Minutes of 23rd Annual Meeting of the Canadian National Committee of the CIE

(Held in the Energy and Services Building, Division of Building Research, National Research Council, Ottawa, 8 November 1978)

Present

Members:

Prof. M.G. Bassett (University of Toronto), President
Mr. G.H. Cornish (City of Calgary)
Dr. A.W. Levy (National Research Council), Secretary
Mr. G.F. Dean (Consulting Engineer)
Mr. D.W. Frick (Consulting Engineer)
Mr. R.E. Jennings (Public Works Canada)
Prof. P.K. Kaiser (York University)
Mr. A. Ketvirtis (FENCO Consultants Ltd.)
Mr. S.W. McKnight (Westinghouse, Canada)
Mr. G.E. Mulvey (Mulvey Engineering)
Mr. A.T. Orr (Orcons Co. Ltd.)
Dr. A.R. Robertson (National Research Council)
Dr. C.L. Sanders (National Research Council)
Mr. J.M. West (Transport Canada)
Dr. G. Wyszecki (National Research Council)

Guests:

Prof. D. Moizer (Carleton University)

1. Call to order and approval of agenda

The President opened the meeting at 10:00 a.m. The order of the agenda was approved. The President indicated that apologies for absence had been received from Messrs. Albach, Budde, Clarkson, Davidson, Kluge, Labrecque, Manning, Moreland, Pinkney, Subotich, Trotter.

2. Minutes of 22nd Annual Meeting

The Secretary read the minutes, which were then approved on a motion by Mr. Mulvey, seconded by Prof. Kaiser.

3. Secretary's Report

The Secretary read his report, which is attached to these minutes. Dr. Wyszecki suggested that in order to avoid

confusion in future reports, sub-committees of the CIE, designated SC, should be clearly distinguished from subcommittees of Canadian technical committees. The report was accepted unanimously on a motion by Dr. Robertson and seconded by Mr. Jennings.

Dr. Robertson and Mr. Dean attended the United States National Committee meeting in Columbus, Ohio during October. Mr. Dean attended as a member of the USNC/CIE and Dr. Robertson since he was already in Columbus for an earlier meeting. The President reaffirmed CNC/CIE policy that due to lack of time and finance it would not be convenient for the CNC/CIE to be always formally represented at USNC/CIE annual meetings.

4. CIE Executive Committee

There have been no activities in the past year.

5. Reports from Delegates to CIE Technical Committees

The reports presented and discussed are attached to these minutes.

The reports provided by Mr. Budde TC-2.2 (Detectors) and TC-2.3 (Materials) were presented in his absence by Dr. Robertson.

Mr. Orr, delegate to TC-4.9 (Economics) gave a verbal report.

Dr. Wyszecki reported that Study Group D, Computers in Lighting, no longer exists.

6. NRC Office of Lighting Research

Dr. Wyszecki outlined what progress had been made since the Memorandum on Lighting Research, prepared by the CNC/CIE, was submitted to NRC in November 1977.

After passing through International Relations (NRC) the memorandum was considered by the Tactical Studies Committee (NRC). The Committee requested that Dr. Wyszecki evaluate the memorandum and provide them with an opinion as to the most effective action to take. As a result of this and further discussions, NRC requested Dr. Wyszecki to suggest terms of reference for and form an Office of Lighting Research together with an Advisory Committee. The terms of reference are attached to this report and Dr. Wyszecki stressed that they may be altered or added to as deemed necessary by the Office and Advisory Committee respectively.

The Advisory Committee has been formed and held its first meeting on 27 September 1978 in Ottawa.

One important area for which NRC has no mandate to act is in education. Dr. Wyszecki indicated, however, that with the assistance of Universities, and other teaching and trade bodies NRC could be encouraged to promote and sponsor activity in this area. Dr. Wyszecki felt that the formation of the Office and Advisory Committee was a practical and promising step forward towards the goal of achieving a vigorous and extensive lighting research activity in Canada. The speed with which this goal can be realized depends on the coordinated effort of all those Canadians interested in lighting. The initiation of this process by the CNC/CIE has proved successful.

Mr. Orr felt some effort should be made to stimulate and create the need for Canadian lighting expertise to reduce the present practice of seeking information and technical and professional services outside of Canada.

Prof. Kaiser, Chairman of the Advisory Committee briefly explained the terms of reference of his committee and the progress made at its first meeting. He requested that those not on the Advisory Committee should contact members to present their interests and ideas to the Committee.

In the following discussion it was generally agreed that any seminars organized by the Office of Lighting Research should be presented across the country to avoid centralization in Ontario. Dr. Wyszecki emphasized that the Office and its program of activity was not in competition with complementary organizations such as the IES and IERI.

7. Travel to CIE 19th Session, Kyoto, 1979

Dr. Levy informed the meeting that he was in contact with Mr. Amick of the USNC/CIE regarding U.S. travel plans for the Kyoto Session. Copies of Group Inclusive Tour plans presented at the USNC/CIE Annual Meeting in Columbus by Mr. Amick were distributed. Mr. Frick offered his assistance in obtaining further information from travel agents. It was agreed that by the end of March travel arrangements should be finalized.

Dr. Levy, with the assistance of Mr. Frick, will determine the cheapest travel scheme, i.e., individually or as a group; whether a block hotel booking for the Canadian delegation would be economic, and the preferred dates of departure and return for those intending to travel. At the last count the Canadian delegation, including spouses, totalled 26.

8. Appointments and Re-appointments

It was unanimously agreed to recommend to NRC that Professor P. Manning be re-appointed to the Executive Committee. The motion was moved by Mr. Ketvirtis and seconded by Mr. Dean.

Mr. Frick was appointed delegate to TC-1.1 (Terminology) Proposer: Mr. Cornish; Seconded: Mr. McKnight.

Professor Kaiser was appointed temporary delegate to TC-1.6 (Visual Signalling) until a permanent delegate can be appointed, possibly from the transport field.

Dr. Robertson reported that Mr. Budde wishes to retire as delegate to TC-2.3 (Materials). No immediate replacement could be found and Dr. Wyszecki suggested that Mr. Budde continue on a temporary basis until a new delegate is appointed.

Mr. Chorlton, delegate to TC-3.1 and TC-3.4, has been indisposed for some time due to illness, and more recently an accident. Professor Bassett suggested that she contact Mr. Chorlton and explain that because of the importance of his two technical committees and the imminence of the Kyoto Session, temporary delegates be appointed immediately. In anticipation of Mr. Chorlton's acceptance of this proposal, Dr. Levy was appointed temporary delegate to TC-3.1 (Visual Performance) and Professor Kaiser to TC-3.4 (Discomfort Glare).

