

2. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1 Introduction

The objective of this Section is to introduce the Ukrainian legal framework, including concerns of public participation; regulations dealing with specific subjects are described in other Sections as required.

The political changes of 1991, and the subsequent dissolution of the Soviet Union, have led to substantial changes in the legal system of Ukraine. A considerable effort has been made by the Ukrainian government to develop a sound and comprehensive legal and regulatory framework.

The Ukrainian system is a combination of documents approved before independence and still valid, and of new ones approved after independence and which reflect a more decentralised approach towards safety. This decentralised approach aims at rendering the operators of nuclear plants responsible for the safety of their installations; therefore, the responsibility of the safety authorities is to define objectives and to verify that adequate procedures are set up and correctly implemented by the constructors and operators of nuclear plants. It represents a complete change in approach and may, therefore, take some years for full implementation.

2.2 Ukrainian legal framework

Regulating and supervising the safety of nuclear installations is the responsibility of the Ministry of Environmental Protection and Nuclear Safety (MEPNS) and the Ministry of Health Protection (MHP) of Ukraine.

2.2.1 Responsibilities

2.2.1.1 The Ministry of Environment Protection and Nuclear Safety (MEPNS)

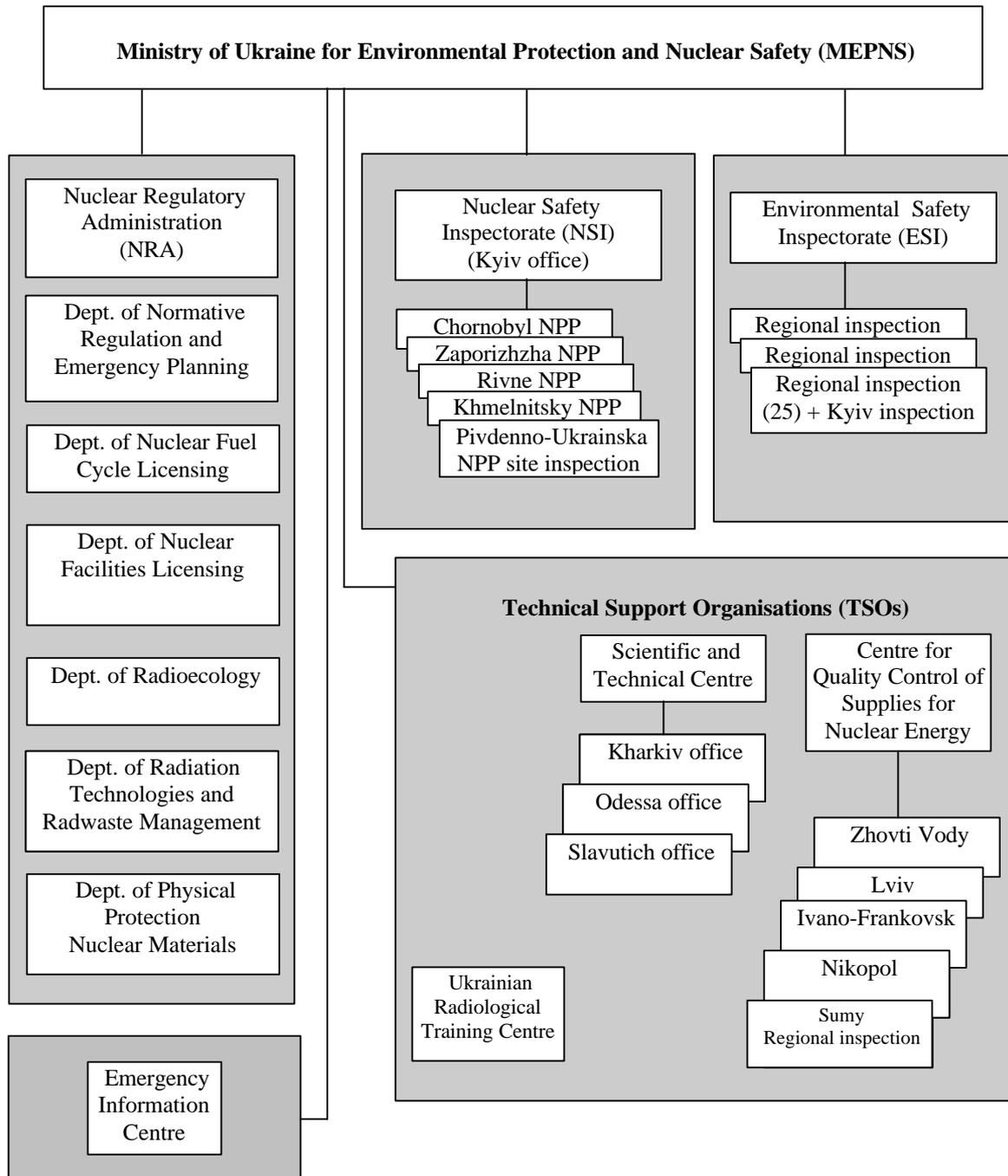
MEPNS comprises three directorates which share the responsibility for nuclear safety (Figure 2.1):

