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EXPERT GROUP ON BEST AVAILABLE
TECHNIQUES AND BEST ENVIRONMENTAL
PRACTICES
Second session
Villarrica, Chile, 8-12 December 2003

REPORT OF THE SECOND SESSION OF THE EXPERT GROUP ON
BEST AVAILABLE TECHNIQUES AND BEST ENVIRONMENTAL PRACTICES¹

I. OPENING OF THE SESSION

1. The sixth session of the Intergovernmental Negotiating Committee of the Stockholm Convention on Persistent Organic Pollutants, held from 17 to 21 June 2002 in Geneva, Switzerland, established the Expert Group on Best Available Techniques (BAT) and Best Environmental Practices (BEP) to develop guidelines on BAT and provisional guidance on BEP relevant to the provisions of Article 5 and Annex C of the Convention.
2. The first session of the Expert Group on BAT and BEP was held in Research Triangle Park, North Carolina, United States of America from 10 to 14 March 2003.
3. The second session of the Expert Group was held in Villarrica Park Lake Hotel, Villarrica, Chile from 8 to 12 December 2003. The session was opened at 9.00 a.m. on Monday, 8 December 2003 by Mr. Sergio Vives (Chile), Co-chair of the Expert Group.
4. At the opening of the session, statements were made by Mr. Erwin Gudenschwager, Mayor of Villarrica, Mr. John Buccini (Canada), Chair of the Intergovernmental Negotiating Committee (read by Mr. Whitelaw, Deputy Director, UNEP Chemicals), and the Co-chairs of the Expert Group, Mr. Robert Kellam (United States of America) and Mr. Vives.
5. Mr. Gudenschwager drew attention to the multicultural community and natural beauty of Villarrica. He said that the community worked together to maintain the beautiful environment of the surroundings and that had been achieved through education. Education of children and youth on environmental matters had modified the thinking of previous generations that the environment was infinitely forgiving. He commended the expertise present at the session and hoped that it would develop guidance that could be concretely implemented.

¹ This document has not been formally edited.

6. Mr. Whitelaw read a statement from Mr. Buccini which noted that the BAT/BEP Expert Group had been established in recognition that countries would need assistance in meeting those obligations under the Convention that dealt with unintentionally produced POPs. Countries preparing national implementation plans had reinforced their need for guidance, as had the seventh session of the Intergovernmental Negotiating Committee that heard a report on the progress made at the first session of the Expert Group. With 41 countries having ratified the Convention, it was projected to come into force by May 2004 with the first meeting of the Conference of the Parties to be held in May 2005. The draft guidance would therefore have to be ready by the end of 2004 for it to be considered at the first meeting of the Conference of the Parties. He commended the considerable amount of work done intersessionally by members of the Expert Group, which provided a sound basis for good progress at the current session and closed by thanking the Governments of Canada, Germany, Switzerland and the United States of America for their financial contributions to the session and the Government of Chile for its hosting and support in facilitating the preparations.

7. Mr. Vives welcomed the participants on behalf of the Government of Chile and thanked the Governments that had made financial contributions towards the session. He noted that the work was advancing well and that excellent progress had been made intersessionally for which he thanked the coordinators of the papers prepared during that time. He said that the ultimate objective was to assist developing countries and, bearing that in mind, the group needed to develop realistic, practical and applicable guidance for developing country conditions. The real threat, he said, lay in the difficulty to control common practices to manage small and diffuse activities. He concluded by recalling the timetable set to finish the task assigned to the Expert Group by the Committee.

8. Mr. Kellam noted that the Expert Group was faced with an ambitious agenda but that the expertise present at the session would assist towards a positive outcome not only of the session but of the intersessional work to be done between the current session and the first meeting of the Conference of the Parties. He, however, reminded the session that there was limited time available and that there was a need to remain focussed on the goal of preparing guidance that was applicable. He said that it was important to take into account the different perspectives of the members of the Expert Group. He concluded by congratulating the coordinators responsible for preparing papers intersessionally between the first and second sessions of the Expert Group for their excellent work.

