

Notes of the Meeting held at Capesthorpe Hall **on 24th/25th May 2006**

Present:

N. Jackson, Transmission Standards Manager, UK Distribution, National Grid - Chairman
R. Ellis, Manager, Pipeline Group, Shell UK Ltd.
M. Harrison, Technology Manager, Huntsman Petrochemicals (UK) Ltd.
J. Martin, BP FPSI.
T. Stonehewer, Compliance and Monitoring Manager, UK Transmission, National Grid.
E. Reeder, Contract and Services Team Leader, Innovene, BP.
K. Curtis, Pipeline Engineer, E.on UK Ltd.
B. McKay, Pipeline Users Group (PLUG).
R. White, General Manager, Total (UK) Ltd.
P. Davis, Director and General Manager, BPA.
M. Alderson, Network Integrity Engineer, Northern Gas Networks
M. Baldwin, Engineering and Maintenance Team Leader, E.on UK Ltd.
D. Gray, Pipeline Protection Engineer, Esso Petroleum Co. Ltd.
P. Mitchell, Contract Manager, Unipen Ltd.
R. Armstrong, Scotia Gas Networks.
M. Price, Operations Manager, BPA.
L. Haw, Huntsman Petrochemicals (UK) Ltd.
S. Chatfield, Head of Operational Policy, HSE (25th only).
R. McConnell, Consultant.
J. Haswell, Consultant, Pipeline Integrity Engineers Ltd.
W. P. Jones, Pipeline Integrity Engineers Ltd, (Secretary).

1. Welcome and Introductions

The Chairman proposed a vote of thanks to Dick Gray and Esso Petroleum Co. Ltd. for arranging the meeting. He extended a special welcome to:

- i) Andy Rushton of the HSE who was attending to give a presentation on The Application of ALARP and Cost Benefit Analysis.
- ii) Mike Acton of Advantica who was attending to give a presentation on the Corrib Onshore Pipeline.

He also noted that Steve Chatfield of HSE would be attending the meeting on the 25th May.

2. Apologies

The Secretary reported that apologies had been received from:

D. Perry, Engineering Manager Network Policy, National Grid.
J. Trounson, UKD Policy Manager – Transmission, National Grid.
R. Michie, Transmission Operations Manager, BG Group.
D. Cullen, Senior Pipeline Supervisor, Shell Expro.
B. Proud, SHE & Coordination Manager, SemUtilities Solutions.
T. Taylor, Pipeline Plant Manager, Esso Petroleum Co. Ltd.
B. Keyes, Head of Network, Scotland Gas Networks.
P. Williams, Head of Operations, UKD Construction National Grid
P. Roberts, NTS, National Grid
C. Gorman, Network Operations Director, Northern Gas Networks
J. Varden, General Manager, OPA.

3. Pipeline Failures – J V Haswell

The presentation covered a number of pipeline failures which have occurred in all parts of the world with emphasis on cause and consequences. The slides used by Jane in her presentation have been posted on the Members' section of the website – reference UKOPA/06/0040.

A number of questions arose during/after the presentation:

Question: The statistics shown do not indicate internal corrosion. Why is this?

Answer: For the purpose of this presentation, the statistics are a simplification of the UKOPA database which does not show high rates of internal corrosion. The figures are in fact included in the “other” category.

Question: The overall failure rate for the American statistics is per 0.6km years. Is this correct?

Answer: No, this should be per thousand km years.

The Chairman thanked Jane for her presentation.

4. The Application of ALARP and Cost Benefit Analysis – Andy Rushton of the HSE

The presentation covered ALARP and cost benefit analysis principles in general, and the slides used by Andrew in his presentation have been posted on the Members' section of the website – reference UKOPA/06/0041. Andy explained the principle of risk assessment as required by

legislation and regulations in terms of the identification of necessary measures to reduce risk. He then covered cost versus benefit as a useful way of considering this. In simple terms, this means what more can be done to reduce the risk and why has/is this not done? Andy defined the gross disproportionate factor which must be taken into account, noting that HSE does not have an algorithm or methodology for assigning disproportionate factors.

HSE guidance recently issued is available on <http://www.hse.gov.uk/risk/theory/alarpcba> and <http://www.hse.gov.uk/risk/theory/alarpccheck>. The guidance covers the costs that should be included, and the benefits which should be considered, in a cost benefit analysis. The value of benefits used by HSE in carrying out cost benefit analysis are:

Fatality = £1.3million (x2 for cancer).

Permanent injury / disability = £200,000.

Serious injury = £20,000.

Problem areas which should be considered in life valuation relate to ethics, law, fear of the unknown and durability.

A number of questions arose during/after the presentation:

Question: The cost of avoiding a fatality is quoted as £1.3 million. Why is this not £1 million or £10 million?

Answer: This value is derived from various sources associated with the development of road safety systems in the UK. There is no internationally accepted figure. Individual companies / industries often use higher values. The value quoted is a suggested value only and would be the value used by HSE in any assessment, such as a Regulatory Impact Assessment.

Question: Pipeline design is code driven whereas specific design aspects of complex plant may not be. Where a code is applied directly, is the risk accepted as negligible?

Answer: No, unless the code assessment specifically considers the population in the vicinity to the installation or pipeline and its proximity to it.