The subject of delegates who have not submitted annual reports and/or have remained inactive in their respective technical committees was discussed. Dr. Wyszecki suggested that the Secretary send a letter to all Canadian delegates asking whether they will be attending Kyoto and if not, requesting they propose a delegate to act on their behalf. Furthermore, all delegates should be asked whether, if re-elected after the Kyoto Session, they would be willing to serve for another four years.

The President and Secretary will ensure that Canada is represented in as many of the technical committee meetings in Kyoto as is possible. Names of acting delegates will be forwarded to individual CIE Technical Committee Chairmen by the Secretary.

9. Other Business

In order to assist those seeking permission to travel to Kyoto, the President will provide a CNC/CIE letter upon request explaining the importance of the conference and the need for the individual to attend.

10. Adjournment

There being no further business, the meeting was adjourned at 3:30 p.m.

National Research Council Canada
Conseil national de recherches Canada

Division of Building Research
Division des recherches sur le bâtiment

File Référence M43-18-48

1978-10-11

Secretary's Report to the
Canadian National Committee of the CIE

October 1978

1. The 1978 annual dues of $1625 (Cdn) for Canadian membership of the CIE were paid by the National Research Council in January 1978.

2. The Canada Institute for Scientific and Technical Information, CISTI, is continuing with the arrangement of purchasing CIE publications in bulk from the Central Bureau and passing them to NRC Publications for resale. All revenue received is now credited against a CISTI account and orders to CISTI are made directly by myself. Previous practice was for orders to be made through a Divisional library and revenue credited against general NRC funds. A list of publications bought and sold during the past year is attached. Early in the year the prices of some publications were increased by the CNC to bring them in line with USA prices and current Central Bureau purchasing prices.

3. CIE Bulletins No. 33, 34 and CIE Newsletters 1, 2, 3 and 4 were received from Central Bureau and distributed to members. Brochures and Preliminary Registration forms for the CIE 19th Session in Kyoto, 1979 were sent out to members and consultants on request.

4. Five new CIE publications were announced this year, No. 34, 35, 39, 40 and Supplement No. 2 to CIE Publication No. 15.

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Ottawa, Canada
K1A 0R6

5. The committee on International Scientific and Technological Affiliations, CISTA, requested in January 1978 information on how CNC/CIE members are selected. This information was duly provided and no further communication has been received from CISTA.

6. There were no Canadian proposals for papers to the 1979 Kyoto Session.

7. Suggestions received from members for General Papers at the 1979 Session were passed on to the CIE Action Committee Chairman. CIE Technical Committees for future assignment to Canadian responsibility were also forwarded. In order of priority these were TC-1.4, Vision; TC-1.3, Colorimetry and TC-4.10, Mine Lighting. Dr. Peter Kaiser, York University, is now Chairman of TC-1.4.

8. A sub-committee of TC-4.2 Daylighting, has been formed. Members are A.W. Levy (Chairman), G.F. Dean, R.E. Jennings, P. Manning, D. Moizer, E. Thrun and E. Wotton. J. Allyson Chrysler, who is specializing in lighting at the University of Toronto, has joined SC-3.6, Lighting and Architecture.

Three persons have accepted invitations to join the CNC/CIE as consultants (non-members). They are: Dr. G. Albach, President, Vortek Industries, Vancouver, B.C.; Prof. D. Moizer, School of Architecture, Carleton University, Ottawa; Eric R. Thrun, Eric Thrun Associates Ltd., Vancouver, B.C. G. Davidson has resigned from SC-1.2.

9. During the year I have kept in contact with the USNC and Canadian travel agencies regarding travel arrangements for the Kyoto 1979 Session. Details will be discussed as an agenda item.

10. I would like to thank Dr. Alan Robertson, our previous Secretary, for his generous assistance during my first term as Secretary.

Alan Levy

A.W. Levy,
Secretary CNC/CIE.

AWL:gm
Encl.

National Research Council Canada
Conseil national de recherches Canada

Division of Building Research
Division des recherches sur le bâtiment

File Référence M43-18-48

1978-09-25

TO: Members and Consultants of the Canadian National Committee of CIE

1. The 1978 Annual Meeting of the CNC/CIE will be held in Ottawa on Wednesday, 8 November 1978. The proposed agenda is enclosed. Everyone receiving this notice is invited to attend, but it is most important that you inform me in advance if you will be coming in order that the correct amount of space can be allocated both for the meeting and lunch.

2. All Canadian delegates to CIE Technical Committees or Study Groups should bring their Annual Report to the meeting or send it to me beforehand. I will duplicate all the reports and distribute them after the meeting. If you wish to distribute your particular report at the meeting, then you should bring about 20 copies with you.

3. Please note that this year's meeting is being held in the Energy and Services Building, M-24, Division of Building Research.

Alan Levy

A.W. Levy
Secretary CNC/CIE

AWL:led

78-ES-598

Ottawa, Canada
K1A 0R6

23rd ANNUAL MEETING OF THE CNC/CIE

Date: Wednesday, 8 November, 1978

Time: 10:00 - 16:30

Place: Energy & Services Building (M-24)
Division of Building Research
National Research Council
Montreal Road
Ottawa, Ontario K1A 0R6
Tel: (613) 993-1421

PROPOSED AGENDA

1. Call to order and approval of agenda
2. Minutes of 22nd annual meeting
3. Secretary's Report
4. President's Report
5. Report from CIE Executive Committee
6. Report from delegates to CIE Technical Committees and Study groups.
7. Matters raised by CIE Central Bureau
8. NRC Office of Lighting Research
9. Travel to CIE 19th Session, Kyoto, 1979
10. Appointments and re-appointments
11. Other business.

Purchase and Sale of CIE Publications 1977-78

		Bought	Sold	In stock
2.2	Colors of light signals, 1975	5	3	5*
8	Street lighting and accidents, 1960	0	0	1
9	History of the CIE, 1963	5	0	5*
12.2	International recommendations for the lighting of public thoroughfares, 1977	0	0	15
13.2	Method of measuring and specifying color rendering properties of light sources, 1974	0	1	1
15	Colorimetry, 1971	0	2	38
15/1	Special metamerism index: change of illuminant, 1972	0	1	159
15/2	Recommendations on uniform color spaces - color difference equations - psychometric color terms	30	2	28
16	Daylight, International recommendations for calculation of natural daylight, 1970	0	1	5
17	International Lighting Vocabulary, 1970	9	1	6
18	Principles of light measurements, 1970	0	2	15
19	A unified framework of methods for evaluating visual performance aspects of lighting, 1972	0	6	11
20	Spectral distribution of solar radiation, 1973	0	3	8
22	Standardization of luminance distribution on clear skies, 1972	0	2	4
23	Motorway lighting, 1972	0	19	22
24	Photometry of indoor type luminaires with tubular fluorescent lamps, 1973	0	1	4