9. A list of documents available to the session was provided in UNEP/POPS/EGB.2/INF/13.

Attendance

10. The session was attended by Government-designated experts from Algeria, Argentina, Australia, Austria, Canada, Chile, Dominican Republic, Fiji, Finland, Gabon, Germany, Islamic Republic of Iran, Italy, Japan, Kazakhstan, Kenya, Mexico, Mongolia, Serbia and Montenegro, Singapore, Switzerland, United States of America, Venezuela and Zambia.

11. Representatives of the following intergovernmental organizations and United Nations specialized agencies were also present: United Nations Environment Programme and United Nations Industrial Development Organization.

12. The following non-governmental organizations were also represented: Greenpeace International, International Council of Chemicals Associations, International Council on Mining and Metals, International POPs Elimination Network, The European Cement Association, World Chlorine Council and World Wide Fund for Nature-International.

13. The list of participants was provided in UNEP/POPS/EGB.2/INF/14.

II. ORGANIZATIONAL MATTERS

A. Practical arrangements

14. A brief outline of the practical arrangements for the session was provided by the Secretariat to the Expert Group.

15. Pursuant to section VII of annex VII of UNEP/POP/INC.6/22, the following experts continued to serve as officers of the Expert Group:

Mr. Robert Kellam (United States of America)	Co-chair
Mr. Sergio Vives (Chile)	Co-chair

B. Organization of the Work

16. The Expert Group agreed to work in plenary sessions from 9.00 a.m. to 12.00 p.m. and from 1.00 p.m. to 5.00 p.m. and to set up contact groups as necessary

17. The Expert Group adopted the following agenda:

1. Opening of the session
2. Organizational matters:
 - (a) Practical arrangements;
 - (b) Organization of work;
 - (c) Report by the Secretariat on intersessional work requested by the Expert Group
3. Development of guidelines on best available techniques and provisional guidance on best environmental practices relevant to the provisions of Article 5 and Annex C of the Stockholm Convention on Persistent Organic Pollutants
4. Preparing for the next session
5. Other matters
6. Adoption of the report
7. Closure of the session

18. The Expert Group had before it a scenario note for the session (UNEP/POPS/EGB.2/INF/1) prepared by the Co-chairs of the Expert Group and the note by the Secretariat on a tentative schedule for the week (UNEP/POPS/EGB.2/INF/2). The Co-chairs provided an explanation of how they expected the work of the session to progress over the course of the week.

C. Report by the Secretariat on intersessional work requested by the Expert Group

19. The Secretariat presented an oral report on progress made in completing the intersessional work requested by the Expert Group at its first session.

III. DEVELOPMENT OF GUIDELINES ON BAT AND PROVISIONAL GUIDANCE ON BEP RELEVANT TO THE PROVISIONS OF ARTICLE 5 AND ANNEX C OF THE STOCKHOLM CONVENTION

A. Scope of work of the Expert Group

20. The Expert Group had considered the form and nature of the guidance during its first session, but had not resolved all the issues. It had, however, agreed to the inclusion of a possible structure of guidance on BEP and guidelines on BAT as contained in annex A of the report of the first session of the Expert Group, UNEP/POPS/EGB.1/4. The Expert Group had before it a note, prepared by the Secretariat and based on that structure, on possible elements of guidance on BEP and guidelines on BAT (UNEP/POPS/EGB.2/2).

21. The Expert Group agreed to replace the current language under item C (4), "Performance standards", of section III of the annex of UNEP/POPS/EGB.2/2 to avoid the appearance that the guidance was mandating standards of performance or emission limit values. It was suggested that that section V, "Annexes", and section VI, "References" of the annex should be removed from their current location and be incorporated in each of the Part II and Part III source categories guidance and guidelines.

22. The Expert Group discussed the possible format of the document and noted that the structures for the different source categories should be as similar as possible. The format used for the draft guidelines for thermal processes in the metallurgical industry was considered a good basis. It would be necessary to include elements of socio-economic considerations, distinguish between new and existing sources, distinguish between BAT and BEP, and include a preambular section, a general section on alternatives, and source specific sections on alternatives where available. In acknowledgement of the diversity of and challenges to developing countries, it was recognized that some techniques of industrialized countries may be a challenge to install in those countries: hence local approaches also needed examination. It was noted that to simplify the documents, issues inherent to all sources should be included in an introductory section. It was proposed that the format would include a list of contents for each source category, an introduction, existing sources, new sources, BAT, BEP, alternatives, a summary of measures, achievable levels and reporting.

