



8 February 2005

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Did you answer the 2004 OzoNews Survey?

(Please see the questions at the bottom of this issue)

Note for Readers: Starting with this issue, we have modified the format of OzoNews to include the full text of the article. We hope that this reformulated service continues to meet your needs. Thank you for your continued interest in our service.

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GLOBAL

1- Evidence suggests that global warming enhances destruction of ozone layer

OTTAWA (CP) - **Two major environmental problems once thought to be unrelated - climate change and ozone depletion - appear to be closely linked in ways that will delay recovery of the ozone layer, scientists say. Growing evidence suggests that global warming favours destruction of ozone in the stratosphere, jeopardizing the achievements of the 1987 Montreal Protocol to protect the ozone layer.**

One signal of the ozone-climate link is the sharp ozone depletion over the Arctic this winter, says Environment Canada scientist Tom McElroy in an interview Thursday. Ozone over the Arctic was about 10 per cent thinner this January than last, and if current cold temperatures in the stratosphere persist Canada could see record ozone depletion this spring, he said. "If it stays cold . . . I think we'll see depletions in some layers that are as big as we've ever seen," said McElroy. The ozone layer is a blanket of gas in the stratosphere, high above the Earth, that screens out most of the sun's harmful ultraviolet radiation. Thinning ozone leads to higher levels of radiation that can damage DNA in living systems. The big risk for humans is skin cancer.

Concern about the issue made headlines after the discovery of the Antarctic ozone hole in the 1980s. Nations responded with the Montreal protocol to curb the production of manmade chemicals that damage the ozone layer. But the ozone layer has not recovered in the way many had hoped, and it is feared this is due to global warming in the lower atmosphere, which paradoxically leads to colder temperatures in the stratosphere.

Ozone depletion occurs rapidly in extreme cold, and the temperatures in the stratosphere now are minus 85 Celsius, said McElroy.

Since there is no sunlight reaching the Arctic stratosphere, the only source of warmth is solar radiation bounced upward from the surface of the Earth, he explained.

"It's something we speculated on as early as 1997, that the increase in greenhouse gases would lead to cooling in upper atmosphere in the polar darkness. We believe what's happening here is consistent with

that concern."

The Montreal protocol was intended to stop the use of ozone-depleting chemicals such as CFCs, and has been successful in doing so. "I think there was a feeling that the ozone issue was closed and we didn't need to worry about it any more," said McElroy. That optimism is now being reconsidered.

"Obviously we're concerned that the effect (of climate change) on ozone in the upper regions could be quite important in terms of delaying the recovery. My own prediction right now is that we're going to see the recovery of the ozone layer in the polar regions delayed by a decade or two." This year's ozone story won't be clear until the sun rises in the Arctic, he added.

"When the sun hits the chemical soup that's left there at the end of the winter, that's when the most destructive reactions involving chlorine take place very rapidly."

Source: The Canadian Press (CP), 4 February 2005, By Dennis Bueckert. [Click here for direct link to the source](#)

NORTH AMERICA

2- Leak Repair Requirements for Appliances Using Substitute Refrigerants; Final Rule **The Environmental Protection Agency (EPA) has amended the rule on mandatory leak repair of appliances to clarify how the requirements of section 608 of the Clean Air Act apply to appliances using substitutes for chlorofluorocarbon (CFC) and hydrochlorofluorocarbon (HCFC) refrigerants.**

This final rule extends the leak repair required practices and the associated reporting and recordkeeping requirements (40 CFR Part 82, Subpart F) to owners and/or operators of comfort cooling, commercial refrigeration, or industrial process refrigeration appliances containing more than 50 pounds of a substitute refrigerant, if the substitute contains a class I or class II ozone-depleting substance (ODS). In addition, this final rule defines leak rate in terms of the percentage of the appliance's full charge that would be lost over a consecutive 12-month period, if the current rate of loss were to continue over that period. EPA now requires calculation of the leak rate every time that refrigerant is added to an appliance.

EPA has not lowered the leak repair trigger rates for appliances containing more than 50 pounds of refrigerant. Nor has the Agency extended the leak repair requirements to owners and/or operators of appliances using refrigerant substitutes that do not contain an ODS.

EPA emphasizes that while this final rule does not extend the leak repair required practices to appliances containing substitutes that do not consist of an ODS (for example, R-134a, R-404A, R-410A), that it remains illegal to knowingly vent such substitutes during the maintenance, service, repair, or disposal of appliances.

The details of this final action may be found in the final rule signed by the Administrator on December 30, 2004. For technical questions on the leak repair amendments. [Download a PDF >>>](#)

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SOUTH ASIA

3- Study finds dangerous ozone depletion over north India

An Indo-US study using satellite and ground data has revealed a "dangerously" declining trend of ozone layer over northern India. Ozone is one of the important atmospheric trace gases that shield people from the harmful ultraviolet radiation from the sun. Man-made chemicals like chlorine destroy it. Depletion of ozone can increase the rate of skin cancer. After the discovery of the "ozone hole", over Antarctica in the 1980s scientists have been measuring the ozone content in different regions of the globe. **The joint study by scientists of the Indian Institute of Technology (Kanpur) and George Mason University in the United States aimed at assessing the trend of total ozone column over the Indian subcontinent using satellite and limited ground observations. "The rate of declining of ozone is found to be higher in recent years over the northern parts of India covering Indo-Gangetic basin compared to other parts of India," Ramesh Singh, one of the authors of the study, told PTI. "This declining trend is a serious threat especially to 400 million people who live in the basin,"** the authors reported in a paper soon to appear in the international Journal of Remote Sensing. They said the factors responsible for the ozone depletion need further investigation. One

source could be the sulphate aerosols and dust particles transported from the Sahara desert during and preceding the summer monsoon.