Question: What drives the move from simple code assessments to complex specific assessments?

Answer: If the code or standard does not deal specifically with the complexity which is being handled, it cannot be relied upon to comprehensively cover these.

Question: How does HSE deal with CBA involving large numbers of casualties? Is this by increasing cost per life or through applying aversion?

Answer: The gross disproportionate factor applied should be selected to address the risk and the consequences so a higher disproportionate factor would be expected to apply where the consequence involves large numbers of people.

Question: The use of ALARP and CBA is required for unusual situations, but in new/innovative design situations, there is often little data available. Can you comment on this?

Answer: Agreed, but the use of tools such as ALARP and CBA should be used to support decision making, and not as part of code application.

The Chairman thanked Andy for his informative and relevant presentation, and for taking time to attend the meeting.

5. The Corrib Onshore Pipeline and the Public Perception of Risk – Mike Acton of Advantica

The slides used by Mike in his presentation have been posted on the Members' section of the website – reference UKOPA/06/0042.

Mike gave an introduction and background to the Corrib project and Advantica's involvement. The project involves a length of onshore pipeline from the shore to the terminal. Four onshore routes were considered, the preferred route passes close to a small village called Rosspoint. The design pressure of the onshore pipeline section is 150 bars, with a theoretical worst case of 345 bars if the pipeline is shut down and sees the full offshore pressure. The pipeline is designed for this worst case and is therefore thick wall.

An independent safety review was actioned by the Irish Government following fierce opposition to the onshore pipeline. Five local landowners were jailed for preventing access for pipeline construction and subsequently, legal judgment required that the pipeline be dismantled as legal permissions were not properly in place when construction commenced. Previous technical reviews had been carried out and had demonstrated that the pipeline safety was adequate, but the work was not deemed to be sufficiently independent. Advantica was appointed as the independent but this again proved controversial due to Advantica's connections with National Grid and Shell.

Advantica faced a number of technical challenges to be addressed, in particular:

- a) The probability of failure due to ground movement due to movement of the peat through which the pipeline is routed.
- b) The 345 bar design pressure is above the range of validation for all the consequence and failure models applied.
- c) There is no risk framework in place in Ireland.

The assessment showed that the individual risk levels are all below 1×10^{-6} and that the societal risk analysis results are below the established TD/1 criteria. Based on the analysis, the recommendations made included:

- i) The Irish Government should establish a risk-based framework for assessment of hazardous infrastructure.
- ii) The pipeline pressure should be limited to 145 bars for the onshore section.
- iii) A reliability analysis should be carried out for the subsea equipment (specifically the pressure control system and the emergency shutdown valve).
- iv) Implementation of specific recommendations for the construction in peat.

All recommendations were accepted by the Irish Government but have received a mixed reaction from protestors, and mediation is ongoing.

Following his presentation, the following questions were raised:

Question: Who specifically actioned the work with Advantica?

Answer: The work was commissioned and appointed by the Irish Minister Noel Dempsey.

Question: The worst case pressure for the onshore section is 345 bars, but the recommendations require operation at 145 bars. How is the worst case discounted?

Answer: The worst case is not discounted; it is to be dealt with by controlled systems of adequate reliability for isolation of the subsea section. This recommendation is consistent with a separate recommendation provided by the Technical Group advising the Irish Government.

Question: Why was the pipeline route along the river discounted?

Answer: This was discounted by the Environmental Agency.

Question: Two issues may drive the public perception of risk in this case, one being the real fear for the safety of the pipeline, the other being the loss of value of the land in the area. Which of these drove the protest in this case?

Answer: The Rosport Five, as the key protestors became known, retained full dignity throughout the process and all concerned considered they were driven by a genuine fear relating to the safety risks. In addition, there is a complex history relating to the inception of this project in which the Government official responsible at the time was

imprisoned for corruption in relation to giving permission for the construction of the terminal. This is the main reason why permissions for the pipeline were not robustly in place at the time responsibility for the project changed hands and Shell became responsible.

Question: Why was construction started without approval?

Answer: The approvals process in Ireland is not well-developed and is not set up to deal with the complex consent process adequately.

The issues raised by Mike's presentation generated significant discussion which covered dealing with public opinion, the problems associated with building hazardous facilities in remote areas where people are not used to dealing with the issues or risks, and problems associated with risk analysis results in terms of absolute numbers and comparisons with other options.

The Chairman thanked Mike for his interesting and thought-provoking presentation, and for taking time to attend the meeting.

6. Pipeline Operation – A French Perspective – Jean Grenier, Total Oil

It was noted that Jean Grenier of Total had been unable to attend the meeting at short notice.

7. Notes of Previous Meeting and Actions arising – UKOPA/06/0017

7.1 Notes of Previous Meeting

The notes of the previous meeting were accepted as a fair record of discussions and will be signed by the Chairman.

7.2 Actions Arising not covered on the Agenda (note of previous meeting in brackets)

7.2.1 Emergency Planning Work Group (EPWG) (7.2.3)

(i) Jane Haswell to check progress relating to publication of PERO course details on the Sembcorp website and the link to the UKOPA website

Jane reported that John Wilson of Sembcorp Utilities had confirmed that details of the PERO courses are available on the Sembcorp website. A link to this from the UKOPA website will be established in the near future.