*On order

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		Bought	Sold	In stock
25	Procedures for the measurement of luminous flux of discharge lamps and for their calibration as working standards, 1973	0	3	2
26	International recommendations for tunnel lighting, 1973	0	1	5
27	Photometry of luminaires for street lighting, 1973	0	1	4
28	The lighting of sports events for colour TV broadcasting, 1975	10	2	9
29	Guide on interior lighting, 1975	0	7	6
30	Calculation and measurement of luminance and illuminance in road lighting, 1976	20	10	5
31	Glare and uniformity in road lighting installations, 1976	20	6	10
/32B	Lighting in situations requiring special treatment (Roadway lighting), 1977	15	2	12
33A/33B	Depreciation of installations and their maintenance (Roadway lighting), 1977	15	2	13
34	Road lighting lantern and installation data - photometric, classification and performance, 1978	15	4	11
35	Lighting of traffic signs, 1978	20	3	17
36	Proceedings, 18th Session of CIE, London 1975	8	2	4
37	Exterior lighting in the environment, 1976	15	3	11
38	Radiometric and photometric characteristics of materials and their measurement, 1977	20	4	11
39	Surface colours for visual signalling	15	3	12
40	Calculations for interior lighting - Basic Method	30	4	26

CIE TC-1.3 (Colorimetry)

Report to CNC/CIE, November 1978

No meetings of the Committee have been held in the past year.

The Subcommittee on Standard Sources has prepared a fourth draft of its document "A method for assessing the quality of daylight simulators for colorimetry" and the Subcommittee has asked that the methods be studied both theoretically and experimentally.

Dr. C.J. Bartleson, Chairman of the Subcommittee on Chromatic Adaptation, has published in Color Research & Application a paper entitled "Comparison of chromatic-adaptation transforms". This paper results from the work of the Subcommittee and includes a call for assistance in determining which type of transformation agrees best with practical observations.

A Whiteness Task Force has been set up with Dr. A. Brockes as Chairman. The Task Force has the objective of recommending a few representative whiteness formulae for field trials with a view to the ultimate adoption of a single formula.

The final English version of the vocabulary revisions suggested by TC-1.3 has been submitted to TC-1.1 (Terminology) with suggestions as to which terms should be considered "major" and which "minor".

The Subcommittee on Color Differences has produced a document "Guidelines for Coordinated Research on Colour-Difference Evaluation" which has been published in Color Research and Application. The document calls on researchers in the field to coordinate their research in order to work efficiently towards the goal of the subcommittee, namely to assemble comprehensive data on colour-difference evaluation and eventually develop an improved colour-difference formula.

A.R. Robertson
Member, CIE TC-1.3

Department of Psychology

YORK UNIVERSITY

FACULTY OF ARTS

4700 KEELE STREET, DOWNSVIEW, ONTARIO M3J 1P3

Annual Report Technical Committee 1.4, Vision

Two major events in TC 1.4 occurred during the past twelve months. Most importantly the Technical Report, "Light as a true visual quantity: Principles of measurement" on which we have been working since 1971 is complete. The galley proofs have been corrected and returned to Paris. This marks one of the major accomplishments of this committee in many years. In my judgement, the CIE owes a gratitude to Dr. JoAnne Kinney, former chairman TC 1.4. It was through her untiring efforts that this report reached its final conclusion.

The other major event is that Dr. Kinney has resigned as chairman of TC 1.4 and the new chairman is P. K. Kaiser.

The major efforts of this committee will now be directed towards the implementation of recommendations that are implicit in the Technical Report mentioned above. It might be well worth reminding the CNC/CIE that a Technical Report is only a report recommended for study. There are no official recommendations in this report. Indeed, we feel that the data base for many of the recommendations we would like to make by 1983 is inadequate. Therefore, we have publicly requested additional data on brightness matching and mathematical colour vision models. This request has gone out in numerous journals in many other countries represented in the CIE. All member nations of TC 1.4 were given an English version of a journal article requesting these brightness matching data and mathematical colour vision models. The representatives from each country were requested to translate the paper into the language of that country and publish same in the most appropriate journals. Thus far I have been informed that this paper has been published in Perception and Psychophysics, Journal of the Optical Society, Color Research and Application, Vector. Hopefully it has been published in other journals as well.

I believe that an additional task this committee will take is that of attempting to better understand the relationship between subjective brightness assessment and luminance measures. This is a difficult problem which Dr. Kinney first introduced in 1971, but little work has been done by the committee. We have amassed a

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considerable literature and hopefully this can be digested and a more concrete attack on this area can be developed. This will be discussed at some length at the CIE meetings in Kyoto.

TC 1.4 has also interacted with TC 1.1 in relationship to the problems of a vocabulary. We believe that the new definition of light may be as follows. "Light is radiant energy evaluated with respect to its ability to act as an adequate stimulus for the sense of sight of a human being".

The last major official meeting of TC 1.4 was in Troy, New York, in 1977. We had a small meeting between the Canadian, American and German delegates during the ARVO meetings in Sarasota, Florida. The next meeting will be in Kyoto, Japan.

Peter K. Kaiser

TC-1.7 ACTINIC EFFECTS OF OPTICAL RADIATION: ANNUAL REPORT-1978

The activity of the TC-1.7, during the year has been limited mainly to the preparation of the bibliography and vocabulary of major terms, used in Photobiology. These were carried out by Dr. Luke Thorington. Dr. Thorington has sent out Part I of the bibliography(which covers key words from A through O) to members and consultants at the end of August 1978. Part II of the bibliography has not been completed.**

The TC-1.7 meeting took place in September 25-26, 1978, in Lausanne, Switzerland. I was unable to attend the meeting. Due to the mail situation, the report on the meeting has not been received as of toady. When it is received, we should be in a better position to know what task can be undertaken by the subcommittee during the coming year.

I participated in the meeting of the working group of the World Health Organization European Regional Office, held during February 21-25, 1978, in Sofia, Bulgaria. The working group met to discuss the drafts and the comments by reviewers on two health manuals on ultraviolet and infrared radiations (NO. ICP/RCE/801) These manuals were prepared for W.H.O. by Dr. M. Faber of the Finsen Institute, Denmark and C.E. Moss and coworkers of the U.S. National Institute of Occupational Health and Safety. The final version of these manuals should be available at the end of this year or the beginning of next.

The World Health Organization Head Office has prepared the first draft of the document "Environmental Health Criteria for Ultraviolet Radiation" (No.EHE/EHC/78.10). The document is still in the preliminary stage and subject to revision.

The document "Effects of Ultraviolet Radiation on Man", which I prepared for the N.R.C. Associate Committee on Scientific Criteria for Environmental Quality has now been finalised and should be published soon. A copy of the document is attached.

