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Descripton Notes	Also included is item is letter to Alvin L. Young from James F Striegel, March 6, 1981.	

JRB Associates, Inc. 8400 Westpark Drive, McLean, Virginia 22102 (703) 821-4600
A Subsidiary of Science Applications, Inc.

March 6, 1981

MAJ Alvin Young
520A Magnolia
Maxwell AFB, Alabama 36113

Reference: VA Contract Number V101(93)P-823
JRB Project Number 2-816-03-744-00

Dear Al:

As I promised at our meeting yesterday, I am enclosing a copy of the report we provided to EPA following our review of the direct testimony and supporting documentation of Drs. Reggiani, Tuchmann-Duplessis, Crow, and Rowe at the 2,4,5-T/Silvex Cancellation Hearing. All documents listed in the six bibliographies should be available from EPA. Please note that some of these documents are confidential to the Italian Government.

We have some of the documents listed, particularly those in appendix 4. If you see anything of interest to you, you might want to try our files first.

If you have any questions or require further clarification, please call me on (703) 821-4644.

Sincerely,

JRB ASSOCIATES

James F. Striegel, Ph.D.
Project Manager

JFS:jb

Enclosure

Al Young: fyi

JAMES F. STRIEGEL, Ph.D.

3/6/81

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EPA 68-01-6280: 01

JRB 2-800-03-672-01

FINAL REPORT

Work Assignment No. 1

2,4,5-T Seveso Testimony Review

Provided to:

Ms. Jane Keller, M.P.H., Project Officer
Epidemiology Branch, OTS
U.S. Environmental Protection Agency

By:

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 14, 1980

Work Assignment No. 1

2,4,5-T Seveso Testimony Review

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EPA 68-01-6280

JRB 2-800-03-672-01

FINAL REPORT

Work Assignment No. 1:

2,4,5-T Seveso Testimony Review

As the first task under contract number 68-01-6280, JRB was requested to assist the Office of General Counsel (OGC) in their preparation for the cross-examination of four witnesses testifying on behalf of the Dow Chemical Company, et al., during the cancellation hearing for major uses of the phenoxy acid herbicide, 2,4,5-T. A contaminant produced during the manufacture of 2,4,5-T is 2,4,7,8-tetrachlorodibenzo-p-dioxin (TCDD), one of the most highly toxic substances known.

Part of the case concerns the events that occurred at Seveso, Italy, after the ICMESA chemical plant (owned and operated by Hoffman-LaRoche) exploded in July 1976, resulting in a release of chemicals--including TCDD--over a densely populated area. Information regarding this event was provided in the direct testimony and supporting documentation of four witnesses for the Dow Chemical Company,et al. The majority of this information was covered by a confidentiality request by the Italian Governmentand was in Italian. JRB's assignment was to provide a qualified epidemiologist to review the direct testimony and supporting documentation of the four witnesses, and to provide expert advice regarding EPA's cross-examinations.

Nature of Assignment

The four witnesses testifying on behalf of Dow Chemical Company, et al., included:

(1) Dr. Giuseppe Reggiani: Member of the Research Board of Hoffman-LaRoche. As head of the Clinical Research Department at the time of the Seveso incident, Dr. Reggiani was sent to Seveso to determine the extent of danger and recommend to the Italian authorities any protective and preventive measures to be taken on behalf of the public.

(2)	Dr. H. Tuchmann-Duplessis:	Professor of histology and embryology at the University of Paris, Director of the Basic Research Foundation of the Ministry of National Education, and head of the Department of Medical Biologists.
(3)	Dr. V. K. Rowe:	Consultant to the Vice President for Health and Environmental Sciences at Dow Chemical Company, formerly Director of Toxicological Affairs for Dow Health and Environmental Sciences.
(4)	Dr. Kenneth D. Crow:	Investigator for the English Medical Advisory Service, and recognized authority regarding chloracne. In 1976, Dr. Crow was requested by the Italian Government to provide advice about the possible toxicological effects of TCDD contamination following the incident at Seveso.

Mr. John O'Donnell of OGC was identified on the agency's Task Officer for this work assignment. Support was provided to the following members of designated OGC staff for their cross-examinations of witnesses:

Attorney	Witness to be Cross-Examined
Mr. John O'Donnell	Dr. Giuseppe Reggiani
Mr. Carl Bayer	Dr. H. Tuchmann-Duplessis
Mr. Andrew Gordon	Dr. V. K. Rowe
Dr. Richard Bozof	Dr. Kenneth Dr. Crow

Qualifications of JRB Specific to This Task Assignment

Under a separate contract with EPA, JRB is providing support for the determination of health effects and risks of exposure for a large variety of chemicals being manufactured in this country. Additionally, JRB has conducted a special investigation for EPA of the industrial production and disposal of chlorinated dioxins, a list of which is given in Table A.

1-chloro
2-chloro
1,2-dichloro
1,3-dichloro
1,4-dichloro
1,6-dichloro
1,7-dichloro
1,8-dichloro
1,9-dichloro
2,3-dichloro
2,7-dichloro
2,8-dichloro
1,2,3-trichloro
1,2,4-trichloro
1,2,6-trichloro
1,2,7-trichloro
1,2,8-trichloro
1,2,9-trichloro
1,3,6-trichloro
1,3,7-trichloro
1,3,8-trichloro
1,3,9-trichloro
1,4,6-trichloro
1,4,7-trichloro
2,3,6-trichloro
2,3,7-trichloro

1,2,3,4-tetrachloro
1,2,3,6-tetrachloro
1,2,3,7-tetrachloro
1,2,3,8-tetrachloro
1,2,3,9-tetrachloro
1,2,4,6-tetrachloro
1,2,4,7-tetrachloro
1,2,4,8-tetrachloro
1,2,4,9-tetrachloro
1,2,6,7-tetrachloro
1,2,6,8-tetrachloro
1,2,6,9-tetrachloro
1,2,7,8-tetrachloro
1,2,7,9-tetrachloro
1,2,8,9-tetrachloro
1,3,6,8-tetrachloro
1,3,6,9-tetrachloro
1,3,7,8-tetrachloro
1,3,7,9-tetrachloro
1,4,6,9-tetrachloro
1,4,7,8-tetrachloro
2,3,7,8-tetrachloro

1,2,3,4,6-pentachloro
1,2,3,4,7-pentachloro
1,2,3,6,7-pentachloro
1,2,3,6,8-pentachloro
1,2,3,6,9-pentachloro
1,2,3,7,8-pentachloro
1,2,3,7,9-pentachloro
1,2,3,8,9-pentachloro
1,2,4,6,7-pentachloro
1,2,4,6,8-pentachloro
1,2,4,6,9-pentachloro
1,2,4,6,9-pentachloro
1,2,4,7,9-pentachloro
1,2,4,8,9-pentachloro
1,2,3,4,6,7-hexachloro
1,2,3,4,6,8-hexachloro
1,2,3,4,6,9-hexachloro
1,2,3,4,7,8-hexachloro
1,2,3,6,7,8-hexachloro
1,2,3,6,7,9-hexachloro
1,2,3,6,8,9-hexachloro
1,2,3,7,8,9-hexachloro
1,2,4,6,7,9-hexachloro
1,2,4,6,8,9-hexachloro
1,2,3,4,6,7,8-heptachloro
1,2,3,4,6,7,9-heptachloro
Octachloro

TABLE A: CHLORINATED DIOXINS RESEARCHED BY JRB

Due to the technical nature of the testimonies provided by these witnesses, and the short time period permitted for response, a dedicated staff of four persons was selected for this task. These include:

Dr. Jim Striegel:	Task Manager
Dr. Leslie Eninton:	Senior Scientist
Ms. Alice Hastings:	Document Control Specialist and Research Analyst
Ms. Marie Murray:	Research Analyst

In addition, JRB obtained the services of the Literature Research Company to provide English summaries, abstracts, and translations of Italian language documents provided by the four witnesses for Dow.

Schedule of Work

October 29: JRB was notified by the Project Officer that this task would be initiated and would involve rapid response support to the Office of General Council. We immediately contacted the contract specialist and the designated Task Officer, Mr. O'Donnell, to notify them of our readiness and to establish the initial schedule.

October 31: Dr. Striegel met with Mr. O'Donnell and was briefed on the requirements of the assignment. Written testimony of the four witnesses and supporting documentation was received from OGC. The documentation consisted of more than 130 items and reports compiled from Italian Government files concerning the incident at Seveso, and subsequent investigations and public health programs. Almost all of this documentation was in Italian and all of it was covered by an Italian Government request for confidentiality. A list of these documents is provided on appendix 1. In addition, another 187 articles from technical journals and the popular press were provided, many of which were written in Italian, German, and French. A list of these articles is provided as appendix 2.

November 3: The JRB task team was assembled and began work on the testimony and document files. Articles specifically referenced in the testimony of the witnesses were marked. Any references cited by the witnesses, but not included in the supporting documentations, were identified. These missing references are listed in appendix 3.

November 4: Review of the direct testimony of Drs. Reggiani and Tuchmann-Duplessis and documentation continued. The confidential material from Italian Government files was reviewed to select specific reports to submit to the translator for abstracting. Dr. Euinton independently reviewed the English translation of the bibliography of the Italian Government files (shown in appendix 1), and selected documents for the translator to abstract. Documents sent to the Literature Research Company for summarization and abstracting are listed in appendix 4.

