

Watermark of the
Coat of Arms of Romania

**THE GOVERNMENT OF ROMANIA
NATIONAL COMMISSION FOR
NUCLEAR ACTIVITIES CONTROL
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**AUTHORISATION
FOR THE DEPLOYMENT OF ACTIVITIES IN THE NUCLEAR FIELD
No. IFIN-HH / R – 01 / 2010**

Pursuant to article 8 of Law no. 111/1996, regarding the safe deployment, regulation, authorisation and control of nuclear activities, republished and of the national regulations on nuclear,

As a result of the assessment of the documentation attached to IFIN-HH authorization request no. 2136/17/03.2010, registered at C.N.C.A.N. with No 2272/17.03.2010 and the prior completion transmitted through IFIN-HH memos with No 6586/06.08.2010, 9460/12.11.2010 and 10716/20.12.2010, registered at CNCAN with No. 6203/06.08.2010, 5787/VB/12.11.2010 and 9895/22.12.2010,

Finding that the legal provisions are met,

NATIONAL COMMISSION FOR NUCLEAR ACTIVITIES CONTROL

AUTHORISES

**Institutul Național de Cercetare-Dezvoltare pentru Fizică și Inginerie
Nucleară IFIN-HH București R.A.**

Magurele, 407 Atomistilor Street, Ilfov County
legal entity registered at the Chamber of Commerce and Industry under the taxpayer ID number
3321234

**to DEPLOY STAGE 1 DECOMMISSIONING ACTIVITIES OF VVR-S
NUCLEAR RESEARCH REACTOR AND SPENT NUCLEAR FUEL
STORAGE ACTIVITIES**

according to the national regulations in the nuclear field and the provisions imposed in Annexes no. 01 and 02 which are part of this authorisation.

**Enters into force on: 28.12.2010
Expires on: 27.12.2013**

**PRESIDENT,
VAJDA Borbala**
Illegible Signature

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ANNEX No 01
to the authorisation for the deployment of activities in the nuclear field No
IFIN-HH/R – 01/2010

I. AUTHORIZED ACTIVITIES:

This authorization is valid for stage 1 decommissioning activities of VVR-S Nuclear Research Reactor and spent nuclear fuel storage activities in Spent Nuclear Fuel Storage Facility (DCNU) and Cooling Pond (DC).

Stage 1 decommissioning activity consists of keeping the functionality of all nuclear reactor buildings and systems (except those which can allow the restart of the reactor), with the evacuation of the materials, equipments and non-nuclear structures which are not affecting the deployment of the activities in the following stages of decommissioning. Some of the systems kept are rehabilitated and prepared for the actual decommissioning works (ventilation system, various utilities, surveillance and control systems, etc.). In stage 1 of the decommissioning, the reactor building is prepared as a work enclosure meant to carry out the works in the following stages.

The activities deployed during the stage 1 of decommissioning are:

1. Project management, engineering, site support studies;
2. Public consultation;
3. Site security, surveillance and maintenance;
4. Research and development (considering the necessity to adapt the equipment used in decommissioning to the specific design requirements and for simulating some activities specified in the following phases);
5. Elaboration of the technical documentation associated to the work enclosure construction necessary for the activities in decommissioning phase 2 and 3 (technical designs, tender specifications, tender documentation, execution projects, etc.);
6. Repatriation of EK10 nuclear spent fuel;
7. Dismantling of the instrumentation and control system - ion chambers; emergency and control roads;
8. Core control and operation control component dismantling from panels-electro-mechanical components;
9. Rehabilitation of the personnel and material airlock and of the routes to provide zoning of the building during the decommissioning process;
10. Rehabilitation of the reactor main building: preparation of the structures and finishing, plugging the penetrations into the work enclosure (except the two airlocks and the door to the experimental ward), mending the floors and walls, where the case, sealing the reactor hall (at all levels);
11. Arrangement of the radiological characterization laboratory;
12. Arrangement of the dismantling shop, primary cutting of solid waste, including the outfitting with equipment and proper services for developing the cutting and dismantling activities;

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13. Arrangement of a interim storage location within IFIN-HH enclosure for the radioactive waste interim storage;
14. Rehabilitation of the service systems associated to the reactor building: sanitary and fire suppression systems, ventilation and air conditioning systems, power supply and lighting systems, fire detection and alarm system, physical protection system, compressed air system, monitoring systems.
15. Definition of the routes of the likely radioactive waste in the reactor building and between the reactor building and STDR-DMDR;
16. Waste management, including the waste in the reactor channels and hot cells;
17. Procurement of equipment, tools and outfitting required for the rehabilitation of the building and associated systems;
18. Demolition of the metallic structure (building 23).

The nuclear spent fuel storage activity allows the storage of the fuel in DCNU and fuel handling activities for transferring it from DCNU to DC with CNCAN approval.

II. SUPPORTING DOCUMENTS

1. Request for the approval of stage 1 decommissioning activities of VVR-S Nuclear Research Reactor and spent nuclear fuel storage in DCNU, by way of IFIN-HH notice no. 2136/17/03.2010, registered at CNCAN with no. 2272/17.03.2010;
2. Technical documentation necessary for obtaining the decommissioning authorization, attached to the authorization request, by way of IFIN-HH notice no. 2136/17.03.2010, registered at CNCAN with no. 2272/17.03.2010;
3. Completion of technical documentation necessary for VVR-S nuclear reactor decommissioning authorization and DCNU operation, by way of IFIN-HH notice no. 6586/06.08.2010, registered at CNCAN with no. 6203/06.08.2010;
4. Completion of technical documentation necessary for VVR-S nuclear reactor decommissioning authorization and DCNU operation, by way of IFIN-HH notice no. 9460/12.11.2010, registered at CNCAN with no. 5787/VB/12.11.2010;
5. Completion of technical documentation necessary for VVR-S nuclear reactor decommissioning authorization and DCNU operation, by way of IFIN-HH notice no. 10716/20.12.2010, registered at CNCAN with no. 9895/22.12.2010;
6. Romanian Government Decision no. 418 of 25th April 2002 for the permanent shutdown of the VVR-S research and radioisotopes production within “Horia Hulubei” National Institute of Research & Development for Physics and Nuclear Engineering (IFIN-HH) in the view of decommissioning, Bucharest –Magurele, published in the official gazette of Romania, part I, no. 311/10.V.2002;