23. The Expert Group had before it a submission on consolidation of resource documents (UNEP/POPS/EGB.2/3), the preparation of which was coordinated by Mr. Juan Carlos Colombo (Argentina). Mr. Colombo presented a draft web page designed to provide summary information on the Convention, along with information on the guidance on part II and part III specific sources, and links to the guidance for that source, resource documents and other relevant information.

24. The creation of the website was considered a useful tool. It was suggested that the website could be reproduced on a CD-ROM or mini-CD with hyperlinks to web sites. It was further suggested that a disclaimer and firewall be installed to indicate that linked resource documents were not necessarily endorsed by the Expert Group. It was also suggested that any summary information should be taken verbatim from the guidance. Care should be taken to link to sites that were continually updated so as to reduce the maintenance requirements. Maintenance and updating of the proposed website could be undertaken by the Secretariat as part of its clearing-house function. In addition to linking to other relevant websites and more detailed studies, it was considered useful to include information on success stories.

B. Overview of consideration of alternatives in the application of BAT

25. The Expert Group had before it the submission on consideration of alternatives in the application of BAT (UNEP/POPS/EGB.2/INF/4), the preparation of which was coordinated by Mr. Jack Weinberg (International POPs Elimination Network). Referring to Article 5 and Annex C of the Convention, Mr. Weinberg introduced the document, noting in particular that there should be a bias towards prevention or elimination of POPs rather than their control. The challenge was how to integrate the prevention aspect into the guidance. He suggested that part of a recommendation to the first meeting of the Conference of the Parties could be to develop methodology on how to incorporate consideration of alternatives as a key component of guidelines of BAT and guidance for BEP.

26. It was noted that although alternatives had already been touched upon or drafted for specific source categories, a decision was needed on: how to include them in the guidance; which ones to include; and for which source categories. For some experts, identifying alternatives per source was considered the most useful option, while others suggested an additional general reference to alternatives in the chapeau to the guidance. Text on alternatives would also arise in many parts of BEP for example in text on national policy approaches and frameworks. The issue was seen as being not only what alternatives were available, but also which were applicable and of similar usefulness to any proposed facility. It was noted that while developing the methodology for incorporation of alternatives was feasible, transferring that into practicality was more complex. It was noted too that countries might have difficulty in deciding which option was best for their particular conditions taking into account environmental and socio-economic considerations. A practical approach that looked at alternate processes as well as options within a process was suggested. It was suggested too that it might be best to have some principles for BEP and specific alternatives for BAT included in the guidance.

27. A contact group was established, co-chaired by Mr. Nelson Manda (Zambia) and Mr. Weinberg, to discuss possible action with regard to consideration of alternatives in the application of BAT.

28. Mr. Manda reported back to plenary that the contact group on alternatives had reached consensus on including alternatives in the guidance as an overarching consideration as well as for specific source categories. Where such specific alternatives were included it should be in the form of an indication of possible measures. The contact group had also agreed to capture the text originally cited in Annex C, part V A and B and Annex F of the Convention as a check list. He said that the contact group had initiated discussion and further work would be undertaken intersessionally and coordinated by the co-chairs. The results of the contact group are contained in annex I to the present report.

C. Development of guidelines and guidance by source categories

29. The Expert Group had before it draft guidelines that had been prepared intersessionally for BAT for different source categories. Some cross-cutting issues were identified for inclusion in the introduction to the guidance: the need to identify alternatives that were available, feasible and economically viable; socio-economic considerations; policy measures; targets for reducing releases; education campaigns, identifying and using available technical guidelines and other relevant information from other international bodies. It was important that alternatives met BAT/BEP requirements. While release limit values had been included in the draft guidelines it was suggested that those values were not in themselves BAT. However it was agreed that the achievable values could be included as reference information within the guidelines, or as an annex to the guidelines, and that they should characterize the techniques used to achieve them. Additionally, examples of values reached or set by countries could be referenced for information. It was also suggested that examples of successful BAT and alternative methods should be included in the guidelines. It was noted that reference should be made to all releases not only emissions to air.

