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WEC STAFF

TRIP REPORT

TO

CZECH REPUBLIC AND SLOVAK REPUBLIC

SEPTEMBER 20 - 24, 1993

**WORLD ENVIRONMENT CENTER
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I. ITINERARY

- September 20, 1993
 - Meeting at Chemopetrol, Litvinov.
 - Meeting at Czech Environmental Management Center (CEMC), Prague.
- September 21, 1993
 - Meetings at WEC office, Czech Press Center and U.S. AID, Prague.
- September 22, 1993
 - Press Conference. WMDP at Chemopetrol and Prague Press Center.
 - Meeting with representatives from Spolana.
 - Meeting at CEMC.
- September 23, 1993
 - Meeting with Preparation Committee, Association of Slovak Environmental Managers, Bratislava.
- September 24, 1993
 - Meeting with Board of Directors of CHEMIA, Bratislava.

II. EXECUTIVE SUMMARY

WEC organized and conducted a Press Conference in Prague to report on the results of its Waste Minimization Demonstration Project at Chemopetrol, Litvinov. Due to the excellent cooperation of the U.S.AID/OAR, The Czech Environmental Management Center, Malcolm Pirnie, Inc. and Chemopetrol, the press conference was a success. All major T.V., radio and newspapers were present. Resulting coverage was good.

WEC staff made preliminary arrangements for the second WMDP at Spolana, a large chemical factory.

U.S. AID joined WEC staff in Bratislava. Meetings were held to help assist in the establishment of the Association of Slovak Environmental Managers. Agreement was reached on future collaboration.

III. MEETINGS

CZECH REPUBLIC

Monday, September 20 - Chemopetrol

Mr. James Stouch, Malcolm Pirnie, Inc., Ms. Ludmila Hofmanova and Thomas J. McGrath, WEC, met with Messrs. Cir, Head of Ecology and Mr. Dusan Nepejchal, Managing Director. Discussed VOC emission reduction project and the Wednesday press conference.

Thomas J. McGrath met with Mr. Wagner, second in command, AGRO plant, to discuss WEC's proposal to conduct a waste minimization survey of the facility. He proposed that WEC send two pro bono specialists who will train a waste minimization team at the AGRO plant on waste minimization (WM). Then, the team and the WEC specialist will review all processes and identify ones most suitable for WM. If possible, estimated pollution reduction, cost savings and monitoring equipment required will be contained in a report to the Managing Director. Mr. McGrath suggested that Mr. Nepejchal consider using some of the cost savings from the WMDP to fund WM at the AGRO facility and Mr. Nepejchal said he would.

Czech Environmental Management Center (CEMC)

Ms. Ludmila Hofmanova and Thomas J. McGrath met with Mr. Radomir Matyas, President of CEMC, to discuss CEMC participation at the press conference. The next WMDP was discussed and it appeared that the chemical plant, Spolana, would be a good candidate.

Mr. Matyas scheduled meetings with Thomas J. McGrath for Tuesday at 9:00 A.M. and Wednesday at 3:00 P.M. to discuss CEMC.

Tuesday, September 21

Ms. Hofmanova, Mr. Stouch and Mr. McGrath spent the day checking arrangements and preparing for the press conference. They also met with Ms. Lee Roussel, U.S. AID Representative, to review details of the press conference.

Wednesday, September 22 - Czech Environmental Management Center

Mr. Matyas contacted Mr. Frantisek Barkman, Deputy General Director, Spolana, by phone. Mr. McGrath discussed a possible WMDP and Mr. Barkman welcomed

the project.

Mr. McGrath said he would send a proposal next week.

Mr. Matyas and Mr. McGrath discussed the Waste Minimization Impact Program and the need to publicize waste minimization within Czech industry. Mr. McGrath emphasized the importance of public relations (PR) for the success of the WMIP.

Mr. Matyas agreed and said that CEMC needs to publicize its activities. He reported that four chemical companies realize their need for public relations and have organized PR departments. The companies are Chemopetrol, Spolchemie, VCHZ Synthesia and Kauchuck.

Mr. Matyas also said that CEMC recognizes the need for Czech chemical companies to develop an Environmental Management System (EMS) within their company. He welcomed WEC's WMIP because it will help demonstrate the importance of EMS.