Action: Phill Jones.

(ii) EPWG to produce guidelines on management of damaged pipelines for inclusion in the PERO course and Ed Reeder agreed to provide some generic material developed by BP for training purposes.

Jane stated that Ed Reeder had provided excellent information which, as well as covering liquid pipelines, provides a model for simplifying the existing document. All information requested has been received but the document has not yet been revised.

Jane to prepare document by end of June. EPWG to comment / approve by e-mail by end of July and document to be available by next UKOPA meeting.

Action: J Haswell.

7.2.2 Group of Experts to advise the Commission on a Strategy for Dealing with Accidents in the Transport Sector (refs UKOPA/04/0099 to 0101 inclusive) (7.2.4)

The Chairman proposed that Tony Taylor be asked to prepare a summary report for UKOPA on the outcome of discussions of this Group of Experts which is due to publish a report in August 2006. P Davis offered to provide a presentation given by S. Simons, Chairman of the Group of Experts given to CONCAWE recently.

Action: Tony Taylor and Peter Davis.

7.2.3 Safe Isolation of Plant and Equipment (7.2.5)

The Chairman noted this document is now published as HSG 253 Edition 2 (available from HSE Books, £12.95, ISBN No. 0717661717).

Action: Completed and Closed.

7.2.4 Safe Working Distances from Wind Powered Generators (7.2.7)

Phill Jones to arrange for the document to be posted on the public section of the website

Action: Completed and closed

7.2.5 Feedback from the PD8010 Questionnaire (7.7.2)

Jane Haswell agreed to update the document UKOPA 99/073 in line with the recommendations

Jane reported that an electronic update of the document is available on the UKOPA website as UKOPA/06/0032, and requested that members review this with particular attention to an added table covering recommendations for inspection and maintenance frequencies.

Action: Members.

7.2.6 Standard Pipeline Crossings (7.2.8)

Paul Swinborne, Land Agent, National Grid would prepare a 'best of breed' document for UKOPA consideration and acceptance

Neil Jackson reported this action is being progressed. The first draft of the document is being prepared by National Grid and this will be reviewed by Donal and Neil before circulation to Members.

Action: Neil Jackson and Donal Cullen.

7.2.7 UNECE Draft Safety Guidelines/Good Practice for Pipelines (7.2.9)

P Davis to obtain a copy of 2nd draft for UKOPA, to feed any comments back via CONCAWE and to provide an update at the next meeting

P Davis reported the document has been circulated for final comment. He stated the document is very general and is not legally enforceable. He agreed to forward the document to Phill Jones for circulation.

Action: Peter Davis.

7.2.8 On-Line Inspection Summary (12)

Following completed collation of the questionnaire responses, issues for discussion at future meetings would be identified and proposed by Roger Ellis

Roger stated that not all Members had provided responses to the questionnaire. Members who had not contributed would be contacted and any issues for discussion will be covered at the next meeting.

Action: R Ellis

7.2.9 European Regulator Meeting (18.2)

Members to consider and suggest any ideas for the programme and venue for the second day of this meeting in the Aberdeen area

Steve Chatfield reported that Shell is hosting a site visit at their Operator Control Centre and virtual reality facility in Aberdeen. The meeting will be attended by 18 Inspectors representing 8 countries.

Action: Completed and closed.

7.2.10 Work in Progress (18.6)

Jane Haswell noted that she would circulate the 2005 Work in Progress Report as a draft with specific requests for input

Jane reported that the Work in Progress Report is available on the open section of the UKOPA website as UKOPA/06/0034. She thanked Members for their input.

Action: Completed and closed.

All other actions covered on the agenda.

8. DSEAR Regulations

The Chairman introduced this action by referring to discussions held at the September meeting and a note prepared by Tony Stonehewer, ref UKOPA/06/0018 – Application of the Dangerous Substance Explosive Atmosphere Regulations (DSEAR) to existing installations. The Regulations come into force for existing installations on the 1st July 2006 and he introduced Tony Stonehewer to make a short presentation on the subject.

Tony gave a short presentation outlining National Grid's compliance strategy for these Regulations and the slides used in his presentation have been posted on the Member's section of the website – reference UKOPA/06/0033. The presentation covered key requirements of the regulations – risk assessment of equipment, classification and zoning of hazardous areas, marking of hazardous areas, and the issues associated with compliance – assessing ignition sources from mechanical equipment and assessing existing electrical equipment. Tony drew attention to regular statements by various consultants to the requirement for an explosion protection document, commenting that he did not see this requirement in the Regulations. He asked Members how other companies were complying and what issues they were addressing.

Following general discussion, it was confirmed that Members were progressing compliance. J Martin agreed that there was no formal requirement for an explosion protection document, and there was general concern over the volume of work being identified by consultants for compliance. It was agreed that Members should contact Tony direct to discuss this, and that Tony would prepare a draft summary recommending compliance based on the approach developed by National Grid for comment and issue as a UKOPA briefing / best practice document.

Action: Members / T Stonehewer

9. Pipeline Industrial – 2005 Rating Revaluation

9.1.1 Actions arising (14)

No actions arising.

