30) 274 9111</td>
</tr>
<tr>
<td>ToxScreen</td>
<td>Model for assessment of risk of pollution/harm to air, water, and soil.</td>
<td>USEPA, 960 College Station Road, Athens, Georgia, USA, Tel: (+1 708) 355 8400</td>
</tr>
<tr>
<td>UST</td>
<td>Risk assessment/management ranking system for underground storage tanks.</td>
<td>Casana et al.</td>
</tr>
<tr>
<td>VERIS II</td>
<td>Risk assessment and management.</td>
<td>VROM, PO Box 20951, 2500 The Hague, Netherlands, Tel: (+31 70) 339 3939</td>
</tr>
<tr>
<td>XERVIS</td>
<td>Risk assessment/management - accidental air pollution, toxic water spills, etc.</td>
<td>Phoenix</td>
</tr>
</tbody>
</table>
## Category 2 – Exposure assessment/transport/fate

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>Description:</th>
<th>Source:</th>
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</thead>
<tbody>
<tr>
<td>AIRFLOW/SVE</td>
<td>Multi-component soil vapour extraction model.</td>
<td>Waterlo Hydrogeologic Software (Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214)</td>
</tr>
<tr>
<td>AGMS</td>
<td>Air Quality Management System - contaminant dispersion in air</td>
<td>Ashtead Environmental, The Coast House, Hoddesdon, Upper Hartfield, East Sussex TN7 4AR, UK. Tel: (+44 1892) 770 881</td>
</tr>
<tr>
<td>AQUA</td>
<td>Groundwater flow and contaminant transport model.</td>
<td>Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
</tr>
<tr>
<td>ARMOS 5.0</td>
<td>Software for migration of free phase light hydrocarbon and recovery system design.</td>
<td>Geraghty and Miller International Inc. Suite A, Conqueror House, Vision Park, Histon, Cambridge, CB4 4ZR, UK. Tel: (+44 1223) 236950, Fax: (+44 1223) 236242</td>
</tr>
<tr>
<td>AT123D</td>
<td>Analytical groundwater transport model.</td>
<td>Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
</tr>
<tr>
<td>BIOTRANS 1.0</td>
<td>Modelling of multi-species dissolved transport with oxygen-limited decay in fracture or porous aquifers.</td>
<td>Geraghty and Miller International Inc. Suite A, Conqueror House, Vision Park, Histon, Cambridge, CB4 4ZR, UK. Tel: (+44 1223) 236950, Fax: (+44 1223) 236242</td>
</tr>
<tr>
<td>ChemPath</td>
<td>Contaminant transport model for ground water.</td>
<td>BASELINE Concept Inc. (Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214)</td>
</tr>
<tr>
<td>CTRAN/W</td>
<td>Model for contaminant transport through soil and rock.</td>
<td>Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
</tr>
<tr>
<td>DYNTOX</td>
<td>Surface water model which estimates concentrations of toxic substances.</td>
<td>US EPA, 960 College Station Road, Athens, Georgia, USA. Tel: (+1 706) 355 8400</td>
</tr>
<tr>
<td>EXAMS II</td>
<td>Exposure simulation model looking at effect of a chemical on an ecosystem, concentrations, fate and transport</td>
<td>US EPA, 960 College Station Road, Athens, Georgia, USA. Tel: (+1 706) 355 8400</td>
</tr>
<tr>
<td>FARMLAND</td>
<td>Simulates radionuclide transfer through the food chain (accidental releases).</td>
<td>CERC</td>
</tr>
<tr>
<td>FLONET/TRANS</td>
<td>Cross-sectional groundwater flow and contaminant transport model.</td>
<td>Waterlo Hydrogeologic Software (Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214)</td>
</tr>
<tr>
<td>Model/Tool</td>
<td>Description</td>
<td>Source</td>
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<tr>
<td>GMS 2.0</td>
<td>Groundwater flow and contaminant modelling system.</td>
<td>US Department of Defence (Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA, Tel: (+1 703) 620 9214)</td>
</tr>
<tr>
<td>Groundwater Vistas</td>
<td>A comprehensive modelling system incorporating many popular flow models such as MODFLOW, MODPATH, PATH3D, MT3D, MODFLOW-SURFACT and others.</td>
<td>Environmental Simulations Ltd, Acorn Villa, Oak Street, Shrewsbury SY3 7RG, UK, Tel: (+44 1743) 369 504</td>
</tr>
<tr>
<td>ModelCad</td>
<td>Contaminant fate and transport model for ground water.</td>
<td>Geraghty and Miller International Inc. Suite A, Conqueror House, Vision Park, Histon, Cambridge, CB4 4ZG, UK. Tel: (+44 1223) 236200, Fax: (+44 1223) 236242</td>
</tr>
<tr>
<td>MODFLOW</td>
<td>Groundwater flow and contaminant transport model.</td>
<td>USGS. Environmental Simulations Limited, Acorn Villa, Oak Street, Shrewsbury SY3 7RG, UK, Tel: (+44 1743) 369 504</td>
</tr>
<tr>
<td>MODFLOW-SURFACT</td>
