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### **FOREWORD**

Dear Readers,

in the Annual Report which gets into your hands, you can find information about DECOM, a.s. activity in the year 2011. The task of nuclear facility decommissioning in the Slovak Republic including solving the problem of decontamination, dismantling, demolition, nuclear spent fuel and radioactive waste management became richer for another year experience. Nuclear power plant A1 is in the 2<sup>nd</sup> stage of decommissioning and Nuclear Regulatory Authority issued the licence for the 1<sup>st</sup> stage of decommissioning of nuclear power plant V1. Performing of such kind of activities is complex, time consuming and technically complicated activity. The preparation of such process requires knowledge in different scientific fields which are transformed to documentation necessary for performing the decommissioning.

For a long time DECOM, a.s. deals with elaboration of documentation, with cost calculations and cost analysis for process of nuclear facility decommissioning. In this field, company cooperates with IAEA, EC and OECD/NEA. As a result of cooperation the new International Structure for Decommissioning Costing of Nuclear Installation was issued. The computer code OMEGA, developed in the company, is used for calculation of costs and other parameters of nuclear facility decommissioning and back-end of nuclear fuel cycle. The computer code works on the basis of specific unit factors, which are based on the experience from the industry in nuclear and non-nuclear area.

The company elaborated a number of documents such as safety reports, decommissioning studies, conceptual decommissioning plans, stage decommissioning plans, environmental impact assessment studies for nuclear power plants A1, V1 a V2 in Jaslovske Bohunice site, nuclear power plant EMO 1,2 and constructed MO34 in Mochovce site, abroad nuclear power plants Dukovany (Czech Republic), Cernavoda (Romania) and Paks (Hungary), for Bohunice radioactive waste treatment centre, Interim spent fuel storage in Jaslovske Bohunice, Radioactive waste repository Mochovce and nuclear centre Studsvik. Similar documents were elaborated for activities such as radioactive waste management, spent nuclear fuel transport, retrieval and transport of liquid radioactive waste. The company performs the solution of specific problems connected to operation, reconstruction, life extension and long term operation of NPP.

DECOM, a.s. provides engineering, consulting, documentation activities and technical support in following areas:

- technical and economical analysis of various variants of decommissioning of nuclear facilities including development of relevant methodologies,
- elaboration of basic technical documentation for decommissioning of nuclear facilities,
- elaboration of documentation for environmental impact assessment for the process of decommissioning of nuclear facilities or construction of new facilities and technologies,
- elaboration of basic technical documentation for radioactive waste and spent nuclear fuel management,
- elaboration of safety assessment documents for nuclear facilities focused on their decommissioning,

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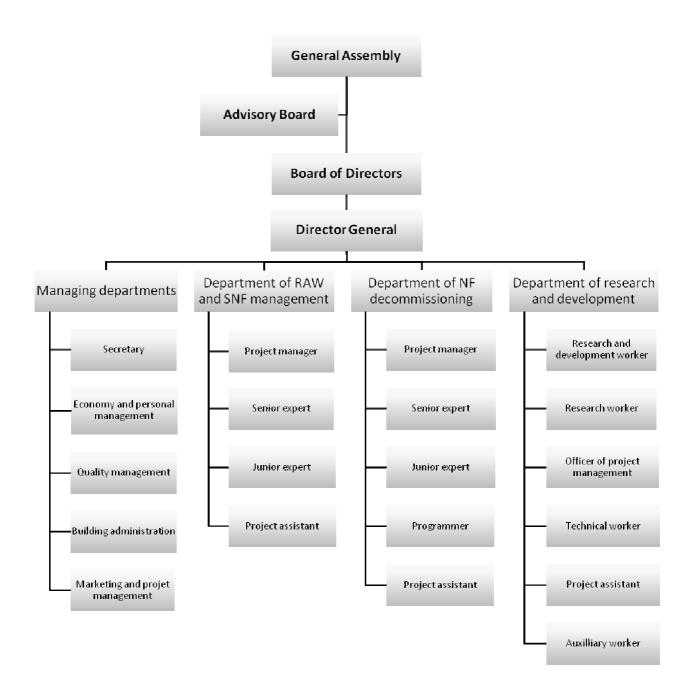