9.1.2 Update

Roger Ellis reported that the 2005 replacement revaluation has been agreed and signed off by the Pipeline Operator's Agents, and is now with the Valuation Office for signing. A copy of the final document will be circulated via the website. The next stage is for individual companies to agree their rates with the Valuation office.

10. The practical application of the Code Supplements based on hypothetical development cases – Rod McConnell and Jane Haswell

Jane Haswell introduced this item by stating three presentations were to be given covering:

- i) Progress on the development of the Code Supplements,
- ii) Presentation of worked examples and,
- iii) An update on the work on pipeline failure frequencies.

10.1 Progress on the Development of the Code Supplements

Jane Haswell gave a presentation which provided an overview of the contents of the Code Supplements and a summary of the current status of their development. The slides presented are given in UKOPA/06/0043. Jane drew attention to the fact that the programme had slipped and the draft for public consultation to be issued by the Standards Bodies will not now be available until September 2006.

Phill Jones referred to the societal risk algorithm presented and asked if this would have a route for assessment of the pipeline as it exists, i.e. without any additional mitigation as this could show that the pipeline is acceptable without further work. Jane stated the algorithm did not state this at the moment but agreed it should be included.

10.2 Worked Examples to be included in Appendix C of the Code Supplements

Rod McConnell presented detailed work examples covering the assessment of a new housing development within a gas pipeline consultation zone, including the derivation of individual risks and societal risks, and the impact of risk mitigation. Rod explained how the planning process applied, and demonstrated the step by step procedure for risk assessment applying the guidance

contained in the code supplements. In particular, he drew attention to the standard wording contained in the HSE “do not accept” letter, noting that this wording had changed from that which had been presented and explained to the Working Group on Pipelines by HSE. The slides presented are given in UKOPA/06/0044.

Rod’s presentation prompted detailed discussion. Several detailed questions were raised regarding the HSE PADHI methodology and its application. Nigel Riley noted that HSE are currently rolling out an expert system relating to the assessment of land use planning (PADHI Plus). This leads the assessor through the PADHI process and leaves an audit trail confirming the issues that have been considered and addressed. The affect of the layout of a development was discussed. Nigel Riley noted that in many cases full details of a development are not available until a late stage in the planning process. He stated that the accurate application of PADHI was dependent on the actual layout of the site, for example the exact location of properties and open areas such as playgrounds within the development. It was noted however that with PADHI Plus the assessor will be the Local Planning Authority.

It was agreed that the Code Supplements should include examples relating to road developments and road improvement schemes, as well as housing developments.

Nigel was asked whether temporary construction sites were assessed under PADHI. He stated that the purpose of PADHI is to control permanent increases in population around hazardous installations and, as such, does not apply to temporary installations such as temporary construction offices. It does, however, apply to developments such as camping and caravan sites where, although the occupation is temporary, the level of occupation is essentially permanent.

10.3 Pipeline Failure Frequencies

Jane Haswell gave a presentation covering the work completed to identify failure frequencies for the primary pipeline failure mechanisms. The failure mechanisms which have been addressed are material defects, ground movement, corrosion and third party interference. A detailed assessment and statistical analysis of the UKOPA fault data relating to material defects, ground movement, corrosion and third party interference has been carried out which demonstrates good correlation across all pipeline datasets. In addition, a failure frequency prediction methodology for prediction of pipeline specific failure frequencies due to 3rd party damage has been developed, which shows good comparison with accepted industry models (gas industry model FFREQ) and operational data. The slides presented are given in UKOPA/06/0045.

Phill Jones asked if there is a reduction factor for toughness. Jane stated there could be but it is not included at the moment, the methodology assumes a lower bound toughness.

The Chairman stated that a lot of work had been carried out to develop the Code Supplements and thanked Rod and Jane for this. He noted that UKOPA now needed to move onto discussions with stakeholders on what is an acceptable level of risk.

11. Risk Assessment – Summary and Discussion

The Chairman introduced this item by briefly recapping the presentations given by Rod and Jane and the discussion following the worked example. He stated that UKOPA's aim to develop a transparent methodology and to achieve this by funding a development of the supplements had been demonstrated as valuable, and will ultimately benefit all stakeholders. He drew attention to the constructive comments made by Nigel Riley and Andy Rushton of HSE during the discussion. He then stated that a number of issues had arisen and invited Members to discuss these.

Roger Ellis noted that consideration should be given to how the overall PADHI / code supplement methodology would work, e.g. if a planning application is referred to the pipeline operator as a result of a PADHI assessment and the operator carries out a risk assessment which shows the risk to be tolerable and gives advice to the Planners in line with the code supplement that this is the case, how would the Local Authority deal with the situation, would this be reassessed according to PADHI or referred to HSE for further discussion and a formal result obtained as it is unlikely that the LA's will have the expertise to review and make decisions on a risk assessment?

Martin Alderson agreed this issue needed resolution. He stated that Northern Gas Networks' experience was that once a risk assessment has been carried out and the basis for a way forward identified with the developer and planning authority, planning permission or refusal is progressed without referral to a further PADHI assessment. Neil Jackson stated that the introduction of PADHI had removed the option for a technical referral and detailed discussions involving HSE, and although the intention is for the LA, the developer and the pipeline operator to identify a constructive way forward agreed by all stakeholders there may still be a requirement for technical advice from the HSE.