November 5: Review of the documentation continued. At the suggestion of Mr. O'Donnell, computer search was conducted by JRB to identify publications by the witness, Dr. Reggiani, which pertain to the incident at Seveso but had not been provided in the supporting documentation. These publications are also listed in appendix 3.

November 6: Dr. Striegel and Dr. Euinton attended initial strategy meeting with Messrs. O'Donnell, Bayer, Gordon and Bozof of OGC. Dr. Euinton provided advice on legal approaches to the cross-examinations of Dr. Reggiani and Dr. Tuchmann-Duplessis, and initial advice regarding the cross-examinations of Dr. Rowe and Dr. Crow.

November 7: JRB delivered two copies of all supporting documents required for disclosure pertaining to the direct testimony of Dr. Reggiani and Tuchmann-Duplessis. Dr. Striegel and Dr. Euinton also met with Mr. Gordon and Dr. Bozof to discuss strategies for the cross-examinations of Drs. Rowe and Crow. Dr. Bozof provided another 23 documents used as references by Dr. Crow, and requested that JRB review these during the coming week. These documents are listed in appendix 5. Mr. O'Donnell, the Task Officer, verified the need for this additional work. Dr. Euinton also provided further advice regarding the cross-examinations of Dr. Reggiani and Dr. Tuchmann-Duplessis.

November 10: Dr. Euinton attended the initial hearing session where Dr. Reggiani read his testimony and the cross-examination began. JRB received from Dr. Bozof a list of items that he wanted found, copied, and delivered to him the next day. A trip was made to the National Library to get these documents.

November 11: A trip was made to George Washington University Himmelfarb Health Sciences Library to complete the set of documents being provided to Dr. Bozof. At the time of delivery, Dr. Bozof requested two more items and a second trip was made to the Himmelfarb Library, but the material requested was not available. Dr. Bozof then withdrew his request. The materials obtained and provided to Dr. Bozof are listed in appendix 6.

November 12: Dr. Euinton spoke by telephone with Dr. Bozof to provide final information and advice regarding the cross-examination of Dr. Crow.

November 13: A final report of all task activities was drafted and prepared for submission to the EPA.

November 14: The final report of the task was submitted to the Project Officer, Ms. Keller, the Task Officer, Mr. O'Donnell, and the Contracting Officer, Mr. Kranda.

Control Procedures for Document Security

At the time that confidential documents were transmitted to Dr. Striegel, he also received forms to be read and signed by each of the persons involved in the review of these documents, indicating their acknowledgment of the confidentiality of this material. Signed agreements of confidentiality from all persons handling the restricted documents were submitted to Mr. O'Donnell on November 6. Persons using these documents include: Dr. Striegel, Dr. Euinton, Ms. Hastings, and Ms. Sara Lee Schnur, the translator.

At the end of each working day, these materials were reassembled, boxed, and placed in a locked security area. The use of these documents for photocopying has been restricted, permitting copies of only those materials selected as a basis for the cross-examination of witnesses. Four copies of these selected materials were made, and dissemination of them is as follows: two copies delivered to Mr. O'Donnell on November 7, one copy to Dr. Euinton for research, and one copy to the task files for backup and for use in compiling the final report. All documents sent to and used by the translator have been returned to JRB.

All confidential documents associated with this task have been carefully controlled and handled in accordance with security procedures.

Original document files were returned to Mr. O'Donnell on November 14, and all remaining copies at JRB have been destroyed.

APPENDIX 1:

ENGLISH-LANGUAGE LISTING
OF CONFIDENTIAL DOCUMENTS SUPPORTING
THE TESTIMONY OF DRS. REGGIANI AND
TUCHMANN-DUPLESSIS, AND PROVIDED BY
DOW CHEMICAL COMPANY*

*About 90 percent of these documents are in Italian. All are covered by a confidentiality request from the Italian Government.

2 A: Reports by Italian Authorities of the Lombardy Region 1976

1. Chronology of the Icmesa accident
   Report on my visit to Milan and to the City Hall of Seveso
   July 23, 1976

2. Coordinating Committee on Public Health and Sanitation Standards following the Icmesa accident
   August 18, 1976
   - Description of TCDD
   - Problems of sanitation caused by dioxin
   - Virulence and characteristics of dioxin toxicity
   - Effect of dioxin toxicity on various organs and body systems
   - Particularities of the dioxin which escaped from Icmesa
   - Evaluation of the risk that dioxin (TCDD) represents in cases of pregnancy - Milan 8/9/76
   - Surveillance plan
   - Plan for the operational rehabilitation program required under Art. 1, para. A, Regional Law 2, January 17, 1977, and provisions for implementing the rehabilitation plan approved by the R. C. on 7/10/76
   - Conference of experts on the problems raised by dioxin pollution
     "Rehabilitation of the areas covered by the districts of Seveso, Meda, Cesano Maderno and Desio that have been contaminated by dioxin"
   - Rehabilitation program for the areas covered by the districts of Seveso and Meda that have been contaminated by dioxin

3. Rehabilitation of the areas of Seveso and of the districts bordering on it which have been contaminated by dioxin
   Coordination and development of the program approved by the Regional Council on August 24, 1976
   Report by Prof. A. Giovanardi
   December 4, 1976

4. Medico-Epidemiological Commission
   (Coordinator Prof. G. M. Fara)
   Milan, August 27, 1976

5. Lombardy Region - Office of the Public Health Assessor
   Medico-Epidemiological Commission
   Milan, September 27, 1976

6. New survey of Zone "B"
   Directed by the Commission of Inquiry
   9/6/76

7. Regional Council of Lombardy, 3rd Advisory Commission: Sanitation and Hospital Services - Social Security - Ecology - Environmental Protection
   "Report by the 3rd Advisory Commission on conditions in the Seveso area affected by pollution due to toxic substances, and on the appropriate measures that must be taken"
   Carrera, 10/7/76

8. Lombardy Region, November 10, 1976
"Updating of the data relating to the actions taken by Public Health for the population of the area affected by dioxin pollution"

9. Lombardy Region - Regional Law 2, January 17, 1977
"Operations for the population of the area affected by TCDD pollution"

10. Minutes of the meeting of the working group on the results of embryo-morphological studies in cases of abortion connected with the Seveso accident of July 10, 1976, held in Lübeck, February 24 - 25, 1977

11. Lombardy Region - Office of the Public Health Assessor
Outline of the operational program in the matter of sanitary assessments and controls, sanitary assistance and the protection of Public Health.
Regional Law 2, January 17, 1977
Milan, March 28, 1977

12. Dermatology Clinic, Milan University, April 1, 1977

13. Commission of the European Communities
Document No. V/F/1/2669/1/77.f
Draft Report
First meeting of the Chloracne Panel, Milan, July 11 - 12, 1977

14. Commission of the European Communities
Document No. 1320/77 e
Chloracne Panel, Milan 11 & 12 July, 1977
Working paper prepared by Prof. Vittorio Puccinelli, Dermatology Clinic, Milan

15. Preliminary report on the state of health in the area polluted by TCDD
(Report submitted by Prof. G. Fara, President of the Medico-epidemiological Commission, to the Seveso Conference on 5/28/77)

16. Documentation File No. 1, comprising:
- a summary approved by the Coordinating Committee
- the report on the state of health
- various documents related to specific problems

17. Operations in Zone R after July 1, 1977

18. Resurvey of Zones A1, A2, A3, A4

2 B: Reports by the Medical Commission of the Lombardy Region 1977

1. Lombardy Region
   Medico-epidemiological Commission
   Preliminary report on the state of health in the area of Seveso
   (Report submitted to the Seveso Conference)
   May 28, 1977

   Computer printouts

2. Cytogenic studies in individuals exposed to the toxic effect of TCDD carried out within the framework of the agreements between the Lombardy Region and the Institutes of General Biology of the Schools of Medicine and Surgery of the Universities of Milan and of Pavia

3. Extract from the report on the results of the chromosomal studies of cells from women exposed to TCDD (Project of the Professors de Carli and Candiani)
   (Chromosome studies on pregnant women)
   (Personal communication)

4. Galley proof, detailed report on the activities related to the matter of sanitary operations in the area polluted by TCDD and on an evaluation of these operations
   Milan, June 21, 1977

   Galley proof, detailed report on the activities related to the matter of sanitary operations in the area polluted by TCDD and on an evaluation of these operations
   Enclosures
   Milan, June 21, 1977

5. Lombardy Region - Veterinary Service - September 1977
   Report on the sanitary situation and on breeding conditions for cattle in the affected area

6. Lombardy Region - November 25, 1977
   Past and recent case histories from the husbandry station of the Archdiocesan Seminary of Seveso

7. Liver function tests
   District of Polo (Meda) - District of San Pietro (Seveso)
   Zone B - sample of 546 people - both sexes

2 C: Reports by the Special Commission on the Seveso Accident
July 2 - 3, 1978
Follow-up on health surveillance - September 1978