20 October 1978

G.C. DUTT

Delegate

**Part II has been received at the end of October 1978

Annual Report of the Activities of
CIE TC-2.2 (Detectors)

Delegate: W. Budde

TC-2.2 held one meeting in August 1978 at Prague which I attended. Main items of this meeting were the reports of the chairmen of various subcommittees.

Subcommittee on "Absolute Detectors of Optical Radiation":

Dr. Hengstberger reported good progress on the preparation of a Technical Report on this subject. A draft is prepared for the Kyoto Session.

Subcommittee on "Characteristics of Photoelectric Detectors":

The international comparison of spectral responsivity and/or linearity measurements is making progress. It was suggested that a Technical Report on Spectral Responsivity measurements should be prepared.

Subcommittee on "Methods of Specifying the Performance of Radiometers (Photometers)":

A new draft, which had been prepared by Dr. Sanders was discussed. A revision will be made by an editorial committee. This final version will be distributed to TC-2.2 for a vote.

Subcommittee on "Terminology":

English, French and German versions of the agreed terms have been forwarded to CIE TC-1.1 (Terminology).

Various new subjects, such as "the high-frequency characteristics of detectors" or "unusual methods in radiometry and photometry" were discussed, however it was decided to postpone introduction of these subjects into the working program until some of the present projects have been finished.

W. Budde
Member, CIE TC-2.2

Annual Report of the Activities of CIE TC-2.3 (Materials)

Delegate: W. Budde

This TC is very active in a number of Subcommittees on:

1. Gloss: A "Proposed Statement on Gloss Terminology" is under discussion and visual scaling experiments are prepared for establishing correlations between visual assessment and physical measurements.

2. Luminescence: A document "Recommended Practices for the Calibration of Luminescence Spectrophotometers" is being prepared.

3. Polarization: The effects of polarization on transmittance and reflectance measurements are studied and the effects of polarization on photometric measurements.

4. Standards and Techniques: Two Technical Reports on materials for reflectance standards and on methods for the calibration of reflectance standards have been finalized for submission to the Action Committee.

5. Turbid Media: Preparation of two documents on existing methods are under discussion.

6. Retroreflection: The first draft of a three-part report dealing with a) terminology and systems of angular reference; b) photometry and accuracy of calibration; and c) colorimetry were discussed. Some experimental work will be performed prior to the preparation of the next draft.

7. Task Force on "Colorimetric Aspects of Luminescence": A Technical Report "Evaluation of Methods for Predicting the Spectral Radiance Factors of Fluorescent Samples under Standard Illuminants from Measurements of the Samples Made under an Arbitrary Source" was distributed to the TC-2.3 members. After careful consideration by Dr. Sanders and myself, we voted against publication as a Technical Report because this constituted rather a working document of the Subcommittee. A revised version was received and approved for publication.

W. Budde
Member, CIE TC-2.3

CIE TC-3.2 (Colour Rendering)

Report to CNC/CIE, November 1978

A meeting of the Committee was held in England on 6 October 1978. I was not able to attend.

The vocabulary revisions suggested by TC-3.2 have been approved and submitted to TC-1.1 (Terminology). The suggestions include two possible definitions for "visual clarity" and there has been considerable correspondence about what the definition should finally be.

Some errors have been discovered in the tables in CIE Publication 13.2. These are not very serious and will probably be handled by the issue of an errata slip.

The first draft has been produced of a document entitled "Colour rendering assessment of ultraviolet emission in light sources".

The subcommittee on Illumination for Colour Reproduction is becoming more active and held a full day's meeting in London prior to the main committee meeting. There is no Canadian representative on this subcommittee.

A.R. Robertson
Member, CIE TC-3.2

CNC/CIE

ANNUAL REPORT

NOVEMBER 8, 1978

C.I.E. 3.6

CHAIRMAN KEITH GOW - SOUTH AFRICA

This Committee remained active through 1978 with comments being interchanged regularly by correspondence. It is anticipated that the report and recommendations of this Committee will be submitted in final form at Kyoto in 1979.

Miss Allyson Chrysler, a graduate student at University of Toronto, has agreed to serve on the Canadian Committee and her name has been submitted to Dr. Levy.

It appears that the work of this Committee has been substantially completed and that the activity, which has already decreased, will likely require very little input by the end of the Kyoto Conference.

Gerry Inulay

"Interior Lighting"

Technical Committee TC-4.1.

Chairman: D. Fischer
Secretary: A.B.de Graaff

c/o N.V.Philips', Building EM 3, Eindhoven, The Netherlands tel: (040) 755445/757742/757349; telex: 51121 PHTC NL

TC - 4.1. "Interior Lighting"

Minutes of the meeting, held on May 8 and 9, 1978
in Budapest, Hungaria
at the Hungarian Academy of Science.

Present:

Bulgaria	Mr. Dikanarov	
Canada	Mr. Dean	
France	Mr Barthes	
Germany	Mr. Hentschell	
Great Britain	Mr. Wood Robinson	
Hungaria	Messrs. Debreczeni	
	Farago	guest
	Hauser	guest
	Schanda	guest
	Deri Tamas	guest
Netherlands	Mr. Fischer	chairman
	Mr. de Graaff	secretary
Poland	Mr. Bak	(May 9th)
U.S.S.R.	Messrs. Kluev	
	Baklanov	(guest)

Apologies for absence received from:

Czechoslovakia	Mr. Polan
Danmark	Mr. Ovesen
Norway	Mr. Hølmoy
Switserland	Mr. Kessler
U.S.A.	Mr. Dorsey
Yugoslavia	Mr. Paligoric

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The chairman openend the meeting with a wellcome to those present. He expressed his thanks to the host for the organization of this meeting in such an impressive conference room.
Those present agreed with the proposed agenda:

1. minutes of the previous meeting
2. correspondence received
3. emergency lighting guide
4. visual clarity
5. visual performance
6. glare
7. revision of the guide
8. CIE congress 1979
9. monographs
10. any other business

1. Minutes of the previous meeting

The minutes of the previous meeting were unanimously approved with the comment that during discussion of the items of the agenda reference will be made to the various topics in more detail.

2. Correspondence received

2.1 ISO/ TC 159/ SC 5 "Ergonomie de l'environnement physique" an information note (dated October 1977) that an ad hoc group "Eclairage" has been formed which will contact CIE - TC - 1.4 in the near future for collaboration. Since then no further information has been received.
Those present agreed that there is no need for further action at this moment, but as soon as TC - 159 takes the initiative we will be glad to cooperate. Since the secretariat is in France, Mr. Barthes is requested to signal eventual activities of SC 5.