<td>Groundwater flow and contaminant transport model.</td>
<td>HydroGeoLogic Inc. (Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214)</td>
</tr>
<tr>
<td>MFAT</td>
<td>Multiphase (water, oil, gas) flow and multi-component transport model.</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA, Tel: (+1 703) 620 9214</td>
</tr>
<tr>
<td>MS-VMS</td>
<td>Groundwater flow and contaminant transport model.</td>
<td>HydroGeoLogic, Inc. (Available through Scientific Software Group - PO Box 23041, Washington DC 20026-3041, USA, Tel: (+1 703) 620 9214)</td>
</tr>
<tr>
<td>MT3D</td>
<td>Contaminant fate and transport model for ground water.</td>
<td>Geraghty and Miller International Inc. Suite A, Conqueror House, Vision Park, Histon, Cambridge, CB4 4ZG, UK. Tel: (+44 1223) 236200, Fax: (+44 1223) 236242</td>
</tr>
<tr>
<td>MULTIMED</td>
<td>Multimedia exposure assessment model simulating the transport and transformation of contaminants released from a waste disposal facility.</td>
<td>US EPA, 960 College Station Road, Athens, Georgia, USA, Tel: (+1 706) 355 8400</td>
</tr>
<tr>
<td>MULTIMED</td>
<td>Multimedia exposure assessment tool simulates leaching of contaminants from a waste disposal facility. Predicts concentrations at receptor.</td>
<td>US EPA, 960 College Station Road, Athens, Georgia, USA, Tel: (+1 706) 355 8400</td>
</tr>
<tr>
<td>Model/Tool:</td>
<td>Description:</td>
<td>Source:</td>
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<tr>
<td>OILYOL</td>
<td>Model which estimates the free hydrocarbon volume in a soil and computes the volume of residual oil in the saturated and unsaturated zones. Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
<td></td>
</tr>
<tr>
<td>OTTER</td>
<td>Mass movements of radionuclides in water. AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
<td></td>
</tr>
<tr>
<td>PESTLA</td>
<td>Dispersion of pesticides in groundwater. RIVM, Postbox 1, NL-3720 BA Bilthoven, Netherlands. Tel: (+31 30) 274 9111</td>
<td></td>
</tr>
<tr>
<td>PLUMES</td>
<td>Dilution/dispersion model for pollution plumes in marine and fresh water US EPA, 960 College Station Road, Athens, Georgia, USA. Tel: (+1 706) 355 8400</td>
<td></td>
</tr>
<tr>
<td>PRAIRIE</td>
<td>Dispersion model for pollution into rivers and estuaries. AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
<td></td>
</tr>
<tr>
<td>PRINCE</td>
<td>Integrated transport and flow model package. Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
<td></td>
</tr>
<tr>
<td>PRZM2</td>
<td>Pesticide Root Zone Model - predicts fate of pesticides in and below the root zone. US EPA, 960 College Station Road, Athens, Georgia, USA. Tel: (+1 706) 355 8400</td>
<td></td>
</tr>
<tr>
<td>SESOIL</td>
<td>Long term pollution fate and transport model Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
<td></td>
</tr>
<tr>
<td>SURPAC 2000</td>
<td>Integrated environmental modelling software incorporating three groundwater modelling tools - MODFLOW, MT3D and THEISA. Surpac Software International (UK) Ltd, Unit 7, The Courtyard, Whitwick Business Park, Coalville, LE67 4JP. Fax: (+44 1530) 839989</td>
<td></td>
</tr>
<tr>
<td>SMPTOX</td>
<td>Calculates water column and stream bed toxic substance concentrations resulting from point source discharges into streams and rivers. US EPA, 960 College Station Road, Athens, Georgia, USA. Tel: (+1 706) 355 8400</td>
<td></td>
</tr>
<tr>
<td>TARGET</td>
<td>Groundwater Contaminant Model Dames and Moore, Booth House, 15-17 Church Street, Twickenham TW1 3NJ, UK. Tel: (+44 181) 891 6161</td>
<td></td>
</tr>
<tr>
<td>TWODAN</td>
<td>2-D analytical fate and transport model. Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
<td></td>
</tr>
<tr>
<td>Model/Tool:</td>
<td>WASP</td>
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<tr>
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</tr>
<tr>
<td>Description:</td>
<td>Water Quality Analysis Simulation Programme models contaminant fate and transport in surface waters</td>
<td></td>
</tr>
<tr>
<td>Source:</td>
<td>US EPA, 960 College Station Road, Athens, Georgia, USA. Tel: (+1 706) 355 8400</td>
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<table>
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<tr>
<th>Model/Tool:</th>
<th>VAW2D</th>
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</thead>