1. - Program for the "Press Seminary" of July 2 - 3, 1978
   - Lombardy Region, Special Office for Seveso
     July 76 - July 78 "Analysis and evaluation of the consequences of the pollution by TCDD and of the policies regarding public operations two years after the ICMESA incident"
     PRESS SEMINARY
   - Organization of sanitary operations in the area affected by TCDD contamination following the ICMESA incident of 7/10/76
   - Progress report on the epidemiological studies and on programming for new investigations
     B. Paccgnalla, L. Dardanoni
   - Neonatology and pediatrics
   - Findings of the "Cytogenic studies in individuals exposed to the toxic action of TCDD"
   - Summary of the reports by Professors L. Giannico and E.M. Colombrini of the Directorate General of the Public Health Services of the Ministry of Health concerning "Operations of the Ministry of Health in connection with the TCDD pollution" - Seminary with the Press, Milan, July 2 - 3, 1978.
   - Evaluation of the consequences of the TCDD pollution from a veterinary viewpoint
   - Lombardy Region, "Evaluation of the consequences of the TCDD pollution from a veterinary viewpoint"
   - Cultivation in the contaminated area
   - Agronomy and agrotechny aspects of the rehabilitation operations in the area of Seveso
     A. Gervato - G. Zampieri
   - Legal aspects of the ICMESA incident, a synthesis for the press. Speaker: Attorney Mario Bertacco
   - Map of the deposit monitors
   - Network of wells for the aqueduct under periodic observation in order to control underground water
   - Surface water
   - Structural foundations

2. Follow-up on the health survey - scope and operational plans

2 D: Reports by the Medical Commission 1979

1. Lombardy Region
   Operational Program No. 2
   "Medical observations relating to subjects suffering from dermatological symptoms exposed to risks as a result of the TCDD pollution in the areas of the C.S.Z.'s Brianza di Seveso 1, 2, 3."
   Report No. 5, November 1978

2. Groups of individuals with dermal lesions, ages 1 to 14 as of 7/10/76

3. Lombardy Region
   Operational Program No.2
   " Development of spontaneous abortions in the area of the C.S.Z.'s Brianza di Seveso 1, 2, 3"
   Report No. 7, December 1978 (galley proof)

4. Lombardy Region
   "Press Conference of July 5, 1979"
   Introduction by Attorney Antonio Spallino

5. Lombardy Region
   Operational Program No. 2
   "Development of spontaneous abortions in the area of the C.S.Z.'s Brianza di Seveso 1. 2, 3"

6. Lombardy Region
   Del Corno, G., Favaretti, C., Caramaschi, F., Giambelluca, S.E., Montesarchio, E., Bonetti, F., Volpato, C.
   "Distribution of chloracne cases in the area of Seveso as a result of TCDD pollution (2,3,7,8-tetrachloro-dibenzo-p-dioxin).

7. Lombardy Region
   "Chloracne and general clinical symptoms in a group of subjects more than 14-years-old, exposed to TCDD in the area of Seveso"

8. Lombardy Region
   Favaretti, C., Del Corno, G., Caramaschi, F., Giambelluca, S.E., Montesarchio, E., Marni, E., Bonetti, F., Volpato, C.
   "Chloracne and general clinical symptoms in a group of subjects, aged 0 to 14 years, exposed to TCDD in the area of Seveso"

9. European Teratology Society, 6th Conference, September 4 - 7, 1978 in Budapest, Hungary
   "Experience of the accident of Seveso"

2 E: Health Surveillance Program
Follow-up reports, September 1979 - May 1980

1. Lombardy Region
   Operational Program No. 2
   Progress report as of March 31, 1979
   (July 1979)

2. Control of the group of individuals with porphyrinuria above 100 mog/e in 1976

3. Total sampling by the Laboratory of the Desio Hospital as of 3/31/79

4. Report on the exploratory dissection of 3/31/79

5. 1st galley proof, report by Dr. Marni on deformities Seveso, September 1979

6. Lombardy Region - Offices of the P.O. 2 FB/ag - Prot. No. 162 " Minutes of the 17th meeting of the Epidemiological Commission established by decree of the President of the Lombardy Region, No. 32 of 1/19/78."

7. Report by Prof. Puccinelli on dermal lesions, July 5, 1979

8. Live births and stillbirths, natimortality rate in the districts of the 3 C.S.Z.'s Brianza di Seveso 1, 2, 3, Milan Province, Lombardy, Italy.

9. Milan University, July 1979
   "Comments on the reports on the neurological activities at the Occupational Clinic, Milan University"

10. Mortality studies in the three C.S.Z.'s "Brianza di Seveso" Preliminary findings - L. Santi 7/9/80

11. Second Meeting of the International Committee of Guarantors, Como, Italy, November 26 - 27, 1979

12. Second Meeting of the International Committee of Guarantors, Como, Italy, November 26 - 27, 1979

13. 3rd Meeting of the International Scientific Steering Committee, March 30 - April 1, 1980, Milan, Italy

14. Official Bulletin of the Lombardy Region
No. 52, December 27, 1979

15. "La Traccia" - Information journal of the Italian Society for Mass Spectrometry in Biochemistry and Medicine
March - April, 1980, 3rd year, No. 2

16. Updated data on mortality in the area of Seveso,
Milan, 7/9/80

17. Minutes of the meeting of 3/14/80 of the Regional Technical Advisory Commision for the determination of the threshold of toleration for TCDD in the environment and in food.

18. Ministry of Health
Reporting Commission, Meeting No. 54/R
Rome, May 2, 1980 - 10 a.m.

19. Ministry of Health
Plenary Commission, Meeting No. 54
Rome, May 2, 1980 - 3 p.m.

20 Ministry of Health
Plenary Commission, Meeting No. 55
Rome, May 27, 1980 - 11 a.m.

21. Ministry of Health
Plenary Commission, Meeting No. 56
Rome, May 29, 1980 - 4 p.m.

22. Ministry of Health
Plenary Commission, Meeting No. 53
Rome, April 24, 1980 - 10 a.m.

23. Ministry of Health
Reporting Commission, Meeting No. 53/R
Rome, April 23, 1980 - 4 p.m.

24. Ministry of Health
Reporting Commission, Rome, April 23, 1980
"Examination of the state of health of the population affected by TCDD pollution"

25. Ministry of Health
Reporting Commission, Meeting No. 52/R
Rome, March 31, 1980 - 10 a.m.

26. Ministry of Health
Plenary Commission, Meeting No. 52
Rome, March 31, 1980 - 3 p.m.

27. Ministry of Health
Reporting Commission, Rome, March 31, 1980
"Proposal to liberalize cultivation in Zones "R" and "B"

28. Telex of February 15, 1980
"Corriere della Sera" - dated 2/15/80
"Another 10 scientists named to the 'Dioxin Commission'"

29. Ministry of Health
Special Technical-scientific Commission for the decontamination of Seveso established by D.P.C.M. of 8/4/76 and subsequent amendments
Minutes of Meeting No. 48, Rome, August 3, 1979

30. Ministry of Health
Special Technical-scientific Commission for the decontamination of Seveso established by D.P.C.M. of 8/4/76 and subsequent amendments
Minutes of Meeting No. 46, Rome, June 23, 1979

31. Ministry of Health
Special Technical-scientific Commission established by D.P.C.M. of 8/4/76 and subsequent amendments
Minutes of Meeting No. 45, Rome, May 30, 1979

4: Reports by medical experts on cases of injury selected by the judge in charge of the judicial investigation - 8 volumes

---

Vol. 1

Investigation reports on the 22 cases designated by the judge charged with the inquiry on the causes of injury and on their extent and their consequences in connection with the Seveso accident

Vol. 2

Laboratory tests for the detection of damage to specific metabolic functions of organs (liver, kidney) or of altered serum composition, of blood morphology, etc. carried out between July 1976 and October 1977

BODONI, Rosa Angela
BRAGATO, Moreno
BRUNO, Farida
CANESSO, Maria in TESSAROLO
CARPEZZA, Claudio
CASSIO, Elda
CASSIO, Paola
CONTE, Corrado
CONTE, Emanuela
CONTE, Katia
CONTE, Massimo
GALLETTA, Rita
GASBARRI, Luciano
PORELLI, Katia
RIZZARDI, Severino
SANAVIO, Iolanda
SANTORO, Antonio
SARTOR, Maurizio
SENNO, Alice
SENNO, Stefania
SUSIGAN, Mara
VARCASIA, Annunziata

Vol. 3

Clinical history and findings of the experts in the examinations which took place March 27 and October 18, 1977

Vol. 4

Laboratory tests (ESR blood count, GOT, GPT, GT, etc, total protein, etc.) carried out during the examinations by the experts.

Vol. 5

Count of chromosome aberrations and test for immunodeficiency in the lymphocytes for each case.

Report on the cytogenic studies carried out as part of the survey ordered by the examining magistrate of the Tribunal of Monza in connection with the accident that occured on 7/10/76 at the Icmesa plant in Meda.

Vol. 6

General considerations on the question of causality with respect to TCDD. Claims of exposure merely assessed historically. Clinical symptoms unspecific except for chloracne. No detection of TCDD. Forensic medical evaluation of each case. Conclusions.

Vol. 7

Documents and communications from the experts:

1) Letter to Ministry of Health, Rome
   September 1977. Request for data.

2) Letter of December 15, 1977 to examining magistrate
   Number of chloracne cases: 130

3) Letter to Spallino, February 16, 1979
   Request for data, July 76 to February 78.

4) Reports on cytogenic studies.

Vol. 8

Case of major abdominal malformation. Atrophy or absence of rectum abdominies with exstrophy of gastrointestinal organs.