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(SC 5 is one of the 5 subcommittees of TC - 159 "Ergonomics". The other SC's are: SC 1: Guiding Principles; SC 2: Requirements to be met in Standards; SC 3: Antropometry and Biomechanics and SC 4: Signals and Controls. The ad hoc groups of SC 5: "Ergonomics of the physical environment" are: 1:Air quality, 2: Illumination, 3: Noise and 4: Vibration)

2.2 C.I.B. (Conseil International du Bâtiment)

Within the framework of the negociations between the CIE and the CIB about further collaboration we have been approached by the Action Committee to consider cooperation between our committee and the CIB Working Commission W 14: Fire and the CIB Steering Group S66: Industrial Buildings.
Contacts have been made, but from the minutes of the meeting of W 14 it became clear that the subjects dealt with by that Working Commission are not related with any lighting problems. A copy of the draft on emergency lighting has been forwarded nevertheless together with the request to contact TC - 4.1 as soon as it seems appropriate. From the report of the symposium of TS66 followed that this steering group is dealing with building construction only and not with matters on illumination. Minutes of the last meeting of TC - 4.1 have been sent to TS66 so that it will be informed on the topics dealt with be TC - 4.1 with the request to make contact if desired.

2.3 Various letters which will be dealt with in more detail at the appropriate items on the agenda.

AC - Action committee
BOA - Board of Administration?

3. Emergency lighting guide

The draft enclosed to the minutes of the previous meeting was discussed in detail together with the written contribution from the U.S.-member Dorsey resulting in a number of corrections, amendments and changes. Apart from a note to be delivered by Mr. Wood Robinson for the chapter on definitions the draft will be considered as final and will be circulated to all members together with a Letter Ballot allowing each member 2 months to study the report before voting. Then if at least 67% of the members have submitted their vote of which at least 80% positive the draft will be sent to the coordinator in a sufficient number of copies for distribution to the members of the AC and the BOA. The greatest problems to be expected will be to obtain answers from 67% of the members because untill now 40% of the members did not react in any way, 40% are active always and 20% react from time to time.

4. Visual Clarity

The concept of "visual clarity" is subject of discussion in many countries nowadays. The committee TC - 3.2 has requested the opinion of our committee on the interpretation of the word. Various suggestions for a definition have been proposed, which were discussed in full. It was generally felt that visual clarity describes an attribute of an illuminated scene which does not necessarily need to contain coloured objects. In his written contribution the U.S.-member Dorsey suggests to include the study of the validity of the prime color theory, those present however were of the opinion this would lead to confusion. Finally it was decided to inform committee TC - 3.2 that our committee is in favour of the following definition:

Visual Clarity: an attribute of an illuminated scene relating to a combination of several individual factors such as perceived colour, perceived brightness and perceived contrasts of both colour and brightness as well as definition and modelling of forms.

In view of the lack of consensus of opinion on the subject no further recommendations may be expected from the committee in the next edition of the guide.

5. Visual Performance

5,1 Working Group TC - 3.1/ 4.1

De Graaff reported that it has been impossible for the complete sub-group to meet together. After the Florence TC - 4.1 meeting discussions have taken place at Capenhurst (Barthes, Boyce, de Graaff) Karlsruhe (Blackwell, Fischer, Squillace, de Graaff) and Columbus (Blackwell & Blackwell, Crouch, Dorsey, de Graaff). The conclusion of these discussions is that more data will be required either from laboratory experiments or from field investigations on total performance of tasks as a function of the lighting level in order to enable prediction of performance probabilities for various tasks. In that case a task could be compared with those of which the performance probability is known regarding its static perception difficulty (equivalent contrast, determined by size, contrast, informational requirement) dynamic factor (the amount of off-axis viewing, search and scanning involved) and its response factor (relative time required for processing the visual information and/ or for further reaction). The idea being to divide the possible range of values for each of the above three factors into a limited number of ranges, indicated by simple descriptions

(like e.g.: "very difficult-difficult-average-easy" for the static perception difficulty). In that way a limited number of "bushel baskets" will be obtained, each containing tasks that do differ slightly only in their performance probability curves. For each "bushel basket" a set of curves will be given of the performance probability for different age groups, and as many examples as will be available.
In the U.S.A. many tasks are in course of investigation.
Summarizing the approach should be to translate the report of TC 3.1 to language that would be understandable to the consultant and plant manager (by skipping concepts of alpha, gamma, ogive, etc.) and to give them an insight in the order of the percentage at which the workers are operating and could be working.

5.2 Contrast Rendition Factor and Equivalent Reference Illuminance

Closely related to the work of TC - 3.1 are the concepts CRF and ERI (ESI in the U.S.A.). After detailed discussion of the pro's and con's of introducing the concept of ERI as a basis for recommended illuminances it was concluded that the recommended illuminance at the working plane with an appropriate minimum CRF for a chosen standard task is to be preferred. In that case a sufficient illuminance will be guaranteed for more matt tasks than the standard tasks, whereas in case of recommended ERI designs could be made (at least theoretically) where the illuminance for matt tasks would be too low.
Moreover it is expected that the CRF in the near future can simply be measured by means of a luminancemeter and a set of samples of various specularity.
In various countries research in this field is done. At the next Congress in Amsterdam (June 1978) some papers on the subject will be presented , amongst which one based on a thesis (Reitmaier). Fischer, Hentschell and de Graaff will organize an ad hoc meeting during the congress with the authors on this subject.

Moreover a meeting is called together for September 7/ 8 in Paris by the committee TC - 3.1 at which the members of the working group are also invited. Mr. Barthes accepted to organize a pre-session for the afternoon of September 6 for the members of TC - 4.1.

6. Glare

The chairman of TC - 3.4 has informed our chairman that the work on a compromise between the various existing glare systems in his committee might succeed but then will be of interest from a scientific point of view only and of no importance for practical application. For that reason both chairmen propose to give a description of the three main systems: the U.S. VCP system, the European Glare Limiting Curves and the British system which is under development now.
Each country will then be free to choose one of the three systems.
Kluev reported that the glare system which is used in the U.S.S.R. has not reached its final stage, but two different glare coefficients will be used one for interiors with a social function and the other for industrial premises. The latter will be based on disability.
In France as well as in Germany the glare limiting curves in the revised editions have sharp edges at 75°. It was decided for that reason to present the curves with sharp edges in the next edition of the guide. The appendix to the previous minutes with the curves and tables for rounded off edges is cancelled.
Debreczeni noted that he was disappointed that not one single recommended CIE glare system will appear in the next edition of the guide. The chairman explained that this is impossible much to his regret.

7. Revision of the guide

7.1 Chapters to be revised

The chapters to be considered for revision are 1, 2, 3 and 6. The other chapters might require re-editing on minor points. The subjects from the chapters mentioned above have been discussed (items 4, 5 and 6 of the agenda) with the exception of colour rendering.