30. Production of pulp using elemental chlorine or chemicals generating elemental chlorine for bleaching: The Expert Group had before it the submission on pulp and paper (UNEP/POPS/EGB.2/INF/5), the preparation of which was coordinated by Ms. Hille Hyttiä (Finland).

31. It was suggested that the scope of the document should be expanded to include non-wood and fibre sources and chemical bleaching with chlorine. Additional information was also requested on release of unintentional POPs during processing and handling, including upstream and downstream stages. It was considered relevant to retain reference to the use of Adsorbable Organic Halogen (AOX) as a potentially cost-effective indicator of performance within the plant, however it was clarified that AOX measurement was not covered directly by the Convention and there was not agreement on its role as a surrogate for unintentional POPs releases. Concerning alternatives, it was noted that pulp and paper feed and processes varied among countries. While information on the furnish at input was important, it was not always possible to know the quality of the input.

32. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

33. Open burning of wastes, including burning of landfill sites: The Expert Group had before it the submission on open burning of waste (UNEP/POPS/EGB.2/INF/6), the preparation of which was coordinated by Mr. Francis Njuguna Kihumba (Kenya). Mr Kihumba introduced the document noting the difficulty in differentiating between BAT and BEP, and that open burning might be a topic for which guidance on BEP should be prioritized. He stressed the importance of the guidance document for the national implementation plans being developed.

34. In the ensuing discussions experts noted that open burning was difficult to define as it covered such disparate areas as household garbage burning, industrial flaring and agricultural or landfill clearing. Each of the sub-categories could be considered separately. It was suggested that examples of successful practices such as public awareness campaigns, banning of open burning and promotion of alternatives should be included in the guidance, and information campaigns promoted. It was recalled that burning of household wastes in some instances took place as no waste management system was in place or planned. Some consideration was given to addressing open burning in a holistic way such that the guidance addressed waste management. It was cautioned that care should be taken to avoid duplication of the work of the Basel Convention. The need for including discussions on energy production, cooking fires and the nature of the materials burned was addressed but not resolved.

35. A contact group was established, co-chaired by Mr. Kihumba and Mr. William F. Carroll (ICCA), to further develop guidance on open burning, taking into account candidates for BAT, segregation of wastes, cultural practice, available alternatives and other international action currently underway.

36. Mr. Carroll reported back to plenary that the contact group had discussed identification of waste composition, barriers to elimination of open burning, waste minimization/diversion strategies, available alternatives, burning techniques, and attributes and improving techniques. Using residential wastes as an example, an exercise to complete a format with those categories was undertaken. The results of the contact group are contained in annex II of the present report. Members of the contact group are to collect additional information on other sectors and to produce a document intersessionally.

37. It was noted that successful strategies for reducing open burning, especially from developing countries, should be included in the guidelines. It was further suggested that while it might not be possible to completely eliminate open burning, reference to policy instruments used globally to manage wastes better or change current practices should be included.

38. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

39. Thermal processes in the metallurgical industry: The Expert Group had before it the submission on secondary copper smelting, iron sintering, secondary zinc smelting, secondary aluminium smelting, secondary lead smelting, primary aluminium production and magnesium production (UNEP/POPS/EGB.2/INF/7), the preparation of which was coordinated by Mr. Patrick Finlay (Canada). Mr. Finlay introduced the document, noting that sources of unintentionally produced POPs for the metallurgical industry were primarily because of process thermal conditions and flue gas conditions, and was also influenced by process chlorine used or chlorine in the feed from plastics, trace oils or other contaminants.

40. Some experts suggested setting up a performance system that allowed for decreased testing in the case where continuous low emission levels were achieved, where there was no change in the plant or for acknowledging improvements based on original values rather than final targets. Some flexibility in that regard might also assist towards lowering the cost of monitoring and testing, which were especially onerous

for developing countries. It was also noted that the means of measuring unintentional POPs with precision did not exist in many developing countries. It was suggested that where no testing was possible due to lack of technology, estimates based on surrogate measures could be used. Additional clarification was necessary on methods for surrogate measures. Developing countries would also benefit from simple mechanisms for testing or a focus on cleaning of the feed as an alternative. In respect of use of inappropriate feed, it was considered that coverage should be given in the document to preparing or cleaning scrap feed. Dirty scrap could be used in more advanced systems. A trend to use of electronic scrap was of concern to some. The nature of the scrap could potentially be changed through product design and fabrication measures. Other alternatives could also be sought for new product design. Attention was drawn to the need to control fugitive emissions as well as process stack emissions. It was recognized that additional data had to be submitted for releases other than air.