Jane Haswell commented that whilst work on the code supplements had achieved the UKOPA aim to develop a transparent risk assessment methodology based on expert best practice, the strategic process for its application needed to be pursued at a senior level with HSE. Mark Harrison stated that a clear statement linking the PADHI assessment to a risk assessment, and the mechanism for acceptance of this and granting of planning approval based upon it, was needed in the code supplement. In particular, he drew attention to the change in wording in the HSE standard letter from that which had been notified to and agreed via the Working Group on Pipelines. Roger Ellis noted that PADHI was a screening tool, and that through the work on the code supplements there is now a transparent methodology for detailed assessment, but there is no obvious mechanism leading to a positive planning decision. Steve Chatfield agreed that while the planning decision was the responsibility of local authorities, in most cases LA's would be reluctant to pursue a decision which went against HSE advice unless there was a clear route for doing so. In this respect, demonstration that a risk assessment had been carried out in accordance with a published code supplement and that risks were deemed acceptable in accordance with this could be a mechanism for demonstration of ALARP. He went on to note that in the event that a Planning Application was progressed against HSE advice, any legal challenge pursued by HSE would be

under PSR and would relate to acceptability of risk and ALARP. Steve noted that the wording of the HSE letter was important, and agreed to take advice on this and report back.

Action: S Chatfield

Steve Chatfield advised that the strategic issues should be referred back to Moira Wilson, Head of HSE CI5. Martin Alderson stated that as HSE were rolling out the PADHI Plus methodology and system, now would be an ideal opportunity to brief local authorities on the process and the role that pipeline operators could take. Mark Harrison stated that as the UKOPA understanding of the HSE's position and the process they applied in providing land use planning advice has been established through the Working Group on Pipelines, clarification and any actions needed to establish this should be referred back through this route. Jane Haswell stated that there was an outstanding action on her to call a final meeting of the Working on Group on Pipelines, and she would do so with this as a key objective for the meeting.

In conclusion the following actions were agreed:

J Haswell to arrange a final meeting of the WGP, with a key objective to discuss and clarify understanding of the process which applies when planning developments fail the PADHI process.

Action: J Haswell.

N Jackson to arrange a UKOPA RAWG meeting with M Wilson/HSE HID to confirm agreement on the methodology and process, and identify any outstanding issues for resolution, and discuss how the interface between the PADHI process and the application of the code supplements may be addressed in the roll out of the PADHI plus methodology.

Action: N Jackson.

Finally, P Jones asked whether there were any plans to publish the work on which the code supplement methodology is based. J Haswell confirmed that both BSI and IGEM had stated that documented technical justification would be required, and that they would agree this could be published by/available from UKOPA. It was agreed that technical justification papers would be published by UKOPA via the website.

Action: J Haswell / R McConnell / P Jones.

12. H, S & E Issues

12.1 Actions Arising

Tony Stonehewer to prepare a short note for circulation to members and discussion at the next meeting

Covered under agenda item 8.

Action: Closed

12.2 Reports from Members

12.2.1 Incident on a BP Pipeline in Azerbaijan

R Ellis advised that a report from BP had been issued regarding a fatality during construction of a pipeline in Azerbaijan. In order to carry out a weld repair, a welder had entered a 36" pipeline to repair a weld from the inside some 30 meters from the open end of the pipe. The welder had ropes attached to his body to facilitate his exit, however, on commencing the welding, he died very quickly due to severe burns and his body had to be removed by cutting the pipeline section – see also report received and circulated after the meeting – reference UKOPA/06/0037.

12.2.2 Platform Incident – Mumbi, India

B McKay reported on an incident in which a diving support vessel had severed a riser in the Mumbi region of India in July 2005. Following the incident, 22 people died and 362 were rescued from the platform. The incident occurred because the cook on the vessel had sliced off his finger. The crew had decided that as the weather was such that a helicopter could not land on the vessel, the vessel would approach a platform so that the cook could receive medical treatment. In approaching the vessel in severe weather conditions, the riser was severed and the incident occurred as described. Review of the facilities following the incident confirmed that there was no subsea isolation valve and a number of other issues which would be required for safety reasons in the UK were not in place.

12.2.3 Incident from Fencing Activities

J Martin reported that BP had suffered damage to pipelines caused by hydraulic pile drivers with hammer action. Investigations had shown that DEFRA was supporting an incentive scheme for landowners to create wildlife habitat in hedgerows and, as part of this scheme, new fencing will be financed. T Stonehewer suggested that this initiative should be investigated by UKOPA and UKOPA should write on behalf of the industry to DEFRA. J Martin confirmed that BP was approaching DEFRA, landowners on the pipeline route, and contractors with regard to this issue.

12.2.4 Damage to Pipeline from Telegraph Pole Installation

D Gray reported that the Esso surveillance helicopter had reported an incident occurring over a pipeline involving the installation of a telegraph pole by BT. Investigations had confirmed that several attempts had been made by the personnel working on site to install this telegraph pole,

during which first a water main and then the Esso pipeline had been damaged and, in addition, an electrical cable had been severed. The personnel involved were actually employed directly by BT.