Source: Hoovers Inc., "Copyright Hoover's, Inc., ALL RIGHTS RESERVED," quoting The Press Trust of India Limited, 1 February 2005 [Click here for direct link to the source >>>](#)

EUROPE

4- Record low temperatures in Arctic ozone layer - first signs of ozone loss

The first signs of ozone loss have now been observed in the Arctic this winter, and large scale losses are expected to occur if the cold conditions persist. Overall temperatures in the ozone layer are the lowest for 50 years having been consistently low for the past two months. Since late November large areas of polar stratospheric clouds (PSCs)- clouds in the ozone layer- have been present over the Arctic region at altitudes around 20km. They are now the largest in the last 20 years, the period when the ozone-depleting compounds have been high.

These conditions could make ozone depletion very likely. The chemical balance in the stratosphere is changed significantly by the presence of these clouds, altering the breakdown products from CFCs (chlorofluorocarbons) so that rapid chemical ozone destruction can occur in the presence of sunlight. If the Arctic stratosphere remains cold during February and March, large ozone loss is expected to take place as sunlight returns to northern latitudes. This could lead to increased levels of ultraviolet radiation in inhabited areas in the northern part of Europe.

Scientists from the EU SCOUT-O3 Integrated Project have been studying the links between stratospheric ozone and climate change in the Arctic since May 2004, with the aim of providing predictions of future ozone and other stratospheric changes as well as the associated UV and climate impact. The project is coordinated at the University of Cambridge's Department of Chemistry and has 59 partner institutions with over 200 scientists involved from 19 countries.

The scientists are following the situation in the Arctic closely using a combination of measurements and atmospheric models. Measurements from the ground-based network of atmospheric observing stations and from satellites are being combined to investigate the ozone loss in the coming weeks.

The extreme conditions are of major concern and scientists will be addressing a number of questions: How large will the ozone loss be? What will be the impact on UV radiation? Are the conditions more favourable for large ozone losses than before? "The meteorological conditions we are now witnessing resemble and even surpass the conditions of the 1999-2000 winter- when the worst ozone loss to date was observed," said Dr. Neil Harris of the European Ozone Research Coordinating Unit, Cambridge, UK, and one of the coordinators of the SCOUT-O3 project.

"However, it is still too early to predict the temperature development in February and March, which are the crucial months for ozone loss in the Arctic. We will watch the development closely from day to day, and will inform the public and our authorities if the situation becomes worrying," concludes Dr. Harris. The cold conditions have worsened during the month of January, and in the last few days the geographical extent of PSCs has reached values which are much larger than ever observed in the Arctic. "Preliminary analysis of data from the international ozonesonde network shows the first signs of depletion at around 20 km altitude. Given the unusual situation we have intensified the measurements. It is not yet clear how the ozone layer will respond to the cold conditions, but we will find it out." said Dr. Markus Rex, from the Alfred Wegener Institute for Polar and Marine Research, who coordinates the Arctic ozone loss studies in SCOUT-O3. **"Overall, measured by the extent and persistence of conditions for PSC formation, the situation is now colder than anything I have seen in the Arctic before. In particular, the large extent of ice clouds gives reason for concern,"** added Dr. Rex.

Note: "SCOUT-O3" is a 5 years project receiving 15 million euros from the European Commission Research DG's Global Change and Ecosystems Programme and a similar amount of associated funding from national agencies. More information on the SCOUT-O3 project can be found at:

<http://www.ozone-sec.ch.cam.ac.uk>

Source: Stratospheric-Climatic Links with Emphasis on the UTLS (SCOUT-O3), Press Release, 28 January 2005 [Click here for direct link to the source >>>](#)

5- New Headquarters for RAL Quality Assurance Association in Luxembourg

The European headquarters of the RAL Quality Assurance Association for the Demanufacture of

Refrigeration Equipment Containing CFCs has a new address. The Association is pleased to announce that with the opening of its new head office in the city of Luxembourg it has taken a further important step in strengthening the European dimension of its quality assurance activities. As a result, quality assurance in fridge recycling will be promoted directly from this key European location. With immediate effect, all the European activities of the RAL Quality Assurance Association will be concentrated in and coordinated by the new office, which is located in the heart of Luxembourg in the Avenue de la Gare. According to Association Secretary, Christoph Becker, it was not only the excellent links to the European road, rail, and air networks, that swayed the decision for Luxembourg, but also the facilities offered by the new offices, which are located in a traditional building on Luxembourg's main business street. The old part of the city, Luxemburg Central Station, and numerous modern shopping arcades can all be reached on foot in a matter of minutes.

The European implementation of the EU WEEE directive has also brought with it a major expansion in RAL's activities. As Becker is in constant contact with nearly all European environmental agencies and ministries, with the most important players in the recycling sector, and with many producers and manufacturers' associations, the new Luxemburg base will clearly become a key element in the Quality Assurance Association's work. 'Journey times will now be shorter – Brussels is now just two hours away on the motorway – and the ideal air links with Luxemburg mean that other European countries are now effectively nearer,' says Becker. **That Luxemburg's national waste management programme for end-of life refrigeration equipment, Aktioun Superfreonskescht, has for years been recycling wastefridges in compliance with RAL's GZ 728 quality assurance scheme was, of course, another important reason for choosing to move the Association's headquarters to Luxemburg.**

Source: RAL Quality Assurance Association for the Demanufacture of Refrigeration Equipment Containing CFCs - Headquarters – B.P. 122829, avenue de la GareL - 1012 Luxembourg
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[Click here for direct link to the source >>>](#)

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DEADLINE FOR RESPONSES MONDAY 14 FEBRUARY 2005

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Thank you for your participation!

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