- *The Nuclear Regulatory Administration (NRA)*, which took over the responsibilities of the former "State Committee for Nuclear and Radiation Safety".

The basic types of activities covered by the NRA are:

- establishing regulatory criteria and requirements on nuclear and radiation safety;
- issuing licenses to perform activities associated with the use of nuclear installations and ionising radiation sources;

Figure 2.1
Organisation chart of the Ukrainian NRA



- supervision over compliance with regulatory requirements on nuclear and radiation safety and licensing conditions;
- arrangement and performing of scientific R&D aimed at improving the safety level of nuclear installations and ionising radiation sources, resolving physical/engineering issues of radiation protection for public and environment;
- performing State accountancy of nuclear materials and control of their storage and utilisation;
- analysing up-to-date international experience in the area of safe utilisation of nuclear power; and
- providing the Ukrainian Parliament, the President of Ukraine, the Ukrainian Government and the public with information on the safety status of nuclear power sites.

The NRA comprises six departments, including the "Emergency Planning and Response Department" which is in particular responsible for: analysis of current situation at NPPs; a continuously updated computerised data bank on NPP abnormal events and production of monthly, quarterly and annual reports on violation of regulations.

- *Nuclear Safety Inspectorate (NSI)* (one office in Kyiv and one at each of the five Ukrainian NPPs).

The basic functions of NSI are:

- arrangement and performing of State supervision of compliance with legislative and regulatory requirements, implementation of measures ensuring safe operation of nuclear installations, training of personnel;
- preparation, based on inspection results, of mandatory arrangements and/or measures to be taken by applicants in order to eliminate any revealed violations and/or deficiencies;
- development of procedures for inspection of the safety status of nuclear facilities;
- review and co-ordination of personnel training methodological documents on the verification of knowledge of rules and regulations of nuclear and radiation safety;
- safety report analysis of operating organisations and participation in the development of proposals for improvement of environmental safety of nuclear installations; and
- study and implementation of international experience in inspection activities in the area of nuclear and radiation safety.

Decisions taken by the Inspectorate can be challenged in court by plant operators. So far, it has always been possible to reach a consensus at the technical level on what should be done to remedy faults or bad practices.

Contrary to the situation that prevails in most European countries, NSI is independent from NRA. There are many technical contacts between the two organisations and incident analyses produced by the inspectors are transmitted systematically to NRA staff.