Following considering of this incident, Esso were looking at the costs of surveying the pipeline system to identify any locations of other possible similar incidents. D Gray stated that the human factors issues were being discussed with BT, in particular questions were being raised as to why the operatives did not check why their first attempt had been unsuccessful and investigate what had been hit during the installation of the telegraph pole.

13. UKOPA Strategy – Proposals and Discussion – UKOPA/06/0028

The Chairman introduced this item by referring to the action on the Management Council to consider the UKOPA strategy for the future. It had been recognized and agreed that UKOPA needs a longer term strategy and in response the Council had prepared and circulated a draft strategy document - reference UKOPA/06/0028 which outlines the proposals in this respect which and requires consideration and comment from Members. He invited Members to discuss their views on the proposals.

P Davis commented that this was a good document. He noted though that major hazard and non-major hazard pipeline definitions required clarification. In addition, he commented on the use of wording associated with the objective of meeting cost effective transportation and stated that the strategy should concentrate on safety and technical issues. This was agreed. R Ellis in particular asked Members to consider the proposed format of future meetings. The document proposed that this would move to two UKOPA meetings per year, plus a technical seminar which would be open to wider attendance and participation. T Stonehewer agreed the technical seminar was a good idea but may take significant effort if this was to be successful. In this respect, he proposed that a seminar on land use planning and the technical issues behind this, and application of the supplement, would provide good material for a technical seminar.

There was general support for two UKOPA meetings per year. K Curtis suggested that a list be compiled and circulated for prioritisation by Members. It was agreed that P Jones would prepare a questionnaire for Members on topics for future seminars.

Action: P Jones

Regarding UKOPA strategy generally, M Alderson commented that a lot of the material considered by UKOPA was specific to buried pipelines rather than the installations associated with them. N Jackson confirmed that the scope of pipeline issues should be as defined in PSR so should cover the equipment associated with pipelines. It was agreed this should be included. N Jackson and R Ellis confirmed that it was not the intention to restrict the technical scope of UKOPA work to buried pipeline sections only, and invited Members to provide suggestions for additional issues associated with installations and equipment for consideration.

Action: Members

Finally, S Chatfield asked if he could have sight of the strategy document. It was agreed that he could have a copy of the document now and would receive the final copy following Members' comments.

Action: P Jones

14. Reports from Working Group Chairmen (by exception)

14.1 Fault Database Management Group

R Ellis updated Members as follows:

The FDMG had proposed that UKOPA should provide gas industry data to EGIG, covering NG, IDNs and E'on. Details of the agreement and relevant confidentiality agreements which will need signing will be sent to the relevant members. R Ellis reported that the database is now fully web based and is being updated. At his request, Advantica had provided a report on entries submitted to the database. The report confirms that a number of Members have not provided updates.

The significance of data updating was discussed. It was agreed that updates should be prompted, and that R Ellis would report back on the level of updating and the results of new records added.

Action: R Ellis

14.2 Infringement Working Group

14.2.1 Actions Arising (14.2)

(i) It is intended to collate information collected at the seminar and circulate to attendees who can use the information to prepare/update action plans for preventing damage to pipelines. It is proposed that a follow up event will be organized in due course.

The collated information/feedback from the meeting was circulated to all attendees as actioned. The Infringement Working Group owns the action to monitor opportunities for and plan the follow up event.

Action Closed.

14.2.2 Update

M Harrison presented an update report which covered the current data and assessment of results, actions on the working group, the interface with HSE work plans and future plans. The slides used are available as UKOPA/06/0046.

The Top Twenty Infringers report continues to be of wide interest to Members, HSE and 3rd parties, contractors in particular. Much more data is now available, and further consideration is being given to how it should be analysed.

An excavation safety webpage has been created; this is now ready for issue subject to final work.

A communication matrix, created by D Willett of NG has been prepared and will be circulated. This provides an excellent reference document and could be considered for development into a best practice document.

An infringement register is to be created, this will record factual data relating to serious infringements, covering who, when, how and what agreed follow up actions were taken, which can be used as reference for Members with similar infringements or in dealing with the same infringement party.

K Curtis suggested requesting that the IWG consider the preparation and issue of a summary report which can be used by operators, particularly those associated with industries where pipeline operations is not a primary responsibility (for example power station operators), to brief colleagues and management. Mark agreed to take this on as an action for the Working Group.

Action: Mark Harrison.

T Stonehewer noted that the annual rate of infringements per infringer and changes in this should be reported, to ensure that company reputations were not consistently penalised for historical poor records. M Harrison agreed that having created a successful working database of information, the IWG can now start to give wider consideration to the use and application of infringement statistics.

It was noted that GERG (Group on European Research Group) had expressed interest in the work carried out by the UKOPA Infringement Work Group. The UKOPA database and its application were considered as best practice and GERG as an organization was keen to understand how infringements are recorded and categorised.

M Harrison stated that the IWG has given consideration to whether the way in which the infringement was sighted / identified should be recorded. In addition it had been suggested the type and category of land should be recorded. In this respect, it was noted that the infringement data could provide data which would corroborate (or otherwise) the rural/suburban 3rd party incidence rates used in the prediction of the failure frequency due to 3rd party interference. It was agreed that any move to collect this data should be notified to Members in advance, and should not

require retrospective data assessment, and that the data should be evaluated after a period of time to assess whether it is of use. M Harrison agreed to raise these issues for discussion with the IWG.