7. Romanian Government Decision no. 898 of 5th August 2009 on the approval of the technical-economic indicators of the investment objective “VVR-S nuclear reactor decommissioning, EK-10 spent nuclear fuel repatriation and modernization of Radioactive Waste Treatment Plant installations” within “Horia Hulubei” National Institute of Research & Development for Physics and Nuclear Engineering (IFIN-HH), published in the official gazette of Romania, part I, no. 581/20.VIII.2009;
8. VVR-S nuclear research reactor decommissioning detailed plan, rev. 10/ June 2010, by way of IFIN-HH notice no. 6586/06.08.2010, registered at CNCAN with no. 6203/06.08.2010;
9. Certificate of approval for VVR-S research nuclear reactor decommissioning detailed plan, rev.10, June 2010, no. CNCAN_PD_VVR-S_01_2010 of 08.10.2010;
10. Environmental agreement no. 1/09.03.2007 for “Horia Hulubei” National Institute of Research & Development for Physics and Nuclear Engineering (IFIN-HH) Bucharest, with headquarters in Magurele, Ilfov County, which provides “VVR-S nuclear reactor decommissioning and DNDR and STDR facilities modernization for treating, conditioning and final disposal of radioactive waste resulted from decommissioning” , issued by the Regional Environmental Protection Agency Bucharest;
11. Medical permit no. 286/2010 for the termination of VVR-S Nuclear Research Reactor activity;
12. Water management permit no. 20 – If of 06.04.2009 on water supply , waste water and rain water discharge at National Institute of Research & Development for Physics and Nuclear Engineering - IFIN-HH RA-Reactor Group 1”, issued by “Romanian Waters” National Administration, Arges – Vedea Water Directorate, Water Management System Ilfov – Bucharest, valid until 30.04.2011;
13. Town Planning Certificate no. 234 of 01.06.2009, issued by Magurele Town Hall, in order to close down VVR-S nuclear reactor, pursuant to “Horia Hulubei” National Institute of Research & Development for Physics and Nuclear Engineering request, valid until 01.06.2011;
14. ISCIR authorizations for lifting installations and personnel, according to annex 2h to IFIN-HH notice no. 6586/06.08.2010, registered at CNCAN with no. 6203/06.08.2010;
15. CNCAN notice no. 78863/12/03.2010 on the approval of revision 6 of the Security Final Report of DCNU within IFIN-HH;
16. Authorization no. IFIN-HH/R-01/2009 for Quality Management System in the nuclear field, issued by CNCAN for the preservation for VVR-S research reactor decommissioning, valid until 28.01.2011;
17. Quality Manual for VVR-S nuclear reactor preservation-decommissioning activities, code MC-DDR-01, rev. 5, sent to CNCAN by way of IFIN-HH notice no. 7302/03.08.2009;
18. CNCAN notice no. 24273/09.09.2009 on the approval of revision 5 of the Quality Manual for VVR-S nuclear reactor preservation-decommissioning activities, code MC-DDR-01;

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- 19.** Decision no. 140/01.03.2010 of the Director General of IFIN-HH on appointing the person responsible for VVR-S research nuclear reactor decommissioning activities;
- 20.** Copy of the waybill no. 6142/27.06.2009 of spent nuclear fuel coming from VVR-S nuclear reactor, which was exported to the Russian Federation at FSUE MAYAK PA, within RRRFR Programme for Romania, in 29.06.2009 and which certifies the reception of the goods by the recipient.
- 21.** List of the licensed suppliers valid until 15.03.2010, according to annex 7 at IFIN-HH notice no. 2136/17.03.2010, registered at CNCAN with no. 2272/17.03.2010;
- 22.** List of existing radiological instrumentation, updated on 30.06.2010, according to annex 8 to IFIN-HH notice no. 6586/06.08.2010, registered at CNCAN with no. 6203/06.08.2010;
- 23.** Situation of radioactive sources on 1st March 2010, according to annex 9 to IFIN-HH notice no. 2136/17.03.2010, registered at CNCAN with no. 2272/17.03.2010;
- 24.** Declaration on liquid and solid radioactive waste management, according to annex 10 to IFIN-HH notice no. 21236/17.03.2010, registered at CNCAN with no. 2272/17.03.2010;
- 25.** Radiological monitoring programme of radioactive emissions, personnel and environment, according to annex 11 to IFIN-HH notice no. 6586/06.08.2010, registered at CNCAN with no. 6203/06.08.2010;
- 26.** CNCAN notice no. 58429/29.06.2009 on the approval of intervention procedures in case of radiological emergency at VVR-S nuclear reactor and DCNU, code PO-DDR-705, PO-DDR-700, PO-DDR-701;
- 27.** Procedure code PO-CGN-101, revision 0, "Elaboration of safeguards reports"
- 28.** CNCAN notice no. 5954/VZ/10.04.2006 on the approval of procedure code PO-DDR-600, rev. 4, "Persons and vehicles access into DDR" ;
- 29.** CNCAN notice no. 4756/VB/10.07.2008 on the approval of procedure code PO-DDR-602, rev. 3, "Accessing the anti-theft system for Reactor Hall and DCNU";
- 30.** CNCAN notice no. 23406/18.06.2009 on the approval of procedure code PO-DDR-820, rev. 6, "IFIN-HH and CNCAN interface" ;
- 31.** List of the measuring procedures approved by CNCAN that will be used for final radiological monitoring, according to annex 17 to IFIN-HH notice no. 2136/17.03.2010, registered at CNCAN with no. 2272/17.03.2010";
- 32.** Inspection reports for authorizing VVR-S nuclear research reactor decommissioning activities, concluded on 03.11.2010 and registered at IFIN-HH with no. 9208/03.11.2010.

III. AUTHORIZATION CONDITIONS

A. GENERAL CONDITIONS

1. IFIN-HH will send to CNCAN, for approval, any modification of the supporting documents attached to the authorization request, mentioned in pt. II of this authorization;
2. The authorizations, permits and approvals issued by other public authorities for VVR-S nuclear reactor decommissioning, which expire during the validity period of this authorization, will be renewed according to legal provisions and send to CNCAN, in copy.
3. IFIN-HH will ensure all material resources and administrative and organizational measures necessary for a prompt response in case of radiological emergency at VVR-S RN or DCNU.
4. Any modification made on the radiation sources inventory will be notified to CNCAN within 48 hours from the modification of the radiation sources inventory.
5. Dose constraint to the population due to VVR-S nuclear reactor decommissioning activities and DCNU operation is 0.05 mSv/year (50 µSv/year) individual effective dose.
6. Work in the radiological risk areas will be done only with personnel holding license for exercising activities in the nuclear field, according to law no. 111/1996, republished with CNCAN norms in force.
7. Spent nuclear fuel will be stored in DCNU. It is forbidden to transfer the fuel from DCNU to DC without CNCAN prior written approval.

B. CONDITIONS REGARDING INSTALLATIONS AND RADIATION SOURCES

The authorization is issued for the following installations and radiation sources:

1. VVR-S reactor, 2 MW thermal power, 2×10^{13} n/cm²s maximum thermal neutrons flux, shut down for decommissioning, without nuclear fuel in the core.
2. Spent Nuclear Fuel Repository (DCNU) with type EK-10 spent nuclear fuel in ponds 2, 3 and 4;
3. Cooling Pond (DC), without fuel;
4. Spent nuclear fuel from the Spent Nuclear Fuel Repository (DCNU);
5. Radiactive sources from the existing inventory, according to the list presented in annex 9 to IFIN-HH notice no. 2136/17.03.2010, registered at CNCAN with no. 2272/17.03.2010, updated and included in the periodic reports sent by IFIN-HH.

C. LIMITS AND TECHNICAL CONDITIONS AT THE REACTOR

1. It is forbidden to recharge the VVR-S Nuclear Research Reactor core with nuclear fuel.

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2. IFIN-HH will review and send for approval to CNCAN until 15.01.2011 the applicable limits and technical conditions for strage 1 of the decommissioning phase.
3. IFIN-HH will strictly comply with “Tests, verifications, inspections and revisions programme of VVR-S RN nuclear installation”, applicable revision.
4. IFIN-HH will mantain in functioning state all monitoring system of radiation (including gaseous radioactive emissions into the environment), technological ventilation and signaling fields.

D. LIMITS AND TECHNICAL CONDITIONS AT THE COOLING POND (DC) AND SPENT NUCLEAR REPOSITORY (DCNU)

The authorization issued is valid under the following terms of use of DC and DCNU:

1. DCNU will be used so that one of the ponds would be permanently available for interim disposal of the spent nuclear fuel, in case of emergency.
2. Depending on the conditions imposed by the handling of the spent nuclear fuel during its return operations to the Russian Federation, the Cooling Pond (DC) can be used as buffer location, according to the repository specific limits and technical conditions.
3. IFIN-HH will maintain the qualitative parameters of the water in the spent fuel ponds within the specified limits, according to DCNU nuclear safety documentation, approved by CNCAN.

E. SPECIFIC CONDITIONS REGARDING THE SELECTION, RECRUITMENT AND TRAINING OF “IFIN-HH - DDR” PERSONNEL PROCESS

1. IFIN-HH will train DDR personnel according to the “SYSTEMATIC APPROACH TO TRAINING” principle.
2. IFIN-HH will harmonize the job descriptions of DDR personnel with the appointment decisions on the basis of the positions and the organizational structure (organizational chart) presented in the Quality Manual for VVR-S nuclear reactor preservation-decommissioning activities, code MC-DDR-01, rev. 5, approved by CNCAN.
3. IFIN-HH will identify the training needs specific to each position from DDR structure taking into consideration the schedule of authorized activities in the current phase and will send the related information to CNCAN.
4. IFIN-HH will permanently identify both the specific decommissioning activities that will be carried out in stage 1 and DDR and external personnel involved and will also ensure the process outline of these activities.
5. IFIN-HH will elaborate training programmes for DDR personnel specific to the identified activities and will send these programmes to CNCAN for approval.
6. IFIN-HH will identify the personnel categories (operators for handling and transporting the spent nuclear fuel, management and training staff) which need licensing from CNCAN, in accordance with the regulations in force.

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7. IFIN-HH will initiate the elaboration of training programmes for DDR personnel in order to ensure the staff capacity to exercise activities according to the job description for stage 1 of the decommissioning.
8. By DDR responsible for personnel training, IFIN-HH will monitor the implementation of training programmes, will evaluate the associated registrations as well as their efficiency, identifying the corrective actions to be taken.
9. IFIN-HH will ensure the training and participation of trained personnel within Reactor Decommissioning Department when accomplishing the spent nuclear fuel return international programme from VVR-S reactor in Magurele into the Russian Federation, under the conditions and terms established.
10. IFIN-HH will review and send to CNCAN the annual training plan of DDR personnel for VVR-S nuclear research reactor decommissioning, before the start of the calendar year.
11. IFIN-HH will send to CNCAN the documentation for authorizing the management staff – “DCNU nuclear installation responsible” and “Radioprotection responsible”, according to the regulation on granting practice permits to operating, management and specific training personnel of nuclear power plants, research reactors and other nuclear installations.
12. IFIN-HH will ensure the appropriate completion, by the training personnel, of all training objectives related to the courses, according to procedure “Selection, training and professional evaluation of personnel”, code PO-DDR-803, the last revision approved by CNCAN.
13. IFIN-HH will ensure the appropriate completion of all training records/ recordings, according to procedure “Selection, training and professional evaluation of personnel”, code PO-DDR-803, the last revision approved by CNCAN.
14. IFIN-HH will ensure the independent and appropriate completion of the form code PO-DDR-803-07, “Knowledge test questionnaire”, by a different lecturer than the one who has taught that course.
15. IFIN-HH will systematically write quarterly status reports on the quantitative assessment of the effectiveness of the training plan, according to the provisions at par. 7.8.2.1. of the procedure “Selection, training and professional evaluation of personnel”, code PO-DDR-803, the last revision approved by CNCAN.

F. RADIOPROTECTION CONDITIONS

1. IFIN-HH will further ensure the radiological monitoring of work areas from NR building and DCNU building, according to its own procedures and CNCAN specific regulations.
2. Any modification of the radiological zoning in the NR building and DCNU building needs CNCAN prior approval.
3. IFIN-HH will ensure the operational radioprotection for its own works as well as for the external workers involved in the decommissioning operations, according to its own procedures and CNCAN specific regulations.

4. IFIN-HH will ensure the monitoring of gaseous radioactive emissions from NR building, using both fixed system and laboratory measurement of radioactive concentration from the ventilation system filters.
5. IFIN-HH will send to CNCAN, for approval, the monitoring procedure of gaseous radioactive emissions from NR building during stage 1 of decommissioning, until January 31, 2011.
6. IFIN-HH will establish the derived emission limits for radioactive effluents which can arise from reactor decommissioning activities, in stage 1 and from DCNU operation, according to the provisions of CNCAN applicable norms, using the value set by A.5 condition from this authorization for dose constraints to the population. Derived emission limits will be sent to CNCAN for approval until March 1, 2011.

G. CONDITIONS REGARDING RADIOACTIVE WASTE MANAGEMENT

1. IFIN-HH will require the clearance from the license requirements of the materials resulting from VVR-S Nuclear Research Reactor decommissioning activities, as often as necessary, according to the provisions of CNCAN specific norms.
2. IFIN-HH will carry out material transfer activities from the hot cells only after obtaining the prior approval of CNCAN.
3. IFIN-HH will carry out material transfer activities from the reactor channels only after obtaining the prior approval of CNCAN.
4. IFIN-HH will maintain the complete and updated inventory, of all radioactive materials from adjacent areas of VVR-S Nuclear Research Reactor.
5. IFIN-HH will ensure the storage in safety conditions of radioactive materials in the adjacent areas of VVR-S Nuclear Research Reactor until their transfer to Radioactive Waste Treatment Plant.
6. IFIN-HH will transfer the radioactive waste resulted from the decommissioning activity to the Radioactive Waste Treatment Plant under the acceptance limits and conditions imposed by the Radioactive Waste Treatment Plant.

H. CONDITIONS REGARDING THE TRAINING AND SCHEDULING IN CASE OF RADIOLOGICAL EMERGENCY

1. DDR IFIN-HH will review its own procedures in case of radiological emergency at RN VVR-S, so that all possible emergency types would be covered during stage 1 of decommissioning, until March 1, 2011.
2. DDR IFIN-HH will send to CNCAN, for evaluation, the reviewed intervention procedures, until March 15, 2011.
3. IFIN-HH will ensure the training of DDR personnel for all radiological emergency types that may arise during VVR-S NR decommissioning stage 1.

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4. IFIN-HH will send to CNCAN , by the end of every calendar year, the annually training programme of DDR personnel for intervention in case of radiological emergency during decommissioning (stage 1), together with the planning of emergency response exercises for the next year.

I. CONDITIONS REGARDING THE QUALITY MANAGEMENT SYSTEM FOR VVR-S NUCLEAR REACTOR DECOMMISSIONING ACTIVITIES

1. IFIN-HH will ensure the management of VVR-S nuclear research reactor decommissioning activities by means of an appropriate organizational structure approved by CNCAN in the Quality Manual for its decommissioning activities. Any modification of IFIN-HH organizational structure affecting the nuclear research reactor decommissioning activity will be implemented only after its prior approval by CNCAN.
2. IFIN-HH will ensure the necessary conditions for authorizing the quality management system appropriate for the decommissioning activities.
3. IFIN-HH will ensure the periodical revision both of the Decommissioning Quality Manual of VVR-S nuclear research reactor and its approval by CNCAN, so that it would correspond to the decommissioning phase established by “The Decommissioning Plan of VVR-S nuclear research reactor”, revision approved by CNCAN, and of the appropriate nuclear regulations.
4. IFIN-HH will ensure the control of preservation and actual decommissioning activities as part of the general decommissioning process by procedures meant to detail the responsibilities transfer, as well as the planning, execution, tracking and recording the modifications resulted from the nuclear plant decommissioning. The procedures will be submitted to CNCAN for approval before the start of those activities.
5. IFIN-HH will make sure that all contracted decommissioning works, products supply and services important for the radiological and nuclear safety, will be executed by organizations having the quality management system authorized by CNCAN.
6. IFIN-HH will send to CNCAN:
 - a. Internal and external audit annual plans of the quality management system, for approval from CNCAN, before the beginning of the new calendar year;
 - b. Internal and external audit reports of quality management system, within 15 days from completing the evaluation;
 - c. Periodic quarterly reports on the fulfilment stage of the provisions resulted from CNCAN inspection reports at IFIN-HH.
 - d. Annual evaluation report of the quality management system.

J. CONDITIONS REGARDING THE SAFEGUARDS CONTROL

1. IFIN-HH will keep records of nuclear materials, according to the Treaty establishing the European Atomic Energy Community (EURATOM), the Treaty of 05/04/1973 between the European Atomic Energy Community and the International Atomic Energy Agency in implementation of Article III (1) and (4) of the Treaty on the non-proliferation of nuclear weapons (78/164/EURATOM), Regulation EURATOM 302/2005,) Norms on Safeguards Control in Nuclear Field and IFIN-HH internal procedures approved by CNCAN.

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2. Inventory variations of nuclear materials from WRMA material balance area will be reported to EURATOM according to Regulation 302/2005, a copy of the safeguards reports will be sent to CNCAN.
3. IFIN-HH will report annually to CNCAN, until March 15, updates of the information provided at art. 2 from the Protocol Additional to the Agreement of 05/04/1973 between the European Atomic Energy Community and the International Atomic Energy Agency, in implementation of Article III (1) and (4) of the Treaty on the non-proliferation of nuclear weapons (78/164/EURATOM), INFCIRC 193/Add.8, adopted by the Parliament of Romania by Law no. 185/2007.
4. Except the cases when a written approval from CNCAN was obtained, no modification regarding the disposal or handling of the nuclear fuel or of any other equipment or procedure that could affect the safeguards control in the nuclear field will be made.
5. IFIN-HH will promptly report to CNCAN any accidental loss or theft of nuclear materials.
6. IFIN-HH will ensure the maintenance of nuclear safeguards system in accordance with the provisions of CNCAN Norms on Nuclear Safeguards, Regulation EURATOM 302/2005, the Treaty of 05/04/1973 between the European Atomic Energy Community and the International Atomic Energy Agency in implementation of Article III (1) and (4) of the Treaty on the non-proliferation of nuclear weapons (78/164/EURATOM) and the Protocol Additional to the mentioned Agreement (INFCIRC 193/Add.8, adopted by the Parliament of Romania by Law no. 185/2007).

K. CONDITIONS REGARDING THE PHYSICAL PROTECTION SYSTEM

1. IFIN-HH will ensure the physical protection both for VVR-S nuclear research reactor and protected materials according to the provisions of CNCAN Norms on physical protection in the nuclear field, CNCAN guides on physical protection and of norms regarding the licensing of the personnel carrying out professional activities, for long or short duration, in the vital work points within the nuclear installations or having access to information.
2. IFIN-HH will ensure the access of personnel, vehicles and protected materials inside VVR-S nuclear research reactor only in accordance with the provisions of IFIN-HH internal procedures approved by CNCAN.
3. IFIN-HH will check and maintain the performances of the physical protection accordance with the provisions of the physical protection guides in the nuclear field.
4. IFIN-HH will modify the physical protection system of VVR-S nuclear research reactor only after requesting and obtaining CNCAN written approval.
5. IFIN-HH will promptly report to CNCAN any event involving the physical protection system of VVR-S nuclear research reactor and any attempt to penetrate the physical protection system.

L. REPORTING CONDITIONS AT CNCAN

1. Reports on abnormal conditions, including reports on unplanned events

IFIN-HH/DDR shall notify CNCAN of any abnormal condition, including unplanned conditions that led to:

- adverse effect on nuclear security;
- adverse effect on radioprotection;
- adverse effect on physical protection and safeguards;
- violation of procedures approved by CNCAN;
- breaking the limits and technical conditions established by security reports;
- breaking the conditions established by the authorizations issued by CNCAN or other authorities;
- all conditions affecting the quality of works (major nonconformities)

Reporting will be done according to procedures approved by CNCAN:

- immediately, at least one hour after the occurrence – verbal information;
- at least 24 hours after the occurrence – written preliminary report;
- at least 7 hours (calendar year) after the occurrence – detailed written report.

All events will be evaluated, including from the point of view of their framing on INES scale.

The evaluation of the events for the framing on INES scale will be made by a person designated by the authorization holder with CNCAN prior notice.

2. Monthly reports

IFIN-HH/DDR will elaborate and send to CNCAN monthly reports regarding the storage parameters of spent nuclear fuel.

3. Quarterly reports

IFIN-HH/DDR will elaborate and send to CNCAN written quarterly reports, for information.

Each quarterly report will be sent for information within 3 months from the end of the period included in the report, except the report for the fourth quarter of the calendar year which will be sent for approval until March 1 of the next calendar year.

The following will be reported quarterly:

- the level of accomplishment of the provisions from CNCAN reports;
- the status of the dosimetry equipment, measurement and control equipment and radioactive sources;
- the level of accomplishment of the revisions plan, tests, verifications and inspections, findings and resulted conclusions.

IV. PERSONNEL RESPONSIBLE FOR NUCLEAR AND RADIOLOGICAL SAFETY

1. The persons responsible for nuclear and radiological safety must own authorizations and/or practice permits according to the requirements of the regulations in force.

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2. All modifications regarding the personnel responsible for the nuclear and radiological safety made to the list sent in annex 2f to the supporting documentation, by way of IFIN-HH notice no. 9460/12.11.2010 registered at CNCAN with no. 5787/VB/12.11.2010, will be reported immediately to CNCAN, and the authorization / issuance of a permit for a new person within 30 days from the reporting will be required.

V. RADIOLOGICAL RISK CATEGORY:

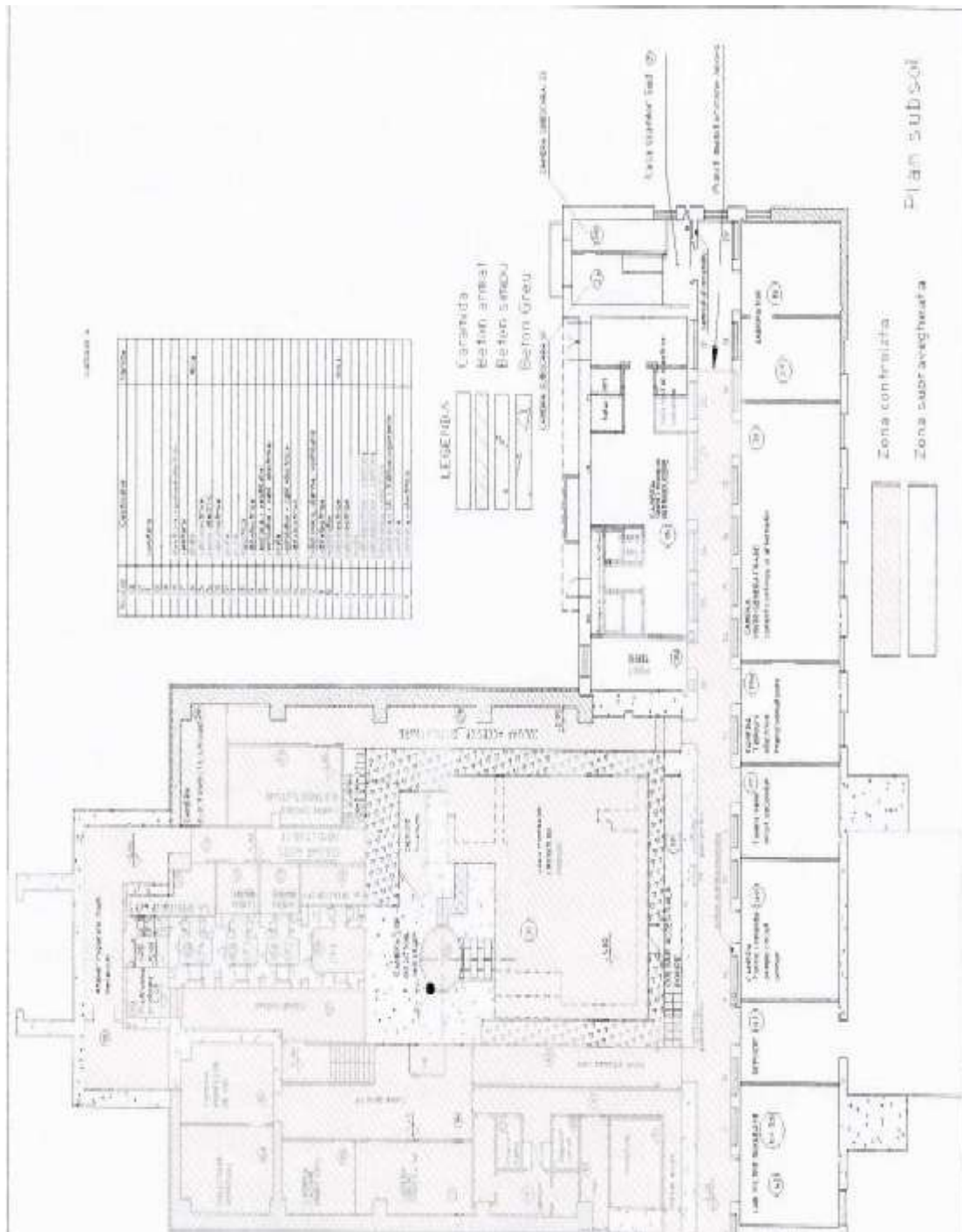
The maximum radiological risk category is 4.

ANNEX NO. 02

to the authorization for the deployment of activities in the nuclear field No. IFIN-HH/R – 01/2010

**RADIOLOGICAL ZONING OF VVR-S REACTOR
STAGE 1 OF DECOMMISSIONING**

Reactor basement plan EL. – 3.45m, zoning

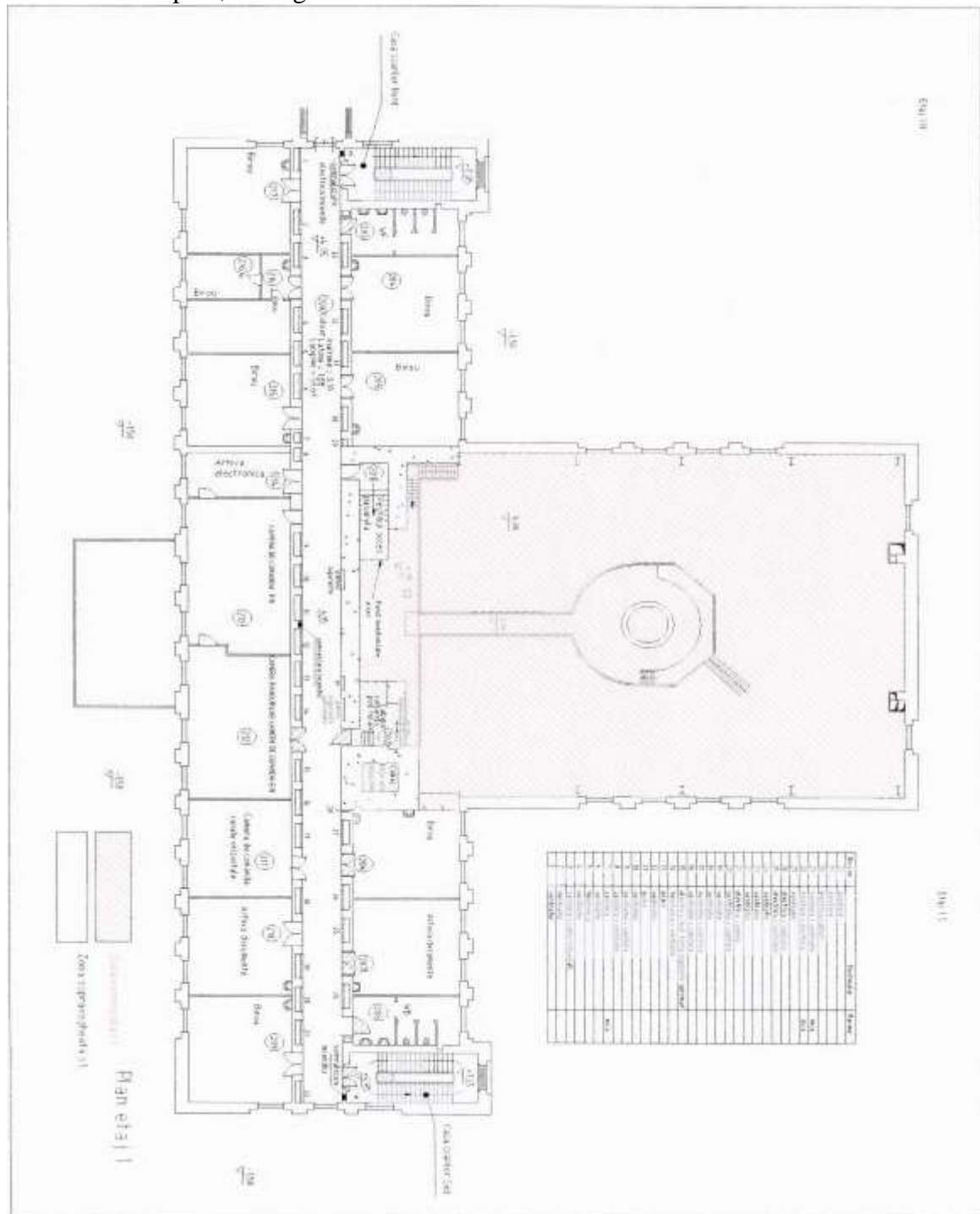


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Figure 1: Floor plan of the first floor of the building. The plan shows a large central hall with a circular feature in the center. To the left is a long corridor with several rooms, including a 'Lobby' and 'Office'. To the right is another long corridor with rooms, including a 'Kitchen' and 'Dining Room'. A large 'Staircase' is located in the center-right. A 'Garage' is attached to the bottom right. A 'Table' with dimensions is shown in the bottom right corner. A legend at the bottom left identifies 'Play 2011' and 'Play 2012'.

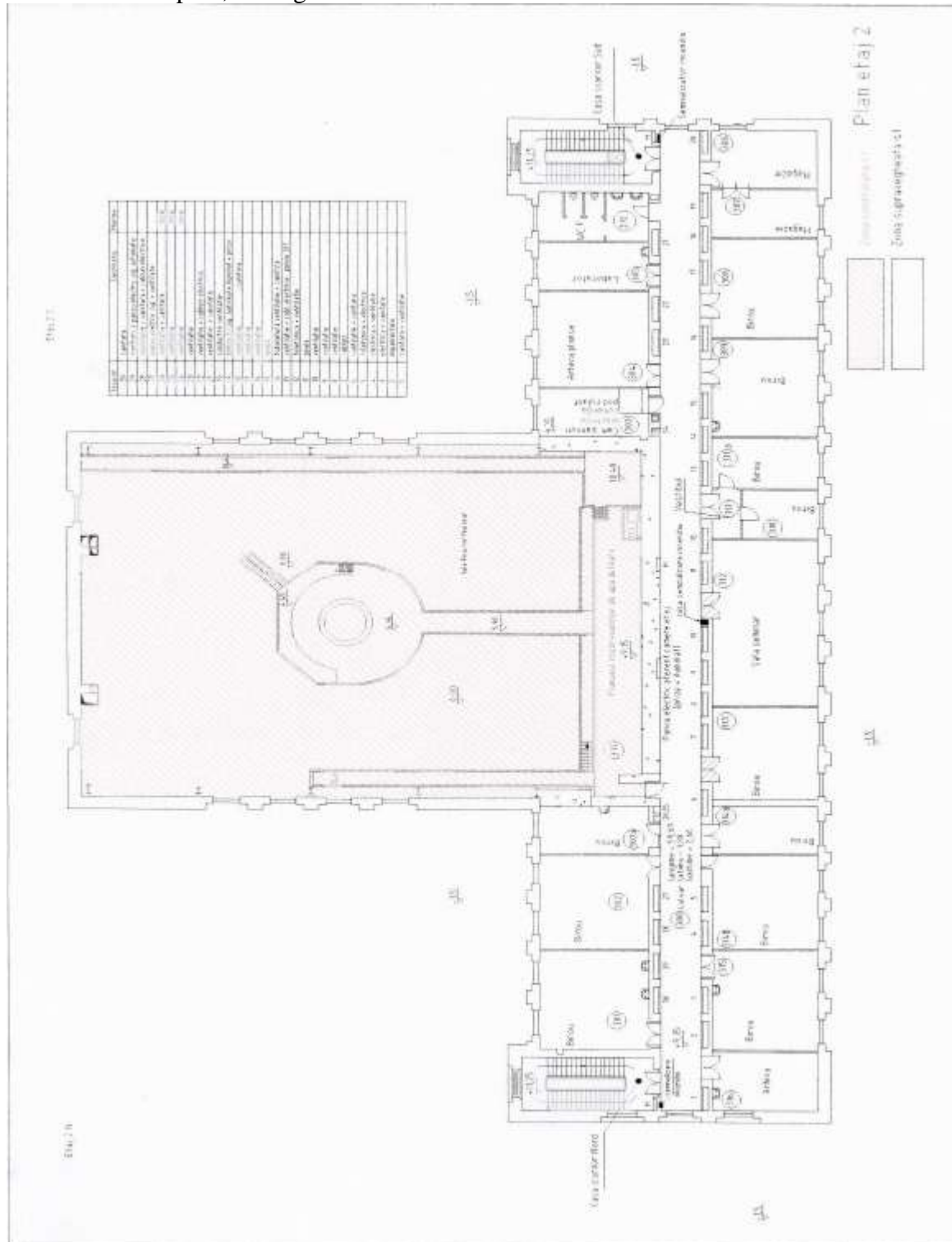
15 / 22

Reactor floor I plan, zoning



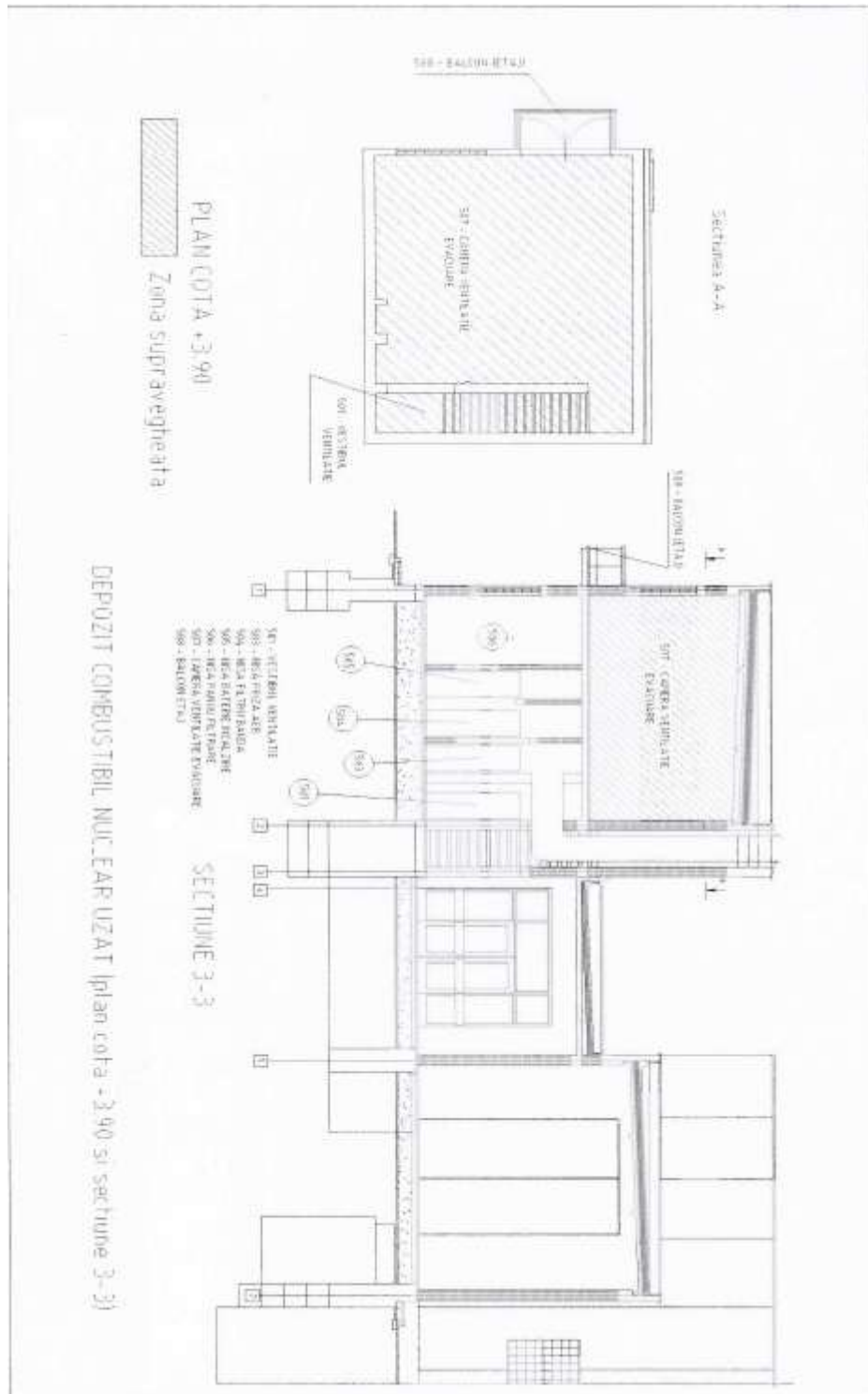
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Reactor floor II plan, zoning



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Spent fuel pond plan EL. - 3.90m, zoning



PLAN COTA +0.00

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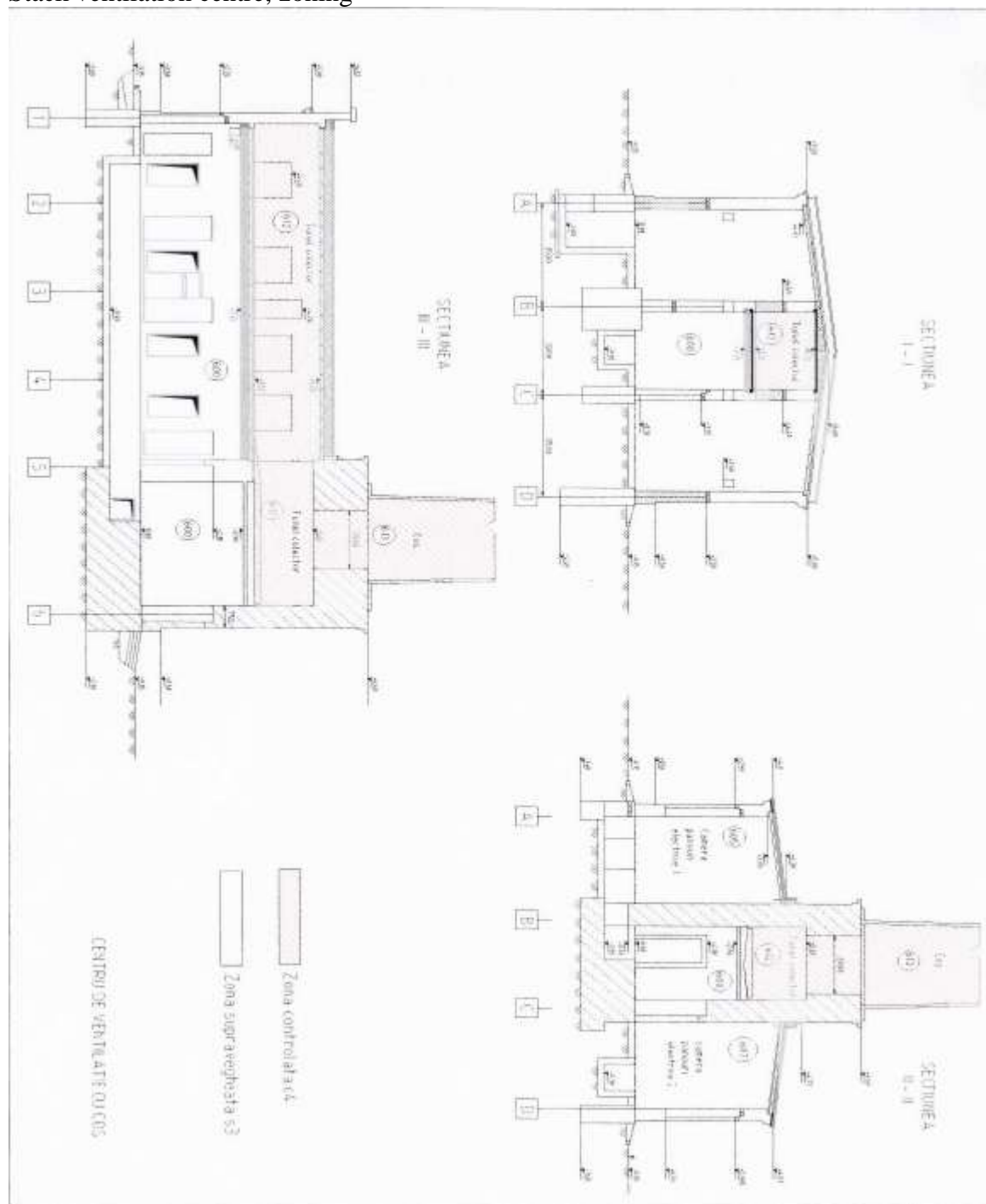
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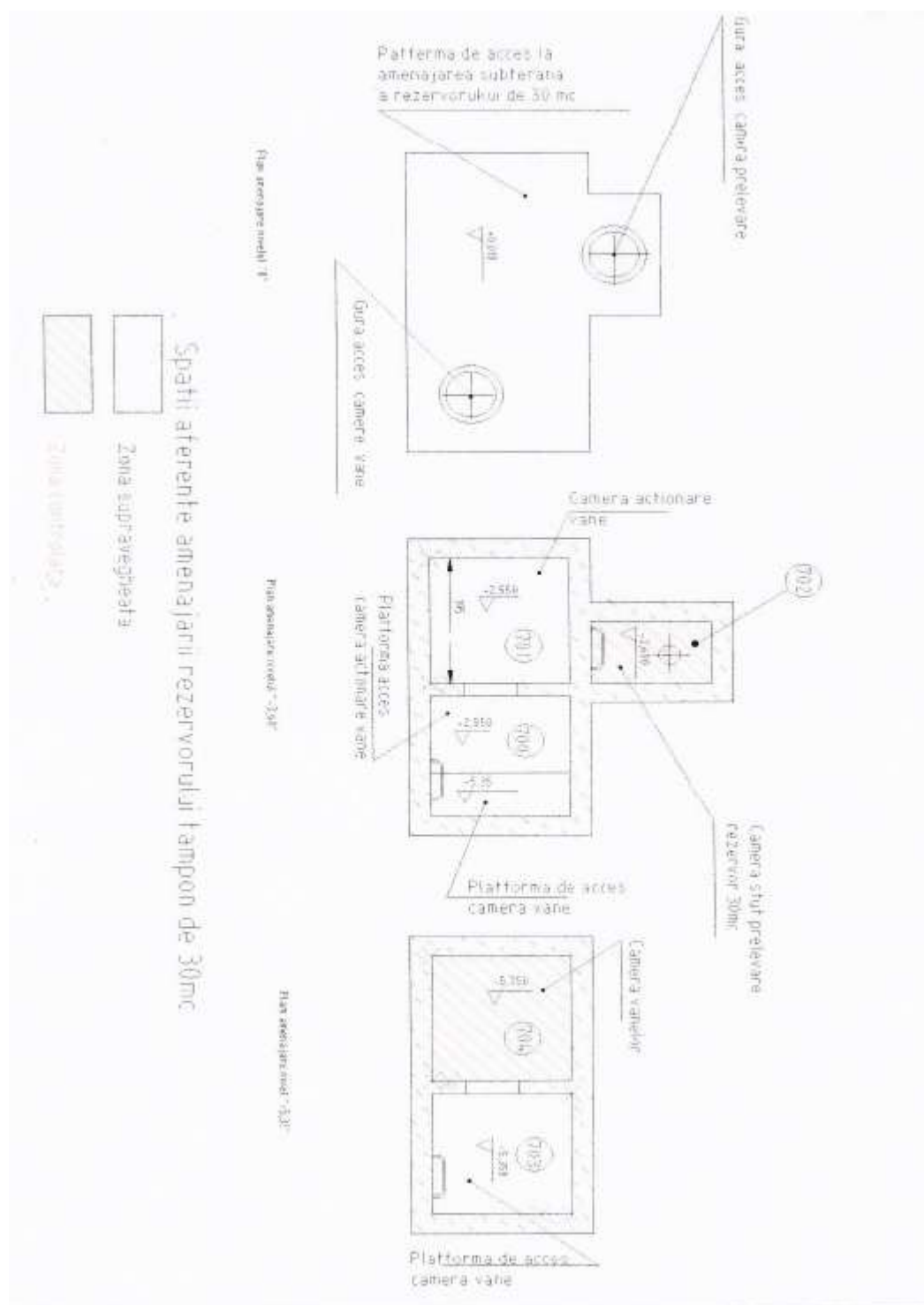
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Stack ventilation centre, zoning



Arrangement containing the 30 m³ tank, zoning



Official round seal of the National Commission for Nuclear Activities Control