- elaboration of safety assessment documents for technological systems for radioactive wastes and spent nuclear fuel management,
- development of database for decommissioning of nuclear facilities and its applications,
- elaboration of exposure analysis, optimization according to the ALARA principles, calculations of dose rates, 2D and 3D visualization of radiation fields,
- decontamination, dismantling of technological equipment and demolition of building structures during decommissioning of nuclear facilities,
- engineering and technical support for decommissioning of nuclear facilities,
- elaboration of studies and methodology for conditional release of large amount of materials from decommissioned nuclear facilities to environment using recycling and further reuse,
- elaboration of analysis evaluating long term impact of recycled decommissioned materials on the environment caused by migration of radionuclides in nature conditions,
- release of materials from the nuclear facility to environment: procedures and criteria,
- elaboration of documentation and technical support for institutional radioactive waste management,
- elaboration of studies and analysis for local region secure energy supply oriented to support utilizing the conventional or renewable energy sources,
- documentation preparation and technical support for non-radioactive toxic waste management.

DECOM, a.s. elaborates technical documentation for nuclear power engineering by using experienced experts covering all main activity of company. Company has needed material tools and software including own computer codes which are used to elaborate relevant documentation and provide technical and economical comparison of calculated options required in the frame of document elaboration.



# **ORGANIGRAM**



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#### PROFESSIONAL ACTIVITY

The professional activity of DECOM, a.s. could be divided on five fields:

- the elaboration of documentation for decommissioning of nuclear facilities,
- radioactive waste and spent nuclear fuel management,
- · preparation of long term operation of nuclear power plants,
- · research and development activities in the above mentioned fields,
- technical assistance on NPP A1 decommissioning activities

The support documentation for the license issued for individual stage of nuclear facility life-cycle has to contain real concept of decommissioning for each time period, whether before start of operation, during operation or before start of decommissioning. The decommissioning strategy selection of concrete nuclear facility depends on many deferent issues and parameters and it is a result of multi-criteria analysis. In general, it could be remarked, that for each nuclear facility there are some specifics which have to be taken into account in the process of planning and implementation of decommissioning. This is the case especially for nuclear power plants with non-standard termination of operation period, or if the parameters of contamination of facility equipment are unusual for such type of power plant.

The elaboration of decommissioning documentation of nuclear facility begins during its operation with collecting the data characterizing the state of nuclear facility. It continues with defining its conditions prior to the beginning of the decommissioning; this determines the proposal of decommissioning option including the procedures of decontamination, dismantling of equipment, demolition of buildings and waste management. The presumed process of the nuclear facility decommissioning is transformed into a calculation model used for evaluating and optimizing the necessary decommissioning parameters of the option. The outputs of the calculations are processed by using multi-criteria analysis resulting in selection of optimal option. Described methodology of elaboration of documentation was used in 2011 for preparation of Conceptual decommissioning plan for 3rd and 4th unit of nuclear power plant in Mochovce which is now under completion. Company created a mathematical model for calculation of decommissioning costs of nuclear power plant Cernavoda (Rumania) together with Canadian company Kinetrics (Candesco). The calculation of costs for some specific decommissioning projects was performed as a contribution to the process of V1 decommissioning. The elaboration of methodology for cost calculation for the decommissioning of nuclear facilities in Research Centre Studsvik (Sweden) was realized. The training of experts of All-Russian Research Institute for Nuclear Power Plant Operation and Nuclear Power Plant Chernobyl was performed to facilitate the effective use of document International Structure for Decommissioning Costing of Nuclear Instalations, recommended by IAEA, OECD/NEA a EC.

Another principal activity of the company is the technical support for radioactive waste and spent nuclear fuel management. The company was a member of a consortium dealing with the European project SAPIERR II finished in the year 2009. The aim of the project was to find a possibility for establishment of deep geological repository in the EU conditions. A working group, in which DECOM a.s. plays an important role, for preparation of the company ERDO (European Repository Development Organization) implements the project results into practice.. In this field, the company elaborated also Radioactive waste and spent

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fuel management plan as a part of documentation required for preparation of operation nuclear power plant in Mochovce which is now under completion.