According to the Enactment of the Cabinet of Ministers of Ukraine of September 21, 1995 N° 751 [2.1], NSI has the authority to:

- impose, according to procedure, financial sanctions on enterprises and organisations irrespective of their type of property and activity in case of violation of legislative acts, rules, regulations and standards on nuclear and radiation safety and in case the conditions of granted licenses are not met;

- apply certain sanctions, according to existing procedure, to individuals who may violate legislative and other regulatory acts on nuclear and radiation safety;
- provide licensees with data on the insufficient competence of individuals holding certain offices and to provide law enforcement authorities with the corresponding data, if necessary;
- limit, suspend, or cease operation of nuclear facilities when nuclear and radiation safety requirements are not met.

The Inspectorate has five local offices and local inspectors are "on-site residents". Besides the advantages such a disposition may offer, it presents some disadvantages, particularly when inspectors are maintained on duty on the same site for too long. It is the intention of the Chief Inspector to avoid inspectors remaining on the same site for too long.

- *The Environmental Safety Inspectorate (ESI)* is the third directorate of MENPS which has a responsibility in nuclear safety .

The ESI shares with NSI the responsibility for radiation safety surveillance. Radiation safety surveillance outside nuclear facilities has been assigned to ESI which has regional offices in all the 26 administrative regions of Ukraine. New divisions responsible for radiation safety were created within these regional Inspectorates.

- *Several specialised centres* report to the Ministry; these Technical Support Organisations (TSOs) work for the three aforementioned organisations.

Two of the TSOs indicated on Figure 2.1 deserve special attention i.e.

- “The Scientific and Technical Centre”. Its staff has increased rapidly (90 in 1993; 150 in 1994; 190 in 1995; 280 in 1996). Moreover, since the beginning of 1996, it has been funded by income from a special tax. It does not work for operators of nuclear installations.
- “The State Centre for Supply Quality Control”

TSOs were recently separated from the Inspectorate; this measure was the first step of a reorganisation which should result in the transfer of its staff to an organisation (to be created) directly responsible to the plant operators.

It is the policy of the Ukrainian regulatory authorities to encourage the Ukrainian nuclear industry to develop its own Quality Assessment System. By law, the nuclear industry is responsible for the safety of its activities; an efficient Quality Assurance Program is essential for this purpose.

2.2.1.2 The Ministry of Health

The Ministry for Health Protection of Ukraine (MHP) is the competent State authority executing control of, and supervision over, compliance with sanitary legislation, standards, criteria and requirements aimed at ensuring the health and "sanitary/epidemiological well-being" of the population.

The agencies of the sanitary/epidemic sector under the MHP are part of the State sanitary/epidemiological service of Ukraine's sanitary doctor general, whose parallel office is as first Deputy Minister for Health Protection of Ukraine. In issues concerning sanitary/epidemiological supervision, the State sanitary doctor general reports directly to the Cabinet of Ministers of Ukraine.

The basic areas covered by the State sanitary/epidemiological service are:

- State sanitary/epidemiological supervision;
- defining priorities for disease prevention as well as public health protection against adverse effects of environment;
- study, assessment and forecasting of public health status, defining adverse environmental factors;
- preparation of proposals for ensuring the sanitary/epidemiological well-being of the population;
- control over eliminating causes of and conditions for the emerging and spread of contagious, mass non-contagious diseases, poisoning and radiation exposure of people; and
- State accountancy of contagious and occupational diseases and poisonings.

The tasks of control over compliance with radiation safety standards, sanitary rules for handling radioactive substances and other sources of ionising radiation at enterprises and organisations are delegated to the radiological subdivisions of authorities for State sanitary epidemiological supervision which cover the corresponding territories.

2.2.2 The legislative framework

2.2.2.1 Main laws applied to nuclear energy and safety

The law "On Natural Environmental Protection", adopted by the Ukrainian Parliament on June 25, 1991 [2.2], provides a number of important rights and obligations concerning public participation, namely the right of referendum, the right to obtain full and adequate information, the right to participate in ecological inspection, the right to participate in State expert examination (see below), the right to settle disputes before a court of law or by arbitration, additional rights for public association.