4: Reports by medical experts on cases of injury selected by the judge in charge of the judicial investigation

- Report on the case of Mrs. Genoveffa Turchetto in Senno
  Prof. Ezio Ventura, Modena
  Modena, April 2, 1977

- Comments on the investigations carried out so far

- Results of the bioptic study made of Genoveffa Turchetto in Senno
  (samples taken during the surgery of 12/7/76)

- Report of medical forensic investigation of the causes of the death of Turchetto Senno Genoveffa
  Prof. Fornari, Montagna, Facchetti

- Report of medical forensic investigation of the causes of the death of Turchetto Senno Genoveffa
  Clinical file
  Analytical outline

4. Reports by medical experts on cases of injury selected by the judge in charge of the judicial investigation

- Tribunal of Monza
  Examining Office - Examining Couns.: Dr. C. Di Nunzio
  Crim. Proc. No. 199/76
  Report of forensic medical investigation into the causes and circumstances of the death of: TEOFILO, Lucia

- Report on forensic medical investigation into the causes of the death of : MARCHETTI, Antonio

- Report on joint forensic medical investigation into the causes of the death of: POLICELLA, Michelangelo

- TRIBUNAL OF MONZA - EXAMINING OFFICE
  Crim. Proc. No. 199/76
  Examining Couns. Dr. Cesare Di Nunzio

- Report of joint medical and chemical-toxicological investigation into the death of PERATELLO ALINO

- Chemical-toxicological investigation in connection with the criminal procedure in the death of MARCHETTI ANTONIO

- Chemical-toxicological investigation in connection with the criminal procedure in the death of TEOFILO LUCIA

4: Reports by medical experts on cases of injury selected by the judge in charge of the judicial investigation

- Medical report on the examination of the children Alice and Stefania Senno in Meda near Milan
  Prof. K.H. Schulz M.D., Hamburg
  2/20/78

  Medical report on the examination of the children Alice and Stefania Senno in Meda near Milan
  Prof. K.H. Schulz M.D., Hamburg
  6/11/79

- Findings by Prof Ugo, 7/28/77

- Report on the examinations by Professors R. Ugo and G. Caglio
  Criminal proceedings 199/76 R.G. Tribunal of Monza
  Examining magistrate Dr. Rosini
  Situation in October - November 1977

- Report of forensic medical investigation into the causes of the death of Di Domenicantonio Vito

- Report of joint medical investigation into the causes and circumstances of the death of Familiari Antonia

APPENDIX 2:

LISTING OF NONCONFIDENTIAL DOCUMENTS
SUPPORTING THE TESTIMONY OF
DRS. REGGIANI AND TUCHMANN-DUPLESSIS
AND PROVIDED BY DOW CHEMICAL COMPANY

1. Publications related to the Seveso accident

1) Abbruzzi, R., Belvedere, G., Bianchi, R., Caccia, S., Cantoni, L., Castelli, M.G., Cerletti, C., Chiabrando, C., Coccia, P., Colturani, F., Facchinetti, T., Fanelli, R., Frigerio, A., Gerna, M., Lanzoni, J., Latini, R., Manara, L., Martelli, G., Negrini, P., Pantarotto, C., Recchia, M., Riva, E., Rossi, E., Salmona, M., Sironi, M., Szumilo, T., Vecchi, A., Zanol, M.: Identification and quantitative determination of 2,3,7,8-Tetrachlorodibenzo-para-Dioxin in animals from contaminated areas. (4th International Symposium on Mass Spectrometry in Biochemistry and Medicine, Riva del Garda, Italy, June 20-22, 1977)

2) Allegrini, I., Bertoni, G., Brocco, D., Liberti, A., Possanzini, M.: Decontaminazione mediante radiazioni ultraviolette da inquinamento da 2,3,7,8-tetraclorodibenzodiossina. (La Chimica e L'Industria 59: No 8, 541-544, 1977)

4) Bastenier, H.: La catastrophe de Seveso. (Bruxelles-Médical 58: No 1, 3-12, 1978)

5) Beale, M.G., Shearer, W.T., Karl, M.M., Robson, A.M.: Long-term effects of dioxin explosure. (Lancet, No 8014, p. 748, April 2, 1977)

6) Berrino, F.: L'esposizione dell'uomo alla diossina prima di Seveso. (Epidemiologia e Prevenzione No 1, 64-67, 1977)

7) Berrino, F.: Preliminary report on mortality in the Seveso area, 1975-77. (I.A.R.C. Meeting, Lyon, France, 10-12 January 1978)

8) Bresson, G.: La peste chimique de Seveso a déjà sevi en 1963 aux Pays-Bas chez Philips.

9) Cassitto, L., Magnani, P.: Un metodo di controllo degli effluenti del previsto impianto di incenerimento di Seveso mediante gascromatografia frammentografia di massa. (Inquinamento 33: No 5, 33-38, 1977)

10) Cattabeni, F.: The analysis of TCDD in the Seveso area (Symposium on Chlorinated Phenoxy Acids and their Dioxins; Mode of Action, Health Risks and Environmental Effects. The Royal Swedish Academy of Sciences. Stockholm, February 7-9, 1977)

11) Cattabeni, F.: Environmental monitoring of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin by mass fragmentography: The Seveso case. (4th International Symposium on Mass Spectrometry in Biochemistry and Medicine, Riva del Garda, Italy 20-22 June 1977)

12) Cooper, P.: Dioxin: A new biological probe? (Food Cosmet Tox 15: No 5, 481-483, 1977)

13) Crow, K.D.: Effects of Dioxin exposure. (The Lancet, pp 82-83, July 9, 1977)

14) Crow, K.D.: Chloracne: the chemical disease. (New Scientist , pp. 78-80, 13 April 1978)

15) Dewse, C.D.: Danger of TCDD. (Lancet, 363, August 14, 1976)

16) Dioguardi: Effetti tossici della diossina. (Associazione Italiana per lo studio del fegato, Roma l'11 e 12 dicembre 1976). Deutsche Uebersetzung: Giftige Auswirkungen des Dioxins. (Italienische Vereinigung zum Studium der Leber, Rom, 11./12.12.76)

17) Editorial: Health hazard of dioxins still uncertain. (C & EN p. 12, April 16, 1973)

18) Editorial: Seveso - the accident that should never have happened. (New Scientist, 267, August 5, 1976)

19) Editorial: Seveso. (Lancet, 297, August 7, 1976)

20) Editorial: Industrial chloracne: A conspiracy of silence? (New Scientist, 371, August 19, 1976)

21) Editorial: A propos de Seveso ... (Laboratoire Coopératif No 112, 46-48, janvier-février 1977)

22) Editorial: Slow Decomposition of the Seveso toxin (Svensk Farmaceutisk Tidskrift. (The Swedish Pharmaceutical Periodical) 81: No 1, 1977)

23) Editorial: Twelve months after Seveso. (Nature 268: No 5616, 90, 1977)

24) Editorial: Decisione e continuità. (Negri News 11: No 1, 6, 1977)

25) Editorial: TCDD - Seveso. (Naturwissenschaften 64: 87, 1977)

26) Editorial: Spread of Dioxin. (The Lancet II, No 8033, 347, August 13, 1977)

27) Editorial: Seveso un anno dopo. L'ordine nella diossina. (Sapere No 802, 24-27, 1977)
(Determination of TCDD in the human body)

28) Editorial: Seveso-Unglück: Teratogene Schäden wahrscheinlich. (Diagnostik 10: No 17, 20.10.1977)

29) Editorial: More dioxin found. (Chemical Week, page 22, October 5, 1977)

30) Editorial: Erstes Treffen des Chlorakne-Ausschusses. (Pharm. Ind. 39: No 9, 866, 1977)

31) Fara, G.M.: Seveso: Studies on teratogenic and other chronic effects of chemical pollutants following an accident in a chemical plant. (Symp. "Detection of Teratogens", Montreal, 21.8.77; a special Symposium held in conjunction with the 5th Int. Conf. on Birth Defects)

32) Foà, V.: The Seveso Accident (pres. at IVth Medichem Congress, Haifa, September 1976)

33) Forth, W.: 2,3,7,8-Tetrachlorodibenzo-1,4-Dioxin (TCDD); das Unglück von Seveso - Fakten und Wertung. (Deutsches Aerzteblatt 74: No 44, 2617-2626, 1977)

34) Frigerio, A.: Identification and quantitative determination of 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD) in animals from contaminated areas: the Seveso case. (26th Congress of the International Union of Pure and Applied Chemistry (IOPAC), Tokyo, 4-10 Sept. 1977)

35) Frigerio, A.: Che cos'è la TCDD e come si comporta chimicamente. (Negri News 11: No 1, 2, 1977)

36) Frontali, N. et al.: Toxicological criteria for operative choices concerning TCDD contamination, partly in relation to analytical "Zero" levels. (Comments on the paper, 28th April 1977)

37) Fuller, J.G.: Seveso: cronaca di un disastro (Selezione dal Reader's Digest 166-203, 1977) (German version)

38) Garattini, S.: TCDD poisoning at Seveso. (Biomed. 26: 28-29, 1977)

39) Garattini, S.: La diossina va combattuta con decisione e continuità. (Negri News 11: No 1, 1, 1977)

40) Gianotti, F.: Chloracne au tetrachloro 2,3,7,8 dibenzo-p-dioxine chez les enfants. (Société Française de Dermatologie, Paris, 9-10 mars 1977)

41) Greim, H., Loprieno, N.: No permanent injuries to health in Seveso. Toxikologie. Keine bleibenden Schäden in Seveso. (Umschau 78: No 2, 53, 1978)

42) Hawkes, N.: Seveso Revisited. (Science 197: 143, 1977)

43) Hay, A.: Seveso: the aftermath. (Nature 263: 538-540, 1976)

44) Hay, A.: Toxic cloud over Seveso. (Nature 262: 636-638, 1976)

45) Hay, A.: The problems deepen. (Nature 264: 309-310, 1976)

46) Hay, A.: Seven months on. (Nature 265: 490, 1977)

47) Hay, A.: Seveso solicitude. (Nature 267: 384-385, June 2, 1977)

48) Hay, A.: Roche's reply. (Nature 267: No 5614, 749, 1977)

49) Hay, A.: Séveso row. (Nature 268: 395, 4 August 1977)

50) Hay, A.: Dioxin meeting recommends cancer study. (Nature 271: No 5642, 202, 1978)

51) Jaubert, A.: Le poison de Seveso. (La Recherche 7: No 71, 868-870, 1976)

52) Klingberg, M.A., Papier, C.M.: Environmental agents as teratogens in man. (presented at the Session on Etiologic Factors in Birth Defects, Second International Congress of Human Reproduction, Tel-Aviv, Israel, October 23-28, 1977) TCDD-Seveso pp. 5-6.