<tbody>
<tr>
<td>Description:</td>
<td>2-D finite element model that simulates water flow and contaminant transport.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
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<thead>
<tr>
<th>Model/Tool:</th>
<th>Visual MODFLOW</th>
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<tr>
<td>Description:</td>
<td>3-D groundwater flow and contaminant transport model.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
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<tr>
<th>Model/Tool:</th>
<th>Win TRAP</th>
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<tbody>
<tr>
<td>Description:</td>
<td>Groundwater contaminant model.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
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<thead>
<tr>
<th>Model/Tool:</th>
<th>WINFLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Contaminant fate and transport model for groundwater.</td>
</tr>
<tr>
<td>Source:</td>
<td>Environmental Simulations Limited, Acorn Villa, Oak Street, Shrewsbury SY3 7RQ, UK. Tel: (+44 1743) 369 504</td>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>WINTRAN</th>
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<tbody>
<tr>
<td>Description:</td>
<td>Contaminant fate and transport model for groundwater.</td>
</tr>
<tr>
<td>Source:</td>
<td>Environmental Simulations Limited, Acorn Villa, Oak Street, Shrewsbury SY3 7RQ, UK. Tel: (+44 1743) 369 504</td>
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</tbody>
</table>
### Category 3 – Hazard identification/release assessment

<table>
<thead>
<tr>
<th>Model/Tool</th>
<th>Description</th>
<th>Source</th>
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<tbody>
<tr>
<td>Breeze Air Models</td>
<td>Gas Dispersion Models.</td>
<td>Trinity Consultants Inc., 12801 North Central Expressway, Suite 1200, Dallas, Texas 75243, USA. Tel: (+1 214) 661 8100</td>
</tr>
<tr>
<td>CARA</td>
<td>Hazard identification, frequency and consequence estimation.</td>
<td>DNV Technica, Palace House, 3 Cathedral Street, London SE1 9DE, UK. Tel: (+44 171) 357 6080</td>
</tr>
<tr>
<td>DEGADIS</td>
<td>Dense Gas Dispersion Model.</td>
<td>Trinity Consultants Inc., 12801 North Central Expressway, Suite 1200, Dallas, Texas 75243, USA. Tel: (+1 214) 661 8100</td>
</tr>
<tr>
<td>DENZ</td>
<td>Calculation of dispersion of dense gas from an instantaneous failure.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>DRIFT</td>
<td>Calculation of dispersion of dense gas from instantaneous failure and at steady rate.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>EXPEL 1</td>
<td>Models confined and unconfined vapour cloud explosions.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>Fault Tree Man</td>
<td>Fault tree modelling tool.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>FaultrEASE</td>
<td>Fault tree software package.</td>
<td>Arthur D. Little Ltd, Berkeley Square House, Berkeley Square, London W1X 6EY, UK. Tel: (+44 171) 409 2277</td>
</tr>
<tr>
<td>GASP</td>
<td>Calculates the evaporation of a spreading pool of liquid.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821 111</td>
</tr>
<tr>
<td>Hazard Man</td>
<td>Tool to carry out HAZOP, What-if and FMEA studies and access to rank hazards.</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 ORA, UK. Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>HAZOPlimizer</td>
<td>Hazard identification package able to perform HAZOP, FMEA, What-if.</td>
<td>Arthur D. Little Ltd, Berkeley Square House, Berkeley Square, London W1X 6EY, UK. Tel: (+44 171) 409 2277</td>
</tr>
<tr>
<td>HAZSEC</td>
<td>Software package for process hazard identification (HAZOP, FMEA).</td>
<td>DNV Technica, Palace House, 3 Cathedral Street, London SE1 9DE, UK. Tel: (+44 171) 357 6080</td>
</tr>
<tr>
<td>HOT SPILLS</td>
<td>Dispersion model of products from a burning chemical spill.</td>
<td>Trinity Consultants Inc., 12801 North Central Expressway, Suite 1200, Dallas, Texas 75243, USA. Tel: (+1 214) 661 6100</td>
</tr>
<tr>
<td>Model/Tool:</td>
<td>INPUFF</td>
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</tr>
<tr>
<td>Description:</td>
<td>Acute and chronic gas dispersion model.</td>
<td></td>
</tr>
<tr>
<td>Source:</td>