DECOM, a. s. cooperates with universities, especially with Slovak University of Technology in Bratislava utilizing the newest results of research and development activities to improve the efficiency of further activities. The cooperation resulting to the research project Conditional release of materials from decommissioning of nuclear facilities (CONRELMAT) which is financed by the Ministry of Education, Science, Research and Sport of SR from fund used for stimulation of research and development activities. The main goal of the project is to assess the possibilities for recycling of very low level contaminated materials arising during nuclear power plant decommissioning, to suggest their further application at different industry areas and to demonstrate the safety from radiation point of view.

The next research activity of company on international level is participation on the project Implementing Public Participation in Radioactive Waste Disposal (IPPA) which is financed by European Commission (means of 7<sup>th</sup> Framework Program for the field of nuclear energy). The project started in January 2011 and it is coordinated by Karita Research (Sweden). The main goals of the solution are:

- improving the quality of decision making processes in radioactive waste management,
- · implementation of public involvement and transparency increasing,
- practical organization of forums for dialogue in national programs and exploration of task how this can be done also in the multinational context.

The company started in 2011 the activity in the new research field - life-time extension of nuclear power plants. The strategic goal of project is elaboration of methodological procedures for evaluating the competence of long term operation of nuclear power plant and its impact to the environment. Regarding such kind of analysis for concrete nuclear power plant it will be feasible to prolong planned operation period.

The outcome of research project, co-funded by the Agency of Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of EU, are the technological procedures for review the state on safety-significant and operating equipment of nuclear power plant. It means procedures for evaluating existing maintenance and qualification programs with respect to the operation of nuclear power plants beyond the designed life-time. The procedures for assessing the technical state of nuclear power will be used to elaborate documentation to permit long-term operation of nuclear power plants.

The projects in the field of local secure energy supply is a new challenge to extending the professional activity of the company. In the frame of needs of Trnava Self-governing Region the utilization of conventional and renewable energy sources was assessed and the possibilities for its using in further strategic development was discussed taking into account the economic and ecological aspects.

The company also provides technical assistance to the decommissioning of NPP A1 activities, such as: radioactive waste management, dosimetry control of sludge processing line, post-dismantling decontamination and retrieval of liquid radioactive waste to another storage area.

The company will further focus on engineering and supporting activities for the processes of decommissioning of nuclear facilities and radioactive waste and spent nuclear fuel management, applying the result of research and development.

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# SAFETY AND HEALTH PROTECTION

The politics of the company in the field of safety and health protection at work presents the philosophy of the company in accident prevention, improvement of working conditions, work culture and protection of employees. It can be formulated into the following points:

- safety and health protection at work is equivalent and inseparable part of performing the company's goals,
- occurrence of industrial accident or any industrial disease is a undesirable situation for the company,
- safe behavior is a personal responsibility of individuals and one of the conditions of the employment,
- · life and health of the employees are pre-eminent to other decisions,
- system of safety and health protection at work results from legal requirements in this field.

The system of safety and health protection at work is regulated by professionally certified extern company ENSARA. There was no industrial accident in 2011 at the working place of DECOM, a.s. There were 578:23 hours spent for the needs of medical examination or treatment of employees (17:47 hours per employee), 439:00 hours (13:29 hours per employee) for sickness absence and 331:00 hours were spent for the whole day medical examination or treatment and accompanying a family member to a healthcare institution (10:10 hours per employee).

The health care service is managed by external company MEDI RELAX M+M, a.s. Bratislava.

### FIRE PROTECTION

DECOM, a.s. does not have any working places with increased danger of fire occurrence. The protection from fire forms a complex of activities connected with fire prevention, and in case of fire occurrence it is targeted to its extinguishment. For this purpose, preventive anti-fire inspections at the working places are performed minimally once a year. The function of Fire prevention technician is performed by a professional certified specialist - external company BEPO Servis, Dobrá Voda.

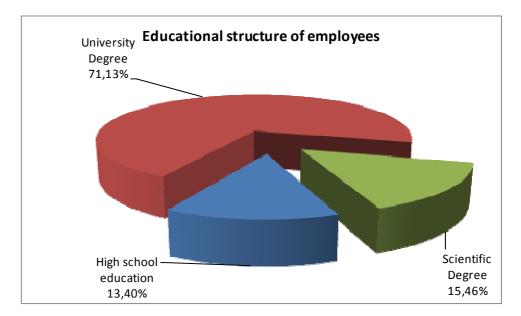
There was no fire in 2011 at the working places of DECOM, a.s.