41. While having limit values to indicate goals to aim for was important, it was considered unlikely that old plants would reach those limits and that testing was complex both for technological reasons and by nature of diffuse releases. It was however considered worthwhile to indicate those limits so that developing countries in particular could note the challenge they were facing. It was suggested that those values be provided as information and include the type of plant that reached those limits. It was important to develop BAT that was usable by developing countries at different stages of development especially given countries where old plants were a mainstream of national economy. It was also suggested that for new industrial facilities BAT and performance should be clearly identified, recognizing that developing countries required special consideration of socio-economic circumstances.

42. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

43. Smouldering of copper cables: Mr Finlay introduced the document on smouldering of copper cables (UNEP/POPS/EGB.2/INF/12). It was considered that the most appropriate BAT in this case might be simply to ban open burning of cable. The main problem was the smouldering of the outer coating of the copper cable. However it was difficult to control as there were certain quantities of old copper cable exported to developing countries where they were burned to remove the outer coating and the wire reused.

44. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

45. Cement kilns firing hazardous wastes: The Expert Group had before it the submission on cement kilns firing hazardous waste (UNEP/POPS/EGB.2/INF/8), the preparation of which was coordinated by Ms. Steffi Richter (Germany) and Ms. Ute Karl (Germany). Ms. Richter introduced the document noting that for those kilns primary methods to reduce dioxin and furan emissions were usually sufficient to remain below current limit values.

46. There was concern that the document appeared to endorse the use of cement kilns for the recovery and disposal of wastes. It was essential that methods for sorting and identification of the wastes at the input point were included in the guidance. The inclusion of additional data on waste streams was also necessary. It was considered important to include an indication of the types of waste that could be used for firing cement kilns and eventually any pre-treatment methods. Some experts noted that no significant change in dioxin and furan values had been noted when co-firing wastes; the same held true when using alternative fuels at the pre-heater/pre-calciner point or the main burner. Other experts noted that there were also indications to the contrary. It was recalled by some experts that cement kilns should not become a tool for incineration of wastes. At the same time it was noted that in some developing countries it was considered a solution to waste problems. It was agreed that further information on unintentional POPs in cement kiln dust and flue gases was needed.

47. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

48. Waste incinerators/medical waste incineration: The Expert Group had before it the submission on incineration of medical wastes (UNEP/POPS/EGB.2/INF/9), the preparation of which was coordinated by Ms. Susana Eberhartinger (Austria). Ms. Eberhartinger introduced the document noting problems associated with putting secondary measures in place. In small hospital incinerators secondary measures were not considered viable. Many experts said that small hospital incinerators should not be considered BAT as they were poorly designed, operated, equipped or monitored. Appropriate solutions therefore had to be identified.

49. Reference was made to the joint United Nations Development Programme/World Health Organization/Health Care Without Harm project to demonstrate alternatives that avoid dioxin generation from medical waste management. It was noted that the scope of guidance needed to go beyond traditional incinerators and take into account destruction of waste at small and remote clinics or during immunization campaigns. Alternatives existed that included training and waste reduction programmes in addition to methods to treat medical wastes to detoxify them. Rigorous segregation of potentially infectious wastes from other wastes was necessary. It was suggested that specific information should be provided on how different medical wastes and waste streams should be handled and the need to expand the list of alternate techniques for health care wastes. However, care should be taken to avoid duplication of the work of the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal. Attempts could be made to limit single use medical-equipment to decrease wastes when this could be done in a way that avoided occupational or environmental hazards. Provisions were necessary to avoid medical waste where possible but not all waste could be recycled or prevented. It was suggested that medical incinerators should not be located within hospitals and that appropriate siting of the incinerator facility was crucial to limit exposure. However minimum transport time to avoid contamination from acutely toxic wastes was also important. Concern was raised over developing countries' abilities to apply suggested guidelines especially with regard to least developed countries and remote areas. Least costly techniques therefore needed to be elaborated. Non-availability of incineration facilities in Africa was also recognized. It was suggested that hospital wastes could be incinerated in centralized plants along with other hazardous wastes.