The law "On Utilisation of Nuclear Power and Radiation Safety", adopted by the Ukrainian Parliament on February 8, 1995 [2.3] provides the main definitions and sets the main objectives of the safety policy of Ukraine. It establishes priorities, civil rights and responsibilities in the area of nuclear energy utilisation, regulates activities associated with operation of nuclear facilities and ionising radiation sources and establishes a legislative basis for Ukraine's international commitments as to nuclear energy utilisation.

The law "On Radioactive Waste Treatment", adopted by the Ukrainian Parliament on June 30, 1995 [2.4], establishes the underlying principles of Government policy in the area of radioactive waste management, defines the competencies and responsibilities of the Governmental authorities, legal entities and individuals responsible for radioactive waste management, establishes a State accountancy system and procedures for radioactive waste management, and establishes a legislative basis for international co-operation in the area of radioactive waste management.

The law "On Ecological Examination" endorsed by the Ukrainian Parliament February 9, 1995 [2.5] establishes basic aims and tasks of ecological expertise, requirements for conducting such expertise and responsibility for violations of legislation in this area. The law addresses the transparency of such expertise and public participation in the expertise process. It also reviews types of expertise (including public expertise), requirements for documentation, procedures for conducting expertise. The status of an expert of the environmental expertise is established as well as his/her rights and responsibilities, guarantees of independence, and rights and responsibilities of the expertise customer. In this respect, Article 27 refers to an expert as a specialist with a high education and corresponding speciality who possesses an expertise and professional knowledge, skills in analysing expert information, methodological approach for the ecological expert assessment, and practice of working in the area of interest for not less than three years. The law also presents the legislative basis for international co-operation in the area of environmental expertise.

The law "On Ensuring The Sanitary and Epidemiological Safety of the Population", adopted by the Ukrainian Parliament on February 24, 1994 [2.6] regulates public relations in the area of ensuring sanitary and epidemiological well-being, defines the corresponding rights and duties of State authorities and individuals, and establishes the procedure for arranging the State sanitary/epidemiological supervision in Ukraine. The law addresses tasks, subjects of and procedures for effecting the State sanitary/hygienic expertise; requirements for food products, service and potable water supply, atmospheric air, resident and industrial premises; disciplinary, administrative, civil and criminal responsibility for violation of sanitary legislation, including financial sanctions and international relations of Ukraine in the area of ensuring the sanitary and epidemiological well-being of the population. Notably, Article 23 establishes requirements on ensuring radiation safety at enterprises producing, storing, transporting, using and carrying out the disposal of radioactive substances and ionising radiation sources. The measures for public protection against adverse effects of ionising radiation are also discussed.

2.2.2.2 Main laws applying to environmental impact assessment

Article 51 "Ecological Requirements On The Location, Design, Construction, Reconstruction, Commissioning And Operation Of Enterprises, Structures And Other Projects" of the Law on Environmental Protection [2.2] stipulates that "projects on economic or other types of activity shall be supplemented with relevant materials as to the assessment of the impact thereof on the environment and health of the population", i.e. with the Environmental Impact Assessment (OVNS).

At present, the Ukrainian methodological basis for developing the OVNS for the Khmelnytsky and Rivne NPPs is represented by two documents [2.7, 2.8] which must be considered together, as the Resolution [2.28] complements, explains and specifies in terms of the organisational and methodological aspect, the structure and contents of "The Interim Regulations"[2.27] with regard to high-level preparedness for the start-up of K2 and R4.

The State Construction Standards DBNA2.2-1-95 [2.9] which took effect in 1995 are consistent with the above documents in the methodological approach towards assessing the environmental impact; however, they are more specific in regard to the organisation and process of OVNS development. In the mandatory annexes 2 and 3, the standards define the form and contents of the documents (“Declaration of Intentions” and “Tasks on OVNS Development”) which are to be drawn up prior to completing the OVNS.

