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Scottish Centre for Infection and Environmen

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human health surveillance:

Human health issues

Human health concerns related to the foot and mouth epidemic can be categorized as:

1. the risk of human cases of foot and mouth disease;
2. acute respiratory or cardiovascular health problems due to inhalation of chemicals emitted from pyres;
3. gastrointestinal infections arising from pollution of drinking water (part for untreated private water supplies in the vicinity of sites for burial of carcasses or ash from pyres) by bacterial, viral or chemical pathogens;
4. long term health effects due to inhalation or ingestion of chemicals emitted from pyres;
5. spread of variant CJD due to pollution of drinking water by the BSE prion;
6. occupational health and safety problems associated with the process and carcass disposal;
7. mental health problems arising from the psycho-social impacts of foot and mouth on members of the affected communities.

Across this range of concerns, the local health boards are monitoring community health by enhancing their routine surveillance of health data including hospital discharge records and outpatient records for both acute and mental health cases.

For Dumfries and Galloway, an audit of general practices is being undertaken by Annandale and Eskdale Local Healthcare Co-operative. This involves distributing forms to GPs requesting information on presentations that could be associated with the foot and mouth epidemic and subsequent collection and collation of data. In addition, a local survey of general levels of health by Canonbie General Practice is planned and a survey of mental health problems in farmers will also be carried out, subject to ethical approval.

A summary of all of the health surveillance programmes appears in the monitoring programme section of this website.

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the monitoring programme:

Environmental Monitoring

The programme comprises collection and analyses of samples from air, water, herbage and foodstuffs. A summary of activities, roles and responsibilities of agencies involved is outlined below:

[Microsoft Word 6.0 summary \(36KB\)](#) [Adobe Acrobat PDF summary \(1](#)

Public Health Monitoring

A summary of the various monitoring programmes is outlined below:

[Microsoft Word 6.0 summary \(24.5KB\)](#) [Adobe Acrobat PDF summary \(71](#)

Air

Parameter: *Various gases including SO₂, NO₂ and VOCs*

Monitoring Activity: Real time monitor

Location and Timescales: One small pyre directly downwind over 4 days

Agency:
Glasgow Scientific
Services

Analysed by:
Glasgow Scientific
Services

Required by:
Dumfries & Galloway
Council

Outputs used to:
Assess acute public health risk

Paid for by:
Dumfries & Galloway

Parameter: *PM10 particulate in air*

Monitoring Activity: High volume air sample on filter

Location and Timescales: One small pyre directly downwind over 4 days

Agency:
Glasgow Scientific
Services

Analysed by:
Glasgow Scientific
Services

Required by:
Dumfries & Galloway
Council

Outputs used to:
Assess acute public health risk

Paid for by:
Dumfries & Galloway

Parameter: *Dioxin in air*

Monitoring Activity: Real time monitor

Location and Timescales: One small pyre directly downwind over 4 days

Agency:
Glasgow Scientific
Services

Analysed by:
Atomic Energy Authority
(AEA)

Required by:
Dumfries & Galloway
Council

Outputs used to:
Assess long-term public health risk

Paid for by:
Dumfries & Galloway

Parameter: *Gas and odour including H₂S, methane, VOCs and formaldehyde*

Monitoring Activity: Real time monitors and charcoal tubes

Location and Timescales: On-site at the Birkshaw mass burial site and at various locations off-site in response to local concerns over odour

Agency:
Glasgow Scientific
Services

Analysed by:
Glasgow Scientific
Services

Required by:
Dumfries & Galloway
Council

Outputs used to:
Assess nuisance and to inform overall
management of the site

Paid for by:
Dumfries & Galloway

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Water

Parameter: *Chemical analysis of ground-water with additional microbiological analyses if necessary*

Monitoring Activity: Collection of water samples from monitoring wells

Location and Timescales: Sampling programme at Birkshaw mass burial site. Results to be provided to SEE and SEPA. Note: SEPA initially sampled monitoring wells weekly during April 2001, Enviro now sampling weekly

| | | | | |
|---------------------|----------------|--------------|--|--------------|
| Agency: | Analysed by: | Required by: | Outputs used to: | Paid for by: |
| Enviros Consultancy | Sub-Contracted | SEERAD | Assess impact of operations on groundwater and water supplies. To inform management of site. | SEERAD |