50. Fly ash and bottom ash residues also need to be addressed. It was noted that the emerging issues section of the guidance could indicate techniques that become available.

51. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

52. Waste incinerators/municipal and other waste incineration The Expert Group has before it the submission on incineration of municipal waste (UNEP/POPS/EGB.2/INF/10), the preparation of which was coordinated by Mr. Robert Kellam (United States of America). Mr. Kellam introduced the document noting that although landfilling remained the principal means for the disposal of municipal waste, incineration and subsequent landfilling of residues was a common practice in many countries.

53. Mr. David Atkinson (Australia) made a presentation on a programme in Australia entitled "No Waste in 2010" that encouraged the recovery and reuse of wastes. He noted in particular that a mix of pricing signals, regulatory frameworks, industry waste resolution agreements and integrated collection and handling systems were used to overcome barriers to reuse. The holistic approach to waste management as given in the Australian example was commended and inclusion of text in the guidance describing the alternative approaches was recommended.

54. Distinguishing between BAT and BEP was considered important. Special practices might need to be identified for small-scale waste incinerators. It was suggested that additional information on cost could be included in the guidelines. It was noted that reference should be made to total releases rather than emissions that only took into account releases to air. It was suggested that pre-sorting of wastes before treatment

should be encouraged. It was noted that it was difficult to identify the composition of wastes where municipal wastes and hazardous wastes were combined. Before establishing state of the art incinerators, it was necessary to further build capacity and hence the guidelines should recognize the opportunity to transition to BAT. It was suggested that emerging techniques be considered as possible BAT.

55. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

56. Chemical production: The Expert Group had before it the submission on chemical processes (UNEP/POPS/EGB.2/INF/11), the preparation of which was coordinated by Mr. Bill Carroll (International Council of Chemical Associations). Mr. Carroll introduced the document noting that it was a study of processes involving chlorine, and that it was not addressing processes for treatment of wastes as those would be covered in other sections.

57. More information was requested on industry historical practices to prevent unintentional POPs formation and release, and additional information was requested on unintentional POPs in pesticides and other chemical products.

58. The Expert Group took note of the comments made and agreed that a revised draft would be prepared which would include those and any other comments submitted on the topic for receipt by the coordinator through the Secretariat.

59. Other source categories: The Expert Group examined possible action with regard to those source categories that had not been considered. Those source categories and experts identified to prepare draft guidelines for BAT and guidance for BEP for the third session of the Group were as follows: sewage sludge, hazardous waste with municipal wastes and co-incineration (United States of America with Switzerland, United Nations Industrial Development Organization (UNIDO) and the World Chlorine Council), residential combustion sources (Dominican Republic, Fiji and UNIDO), fossil-fuel firing facilities (Australia with Canada, Germany, UNIDO and UNEP), firing installations for wood and biomass (Germany with Switzerland), animal carcasses and crematoria (United Kingdom – to be invited). An information document would be drafted for motor vehicles, textile and leather dyeing and finishing, shredder plants and waste oil refineries (UNEP). Canada offered to provide BAT drafts for secondary steel and primary metal industries.

60. Further to a request made by the Expert Group, Mr. Finlay made a brief presentation on BAT and BEP and suggested that the documents were important for the development of national action plans. Elements in those plans included inventories development, laws and policies evaluations, strategies for obligations, education and training steps, strategies for a five year review, and implementation schedules. He also provided an outline of emission levels that could be used to prioritize action for different source categories and facilities.

IV. PREPARATION FOR THE NEXT SESSION

61. The Expert Group agreed on the following schedule for undertaking intersessional work for preparing the next session:

15 April 2004	Deadline for Expert Group sub-group coordinators to submit to the Secretariat revised or initial draft guidance on source categories and for the Secretariat to prepare drafts on the introductory sections of the overall guidance
16 April 2004	Deadline for the Secretariat to distribute draft guidance for comments outside the Expert Group
16 June 2004	Deadline for submission of comments to the Secretariat

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| 15 July 2004 | Deadline for Expert Group sub-group coordinators to submit revised drafts of guidance (taking into account comments received) to the Secretariat |
| 29 July 2004 | Deadline for the Secretariat to distribute guidance as official pre-session documents for the third session of the Expert Group |
| 11-16 October | Third session of the Expert Group |

62. The Expert Group requested the Secretariat to communicate the Stockholm Convention Focal Points, participants of the seventh session of the Intergovernmental Negotiation Committee and UNEP Official Contact Points information on the status of documents of its second session and to indicate that additional information related to the work of the Expert Group could be provided to the Secretariat by 29 February 2004. The Secretariat was further requested to communicate the schedule for the preparation of documents for the third session of the Expert Group, including the provision of opportunities for comments on the guidance and guidelines being developed.