The process of OVNS development shall be finalised with submission of the prepared materials for State ecological examination.

The package of legislative codes issued in Ukraine [2.5, 2.10, 2.11] provides exhaustive information on the relevant procedures for ecological examination.

2.2.3 The regulatory framework

The following regulatory documents - called "normative papers" - were recently adopted; they complement documents formerly published in Moscow.

- Radiation Safety Standards, NRB 76/87, 1988, [2.12].
- NPP siting requirements, 1987 [2.13].
- Sanitary regulations for NPP design and operation, 1989 [2.14].
- General provisions for NPP safety, 1989 [2.15].
- Sanitary regulations for radioactive waste management [2.16].
- Basic sanitary standards for working with radioactive substances and other sources of ionising radiation. BSS 72/87, Moscow 1988 [2.17].

Other "normative documents" concern:

- format and content of the "Radioactive Waste Annual Safety Reports" to be produced by each institution licensed for handling radioactive wastes [2.18]; and
- the containers utilised for disposal of radioactive wastes of classes I and II [2.19].

2.2.4 The licensing process

The licensing process to be applied to future plants is similar to that implemented in Western European Countries; it involves the following steps.

- Preparation of a feasibility study and decision of principle by the Cabinet of Ministers.
- Choice of a site by the Cabinet, based on the three sites proposed by the proponent.
- Project design, which leads to a decision by the Cabinet to authorise the construction of the plant. At that stage, the production of an OVNS is compulsory.
- Authorisation to load the reactor with nuclear fuel, for appropriate tests and verifications and authorisation to operate.

Only the first two steps have already been implemented for the present project.

According to decision No.1 taken at the Board Meeting of MEPNS, an operational license has been granted to Zaporizhzhya NPP Unit 6. It means that the licensee has carried out specific

licensing conditions and that the list of safety case documents to submit to the MEPNS has been agreed.

The analogous licensing process will be implemented for Rivne 4 and Khmelnytsky 2. In the case of K2, the OVNS will have to be produced - and assessed by the TSOs - before the authorisation to load fuel can be granted.

2.2.5 Analysis of the last NRA activity report

In 1996, the NRA published a "Report on the status of nuclear and radiation safety in Ukraine - 1995 reporting year" [2.20]. This report was prepared in collaboration with the Science and Technology Centre for Nuclear and Radiation Safety and the Main State Inspectorate. It provides the public with the main data concerning operation of the Ukrainian nuclear power industry.

It contains a reminder of the nuclear and radiation safety regulatory framework in Ukraine and an analysis of the Ukrainian NPPs nuclear and radiation safety status. Information is provided concerning radiation safety (individual dose distribution and annual collective doses for each plant, radiation status in areas surrounding NPPs and uranium mining and milling industry). The main safety problems of VVER reactors are also identified, like the time to drop the control rods or the unsatisfactory implementation of the programme aimed at improving NPP fire protection. The modernisation programme approved by NRA aims at overcoming such problems.

2.3 International relations

2.3.1 International treaties and obligations

The laws of Ukraine in the field of Nuclear Protection and worker radio-protection are compliant with the recommendations of international recognised agencies and commissions such as:

- IAEA - International Atomic Energy Agency.
- ICRP - International Commission for Radiological Protection (ICRP). Until now, ICRP 26 recommendations have been applied at Khmelnytsky NPP, but it is planned to follow ICRP 60 recommendations.

In addition, the Ukraine Government subscribed to the Espoo Convention which is a transborder convention.

The Ukrainian Government is represented on the Board of EBRD which sets up the policy of the Bank, in particular its environmental policy.

Ukraine has signed and ratified many international conventions including the following.

- Convention on early notification of a nuclear incident, ratified on January 26, 1987.
- Convention on providing assistance in case of a nuclear incident or radiological accident, ratified on January 26, 1987.