WMDP - Chemopetrol - Press Conference

Mr. McGrath moderated a press conference at the Prague Press Center. Speakers were Ms. Lee Roussel, U.S. AID Representative, Thomas J. McGrath, WEC, Radomir Matyas, CEMC, Dusan Nepejchal, Chemopetrol, and James Stouch, Malcolm Pirnie, Inc.

The conference was attended by Prague's three T.V. stations, radio, and leading newspapers.

A copy of Mr. Stouch's presentation is attached as Annex one.

Following the press conference, Ms. Lee Roussel and Mr. Dusan Nepejchal commented favorably about the project and the press conference.

It is noteworthy that in response to a question from a T.V. reporter asking why WEC was required since it appeared that the problem was poor maintenance, Mr. Nepejchal said that without WEC participation, the workers would not have seen with their own eyes how they can help correct pollution problems. He added that the project helped change workers' attitudes making them more positive.

Following the press conference, Mr. Kunz of Alpha T.V., a private producer of T.V. documentaries, inquired if WEC would consider collaborating and supporting a documentary on the WMDP. Mr. McGrath requested a proposal from Mr. Kuntz for WEC's consideration.

Spolana

Mrs. Hofmanova and Mr. McGrath met with Mr. Dobes, Chief of Spolana's Environment Department and Mrs. Behnerova, Head of its Wastewater Management to discuss a possible WMDP.

Spolana employs 4,400 employees. Its main product is cellulose fibre. It also produces chlorine, hydrochloric acid, vinyl chloride monomer, polyvinyl chloride, caprolactum and ammonia sulphate among other products.

Mr. Dobes expressed interest in a WMDP and he will provide information about Spolana after WEC sends WMDP information to Mr. Barkman.

Czech Environmental Management Center

During his last visit, Mr. McGrath inquired if there is a local Czech public relations firm that could work with WEC in publicizing its Waste Minimization program.

Mr. Matyas invited a local P.R. firm to give a presentation about its capabilities because CEMC also recognizes its need to publicize its activities. He said that there may be a possibility of CEMC and WEC using the same P.R. firm.

DMMS is a one year old Czech firm that provides P.R. and direct mail services. It has seven young people employed. Also, it has a working relationship with McCann-Erickman, one of the largest P.R. firms in the world, based in New York.

A copy of the DMMS presentation is available from WEC.

Following the DMMS presentation, Mr. McGrath asked its presenters questions to determine how they could assist WEC.

Ms. Hofmanova, Mr. Matyas and Mr. McGrath discussed public relations needs. Mr. Matyas informed us that CEMC had interviewed several U.S. firms, but their fees were too high.

CEMC agreed with Mr. McGrath's request that we should use a Czech firm because of culture and cost. Mr. Matyas advised that of the three Czech P.R. firms, CEMC recommends DMMS as the best one.

Mr. McGrath requested Mr. Matyas to consider WEC's needs, which are primarily assistance in writing and media contacts. He also requested information about DMMS' fees.

SLOVAK REPUBLIC

Thursday, September 23

Ms. Olga Hauskrechtova and Mr. Thomas J. McGrath met with Mr. Hedja, President, Chemia, to discuss the afternoon meeting with the Preparatory Committee of the Association of Slovak Environmental Managers. Ms. Olga Hauskrechtova, Mr. Samuel Hale, Jr., and Mr. James Taft, U.S. AID, and Mr. Thomas J. McGrath, met with members of the Preparatory Committee of the Association of Slovak Environmental Managers in Bratislava. The meeting was held at the offices of Chemia, the organization that represents the Slovak chemical companies.

In his previous visits, Mr. McGrath met with representatives of the new association and discussed possible collaboration with WEC. The purpose of today's meeting was to continue the discussion directly with the Preparatory Committee and reach agreement on a proposed Memorandum of Understanding between ASPEK and WEC.

The result of the discussion was agreement on a draft M.O.U. that would be discussed at a meeting on Friday. This meeting, arranged by Chemia of its members, would have most, if not all, General Directors of Slovak chemical companies.

Mr. McGrath will discuss the WEC Waste Minimization program. The General Directors of Chemko, Petrochema, where WMDP are in progress, will attend.