53) Laporte, J.-R.: Effects of dioxin exposure. (Lancet 1: No 8020, 1049, May 14, 1977)

54) Laporte, J.-R.: Effects of Dioxin exposure. (Lancet II: No 8028, 82-83, 1977)

55) Lederer, J.: Le problème des chlorodioxines, la guerre du vietnam et les accidents de Seveso. (Louvain Méd. 96: 395-402, 1977)

56) Leonardi, A.: Affinchè non si ripetano altre Seveso. (Negri News 11: No 1, 5, 1977)

57) Manara, L.: Ha una potenza tossica fra le più alte che si conoscano. (Negri News 11: No 1, 3, 1977)

58) McGinty, L.: After Seveso, what? (New Scientist, 314, August 12, 1976)

59) McGinty, L.: The graveyard on Milan's doorstep. (New Scientist 383-385, August 19, 1976)

60) Meselson, M.: Statement on Seveso: (Carlo Erba Foundation Meeting, Milan, 29 September 1977)

61) Mingoia, Q.: Profilo chimico della diossina TCDD e composti correlati. (Cronache Farm. 19: No 5, 206-209, 1976)

62) Nguyen Dang Tam: Dioxine: une solution possible. (La Recherche 8: No 80, 678, 1977)

63) Philbert, M.: La Dioxine. (in Paul Milliez: L'Année du Médecin, édition Flamarion/Médecins, médecine du travail, p. 282-286, 1977)

64) Pocchiari, F.: Decontamination of TCDD (Symposium on Chlorinated Phenoxy Acids and their Dioxins; Mode of Action, Health Risks and Environmental Effects. The Royal Swedish Academy of Sciences. Stockholm, February 7-9, 1977)

65) Pocchiari, F.: Accidental TCDD contamination in Seveso (Italy): Epidemiological aspects. (I.A.R.C. Meeting, Lyon, France, 10-12 January 1978)

66) Ramade, F.: Seveso. La pollution par les défoliants et ses conséquences écotoxicologiques. (Le courrier de la Nature No 47, 26-32, Janvier-Février 1977)

67) Rawls, R.L., O'Sullivan, D.A.: Italy seeks answers following toxic release. (C & EN pp 27-35, August 23, 1976)

68) Reggiani, G., Beylier, M.-F.: Seveso: Mise au point médicale de Givaudan-Roche (Méd. & Hyg. 35: 1154-1158, 1977)

69) Reggiani, G.: Seveso heute - Eine Voraussage. (Schweiz. Aerztezeitung Nr. 18, 751-754, 1977)

70) Reggiani, G.: Seveso heute - eine Voraussage. (Euromed No 11, 476-478, 1977)

71) Reggiani, G.: Roche's view of Seveso. (General practitioner May 13, 1977)

72) Reggiani, G.: Toxic effects of TCDD in man. (NATO-Workshop on Ecotoxicology in Guildford, England, July-August 1977)

73) Reggiani, G.: Medical problems raised by the TCDD contamination in Seveso/Italy. (5th Int. MEDICHEM Congress, San Francisco, September 1977) (Arch. Toxicol. 40: 161-188, 1978)

74) Reggiani, G.: The estimation of the TCDD toxic potential in the light of the Seveso accident. (20th Congress of the European Society of Toxicology, Berlin, June 25-28, 1978) (Arch. Toxicol., Suppl. 2: 291-302, 1979)

75) Reggiani, G.: Clinical feature of the TCDD contamination in Seveso, Italy. (7th International Congress of Pharmacology IUPHAR, Paris, July 16-21, 1978)

76) Rondia, D.: L'accident de Seveso et la responsabilité industrielle en matière de produits. (Conférence tenue à l'Université de Liège, 1977)

77) Rosa, E.: Il crimine di Seveso. (Le Scienze No 104, 7-9, April 1977)

78) Rossion, P.: Les experts réservés devant l'accident de Seveso. (Science & Vie 103-107, Octobre 1976)

79) Schulz, K.-H.: Die Giftkatastrophe von Seveso. (Euromed 17: No 9, 362, 3. Mai 1977)

80) Schulz, K.-H.: Dermatologische Aspekte der Intoxikation mit TCDD (Dioxin). (Der Hautarzt 28: 35, 1977)

81) Strigini, P., Torriani, A.: Seveso: "Encouraging Evidence"? (Science 197: No 4308, 1034+1036, 1977)

82) Tognoni, G.: E' la salute nel suo insieme che deve essere sorvegliata. (Negri News 11: No 1, 4, 1977)

83) Tognoni, G.: Open questions to epidemiologists after TCDD-contamination at Seveso. (in Colombo, F.; Shapiro, D.; Slone, D.; Tognoni, G.: Epidemiological Evaluation of Drugs, Intern. Symp. Milano, Italy, May 1977, pp. 315-318, Elsevier and North-Holland, Amsterdam, Neth. 1977)

84) Tuchmann-Duplessis, H.: Influence of environmental factors on offspring. (Exerpt of paper presented at the Int. Coll. "The Evaluation of Toxicological Data for the Protection of Public Health". Int. Academy of Environmental Safety, Luxembourg, December 7-8, 1976)

85) Tuchmann-Duplessis, H.: Influence of environmental factors on offspring.
English Translation - (Proceedings of Congress in Brussel) pp. 81-95
Original: French version pp. 65-79

86) Tuchmann-Duplessis, H.: Problèmes embryologiques posés par l'accident de Seveso. (Le Concours Médical 99: No 44, 6889-6897, 1977)

87) Waldens, R.: Ein Menetekel für die Wissenschaft. Seveso - ein Jahr nach der Katastrophe. (Aerztl. Praxis 29: No 75, 3105, 1977)

88) Wallenfels, K.: TCDD. Eine chemische und biochemische Analyse der Katastrophe von Seveso. (Kommission für zivilen Bevölkerungsschutz, March/April, 1977)

89) Walsh, J.: Seveso: The questions persist where Dioxin created a wasteland. (Science 197: No 4308, 1064-1067, 1977)

90) Whiteside, T.: A reporter at large. The pendulum and the toxic cloud. (The New Yorker, pp. 30-55, 25.7.1977)

91) Zedda, S., Cirla, A.M., Sala, C.: Contaminazione accidentale da Tetraclorodibenzoparadiossina. Considerazioni sull' episodio I.C.M.E.S.A. (Medicina del Lavoro 67: No 5, 371-378, 1976)

92) Klingberg, M.A., Fara, G.M., Marubini, D., Neubert, D., Weatherall, J.A.C.: Round table discussion on teratogenic risks and problems arising from 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in Seveso, Italy. (pp. 161-190)

93) Malizia, E., Andreucci, G., Chiavarelli, M., Amato, A., Gagliardi, L.: A follow-up of 20 months of Seveso, an environmental calamity. (Presented at the Annual Meeting of the Am. Academy of Toxicology, New Orleans, March 15, 1979) (Vet Hum Toxicol 21, Suppl. 136-140, 1979)

94) Malizia, E., Andreucci, G., Chiavarelli, V., Giovannini, G., Drago, G.: Situation actuelle des populations exposées à la calamité ambientale de Seveso avec considération particulière à tumeurs et lésions tératogènes. (in Roche L /Ed/, Actualites Toxicologiques, 1er Congr. Mondial Toxicol. Clin. + Centres Anti-Poisons Lyon/Fr. June 1979/Coll. Med. Legale Toxicol. Med. No. 111, 363-364, Masson, Paris/Fr. 1979)

95) Malizia, E., Andreucci, G., Chiaverelli, M., Amato, A., Gagliardi, L.: Human and animal pathology in the Seveso area after TCDD contamination. (Clinical Toxicology 15: No 4, p. 480, 1979)

96) Manara, L., Garattini, S.: Seveso: premature optimism. (Nature 276: 556, 7 December 1978)
Reggiani, G.: Seveso. (Nature 277: P. 260, 25 January 1979)

97) Marni: Reproductive inquiry: Seveso.
(Paper presented at the NAS Workshop on Plans for Clinical and Epidemiological Follow-up After Area-Wide Chemical Contamination, Washington, D.C., March 17, 1980)

98) Marubini, E.: The monitoring of the population exposed to TCDD in the Seveso accident. (Round Table Discussion on Teratogenic Risks and Problems arising from 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) in Seveso, Italy)

99) Mastroiacovo, P.: Incidence of selected malformations in Italy. A multicentric pilot survey. (7th Conference of European Teratology Society, Herzlia on Sea, Israel, Sept. 2-6, 1979)

100) Miller, R.W., Murphy, S.D., Nelson, N., Ross, P.: Report of the NAS/NRC visiting group on Seveso. (Rome and Milano, Italy, April 2-6, 1977)