7.2 Colour rendering

At the previous meeting it was decided that the members should discuss in their country whether the following colour rendering groups would be appropriate in view of the new light sources that were introduced recently: S: R_a greater or equal 90; 1: R_a greater or equal 80; 2: R_a greater or equal 65 and 3: R_a smaller than 65.

In Britain the colour rendering groups from the guide with borderline values of 70 and 85 have found general acceptance and there is a reluctancy to introduce different values. In Germany the same borderline values are used and additionally a value of 40 at the lower end. Schanda (member of TC - 3.2) commented that the use of values below 50 for the general colour rendering index is meaningless and hence strongly recommended not to introduce a value of 40 as a borderline. The chairman explained that in certain industrial areas the use of monochromatic sources like low pressure sodium lamps should not be allowed, whereas sources like colour corrected mercury could be recommended, because the latter might enable sufficient colour contrast perception in the task. Some members commented that high pressure sodium lamps are allowed in their country in certain industrial areas like steel industry although the general colour rendering index has a value of about 20. It was suggested to introduce the individual colour rendering index for the human skin R_{13} and to describe group 3 as sources having either an R_a greater than 40 or an R_{13} greater than 40. Objections raised were that this would compli-

cate the system risking a less easy acceptance and it would put too much emphasis upon the importance of the human complexion whereas in many dirty conditions the workers might not care about their complexion if only there is sufficient contrast in the task either in luminance or colour. Another suggestion to make a special note: "high pressure sodium lamps may be used in certain industrial areas" has the disadvantage of not being universal and thus could result in more special notes when new lightsources enter the market. Furthermore it was suggested to bring colour corrected mercury lamps and high pressure sodium lamps in the same category and choose the borderline so that the colour corrected mercury de luxe lamps belong to group 3. This would mean that the lowest border value should be increased from 40 to 50.

Schanda gave the warning not to be too strict on the choice of the exact values of the border values of the groups when the groups are meant to contain certain categories of sources because the committee TC - 3.2 is actually working on a revision of the colour rendering index in such a way that not only the sum of squares of the eight indices will determine the general colour rendering index but that also the maximum divergence of the single indices will have an influence. It is expected that the new formulae will be presented next year. The consequence will be that the R_a value will increase for some sources and decrease for others.

The discussion on the subject was concluded with the decision to request TC - 3.2 to inform us about the new colour rendering indices as soon as possible and to discuss the problems mentioned above regarding the lower values (especially in view of the application of high pressure sodium lamps) at their next meeting September this year.

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7.3 New edition

It was decided that a draft for the second edition should be available for general discussion at the Kyoto Session, which means that a first draft for discussion within the committee should be available at the next meeting at the beginning of next year. The final second edition then can be expected at the CIE Session 1983 in Poland. The chairman promised to prepare the first draft and to circulate it before Christmas this year.

The Bureau Central will be informed about this schedule. At the moment 1200 copies are in stock, the yearly sale is about 80 copies so that about 800 copies will be superfluous. With regard to the new draft it was suggested to rephrase the paragraphs dealing with non-uniformity in space and depreciation in time more clearly and unambiguously.

8. CIE Session 1979

At the session two afternoon sessions of TC - 4.1 are planned and one joined meeting of the committees TC - 3.1; TC - 3.2; TC - 3.4; TC - 4.1.

It is intended that the centrepiece of a CIE Session will be discussion on the technical business of the various technical committees with a wider public present and participating. The consequence of this is that fewer papers will be accepted than hitherto.
Thus the TC - chairman's Report is becoming more important. The main purpose of it is to report the activities of the TC during the quadrennium prior to the CIE Session as well as review world-wide progress and new developments in the TC's

field of endeavour. It describes the work planned for the following quadrennium. A selected bibliography of the relevant literature published during the quadrennium is an important part of the report. In view of the above guidelines it was decided that the Chairman's Report of TC - 4.1 should review the activities of the committee drawing special attention to the information from and cooperation with other committees in order to enable the committee to prepare international guides on well established principles. For the preparation of a review of progress a questionnaire will be sent to all members with a copy to the National Committees. Although presentation of colour slides of nice interior lighting installations may be spectacular it was nevertheless decided to put more emphasis on newer developments of principles in lighting applications in interiors. Of course it may be useful to illustrate these developments by means of slides instead of a lengthy description with words.
The chairman will prepare a first outline of his report for discussion at the next meeting.

9. Monographs

9.1 General

With the drafts for four monographs available, the approach of the various authors can be compared. It was decided that the general set-up should have the same image so that each monograph will be recognizable as one of the CIE series.

a. Illustrations

The target group ultimately consists of architects, consultants, designers, lighting engineers, decision makers etc., either directly or via versions adapted to local circumstances by National Committees. In view of this target group it will be useful to illustrate the monographs by means of simple sketches explaining the principles laid down in the text. Examples are given in the

monographs of office- school- and museumlighting. The style of these illustrations should preferably be the same throughout the series of monographs. Requested to do so, the secretary accepted to take care of the elaboration of the illustrations when the various authors provide him with sketches clearly indicating the principle to be illustrated.

b. Preface and Introduction

The preface of each monograph can be the same, the introduction can be similar in set-up. The secretary accepted to combine the various elements from the four introductions to one text along the lines as discussed and to circulate the same to the various authors with a copy to all members.

c. Appendices

In order to make the monographs sufficiently self-contained and to harmonize references in the texts to quality criteria as well as to quality characteristics of categories of products it was decided to use appendices. These should be the same in the way of presentation for the whole series of monographs. The secretary accepted to prepare complete appendices which can be adapted to the requirements of each specific monograph by simply deleting the information which is not relevant for the application field concerned.

The subjects to be dealt with in the appendices are:

1. recommended illuminance, initial-average-minimum, scale used; 2. glare limitation groups; 3. colour rendering groups, colour appearance groups; 4. maintenance and cost analysis; 5. sources; 6. luminaire groups

d. Name

After discussion it was decided to use the name Application Guide for each of the monographs followed by the name of the application field, e.g. "Application Guide Industrial Lighting".

e. References

In the introduction reference will be made to the Guide of Interior Lighting as the main source of reference. In Application Guides reference to other literature should be restricted. In case an author wants to refer to literature which is not strictly limited to or very specific for the application field concerned he is requested to give the reference for inclusion in the second edition of the Guide for Interior Lighting. Remaining references in an Application Guide should be made by means of a foot-note at the page concerned.

9.2 Application Guide Schoollighting

This guide must be re-edited along the lines as stated above. Moreover some parts of chapter 3 require a clearer explanation, in chapter 4 chalk-boards on the side wall should be mentioned as well as the modern types of white chalk-board. In the same chapter reference should be made to chapter 7 of the Guide on Interior Lighting and application of double glazing and reflecting glass should be mentioned. Some information on the electrical installation should be added especially in connection with possibility of flicker, with switching possibilities and safety requirements.
Debreczeni and Hauser will send a proposal for a text on electrical installations to de Graaff. It should be mentioned that the requirements for Kindergarten-type schools are different.