63. The Expert Group agreed to consult with government and non-governmental experts not members of the Expert Group during the phase of preparation of the documents. However it was considered unnecessary to invite such experts to the third session of the Expert Group. The Group emphasized the importance of regional consultation to the document preparation process and to ensure that experts that are unable to attend the third session of the Expert Group are represented by others from their region.

64. The Expert Group also requested the Secretariat to engage experienced technical editors to assist in harmonizing the content and style of the BAT/BEP documents and website.

65. The third session of the Expert Group was tentatively scheduled from 11 to 16 October 2004. Mr. Shinichi Sakai (Japan) indicated the interest of his government to host that session. The offer made by Japan was welcomed by the Expert Group.

V. OTHER MATTERS

66. No other matters were raised by the Expert Group.

VI. ADOPTION OF THE REPORT

67. The Expert Group adopted its report on the basis of the draft report contained in document UNEP/POPS/EGB.2/L.1, which had been circulated during the session, as amended, and on the understanding that finalization of the report would be entrusted to the Co-chairs working in consultation with the Secretariat.

VII. CLOSURE OF THE SESSION

68. Following the customary exchange of courtesies, the Co-chairs declared the session closed at 2:30 p.m. on Friday, 12 December 2003.

Annex I

REPORT OF THE CONTACT GROUP ON ALTERNATIVES

The Group was chaired by Mr. Nelson Manda (Zambia) and Jack Weinberg (International POPs Elimination Network). Expert Group members from the following countries and institutions participated: Australia, Austria, Dominican Republic, Finland, Germany, Italy, Japan, Serbia and Montenegro, Venezuela, UNIDO, The European Cement Association, IPEN, World Chlorine Council, and World Wide Fund for Nature.

There was a general group discussion on different aspects referring to alternatives. The group agreed that alternatives should be included in the text of the guidelines in an:

- overarching context and also in the guidelines on the specific source categories;
- alternatives should focus on sustainable development taking into account environmental health and safety and socio-economic factors;
- in the consideration of alternatives a balanced approach, based on regional differences should be included;
- there was a need for a checklist in the general guidelines and the specific source categories and proposed a stepwise approach with such a checklist, as given below;
- there was strong feeling from developing countries, that the checklist could assist their authorities in decision making.
- a continuous process for updating and review, based on research on emerging options and the exchange of information among the Parties, should be included.
- Some members expressed the need for a compendium or information clearing house, facilitated or managed by intergovernmental organizations. Other members expressed the concern, that such a compendium would be a challenge to create, to transparency and to update.
- Some members expressed the view, that standards and performances should be included in an annex of the guidelines in each source category.
- It was considered that some alternatives considerations could only be done at a certain strategic or policy level.

Cascade in Consideration of Proposals and Alternatives

1. Whether or not the proposed activity is required [needed] in terms of effective integration of social, economic and environmental considerations as a basis for sustainable development.
2. Identify the [possible][available BEP and BAT] alternatives for processes, techniques or practices.
3. Undertake a [careful] evaluation of both the proposal and the alternatives.

In the evaluation of the proposal and the available alternatives the following criteria should be taken into account:

- a) technical feasibility,
- b) costs, including environmental and health cost,
- c) cost efficiency,
- d) efficacy (infrastructural capacity e.g. availability of well-trained staff etc.),
- e) risk,
- f) availability,
- g) accessibility,
- h) operator friendliness,
- i) positive or negative impacts on society including
 - i. health, including public, environmental and occupational health,
 - ii. agricultural, including aquaculture and forestry,
 - iii. biota (biodiversity),
 - iv. economic aspects,
 - v. movement towards sustainable development; and
 - vi. social costs.