Action: M Harrison

R Ellis noted that currently, the collation of data relied very heavily on one person (M Harrison) and asked whether the IWG had given any consideration to the development of a web based reporting system. M Harrison agreed with this comment, and confirmed that web based reporting had been considered. However, the volume of data which was now regularly being received from

NG and the IDNs was very large, and this did not lend itself to a web based reporting system. However, it had been recognised that a central reporting and analysis function may be needed to ensure sustainability of data collection, recording and analysis.

Regarding the production of the UKOPA DVD on safe working in the vicinity of buried pipelines, M Harrison reported that funding from UKOPA for the professional production of an excavation safety DVD had been requested by the IWG and approved in principle by the Management Council. In developing material for the DVD, the IWG had considered existing material (including material in the DVD prepared as a joint initiative by companies in Scotland) to select best material. The core UKOPA material can then be used by individual companies to provide their own specific version.

In discussion, this initiative received strong support. It was noted that the main issue is to ensure that the DVD is viewed by the right personnel, in particular contractor and utility personnel who actually carry out the site work.

Finally, M Harrison outlined HSE's interest in appointing Derek Morgan of HSL to carry out a statistical analysis of the UKOPA infringement data to identify trends, factors and combinations of factors influencing trends, and to use the results to propose initiatives and suggestions for improvements. M Harrison noted that, with UKOPA's support, the data and the form in which it will be supplied for the analysis will be discussed with Jim Stancliffe of HSE on 9th June. Issues relating to data confidentiality were discussed. S Chatfield confirmed that HSE's intention was to use the analysis to develop simple, practical guidance relating to human factors, and to use this as the basis for discussion with contractor and utility companies. He stated that any information provided to HSE would be covered by the Freedom of Information Act, so the confidentiality issues needed to be properly considered before the data was supplied to HSE. M Harrison and S Chatfield agreed to discuss with Jim Stancliffe before the proposed meeting.

Action: M Harrison / S Chatfield

14.3 Risk Assessment Working Group

The Chairman asked R McConnell to give an update to Members. R McConnell reported that as previously discussed, a lot of technical work was being progressed through the RAWG. There had been five meetings held in the last few months. In January, a meeting was held with HSE to discuss jet fire modeling and the concerns associated with this which are being expressed by both UKOPA and HSE. It had been agreed that a programme was needed to develop a better model for jet fires.

A meeting was held on the 1st February 2006 at Loughborough to look at pipeline failure frequencies, data modeling and ethylene modeling. On the 24th February, a joint meeting with HSE had been held at the National Grid offices at Warwick. At this meeting, G Leach gave an excellent presentation of the comprehensive work carried out for National Grid to predict failure frequencies of pipelines due to national landsliding. R McConnell commented that the results of this work were being incorporated in the Code Supplements and that Neil Jackson had provided information on the work carried out to HSE for consideration. In addition, at this meeting, the UKOPA mechanical damage model was discussed with HSE and a number of issues raised which are being progressed by the RAWG. Finally, HSE raised the issue of modeling of ethylene release rates and failure frequencies. They presented some results which are being considered in detail by the RAWG.

A meeting was held on the 7th April 2006 at Newcastle University. At this meeting, Professor Phil Hopkins gave a presentation on the proposals for the Centre of Pipeline Engineering. In addition, Dr Julia Race offered a proposal on the assessment of dents in pipelines. N Jackson commented that the proposal provided by Dr Julia Race was in two stages; feasibility and then a programme of research work. The UKOPA RAWG had recommended to the Management Council that UKOPA should fund the feasibility study on behalf of Members. This was being done at a cost of £5800. The results would be presented by Dr Race to UKOPA on completion. The second stage will require a more substantive piece of work. Depending on the conclusions, this may be proposed to Members for consideration as a joint sponsored project at an appropriate time.

Finally, a meeting was held on the 28th April 2006 where issues associated with pipeline failure frequency prediction modeling for third party interference were discussed in detail. A number of comparisons were discussed and actions were agreed. The current position on this is as presented in the earlier presentation on pipeline failure frequencies.

In conclusion, R McConnell noted that due to recent changes in Membership, the RAWG would appreciate further technical input from Members. In particular, he noted that a member representing ethylene operators would be particularly valuable as there are a number of ethylene issues to progress in the near future. L Haw agreed to consider this.

Action: L Haw

**15. Emergency Pipeline Repairs and Record of Pipeline Emergency Equipment and Spares
(D. Cullen) (13)**

15.1 Actions arising

Ambergate to provide a scope of service for consideration by UKOPA, together with indicative costs.

Covered under update

15.2 Update

In the absence of Donal Cullen Phill Jones reported that he had received a draft scope for the service from PMC and circulated to the members who had said that they might be interested in the service. Only one member other than Shell had indicated that they might be interested in pursuing the issue further. One member indicated that they only had interest in access to spares but not to a repair service. As interest in this subject is very limited Donal proposed that the item be closed and removed from the agenda.

Donal's proposal was accepted but it was suggested that the register of emergency spares and equipment would still be of benefit to Members and Phill Jones was actioned to speak to Donal on the possibility of including on the website.