In chapter 5 the use of day-light projectors and their consequence for the illuminances required should be mentioned. Wood Robinson will propose a better title for chapter 7.2. In chapter 13.2 more specific requirements on daylighting should be incorporated. In chapter 14 special considerations for handicapped should be added. A new draft will be made and will be circulated before X-mas 1978.

9.3 Application Guide Office Lighting

This guide will have to be re-edited to conform to the agreements described sub. 9.1. Moreover the use of scopes in offices apart from those in special computer rooms will be dealt with. Table 1 will be rearranged and an explanation will be given why three values have been given for the last groups but that the values of the first groups are related to those chosen for the last groups. The authors of this guide and of the application guide schoollighting should take counsel together to produce a similar text on the directional quality of the lighting in open spaces. The other comments made mainly concerned smaller details.
A new draft will be made and circulated before the end of this year.

9.4 Application Guide Industrial Lighting

This guide will also be re-edited in view of the decisions mentioned sub. 9.1. The main problem for this application guide is to decide how far to go into detail. For very detailed description more information should be required, which however is difficult to obtain.
Barthes suggested to contact the ISO committee on Ergonomics (see 2.1) to inquire what the kind of information is that they require and to what extend it is necessary to enter into details. After discussion of possible benefits to be ex-

pected from this approach Barthes offered to make the contact and in case of a positive reaction to draft an introduction on ergonomics to be included in this application guide. Some members expressed their pessimism on the outcome of these discussions, fearing the ergonometrists will rebound the ball.
Besides Hentschell will make a questionnaire to be sent to all members with a rather detailed split-up of the industrial activities. The members then are requested to give the values of illuminance, the glare limitation class, the colour rendering group, the colour appearance group and eventually special notes, for those activities that are considered by each member and his colleagues in his country to be worthwhile to be mentioned in the list. Activities which are not given but which are considered of sufficient importance to be specified can also be added. Hentschell then will together with the secretary make a final proposal, which will also include a possible tool for analysis of tasks that have not been mentioned specifically.
The time when the next draft will be ready partly depends on the time that the completed questionnaires are received. The main text and the framework for the tables however will be circulated before the end of this year.

9.5 Application Guide Museum Lighting

This guide contains very much information which is specific for conservation technology. The committee TC - 4.1 is not sufficiently informed about these matters that it could judge whether the information contained on these subjects is relevant and sufficiently complete. For that reason it should be investigated whether the responsibility for that part can be taken by the International Museum Committee, for instance in the way that it will be a joined publication. When it would appear that this will cause much delay another possibility

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will be to ask the British experts which have contributed so much to the draft to accept official nomination as consultants for this publication. The secretary was charged to contact the International body.
The guide should contain a clear definition of the damage factor and a table of values for existing sources. Debreczeni accepted to send the required information to Wood Robinson with a copy to the secretary.

9.6 Application Guide Home Lighting

At the meeting Bak presented 2 copies of the first draft to the secretary with the request to make more copies and to circulate it to all members, so that comments on the contents can already be send to Bak which will enable him to prepare a second draft for discussion at the next meeting.

10. Any other business

10.1 Terminology

The list of terms proposed for inclusion in the international lighting vocabulary has not been changed. It has been submitted in the English language. The translations in German and French must be submitted to TC - 1.1. before June 30 this year. Kokoschka, TC - 1.1 member for Germany, has been requested to make the translation into the German language, Barthes will do the same for the French language.

10.2 Next meeting

The invitation of Barthes to have the next meeting in Paris was gladly accepted. As dates for the meeting were fixed 23rd and 24th of January 1979. Barthes will organize a tour for visiting interesting lighting installations for the morning of January 25.

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Items for the agenda will be:

TC-chairman's Report;
Draft second edition of the guide for interior lighting;
Discussion of the various drafts of application guides.

10.3 Closing of the meeting

No other subject being laid on the table, the chairman closed the meeting expressing his satisfaction for the fruitful discussions and the progress made during these days.

A.B. de Graaff
secretary

AG/DH/L. 391
25-05-1978

TC-4.2 Daylighting

Delegate: A.W. Levy
Subcommittee: G.F. Dean
R.E. Jennings
P. Manning
D. Moizer
E. Thrun
E. Wotton

A meeting of the committee was held in June 1978 in Amsterdam but was not attended by the Canadian delegate. A number of draft publications prepared by committee members were discussed. It was decided to abandon the original idea of a daylight guide and instead publish some chapters as independent technical reports. The reports cover the following areas:

The availability of daylight

Principles of good daylighting design practice

A combined report on noise, thermal, rain and fire aspects of windows

Architectural aspects

Individuals and groups of committee members have been assigned to the various chapters of these reports. Drafts are to be circulated to the Chairman and committee members no later than 31 October 1978.

The Chairman stressed the importance of sending publications and information on research projects to him and active members of the committee.

Mr. Lofberg, Sweden, has accepted to become secretary of the committee.

. . . 2

In July 1978 our subcommittee was formed. This news and information on the activity in daylighting studies in Canada was sent to the Chairman. A progress report, as requested, was sent in early October.

The increased interest in daylighting in relation to lighting energy conservation would indicate that our subcommittee will become very active in the coming months. We will soon explore our potential involvement in building design for passive solar heating.

A.W. Levy.

October 1978

TC-4.4 Sports Lighting

November 8,1978, Ottawa

Delegate: S.W. McKnight

Subcommittee: C.J.Courtney
G.F.Dean T.Nutt
D.S.Gordon A.Lafontaine

The seventh meeting of TC-4.4 in the series was held on May 24,1978 in Vienna to further prepare drafts on sports lighting. One of the main items was the rewording of the 4th draft of "Lighting for Swimming", and the final editing of several other documents on Sports Lighting.

The following documents were prepared and copies are available:-

1. The Lighting of Ice Sports consists of 16 pages of data including ice hockey, curling and speed skating ovals with two layouts for each type of sport.

2. Lighting for Tennis consists of 20 pages of data including indoor and outdoor tennis courts (not paddle tennis reported last year). Layouts are shown for good lighting performed and good quality television pictures are possible with these types of installations.

The TC-4-4 Sports Committee is still chaired by Mr. A. Wald of Germany and these reports have been approved by the majority of the committee on which most member countries of the CIE are represented. These reports are recommended for study and application and not considered as mandatory.

Copies of these reports have been sent to my subcommittee members and other copies are available on request.