- Convention on physical protection of nuclear materials, the act of joining the convention signed on July 6, 1993.
- Nuclear weapons non-proliferation treaty, the act of joining the convention signed on December 5, 1994.
- Convention on nuclear safety, signed on September 20, 1994.
- Vienna convention on civil liability for nuclear damage, the act of joining the convention signed on July 12, 1996.

2.3.2 International co-operation

The NRA is the beneficiary of a three year project entitled: "Transfer of West European Regulatory Methodology and Practices to the Nuclear Safety Authorities of Ukraine" funded by the European Commission (TACIS). It is also the beneficiary of bilaterally funded co-operative projects.

The TACIS project is being executed by a "Consortium of Western Regulators" (CWR) which is composed of seven NRA of Western Europe and their Technical Supports. The scope of the project is very wide; it encompasses the following.

- Standards and regulations for nuclear safety.
- Development and improvement of the Ukrainian licensing systems.
- Regulatory systems for monitoring operator training and licensing.
- Regulatory requirements for documentation on operational and emergency procedures.
- Regulatory system for monitoring fuel cycle activities.
- Regulatory inspection of pressurised NPP's components.
- Regulatory radiometric inspections.
- Regulatory radiological inspections.

During the first year of implementation of the project, Western European regulatory methodology and practices were transferred mainly through seminars, workshops and training courses. In 1995 and 1996, the assistance moved to a more concrete objective, i.e. giving advice in the development of regulatory documents and reviewing those which were developed by the Ukrainian Nuclear Regulatory Administration.

The main recommendations concerning the future of the legislative and regulatory framework will be taken into account in the EAP for K2.

2.4 **Public participation**

2.4.1 **Ukrainian legislation**

According to the new Ukraine legislation, at certain stages in the licensing process, the views of affected citizens are taken into account as parties to the proceedings. Section II of the law "On Nuclear Energy Utilisation and Radiation Safety" [2.3] of 8 February 1995 complements the law "On Natural Environmental Protection" [2.2] and is devoted to public participation as follows.

- *Article 10. Rights of citizens and their associations to obtain information concerning the use of nuclear power and radiation safety.* Citizens and their associations shall have the right to request and obtain from appropriate enterprises, organisations and institutions (...) complete and reliable information concerning the safety of a nuclear installations.

Citizens shall have the right to obtain information from institutions of the State system for monitoring the radiation situation within the territory of Ukraine. Officials of enterprises, institutes and organisations, citizen organisations and the mass media shall bear responsibility consistent with legislation for refusing to grant this information, deliberate misrepresentation.(...) Ukrainian citizens with a recognised objective have the right to visit nuclear installations as well as facilities designated for management of nuclear waste.

Institutions of the State system of control over the radiation situation, the enterprises, establishments and organisations whose activities are associated with the use of nuclear power (...) are obligated as follows to respect the rights of citizens:

- to periodically disseminate official information (...); and
 - to grant the ability to citizens of Ukraine to become acquainted with the operation of nuclear installations.
- *Article 11. Rights of citizens and their associations to take part in formulating policy concerning the use of nuclear energy and radiation protection.* Citizens and their associations have the right to take part in the preparation of drafts of legislative actions and programmes concerning the use of nuclear power as well as to become involved in the discussion of the issues associated with the location, design, construction, operation, and facilities and sources of ionising radiation.

(...) The local bodies of State power and self-government may organise public hearings on the defence of the projects connected with the location, construction, and decommissioning of nuclear installations (...).

Public hearings shall deal both with the materials submitted by the applicant, and with the results of the State and public expert examinations.

The procedure of holding public hearings shall be determined by the Cabinet of Ministers of Ukraine.

2.4.2 EBRD's requirements

One of the statutory requirements [2.22] of the European Bank is that the Bank "will foster the principles of public consultation within its region of operations and will implement procedures to ensure that information is provided to interested parties concerning the Bank's environmental activities and that views expressed are in the preparation of projects".