101) Morre, J., Barrairon, E.-P., Janin, F.: Enseignements tirés de la catastrophe de Seveso due à la dioxine. (Ann. Fals. Exp. Chim. 71: No 767, 253-261, 1978)

102) Panero, C., Mainardi, G., Cianciulli, D., Carbone, C., Gambi, R., Manetti, A., Dolara, A.: Incidenza delle malformazioni congenite in un campione di popolazione neonatale. (Minerva Pediatrica 31: 1255-1260, 1979)

103) Pocchiari, F.: Decontamination of TCDD.
(Paper presented at Sympsoium in Milan, October 1976)

104) Puccinelli, V. et al.: Patologia dermatologica specifica nella zona di Seveso dal luglio 1977 al febbraio 1978. II° relazione del servizio dermatologico (parte I). Milano, maggio 1978

105) Puccinelli, V.: Dell'acne clorica. (La Medicina del Lavoro 45: No 3, 131-145, 1954)

106) Puccinelli, V.: Chloracne Panel. (Working Paper, Milan, 11 & 12 July 1977)

107) Rehder, H., Sanchioni, L., Cefis, F., Gropp, A.: Pathologisch-embryologische Untersuchungen an Abortusfällen im Zusammenhang mit dem Seveso-Unglück. (Schweiz. med. Wschr. 108: No 42, 1617-1625, 1978)

108) Rehder, H.: Cytogenetic analyses in Seveso. (Paper presented at the NAS Workshop on Plans for Clinical and Epidemiological Follow-up After Area-Wide Chemical Contamination, Washington, D.C., March 19, 1980)

109) Scarlato et al.: Commenti alle relazioni dell'Istituto Neurologico sulla attività neurologica relativa alla popolazione sottoposta a piano di monitoraggio negli anni 1977-78'. (Università di Milano, Clinica Neurologica, Milano)

110) Simoni, G., Della Valle, G., Larizza, L., Sacchi, N., Rossella, F.: Chromosome lesions in amniotic fluid cell cultures. (Presented at the Symposium of the European Society of Human Genetics, Oslo, May 14-15, 1977)

111) Simoni, G., Larizza, L., Sacchi, N., Della Valle, G.: Dambrosio, F., De Carli, L.: Chromosome lesions in amniotic fluid cell cultures. (Manuskript)

112) Schulz, K.H.: Selbstversuch mit TCDD-Lösung. (Bericht der Universität Hamburg, 28.2.1977)

113) Schulz, K.H.: Bericht über meinen Besuch in Mailand und Seveso am 17.11.1976.

114) Tenchini, M.L., Giorgi, R., Crimaudo, C., Simoni, G., Nuzzo, F., DeCarli, L.: Approaches to examination of genetic damage after a major hazard in chemical industry: preliminary cytogenetic findings on TCDD-exposed subjects after Seveso accident. (Presented at the Expert Conference on genetic damage caused by environmental factors, Oslo, 11-13 maggio 1977)

115) Terracini, B.: Rapporto preliminare sullo stato di salute della zona inquinata da TCDD. (Epidemiologia e Prevenzione No 2, 58-63, 1977)

116) Vaterlaus, B., Wipf, H.K.: Comments on the paper by N. Frontali et al. (Istituto Superiore di Sanita, Rome, 8th March 1977) entitled: Toxicological criteria for operative choices concerning TCDD contamination, partly in relation to analytical "zero" levels. (April 28, 1977)

117) Vecchi, A., Mantovani, A., Sironi, M., Luini, W., Cairo, M., Garattini, S.: Effect of acute exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin on humoral antibody production in mice. (Chem.-Biol. Interactions 30: No 3, 337-342, 1980)

118) Wipf, H.K., Homberger, E., Neuner, N., Ranalder, U.B., Vetter, W., Vuilleumier, J.P.: TCDD-analysis in vegetation samples from the Seveso area. (Paper presented at the 23rd Collaborative International Pesticide Advisory Council (CIPAC) Symposium at Baltimore, Maryland (USA), June 6/7, 1979)

119) Behrends, M.: Seveso - aus zeitlicher Distanz. (Aerztliche Praxis 30: No 36, 1156, 1978)

120) Beretta, C., Pompa, G.: Considerazioni sui consumi di insetticidi organoclorurati sul territorio nazionale nel periodo 1968/69-1974. (Estratto da "Rivista di Zootecnia e Veterinaria", No 6, 631-639, 1977)

121) Bertoni, G., Brocco, D., Di Palo, V., Liberti, A., Possanzini, M., Bruner, F.: Gas chromatographic determination of 2,3,7,8-tetrachlorodibenzodioxin in the experimental decontamination of Seveso soil by ultraviolet radiation. (Analytical Chemistry 50: No 6, 732-735, 1978)

122) Centen, A.: Porphyrins in urine from TCDD exposed people (Seveso). (Presented at the Thema Colloquium on "Chronic Hepatic Porphyria in humans" Agricultural University, Wageningen, May 10, 1978)

123) Colombi, A., Musicco, M., Ragazzon, F.: Un documento che accusa. (Sapere, p. 11-20, luglio-agosto 1978)

124) Colombi, A.M.: Preliminary report on subjective symptomatology prevalence as adjunctive criterion to define risk-groups exposed to TCDD in the Seveso area, Italy, for further epidemiological research. (Presented at the Thema Colloquium on "Chronic Hepatic Porphyria in humans" Agricultural University, Wageningen, The Netherlands, May 10th, 1978)

125) Colombi, A.M.: Relationship between present volunteer research by scientific and technical popular comitee of Seveso and porphyrin and porphyrin pattern assessment on urines of TCDD exposed people in Seveso run by the Toxicological Department of the Agricultural University of Wageningen. (Presented at the Thema Colloquium on "Chronic Hepatic Porphyria in humans" Agricultural University, Wageningen, The Netherlands, May 10th, 1978)

126) Commoner, B.: Seveso: the tragedy lingers on. (Clinical Toxicology 11: No 4, 479-482, 1977)

127) Crow, K.: Dioxin. (New Scientist, 393, 11 May 1978)

128) Dioguardi, N.: Riflessioni di un medico sulla intossicazione da diossina (TCDD) dopo due anni dalla polluzione di Seveso. (Paper read on 2 July 1978 at the Press Seminar "July '76 - July '78: Analysis and evaluation of the consequences of pollution by TCDD and of the public policies adopted, two years after the ICMESA disaster") Manuskript

129) Editorial: Seveso: Un'occasione perduta. Scienza, partiti ed istituzioni di fronte alla diossina. Interventi e defezioni in campo scientifico-una scelta a favore delle cose-il tossico vagante-cosa succede a distanza di due anni? (La Traccia No 3, 1-16, luglio-settembre 1978)

130) Editorial: Seveso counts the final cost. (Doctor, p. 24, 23rd March 1978)

131) Editorial: Dioxin lingers on. (Chemical Week, p. 22, April 12, 1978)

133) Tuchmann-Duplessis, H.: Pollution de l'environnement et descendance. A propos de l'accident de Seveso. (Médecine et Hygiène 36: 1758-1766, 1978)

134) Adamoli, P. et al.: Analysis of 2,3,7,8-tetrachlorodibenzo-para-dioxin in the Seveso area. (in Ramel, C. (ed.) Chlorinated Phenoxy Acids and Their Dioxins. Ecol. Bull. Stockholm 27: 31-38, 1978)

135) Aliverti, V., Bonanomi, L., Giavini, E., Leone, V.G., Mariani, L.: Protocol form for recording malformations in teratological studies. Advances in the detection of congenital malformations. (Proceedings of the 5th Conference of the European Teratology Society, Sept. 20-23, 1976, pp. 241-244)

136) Beale, M.G., Shearer, W.T., Karl, M.M., Robson, A.M.: Long-term effects of dioxin exposure. (Lancet, No 8014, p. 748, April 2, 1977)

137) Borella, G.: Seveso due anni dopo. (Sapere, p. 2-3, luglio-agosto 1978)

138) Bisanti, L., Bonetti, F., Caramaschi, F., Del Corno, G., Favaretti, C., Giambelluca, S., Marni, E., Montesarchio, E., Puccinelli, V., Remotti, G., Volpato, C., Zambrelli, E.: Experience of the accident of Seveso. (Proceedings of the 6th Conference of the European Teratology Society, Budapest-Szentendre, Hungary, September 4-7, 1978)

139) Bonaccorsi, A., Fanelli, R., Tognoni, G.: In the wake of Seveso. (Ambio 7: No 5-6, 234-239, 1978)

140) Botré, C., Memoli, A., Alhaique, F.: On the degradation of 2,3,7,8-tetrachlorodibenzoparadioxin (TCDD) by means of a new class of chloroiodides. (Environmental Science & Technology 13: No 2, 228-231, 1979)

141) Boeri, R., Bordo, B., Crenna, P., Filippini, G., Massetto, M., Zecchini, A.: Preliminary results of a neurological investigation of the population exposed to TCDD in the Seveso region. Risultati preliminari di una indagine neurologica della popolazione esposta a TCDD nella zona di Seveso.
(Riv. Pat. Nerv. Ment. 99: 111-128, 1978)

142) Bolasco, F., Molteni, L., Botre, C., Memoli, A.: Abbau von TCDD mit Chlorjodid. (Deutsches Patentamt, 10.5.79)

143) Boeri, R., Bordo, B., Bottacchi, E., Crenna, P., Filippini, G., Massetto, N., Musicco, M., Zecchini, A.: Cross-sectional neurological survey of a TCDD-exposed population in the Seveso area compared with an unexposed population.
(Paper presented at the Meeting of the Italian Society of Toxicology, International Congress of Neurotoxicology, Varese, Sept. 27-30, 1979)