REPORT - 1978

TC-4.6 Committee - Street Lighting

The Annual Meeting of the CIE TC-4.6 Committee was held on June 20 to June 23, 1978 in Grenoble, France. The TC-4.6 Committee is operating through seven sub-committees, each charged to investigate a specific problem or area and report to the main committee annually.

Prior to the main committee meeting a series of discussions was held by the working groups and sub-committees. Following is a short summary of their activities.

1. SC-1 Performance (Dr. Schreuder)

A lengthy discussion was held regarding possible conflict between CIE Document No. 12/2 (Roadway Lighting Recommendations) and Document No. 19/2 (TC-3.1, Visual Performance - Dr. Blackwell, Chairman).

The present CIE roadway lighting practice is based on luminance, uniformity and glare control. The Document No. 19/2 describes the method based on the assessment of Visibility Level (VL). Both methods were presented to this committee by Dr. Blackwell (VL) and A. Ketvirtis (CIE System) at the Atlanta Spring Meeting in 1977 respectively.

After some lengthy discussion the chairman of SC-1 (Dr. Schreuder) and Dr. Fisher (Chairman of TC-4.6) concluded that Document No. 19/2, as far as roadway lighting practice is concerned, is based on artificially postulated premises and it is only interesting from an academic point of view, and as such it would be difficult to apply to the lighting system design in practice.

During the discussion a question was raised whether the road capacity should be considered as a significant factor in the justification of highway illumination. At present the most forceful reason for providing roadway lighting is safety. With the continuous decrease in the construction of new roads, and at the same time the increase in the number of automobiles at the rate of 7-8% annually, a better utilization of present facilities should be investigated. Some studies with respect to the optimization of traffic flow are being carried out

(Ontario) by electronically monitoring the traffic density and controlling the feed onto the main routes from collector roads.

There is a strong feeling (Fisher, Schreuder, Ketvirtis) that lighting of major routes in conjunction with the monitoring would contribute to the increase in road capacity, thus, it would provide another strong factor (in addition to safety) for lighting of existing highways.

2. SC-2 Accidents (Dr. A. Fisher)

A document is being prepared by this group on "Road Lighting and Accidents". A draft of this document will be available to the TC-4.6 members shortly.

3. SC-3 Tunnels (Dr. K. Narisada)

Most of the discussion regarding tunnel illumination was related to the disagreement between PIARC and CIE views concerning the luminance levels in the threshold zone.

CIE Publication No. 26 (1973) paragraph 2.2 states that the ratio L_1/L_2 should not exceed 10. Assuming that L_1 = 8000 cd/m^2 the L_2 value would have to be 800 cd/m^2.

The PIARC position is stated in the Proceedings of the XVth Congress - Mexico 1975. This document recommends threshold illumination as follows:

Mountain tunnels	-	500 to 1500 lux
Urban tunnels	-	1500 to 3000 lux

SC-3 is presently working on a new terminology. One of the significant factors in the new format is the introduction of adaptation luminance (L_a) which is believed to be significantly lower than L_1. If the method of calculation of L_a can be established (Dr. Adrian) perhaps the disagreement between PIARC (and many other organizations) and CIE can be resolved.

4. SC-4 Surfaces (Dr. Kebschull)

A document is being prepared jointly with CIE and PIARC regarding the methods of classification and measurements of road surfaces. A preliminary draft will be mailed to the members of TC-4.6 shortly.

5. SC-4 Wet Conditions (Dr. Sorensen)

An elaborate document entitled "Lighting for Wet Conditions" has been prepared by this working group and has already been distributed to members of the TC-4.6 Committee. It was decided that the final edition will be published as a formal CIE Report.

6. SC-6 Installation Design and Economics (Dr. Marsden)

A significant volume of information concerning the roadway lighting design and economics has been assembled, but due to the differences in conditions in various countries, difficulties were encountered with the summarizing of data.

A one-day symposium on "Road Lighting Design - Present and Future" will be held on February 14, 1979 in Manchester, England. At the same time TC-4.6 will hold their annual meeting.

A. Ketvirtis

TC-4.10. Mine Lighting: Annual Report 1978

1. A meeting of TC-4.10 was held October 2-3 in Poland. The Canadian delegate was unable to attend and is awaiting the report from the meeting.

2. CSA has formed a committee on mine lighting. Don Trotter will serve on this new committee.

3. Don Trotter is organizing a one week seminar/workshop on mine lighting at the University of Nevada, Reno, May 21-25, 1979. There will be a number of invited speakers.

D. Trotter,
Delegate.

Report received by telephone Nov 3, 1978
AWL

NRC OFFICE OF LIGHTING RESEARCH

OFFICE OF LIGHTING RESEARCH

Terms of Reference

- to coordinate NRC's research in the field of light and lighting by promoting better communication and exchange of information aimed at avoiding duplication of work done in different Divisions.

- to serve as an interface between NRC's lighting research groups and outside organizations such as other government departments, industry, universities, as well as national and international standardizing bodies concerned with lighting.

- to prepare, with the assistance of an Advisory Committee on Lighting Research, and to recommend for the approval of the Vice-President (Laboratories), goals and objectives and priorities for NRC's Program of Lighting Research.

Administration

The office of Lighting Research is to be headed by a Program Coordinator (Dr. G. Wyszecki), supported by an Executive Secretary (Dr. A.W. Levy).

A major part of the coordination effort by the Office of Lighting Research will go into the organization and administration of regular seminars dealing with subjects on lighting and the preparation of a detailed survey of current research projects and facilities in lighting research across Canada. Any funding requirements are to be the responsibility of the Divisions involved and to be found from within existing resources.

ADVISORY COMMITTEE ON LIGHTING RESEARCH

Terms of Reference

The Advisory Committee on Lighting Research, composed of members appointed by the President for a term of not more than three years, reports to the Vice-President (Laboratories). Its terms of reference are as follows:

1. To provide advice concerning the formulation of goals and objectives for NRC's activities in lighting research.

2. To provide advice concerning the establishment of priorities for the allocation of resources to NRC research projects in lighting.

3. To act as a source of expertise to assist the NRC Office of Lighting Research in its task of coordinating NRC's research in the field of light and lighting.

4. To provide a mechanism through which the lighting community in Canada can bring to the attention of NRC urgent needs in the field of lighting research.

Modus Operandi and Budget

- The Advisory Committee on Lighting Research will conduct its work by correspondence and hold two meetings annually, at least one of which should be on the premises of the NRC laboratories.

- At the end of each calendar year, the chairman submits, on behalf of the Committee, a report to the Vice-President (Laboratories) summarizing the results of its deliberations and making recommendations in accordance with its Terms of Reference.

- At the end of the third calendar year the Advisory Committee is required to review and assess its progress, determine whether it should continue, and make its recommendations to the Vice-President (Laboratories).

- All budget requirements are estimated to be for the travel expenses of the non-government committee members.