Friday - September 24

Messrs. Taft, Hale and McGrath addressed the members of Chemia about U.S.AID/WEC programs in Slovakia.

Mr. Taft discussed AID assistance and his meeting with the Ministry of Environment about a proposed environmental compliance program. He and Mr. Hale advised that discussions have begun about a program that would develop a timetable for industry compliance to new environmental regulations based on current and projected conditions.

Mr. Hale requested the assistance of a company in developing a case study that would present an opportunity for industry input into the compliance discussions.

Mr. McGrath explained the WEC organization, its objectives and its current and future projects in Slovakia.

The attendees stated their concerns about economic conditions and their needs for industrial environmental information from the U.S.

Specifically, the attendees requested:

1. Input into Slovak regulation during the development stage.
2. Environmental information on U.S. industry manufacturing of paint and dyes.
3. U.S. information on the future of mineral based oils versus vegetable based oils.

Mr. Jaroslav Gilani, General Director, Chemko, complimented the progress of the WMDP. He noted that obtaining accurate reading of its benzene emissions not only will improve the environment when corrective action is taken, but will also increase security at the factory by reducing the risk of explosions.

Mr. Matas, General Director, Petrochema, said that the company and WEC selected a process, reduction of sulphur loss during the reaction of SO_2 from SO_3 , because it could have broad industry implications. Almost every chemical company has a sulphur emission problem.

During the discussion period, Novatce Chemical Company volunteered to work with Mr. Hale in developing the compliance case study.

The M.O.U. between Aspek and WEC was reviewed and approved. Mr. McGrath said he will submit it to Mr. Antony G. Marcil, WEC President, for his review and signature.

After the close of the official meeting, six attendees spoke with Mr. McGrath. A research institute and a consulting firm expressed interest in participating in the WMIP.

Several General Directors complimented WEC on its realistic approach to environmental problems and said they will participate.

Particularly important were the positive comments from Slovnaft, the largest refinery in Slovakia. Slovnaft has expressed no interest in participating in any WEC program choosing to "go it alone". They are making impressive progress in their efforts.

Mr. Vratko Kassovic said that he is impressed with the WEC program and that Slovnaft will support it.

Chemia

Ms. Hauskrechtova and Mr. McGrath met with Mr. Hedja, Chemia and Mr. Prizimin, President, ASPEK.

Mr. Hedja congratulated WEC on its presentation. He said that the General Directors who spoke with him after the meeting had positive comments and will support the WEC program and ASPEK.

He requested Mr. McGrath make every effort to return in the latter part of November for the general meeting of ASPEK. Mr. McGrath said that barring some emergency, he would attend.

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V. APPENDIX

P R E S E N T A T I O N

CHEMOPETROL

**Waste Minimization
Project**

Project Objectives

- Reduce fugitive VOC* emissions
- Reduce exposure to toxic compounds
- Reduce emission fees and penalties
- Reduce operating costs
- Provide training
- Provide method to assess savings

* Volatile Organic Compounds

CHEMOPETROL

Waste Minimization, A Team Effort...

USA.I.D.

CHEMOPETROL

ChemPlan

CHEMCONS

MALCOLM

PIRNIE

World

Environment

Center

WEO

MALCOLM
PIRNIE

5

CHEMOPETROL

Project Stages

1

May - December 1992

- Purchase instrument (Foxboro OVA108)
- Aromatics plant - 2.489 emission points

2

January - May 1993

- Completed refinery - total of 35.115 points

3

Start late 1993

- Two petrochemical plants

W&G
MILKIN
IRNIE



CHEMOPETROL

Steps

- Measure VOC concentration
- Record measurement
- If less than 1.000 ppm = OK
- If 1.000 to 10.000 ppm = remeasure or repair
- If greater than 10.000 ppm = repair
- Calculate emissions/savings