<td>Trinity Consultants Inc., 12801 North Central Expressway, Suite 1200, Dallas, Texas 75243, USA. Tel: (+1 214) 661 8100</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>ISC View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Air dispersion modelling software.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>Kyspill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Contaminant plume fate and transport model.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>LOGAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Fault tree analysis software.</td>
</tr>
<tr>
<td>Source:</td>
<td>RMC</td>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>OPRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Ranking system to assess hazard by considering site and management.</td>
</tr>
<tr>
<td>Source:</td>
<td>K Environment Agency (HMIP), Rivers House, Waterside Drive, Acton West, Almondsbury, Bristol BS12 4UD, UK. Tel: (+44 1454) 624400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>SAFER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Hazard identification, evolution of dispersion cloud from emergency releases.</td>
</tr>
<tr>
<td>Source:</td>
<td>Du Pont</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>SAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Spill Analysis Work - model for simulation of oil spills and spills of dangerous chemicals into the aquatic environment.</td>
</tr>
<tr>
<td>Source:</td>
<td>Danish Hydraulic Institute, Agern Alle 5, DK-2970, Norsholm, Denmark. Tel: (+45) 45 76 55 55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>Screen View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Model to analyse worst case scenarios for air pollutants.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
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<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>SLAB View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Toxic gas accidental release model.</td>
</tr>
<tr>
<td>Source:</td>
<td>Available from Scientific Software Group, PO Box 23041, Washington DC 20026-3041, USA. Tel: (+1 703) 620 9214</td>
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<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>SPILLCAO 3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>A screening model for hydrocarbon spill assessment and remedial design.</td>
</tr>
<tr>
<td>Source:</td>
<td>Geraghty and Miller International Inc. Suite A, Conqueror House, Vision Park, Histon, Cambridge, CB4 4ZB, UK. Tel: (+44 1223) 236650. Fax: (+44 1223) 236242</td>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>SPILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Chemical spill dispersion model for continuous spills, acute pools of liquid or gas, acute and chronic stack emissions.</td>
</tr>
<tr>
<td>Source:</td>
<td>Trinity Consultants Inc., 12801 North Central Expressway, Suite 1200, Dallas, Texas 75243, USA. Tel: (+1 214) 661 8100</td>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>TECJET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Dispersion model to simulate jets e.g. from pipes, flange leaks, etc.</td>
</tr>
<tr>
<td>Source:</td>
<td>DIW Technica, Palace House, 3 Cathedral Street, London SE1 9DE, UK. Tel: (+44 171) 357 6060</td>
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</table>

<table>
<thead>
<tr>
<th>Model/Tool:</th>
<th>TRAUMA</th>
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<tbody>
<tr>
<td>Description:</td>
<td>Calculates the behaviour of a jet release of a flashing, pressurised liquid.</td>
</tr>
<tr>
<td>Source:</td>
<td>AEA Technology, 329 Harwell, Didcot, Oxfordshire OX11 0RA, UK. Tel: (+44 1235) 821111</td>
</tr>
<tr>
<td>Model/Tool:</td>
<td>TRPUF</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Description:</td>
<td>Acute release gas dispersion model.</td>
</tr>
<tr>
<td>Source:</td>
<td>Trinity Consultants Inc., 12801 North Central Expressway, Suite 1200, Dallas, Texas 75243, USA. Tel: (+1 214) 661 8100</td>
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</table>
Category 4 – Directories of software products

<table>
<thead>
<tr>
<th>Model/Tool</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-ROM of Groundwater Modelling</td>
<td>Directory of available, public domain groundwater modelling, geochemical, graphical and related software.</td>
<td>Environmental Simulations Incorporated</td>
</tr>
</tbody>
</table>