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# **HUMAN RESOURCES**

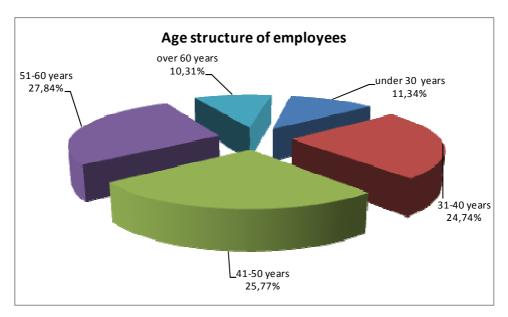
As of the start of 2011 DECOM employed 25 persons. During year 2011, 80 people were admitted and 15 employees terminated employment (78 new employers work on a part-time). In the end of year company employed 90 people. Besides these employees 23 persons work for company as external experts. Educational and age structure of employees is in the following pictures.



Special attention is given to education in the company. The main goal is to prepare and maintain competent personnel that will keep the quality of company outputs at a high level through their own abilities and knowledge. Altogether 2 workers are improving their education by a PhD. study.

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# REPORT ON BUSINESS ACTIVITY AND FINANCIAL STATE OF THE COMPANY

#### **COMMENT ON ECONOMIC RESULTS**

The total revenue for year 2011 was 1 606 795,57 €, what is 91,82 % from revenue presumed in the business plan. Revenue from sale of own services was 986 898 €, changes in internal inventory -90 680 €, other operation income was 706 906 €, revenues from sale of long-term assets and sold material 1 900 € and gains from financial operations (interest income and exchange rate gains) was 293 €.

Total costs were 1 556 496,16  $\in$ , what is 91,87 % from costs presumed in the business plan. The saving in costs was caused by the lower revenues and total costs corresponds to operation needs of company.

[€]

Revenue from production	896 218
Production expenses	- 451 217
Added value	445 001
Personnel expenses	- 796 670
Taxes and fees	- 1 779
Amortization and value adjustments to non-current intangible assets and depreciation and value adjustments to property, plant and equipment	- 32 575
Revenues from sales of long-term assets and sold material	1 900
Depreciated price of sold long-term assets and sold material	- 582

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Other operating income	706 906
Other operating expenses	- 7 718
Profit/loss from operations	53 096
Interest income	299
Interest expense	- 1 218
Exchange rate gains	1 473
Exchange rate losses	- 2 028
Other expenses related to financial activities	- 1 323
Profit/loss from financial activities	- 2 797
Profit/loss from ordinary activities before tax	50 299
Income tax on ordinary activities	- 6 532
Profit/loss for the accounting period after tax	43 767



#### **ASSETS**

Assets of the company consists of 8,80~% for fixed assets, 81,66~% for current assets and 9,54~% for accrual.

Fixed assets are non-current intangible assets (software) in the share of 20,48 % and tangible fixed assets in the share of 61,34 %. Status of current assets is 17,21 % of inventories, 0,07 % of long-term debts, 60,41 % of current receivables and 22,31 % of financial accounts. Accruals and deferrals are 3,00 % prepaid expenses and 97,00 % deferred incomes.

Total assets	789 510
Fixed assets	69 461
- Non-current intangible assets	14 226
- Tangible fixed assets	55 235
Current assets	779 166
- Inventories	110 974
- Long-term debts	420
- Current receivables	389 499
- Financial accounts	143 810
Accrual	75 346
- Prepaid expenses	110 974
- Deferred income	420

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# **LIABILITIES AND EQUITY**

Total liabilities consist of 63,75 % of equity, 36,22 % of liabilities and 0,03 % accrual.

Equity is made up 34,30 % of shared capital, 7,65 % of funds created from profit (legal reserve fund), 49,35 % of net profit of previous years and 8,70 % of net profit of the accounting period after tax. Liabilities are formed by reserves in amount 11,61 %, non-current liabilities in amount 7,69 % and current liabilities in amount 80,70 %. Accrual are formed by accrued expenses.

Total equity and liabilities	789 510
Equity	503 307
- Shared capital	172 640
- Legal reserve fund	38 506
- Net profit of previous years	248 394
- Net profit of the accounting period after tax	43 767
Liabilities	285 928
- Reserves	33 184
- Non-current liabilities	21 998
- Current liabilities	230 746
Accrual	275
- Accrued expenses	275

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