Parameter: *Chemical and ecological analysis of surface water*

Monitoring Activity: Collection of samples from local watercourses

Location and Timescales: Initial daily sampling around the Birkshaw mass burial site. Now fortnightly sampling no evidence of pollution from initial monitoring. Additional monitoring also being undertaken by SEPA at burial site near Newcastleton Chemical analysis only to date

| | | | | |
|---------|--------------|--------------|--|--------------|
| Agency: | Analysed by: | Required by: | Outputs used to: | Paid for by: |
| SEPA | SEPA | SEPA | Assess any off-site environmental impacts. Inform site operations and controls over leachate etc., | SEPA |

Parameter: *Dioxin and PAH in drinking water*

Monitoring Activity: Collection of drinking water samples

Location and Timescales: Samples from each of the private and public water supplies considered to be most near any pyre. One sample will be taken from each private supply borehole and a sample from the inlet and each public supply surface water reservoir. In addition a control sample will be taken in each case some distance away from (1) the private supplies and (2) the public supplies

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|---|-----------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Agency: | Analysed by: | Required by: | Outputs used to: | Paid for by: |
| LAs for private water supplies, WAs for public water supplies | Glasgow Scientific Services | Dumfries and Galloway Council / WOSWA | Assess the safety of drinking water | Dumfries and Galloway Council / WOSWA |

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Pastures and soils

Parameter: *Dioxin and PAH*

Monitoring Activity: Collection of samples of potentially polluted herbage and soils*

Location and Timescales: Three samples of herbage and of soils to be collected from each of the locations

| | | | | |
|---|------------------------------------|--------------|--|--------------|
| Agency: | Analysed by: | Required by: | Outputs used to: | Paid for by: |
| University of Liverpool Environment Research and Consultancy Unit * | MAFF Central Science Lab in York * | FSA | Assess food safety and determine stocking policy | FSA |

Food

Parameter: *Dioxin in animal produce*

Monitoring Activity: Collection of dairy products, free range eggs, meat, fish and vegetables

Location and Timescales: To be advised by FSA Scotland following discussion with other FSA colleagues

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|--|--|-------------------------------------|--------------------|--------------|
| Agency: | Analysed by: | Required by: | Outputs used to: | Paid for by: |
| Dumfries and Galloway Council / Scottish Borders Council | Glasgow Scientific Services / Central Service Laboratory | Dumfries and Galloway Council / FSA | Assess food safety | FSA |

* As part of the UK-wide programme co-ordinated by the Environment Agency

N.B. Agencies in the Dumfries and Galloway area have been specified in the above table. Similar arrangements proportional to risk are envisaged for the Scottish Borders Area with respect to water monitoring.

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Public health monitoring

Health issue: *Human foot and mouth*

Monitoring body: Local GPs and hospital clinicians

Surveillance system: Samples sent to PHLS for virology and serology

Reporting system: PHLS reports back to sample provider and to Health Boards

Health issue: *Acute respiratory and cardiovascular health conditions*

Monitoring body: Local GPs and hospital clinicians, plus specific audit of general practices by Annandale and Eskdale Local Healthcare Co-operative

Surveillance system: Enhanced routine community health monitoring programmes. GP audit by Annandale and Eskdale Local Healthcare Co-operative

Reporting system: Data will be collated and analysed by the local Health Board and reported through SCIEH audit data may be published elsewhere.

Health issue: *Gastro-intestinal infections possibly associated with polluted drinking water*

Monitoring body: Surveillance systems already in place via the Department of Public Health

Surveillance system: Identification of cases of diarrhoeal illness that might be linked to private water supplies

Reporting system: Local GPs, hospital clinicians and laboratories report cases to the local CPHM who will collate reports and send on to SCIEH.

Health issue: *Longer term health concerns*

Monitoring body: Information and Statistics Division and the Scottish Centre for Infection and Environmental

Surveillance system: Routine surveillance programmes (cancer registration etc.)

Reporting system: Data will be collated and analysed, as appropriate by ISD and SCIEH

Health issue: *Variant CJD*

Monitoring body: Local GPs and hospital clinicians

Surveillance system: CJD Surveillance Unit at the Western General Hospital in Edinburgh

Reporting system: Local GPs and hospital clinicians report suspected cases to the CJD Surveillance Unit

Health issue: *Occupational health and safety*

Monitoring body: Employers and local GPs and hospital clinicians

Surveillance system: Employer's occupational health and safety systems or the other health surveillance systems

Reporting system: Employer's occupational health and safety systems or the other reporting systems noted appropriate

Health issue: *Mental health in the affected communities*

Monitoring body: Canonbie General Practice

Surveillance system: Repeat local health survey in the locality

Reporting system: Method of public dissemination of results has yet to be decided

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