144) Creso, E., de Marino, V., Di Tonto, B., Lampa, E., Ottavo, L.R., Pagnini, G., Sasso, M., Donatelli, L.: Effetti della 2,3,7,8-TCDD in alcuni saggi psicofarmacologici nel topo.
(Comunicazione tenuta il 21.7.1978)

145) Cocucci, S., Di Gerolamo, F., Verderio, A., Cavallaro, A., Colli, G., Gorni, A., Invernizzi, G., Luciani, L.: Absorption and translocation of tetrachlorodibenzo-p-dioxine by plants from polluted soil.
(Experientia 35: No 4, 482-484, 1979)

146) Camoni, I., Di Muccio, A., Pontecorvo, D., Vergori, L.: Clean-up procedure for the extraction of soil samples in the determination of 2,3,7,8-tetrachlorodibenzo-p-dioxin.
(Journal of Chromatography 153: 233-238, 1978)

147) Cavallaro, A.: Sulla valutazione di policloro-dibenzo-p-diossine e di policloro dibenzofurani nelle scorie, nelle ceneri dei depolveratori e negli effluenti dei forni di incenerimento di Milano (Zama e Figino), di Desio e di Busto A. (Laboratorio Provinciale di Igiene e Profilassi, Milano, 1979)

148) Canonica, A.: Treshold value and decontamination. (Vortrag gehalten am Meeting über moderne Toxikologie. Belgirate/Italien, 22.-26. Okt. 1979)

149) Carberry, J.J.: Un autorevole parere sull'esplosione di Seveso. (La Chimica e l'Industria 61: No 11, p. 866, 1979)

150) Cassitto: Effetti Neuropsicofarmacologici della TCDD. (La Medicina del Lavoro 70: No 2, p. 167, 1979)

151) Creso, E., De Marino, V., Donatelli, L., Pagnini, G.: Effetti Neuropsicofarmacologici della TCDD. (Boll. Soc. It. Biol. Sper. LIV: No 291, 1592-1596, 1978)

152) Dambrosio, F., Brambati, B., Buscaglia, M.: Primi risultati di uno studio epidemiologico dei difetti congeniti del sistema nervoso centrale diagnosticati alla nascita. (Epidemiologia e Prevenzione 1: No 4, 49-51, 1978)

153) di Domenico, A. et al.: Analytical techniques for 2,3,7,8-tetrachlorodibenzo-p-dioxin detection in environmental samples after the industrial accident at Seveso. (Analytical Chemistry 51: No 6, 735-740, 1979)

154) Donatelli, L., Creso, E., Lampa, E.: I Misteri di Seveso. (To be published by Clinical Toxicology)

155) Dardanoni, L.: Dermatologic effects: chloracne in Seveso. (Paper presented at the NAS Workshop on Plans for Clinical and Epidemiological Follow-up After Area-Wide Chemical Contamination, Washington, D.C., March 18, 1980)

158) Tuchmann-Duplessis, H.: Entwarnung für die Mütter von Seveso. (Selecta 20: No 27, 2459, 1978)

159) Pocchiari, F.: Human health effects from accidental release of TCDD at Seveso (Italy). International Conference on Health Effects of Halogenated Aromatic Hydrocarbons. (New York Academy of Sciences, New York, June 24-27, 1978) (Ann NY Acad Sci 320: 311-320, 31 May 1979)

160) Hay, A.W.M.: Tetrachlorodibenzo-p-dioxin release at Séveso. (Disasters 1: No 4, 289-308, 1977)

161) Hay, A.: What caused the Seveso explosion? (Nature 273: No 5664, 582-583, 1978)

162) Graul, E.H.: Giulini Report. Gegenwartslexikon. Seveso-Katastrophe. (Therapiewoche vom 8.2.1978)

163) Garattini, S.: La diossina va combattuta con decisione e continuità. (Negri News 11: No 1, 1, 1977)

164) Facchetti, S., Fornari, A., Montagna, M.: Distribution of 2,3,7,8-tetrachlorodibenzo-p-dioxin in the tissues of a person exposed to the toxic cloud at Seveso. (8th International Mass Spectrometry Conference, Oslo, August 12-18, 1979)

165) Fanelli, R., Airoldi, L., Bertoni, M.P., Bonfanti, M., Castelli, M.G., Chiabrando, C., Martelli, G.P., Noe, M.A., Noseda, A., Sbarra, C., Garattini, S.: Studies of TCDD levels in animals living in the Seveso area. (Manuskript, March 3, 1979)

166) Fanelli, R., Chiabrando, C., Salmona, M., Garattini, S., Caldera, P.G.: Degradation of 2,3,7,8-tetrachlorodibenzo-p-dioxin in organic solvents by gamma ray irradiation. (Experientia 34: No 9, 1126-1127, 1978)

167) Fara, G.M.: The history of the Seveso accident. (Round Table Discussion on Teratogenic Risks and Problems arising from 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in Seveso, Italy)

168) Ferraiolo, G.: Seveso: analisi sulla stabilità del processo in rapporto alle possibili cause chimico-fisiche dell'esplosione. (La Chimica e l'Industria 61: No 2, 108-112, 1979)

169) Frigerio, A.: The Seveso case: TCDD in animals from contaminated areas. (in Reid E/Ed/ Blood Drugs and other Analytical Challenges/Bioanal. Symp. Guildford, England, Sept. 1977, Methodological Surveys in Biochem. 7: 161-166, 331, 1978, Horwood, Chichester, England + Wiley, New York N.Y.)

170) Frontali, N.: Diossina: davvero "niente di nuovo"? (Sapere, p. 7-10, luglio-agosto 1978)

171) Garattini, S. et al.: Ricerche sperimentali sul TCDD in relazione con l'inquinamento di Seveso. (Manuskript)

172) Gilioli, R., Cotroneo, L., Bulgheroni, C., Genta, P.A., Rota, E., Cannatelli, P., Ferrari, E.: Neurological monitoring of workers exposed to TCDD: preliminary neurophysiological results. (Activ. nerv. sup. (Praha) 21: No 4, 288-290, 1979)

174) Hofmann, M.F., Meneghini, C.L.: A proposito delle follicolosi da idrocarburi clorosostituiti (acne clorica). (Giornale Italiano di Dermatologia, pp. 427-450, 1962)

176) Holmstedt, B.: Prolegomena to Seveso. (Arch. Toxicol. 44: No 4, 211-230, 1980)

177) Italienische Regierung: Verordnung vom 27.7.1936 und 26.5.1940 über die Meldepflicht der Missbildungen. (Gazzetta Ufficiali, Rom)

179) Bronzetti, G., Lee, I., Zeiger, E., Malling, H., Suzuki: Genetic effects of TCDD in vitro and in vivo using D7 strain of S. cerevisiae. (Mut Res 74, No. 3, 206-207, 1980)

180) Cardillo, P., Girelli, A.: Aspetti chimico-fisici dell'evento di Seveso.
(Comunicazione presentata alla Sezione Lombarda della Società Chimica Italiana, Milano, 10 luglio 1980)

181) Fanelli, R. et al.: 2,3,7,8-tetrachlorodibenzo-p-dioxin levels in cow's milk from the contaminated area of Seveso, Italy. (Bull. Environm. Contam. Toxicol. 24: 634-639, 1980)

182) Fanelli, R., Castelli, M.G., Martelli, G.P., Noseda, A., Garattini, S.: Presence of 2,3,7,8-tetrachlorodibenzo-p-dioxin in wildlife living near Seveso, Italy: a preliminary study. (Bull. Environm. Contam. Toxicol. 24: 460-462, 1980)

183) Homberger, E., Reggiani, G., Sambeth, J., Wipf, H.K.: The Seveso accident: its nature, extent and consequences. (Ann. occup. Hyg. 22: 327-370, 1979)

184) Ideo, G., Bellati, G., Alberti, A., Bellobuono, A.: Enhancement of urinary d-glucaric acid (UGA) excretion in an area contaminated by tetrachlorodibenzo-p-dioxine (TCDD).
(Hepato-Gastroenterology Suppl., p. 280, Congress Hamburg, June 8-13, 1980)

185) Vecchi, A., Sironi, M., Mantovani, A., Spreafico, F., Garattini, S.: Immunotoxicological effects of TCDD in different mouse strains. (Int J Immunopharm 2: No 3, 235-236, 1980)

186) Reggiani, G.: Acute human exposure to TCDD in Seveso, Italy. (Journal of Toxicology and Environmental Health 6: 27-43, 1980)

187) Stevens, J.J.: What happened at Seveso?
(Chemistry and Industry, pp. 564-566, 19 July 1980)

APPENDIX 3:

A. LISTING OF ITEMS REFERENCED BY DR. REGGIANI, BUT NOT PROVIDED IN SUPPORTING DOCUMENTATION

B. LISTING OF RELEVANT PUBLICATIONS BY DR. REGGIANI, BUT NOT PROVIDED IN SUPPORTING DOCUMENTATION

ITEMS REFERENCED BY REGGIANI
BUT NOT PROVIDED

7. Sirchia, International Workshop on Plans for Clinical and Epidemiologic follow-up after Area-Wide Chemical Contamination, National Academy of Sciences, Washington (1980).