For this reason, the Bank has identified two main steps for the public participation process as follows.

- "Scoping", the objective of which is to "allow the public and other parties to raise issues which should be addressed in the EIA and discuss arrangements for further public participation. This requirement does not differ from those of the European community.
- "Public consultation" which implies distribution of the EIA and executive summary to the public for review and comment.

2.4.3 Scoping and public participation

The scoping phase was initiated in August 1996 and involved three public scoping meetings, one in Kyiv in November 1996 and at one at each of Netishin and Rivne in December 1996. The outcome of these meetings was taken into account when agreeing the terms of reference for the EIA (Appendix A).

For the second phase of public consultation, a draft contents list of the EIA was distributed in summer 1997 prior to a public meeting that took place in Kyiv in September 1997. The results of that meeting were recorded and, along with other comments received, were taken into account during revision of the EIA.

The programme for, and full details of, the scoping and public participation process are set out in Appendix C.

2.5 References

- 2.1 Enactment of the Cabinet of Ministers of Ukraine, 21 September 1995, No. 751.
- 2.2 The Law of Ukraine "On Environmental Protection". Adopted 25 June 1991.
- 2.3 The Law of Ukraine "On Nuclear Energy Utilisation and Radiation Safety". 8 February 1995.
- 2.4 The Law of Ukraine "On Radioactive Waste Treatment". 30 June 1995. N256.
- 2.5 The Law of Ukraine "On Ecological Examination". 9 February 1995.
- 2.6 The Law of Ukraine "On Ensuring Sanitary and Epidemiological Safety of the Population". 24 February 1994. N4004-XII.
- 2.7 "The interim requirements to the Structure and Contents of the Feasibility Study and NPP Construction Project: Assessment of the NPP Environmental Impact", in effect since October 1, 1990 and agreed upon with the Ministry of Environment of Ukraine on February 2, 1991 N 6/3-8-263.
- 2.8 "The Resolution on the Procedure of Environmental Impact Assessment Development for the Khmelnytsky and Rivne NPPs, agreed upon with the Ministry of Environment of Ukraine, Ministry of Health of Ukraine, Nuclear Regulatory Authority of Ukraine and approved by Goskomatom of Ukraine on January 28, 1994.

- 2.9 DBN A2.2–1-95. The structure and contents of the materials for the environmental impact assessment in the course of designing and constructing enterprises, buildings and structures. The design outline. Derzhkomatom of Ukraine and the Ukrainian Ministry of Environmental Safety, 1 July 1995.
- 2.10 "Guidelines for Conducting the State Ecological Examination". Approved by the order of the Ministry of Environmental Protection and Nuclear Safety of July 7, 1995, N55.
- 2.11 The procedure of submitting documentation for the State ecological examination, Approved by the resolution of the Cabinet of Ministers of Ukraine of October 31, 1995.
- 2.12 Radiation safety standards NRB 76/87, 1988, Moscow.
- 2.13 "Requirements for siting of nuclear power plants." Moscow, 1987.
- 2.14 SR NPP-88. Sanitary standards for the design and operation of nuclear power plants. Moscow 1989.
- 2.15 General NPP Safety regulations. GEW-88 1 July 1990. (Substitute for GEW-82).
- 2.16 Sanitary regulations on radioactive waste treatment. SC(SRRWT 85). Moscow, 1985.
- 2.17 Basic sanitary standards of working with radioactive substances and other sources of ionising radiation. BSS-72/87. Moscow, 1987.
- 2.18 Format and content of radioactive waste annual safety reports.
- 2.19 Containers utilised for radioactive wastes of classes I and II.
- 2.20 Report on the status of radiation and nuclear safety in Ukraine – 1995 reporting year. Science and Technology Centre for Nuclear and Radiation Safety and Main State Inspectorate.
- 2.21 European Bank for Reconstruction and Development. Environmental procedures. September 1992. Revised 1996.