Citing of Annex C, Part V, Section A and B.

Annex II

CONTACT GROUP ON ANNEX C, III (A) “OPEN BURNING OF WASTE”

Category: Open burning of waste including burning of landfill sites

Specific instances of open burning to be considered:

1. Intentional field burning of agricultural waste, also burning to clear land
2. Landfill fires
3. Residential waste (individual or neighbourhood) (example given below)
4. Commercial waste
5. Construction and demolition waste
6. Industrial waste, by type
 - a) Flaring—Include here or in energy generation?
 - i. Gas
 - ii. Coke oven
 - iii. Iron/steel
 - iv. Chemical/petroleum plants
 - b) Oilfield waste
6. Military equipment/munitions
7. Post-disaster open burning of debris
8. Accidental fires
 - a) Forest fires, energy generation, cooking and heating by coal, oil, LPG and gas are not waste burning
 - b) Residential combustion of anything other than waste is considered in Annex C, III(c) “Residential Combustion Sources”
 - c) Hazardous waste destined for incinerators, auto shredder residue, cable waste or waste oil to be refined are considered in Annex C, II(a) and III(k, l, m) respectively.

For each **specific instance** address the following questions:

- a) What is known about the composition of this waste? Does it differ in different regions?
- b) Can this burning be eliminated, if not, what are the barriers?
- c) What can be done to divert waste from this specific instance?
- d) What are the “available alternatives” to open burning this waste?
- e) What are the common techniques for open burning this waste?
- f) What can be done to improve these techniques?
- g) Comments

Answering the questions for open burning of residential wastes

3) Residential Waste

a) Waste Composition

- For developing countries very few waste composition studies done
- Developed country waste composition studied, some variance
- Suspect more compostables in developing countries
- More electronics/appliance waste in developed countries
- May differ urban to rural
- Water composition of waste may differ by region
- May contain hazardous waste
- Note that collection system changes many of these variables

b) Barriers to eliminating Open Burning

<u>Barrier</u>	<u>Remedy</u>
1. Traditional local practice	Education Regulation/enforcement
2. No alternative for waste disposal/scarcity of landfill space	Provide general waste pickup Determine appropriate price strategy Waste diversion (see below) Allocate space for landfill if possible
3. No recycling system in existence	Utilize need to encourage employment/entrepreneurship (add case study as sidebar)
4. Lack of critical mass/low population density	Organize regional centres for small localities
5. Zero cost/very easy	

c) Waste Minimization/Diversion Strategies

- Appropriate waste reduction techniques including economic instruments²
 - Source reduction
 - Compostable/natural packaging
 - Packaging reduction
 - Segregation at source/onsite
 - Compostables
 - Reusables
 - Recyclables
- Sustainable product design

² Basel Technical Guidelines on Wastes Collected from Households

- d) “Available Alternatives” to Open Burning
- Opportunities for collection/aggregation
 - Appropriate landfill
 - See Basel guidelines
 - BAT incineration if available
 - Onsite recycling/reuse
 - Coordinate with other programs if available; e.g., health programs...
 - Goats, chickens--not pigs
- e) Burning Practices—may vary regionally
- Typical options include barrel, pit or pile
 - Barrel may be plain or ventilated
 - Can be small distributed fires or centralized burning
 - In some cases, burning may be augmented by fuel
- f) Improving Techniques
- Improve combustion conditions to minimize unburnt carbon³
 - Supply sufficient air
 - Dry, not wet, waste fuels
 - “Homogeneous” or well-blended fuels
 - Steady burn
 - Minimize smouldering period
 - Segregate dense materials, low surface to mass ratio
 - Eliminate non-combustibles/dangerous materials (spray cans)
 - Limit chlorine and metals
 - Either organic (chlorinated plastics) or inorganic (salt)sources of chlorine
 - Metals, non-combustible “surfaces” such as silica
 - Appropriate site selection
 - Locate away from food production, self and others; remote from water resources
 - Observe reasonable safety rules; have water for extinguishment
 - Proper, non-agricultural use of ashes
- g) Comments
- Aggressive removal of waste including combustible plastics, paper and corrugated may make improved combustion more difficult

³ Presentation made by Brian Gullett to the first session of the Expert Group.