16. Carr, Handbook of Teratology, 3:189-213, Plenum Press, New York, London (1977).

19. Wassom, et al., Mutation Research 47:141-60 (1977/1978).

27. Reggiani, "Localized Contamination with TCDD-Seveso, Missouri and Other Areas," in Halogenated Biphenyls, Terphenyls, Napthalenes, Dibenzodioxins and Related Products, Ch. 9B2, Elseviex North-Holland Biomedical Press (1980).

PUBLICATIONS BY THE WITNESS DR. REGGIANI,
NOT PROVIDED

Reggiani, G. TCDD Contamination in Italy: The Risk Assessment of Low Level Exposure, Cumulative Effect and Long-Term Consequences. Toxicol. Appl. Pharmacol. 48(1):A180 1979.

Reggiani, G. Seveso. Nature (London) 277(5694):260 1979 (10 References).

APPENDIX 4:

LISTING OF SUPPORTING DOCUMENTS
SENT TO THE TRANSLATOR FOR REVIEW
AND ABSTRACTING

1. Particularities of the dioxin which escaped from Icmesa: Coordinating Committee on Public Health and Sanination Standards following Icmesa accident Aug. 18, 1976.

2. Medico-Epidemiological Commission
Milan, Aug. 27, 1976.

3. Lombardy Region - Office of the Public Health Assessor
Medico-Epidemiological Commission
Milan, Sept. 27, 1976.

4. Neonatology and Pediatrics. Special Commission. July 2-3, 1978.

5. Findings of the "Cytogenic studies in individuals exposed to the toxic action of TCDD" Special Commission. July 2-3, 1978.

6. 1st Galley proof, report by Dr. Marni on deformities,
Seveso, Sept. 1979.

7. Lombardy Region - Offices of the P. O. 2 FB/ag - Prot No. 162
"Minutes of the 17th meeting of the Epidemiological Commission established by decree of the President of the Lombardy Region, No. 32 of 1/19/78."

8. Updated data on mortality in the area of Seveso,
Milan, July 9, 1980.

9. Ministry of Health
Reporting Commission, Rome, April 23, 1980
"Examination of the state of health of the population affected by TCDD pollution."

10. Investigation reports on the 22 cases designated by the judge charged with the inquiry on the causes of injury and on their extent and their consequences in connection with the Seveso accident.

11. Laboratory tests for the detection of damage to specific metabolic functions of organs (liver, kidney) or of altered serum composition, of blood morphilogy, etc. carried out between July, 1976 and October, 1977.

12. Reports on cytogenic studies.

13. Case of major abdominal malformation. Atrophy or absence of rectum abdominies with exstrophy of gastrointestinal organs.

14. Zeda, 1976. Accidental Contamination by TCDD: The Seveso Incident.

15. Part 4, Chapter 2, Section 2 of the Parliamentary Commission Inquiry, July 1978.

APPENDIX 5:

LISTING OF REFERENCES OF DR. CROW
REVIEWED FOR DR. BOZOF

1. Crow, K.D.: Chloracne: A Critical Review Including a Comparison of Two Series of Cases of Acne from Chlornaphthalene and Pitch Fumes. The Dowling Oration, delivered at St. Thomas's Hospital April 17, 1970.

2. Poland, Alan and Glover, Edward: Chlorinated Biphenyl Induction of Aryl Hydrocarbon Hydroxylase Activity: A Study of the Structure-Activity Relationship. Molecular Pharmacology, Vol. 13, pp. 924-938 (1977).

3. McConnell, E.E. and Moore, J. A.: Toxicopathology Characteristics of the Halogenated Aromatics. Annals of the New York Academy of Sciences, Vol. 320, pp. 138-150 (1979).

4. Long-Term Hazards of Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans. Joint NIEH/LARC Working Group Report published by the World Health Organization International Agency for Research on Cancer. Technical Report No. 78/001. June 1978.

5. Zack, Judith A.; Suskind, Raymond R.: The Mortality Experience of Workers Exposed to Tetrachlorodibenzodioxin in a Trichlorophenol Process Accident. Journal of Occupational Medicine, Vol. 22, No. 1, January 1980, pp. 11-14.

6. Chloracne and Associated Health Problems in the Manufacture of 2, 4, 5-T.

7. Vos, J.G.; Sterringa, Tj.; Zellenrath, D.; Doctor, H. J., Daldenrup, L.M.: TCDD Accident at a Chemical Factory in the Netherlands. November 1977.

8. Jirasek, L.; Kalensky, J.; Kubec, K.; Pazderova, J.; Lukas, E.: Acne Chlorina, Porphyria Cutanea and other Manifestations of General Intoxication During the Manufacture of Herbicides. Ceskoslovenska Dermatologie, Vol. 49 No. 3, pp. 145-157 (1974). Part I.

9. McConnell, E.E.; Moore, J.A.; Haseman, J.K.; and Harris, M.W.: The Comparative Toxicity of Chlorinated Dibenzop-Dioxins in Mice and Guinea Pigs. Toxicology and Applied Pharmacology, Vol 44. pp. 335-356 (1978).

10. Carter, Coleman D.; Kimbrough, Renate D.; Liddle, John A.; Cline, Richard E.; Zack, Matthew M., Jr.; Barthel, William F.; Koehler, Robert E.; and Phillips, Patrick E.: Tetrachlorodibenzodioxin: An Accidental Poisoning Episode in Horse Arenas. Science, Vol. 188, May 16, 1975, pp. 738-740.

11. Letter to K. D. Crow from Mary G. Beale, M.D., Fellow in Pediatric Nephrology at the St. Louis Children's Hospital, St. Louis, Missori; dated August 30, 1977.

12. Kimbrough, Renate D.; Carter, Coleman D.; Liddle, John A.; Cline, Richard E.; Phillips, Patrick E.: Epidemiology and Pathology of a Tetrachlorodibenzodioxin Poisoning Episode. Archives of Environmental Health, March/April 1977.

13. Report of the Parliamentary Commission of Inquiry into the Escape of Toxic Substances Which Took Place on the 10th of July 1976 in the Icmesa Factory and into the Potential Health Risks and Risks to the Environment Deriving from Industrial Activity. Chapter II: The After-Effects of the Incident of 10 July 1976 Upon the Health of the Population Exposed to the Risk of Contamination. Rome, July 1978.

14. Homberger, E.; Reggiani, G.; Sambeth, J.; and Wipf, H.K.: The Seveso Accident: Its Nature, Extent and Consequences. Annals of Occupational Hygiene, Vol. 22, p. 327-367 (1979).

15. Schwetz, B. A.; Norris, J.M.; Sparschu, G.L.; Rowe, V.K.; Gehring, P.J; Emerson, J.L.; and Gerbig, C.G.: Toxicology of Chlorinated Dibenzo-p-dioxins. Environmental Health Perspectives, Sept. 1973, pp. 87-99.

16. Henck, J. W.; New, M.A.; Kociba, R.J.; and Rao, K.S.: 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin. Acute Oral Toxicity in Hamsters. Dow Chemical Toxicology Research Laboratory, Midland, Michigan.

17. McConnell, E.E.; Moore, J.A.; and Dalgard, D.W.: Toxicity of 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin in Rhesus Monkeys (Macaca mulatta) following a Single Oral Dose. Toxicology and Applied Pharmacology, Vo. 43, pp. 175-187.

18. Beale, Mary G.; Shearer, William T.; Karl, Michael M.; Robson, Alan M.: Long-Term Effects of Dioxin Exposure. The Lancet, April 2, 1977, p. 748.

19. Puccinelli, Vittorio: Chloracne Panel, Milan, July 11-12, 1977. Prepared for the Commission of the European Communities, Document No. 1320/77 e.

20. Jirasek, L.; Kalensky, J.; Kubec, K.; Pazderova, J.; Lukas, E.: Acne Chlorina, Porphyria Cutanea and other Manifestations of General Intoxication During the Manufacture of Herbicides. Ceskoslovenska Dermatologie, Vol. 49, No. 3, pp 145-157 (1974). Part II.

21. Cook, Ralph R.; Townsend, Jean C.; Ott, M. Gerald; and Silverstein, Lawrence G.: Mortality Experience of Employees Exposed to 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin (TCDD).

22. Kligman, A., Letters and data concerning the chloracnegenic potential of TCDD in humans. (Exhibit 866).

23. Mortality Study of Persons Exposed to Dioxin After an Accident on November 15, 1953 in Ludwigshafen, Germany. Working Group of the NIEH and the IARC, Lyon, January 10 and 11, 1978.

APPENDIX 6:

LISTING OF ADDITIONAL DOCUMENTS
OBTAINED FOR DR. BOZOF

1. Crow, K. D.: Chloracne - An Up To Date Assessment, Annals of Occupational Hygiene Vol. 21, pp. 297-298.

2. Taylor, James S.: Environmental Chloracne: Update and Overview, Annals of the New York Academy of Sciences Vol. 320, pp 295-307 (May 1979).

3. Neal, R. A.: Mechanism(s) of Toxicity of the Chlorinated-p-dioxins, Toxicology Research Projects Directory, Vol. 5, iss. 10 (1980).

4. Adams, Robert M.: Chloracne, Occupational Contact Dermatitis pp. 132-136 (1969).

5. Cronin, E. and Wilkinson, D.: Chloracne, Recent Advances in Dermatology edited by Arthur Rook, pp. 188-190 (1973).

6. Fisher, Alexander A.: Acneiform Eruptions Due to Contactants, Contact Dermatitis (1973).

7. Holmstedt, Bo: Prolegomena to Seveso, Archieves of Toxicology 44, pp. 211-230 (1980).