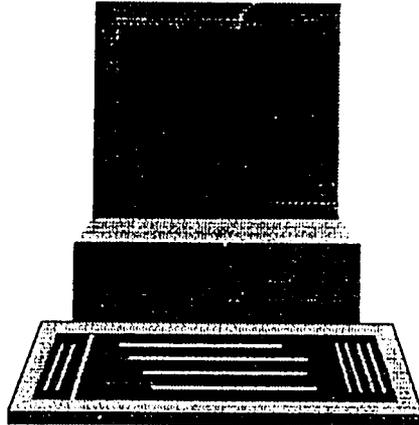
WEO

WILKINSON
PINTS

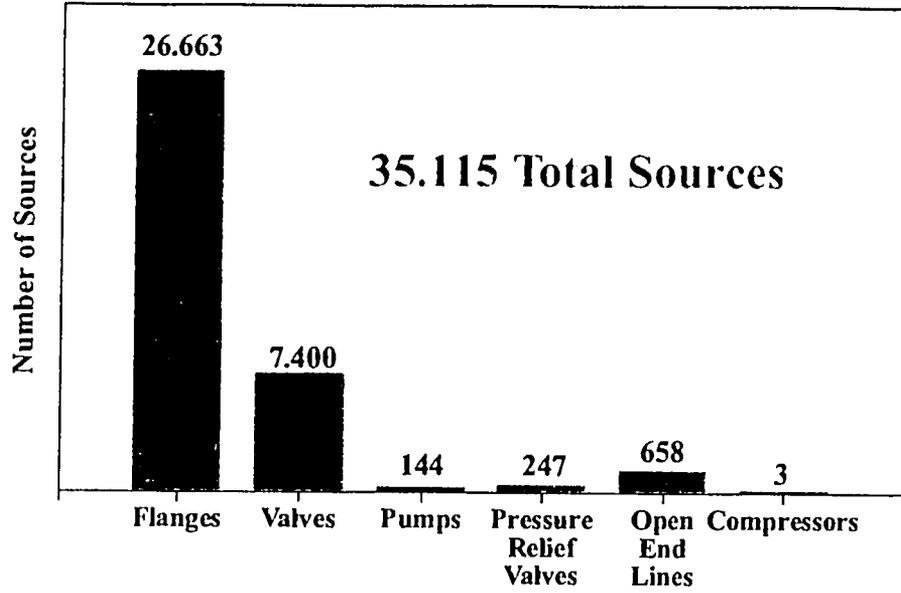
CHEMOPETROL

Advancements

- Computerization
- Plant-specific instead of industry-wide emission data



Results

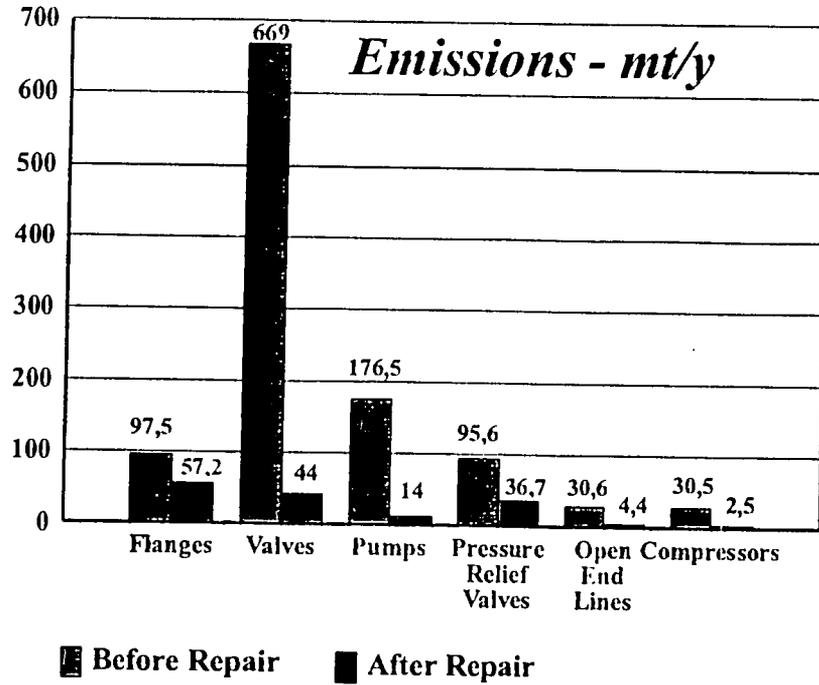


CHEMOPETROL

WEO

MAICCA
FIRNIE

Results



CHEMOPETROL

Results

- Emissions reduced by over 940 mt/y (85% reduction)
- Savings of 3.900.000 Kčs per year

MAICEMI
DIRNET