Action: Phill Jones and Donal Cullen

16. Agenda/Presentations for the September Meeting

16.1 Actions Arising

There were no actions arising.

16.2 Update and Presentations for the next Meeting

The Chairman noted that there is a need to agree the format of the September 2006 and possibly the January 2007 meetings, and summarised the feedback on Members' aspirations as recorded in the notes of the previous meetings as follows:

- *Greater participation by Members.*
- *A higher emphasis in operational / day-to-day matters.*
- *Careful selection of presentations which are relevant to Operator activities.*
- *More focused reporting by the Working Groups.*

- *Less administrative / financial discussions. These should be covered by the Management Council.*

With regard to meetings beyond January 2007, it is suggested that an operational issue could be identified at an early date and that consideration should be given if possible to aligning presentations with that operational issue.

He also noted that the following had been suggested as contenders for presentation at future meetings are:

- i) Web-based aerial imagery of pipeline routes. Sponsor: R Ellis.
- ii) Insurance assessment of damaged sites (Alan Robertson). Sponsor: N Jackson.
- iii) Environmental issues (Mark Calvert, MD of Alder & Alan, Environmental Recovery Company). Sponsor: R White.
- iv) Pipeline Centre for Engineering / Proposal for Assessment of Pipeline Dents (Professor P Hopkins and Dr J Race).

In addition to the above, D Gray suggested that Will Jeffries, who has been doing some work for Esso with R McConnell on environmental risk analysis, could present the results of this work to UKOPA at the September meeting. T Stonehewer also said that National Grid had been carrying out some work to influence the environmental agency to accept some level of environmental risk during pipeline construction. He agreed to consider this as a possible presentation.

Following discussion, it was agreed that a theme for the September meeting would be environmental issues. N Jackson confirmed that Newcastle University had informed the RAWG of topics they were pursuing in this area, notably carbon capture.

The following actions were recorded:

Robert White – to confirm if Mark Calvert would be available for making a presentation.

Dick Gray - to confirm if Will Jeffries would be available for making a presentation.

Tony Stonehewer – to confirm if NG is prepared to make a presentation on environmental risk assessment.

Phill Jones to check with Newcastle University if they would be prepared to make a presentation on environmental issues.

17. Membership Categories and Membership Fees for 2007

17.1 Membership Categories

Neil Jackson reported that the Management Council had reviewed the need for the Affiliate category and had agreed to recommend to Members that the category be discontinued with immediate effect. The recommendation was supported by Members.

17.2 Membership Fees for 2007

The Chairman reported that the fees for 2007 are to be retained at the same level as 2006.

18. Any Other Business

18.1 Chairman of UKOPA

N Jackson confirmed that M Harrison has agreed to Chair UKOPA for a 12 month period commencing at the September meeting. In reality, it is BP's turn to undertake the Chairmanship but as L Boswell has moved on and his position has not yet been appointed, it was agreed that another Full Member would take the Chair for 12 months to allow the BP Member to establish contact and familiarity with UKOPA.

R Ellis thanked N Jackson for agreeing to take the Chair for the May meeting. This was supported by all. N Jackson confirmed he would Chair the Management Council in September and hand over to M Harrison at that meeting.

18.2 Implications of the Traffic Management Act for Pipelines

The Chairman noted that a briefing note had been issued for Member information – reference UKOPA/06/0031.

18.3 Buncefield Study Group

R Ellis reported he had received an enquiry from the Shell representative on UKPIA, who had said that a study group had been formed by UKPIA and HSE to look into issues arising from the Buncefield incident. The Study Group would like an industry member to cover pipeline issues and would like to invite UKOPA to nominate a representative. P Davis and R White confirmed that they would address the issues as required on behalf of UKOPA. Terms of Reference for this Group are not yet available. S Chatfield noted that issues that had already been identified centred on gasoline, the potential for reclassification of gasoline, and application of land use planning associated with gasoline pipelines etc.

18.4 APPE Conference

R Ellis reported that the APPE Conference involved the development of propylene and ethylene pipelines in Europe, and the Group had approached R Ellis with a request to share best practice with UKOPA. R Ellis agreed to provide information and pass on this enquiry to P Jones to progress.

Action: R Ellis.

18.5 UKOPA – Ten Years Old in 2007

Neil Jackson advised Members that the Association will be ten years old in 2007 and that the Management Council considers that the occasion should be celebrated. There are two issues to consider namely (i) how should the occasion be celebrated and (ii) how should the occasion be marketed.

He noted that some discussion taken place regarding the matter at the Management Council Meeting and that it had agreed in principle that any celebration should be linked with the January 2007 meeting and that it might be a special dinner to which previous Chairmen of the Association could be invited. In terms of marketing the event, consideration could be given to preparing articles for publishing in the IGEM and Pipes and Pipelines International magazines which could focus on achievements and current initiatives.

He invited Members to consider the matter and submit any suggestions they may have relating to the issue.

Action: Members

19. Dates and Venues of Future Meetings

20th/ 21st September 2006: Newcastle University – details to be confirmed

7th/8th February 2007: E.on to consider hosting at Coventry – details to be confirmed

10th/11th October 2007: BP to consider hosting – details to be confirmed

The technical seminar will be organised and advised separately.

Signed: (Neil Jackson) – Chairman.

Date: