

WATRP Mission to the Czech Republic

International peer review
of the Czech programme of the geological repository development

Background materials

Quality Assurance Program for the Geological Repository Site Selection

Top management documents

Notation : PJ.S.21

Quality assurance program for the geological repository site selection

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		Name	Date	Signature
Prepared by		RNDr. František Woller		
Approved by	0100	Ing. Vítězslav Duda, MBA		

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1 INTRODUCTION

Quality Assurance Program for the geological repository site selection is adopted for all activities connected with the selection of the site up to the stage of the incorporation of two sites into the territorial plan (assumed in 2015). Its aim is to secure objective and optimum procedure and execution of all works performed in the course of the site selection and systematic handling with all information acquired during the process. It has been worked out in compliance with the Act No. 18/1997 Coll., on the peaceful use of nuclear energy and ionizing radiation, and with the Decree of the State Office for Nuclear Safety (SÚJB) No. 214/1997 Coll., on the quality assurance for activities in the nuclear facilities siting.

2 TERMS AND ABBREVIATIONS USED

2.1 Terms (terms denoted "*" comply with EN ISO 9000:200)

- 1) Contractor - a person providing on the basis of a contract the activities in the course of the siting selection.
- 2) Quality audit (inspection) * - systematic and independent inspection with the aim to find out whether the activities in the field of quality assurance and results connected with them conform with the intentions and whether these intentions are achieved effectively and are suitable for reaching the aims.
- 3) Item - is a product, activity, relation, system or person important from the point of view of nuclear safety and radiation protection.
- 4) Nuclear safety - is a condition and ability of a nuclear facility and personnel operating a nuclear facility to prevent the uncontrolled development of the fission chain reaction or the unauthorized release of radioactive materials or ionizing radiation into the environment and to restrict the consequences of accidents.
- 5) Radiation protection - is a system of technical and organizational measures to reduce the irradiation of persons and environment.
- 6) Quality* - overall sum of all features of an item (i.e., product, activity, process, organization, or person) that affect the ability to meet the prescribed and expected requirements.
- 7) Inspection * - an activity as, e.g., measuring, controlling, testing or comparing with a standard of one or more features of an item and the comparison of results with the specified requirements with the aim to find out whether the conformity of every feature has been achieved.
- 8) Quality management * - all activities of the management that determine the quality policy, aims, and responsibilities and that are accomplished using such means as quality planning, (operative) quality management, quality assurance, and quality improvement within the framework of the quality system.
- 9) Remedy measures - measures taken in order to eliminate the causes of the existing nonconformity, defect or other undesired situation, in order to prevent its appearance.

- 10) Nonconformity * - non-observance of the specified requirement.
- 11) Process * - a set of mutually interconnected resources and activities that transform the inputs into outputs.
- 12) Management review * - official assessment of the state and adequacy of the quality system worked out by the top management in relation to the quality policy and quality aims.
- 13) The geological repository site selection is a sum of all activities (namely geological research and survey studies) resulting in the qualified selection of a site for the geological repository.
- 14) Service * - the result accomplished by the activities on the boundary between the contractor and the customer and the internal activities of the contractor with the aim to meet the customer's requirements.
- 15) Specification *- a document specifying the requirements.
- 16) Quality system * - an organizational structure, procedures, processes, and resources necessary for the accomplishment of the quality management.
- 17) Defect * - non-observance of the requirement in the assumed use or non-observance of the adequate expectancy, including the expectancy connected with safety.
- 18) Quality assurance * - all planned and systematic activities accomplished in the quality system framework and demonstrated - if necessary - in order to provide the adequate confidence that the item will meet the quality requirements.
- 19) Record * - a document providing an objective proof on the activities and on the achieved results.

2.2 Abbreviations

AA	Atomic Act
SHPW	safety and health protection in work
CMO	Czech Mining Office
ČSN	Czech (or Czechoslovak) technical standard
COOS	Czech Office of Occupational Safety
GR	geological repository
ISO	International Standardization Organization
ITI	Institute of Technical Inspection
NS	nuclear safety
IAEA	International Atomic Energy Agency

NUSS	IAEA program for the establishment of the nuclear power plants safety standards
QAP	quality assurance program
MMS	Manual of the RAWRA management system
RW	radioactive waste
QS	quality system
SÚJB	Státní úřad pro jadernou bezpečnost (State Office for Nuclear Safety)
RAWRA	Radioactive Waste Repository Authority
HLW	High-level radioactive waste
SNF	spent nuclear fuel
ENV	environment

3 IDENTIFICATION DATA

3.1 Identification of the licensee for radioactive waste management, including their disposal

Licensee:	Czech Republic - Radioactive Waste Repository Authority
Legal form:	state organizational unit
Seat:	Dlážděná 6, 110 00 Praha 1, Czech Republic
Identification number of the organization:	66000769
Statutory body:	Ing. Vítězslav Duda, MBA, directoraddress: U Botiče 1390, Praha 4 – Michle
SÚJB registration number:	66000769

3.2 Object, location, and scope of the licensee's activities

The object RAWRA's activities is given by §26 of AA (Atomic Act). To secure the fulfillment of this legally given object of activity within the framework of this QAP RAWRA was entrusted with the selection of the geological repository site.

RAWRA, in compliance with the provisions of §5, §26 Paragraph 3(4) of AA secures the activities mentioned above primarily by choosing contractors on the basis of the assessment of nuclear safety, radiation protection, and economic effectiveness.

4 RELATED DOCUMENTS

4.1 External directives

4.1.1 Legal directives

- Act No. 18/1997 Coll.on the peaceful use of nuclear energy and ionizing radiation (Atomic Act) and on the amendments to some acts, as amended in later directives

- Reg. SÚJB No. 214/1997 Coll.on quality assurance in activities connected with the use of nuclear energy and with activities leading to irradiation, as amended in later directives
- Reg. SÚJB No. 215/1997 Coll.on the criteria for the location of nuclear facilities and very important sources of the ionizing radiation
- Reg. SÚJB No. 307/2002 Coll.on requirements for securing the radiation protection, as amended in later directives
- Reg. SÚJB No. 144/1997 Coll.on the physical protection of nuclear materials and nuclear facilities and on their classification in individual categories as amended in later directives
- Reg. SÚJB No. 318/2002 Coll.on the details for securing the emergency preparedness of nuclear facilities and working places with the ionizing radiation sources and on the requirements concerning the contents of the internal emergency plan and emergency rules, as amended in later directives
- Government Decree No. 11/1999 on the emergency planning zone
- Act No. 505/1990 Coll.act on metrology, as amended in later directives
- Act No. 199/1994 Coll.on placing public orders, as amended in later directives
- Act No. 62/1988 Coll.on geological works, as amended in later directives

4.1.2 Recommended international standards and regulations

- ČSN ISO, series 9000 a 10 000 Quality management
- NUSS No. 50-C-S Nuclear power plants safety - site selection
- Documents of the series NUSS No. 50-SG Safety Guides
- IAEA recommendations of the series „IAEA Safety Series“

4.2 RAWRA controlled documents

VD.0.01 Manual of the RAWRA management system (MMS) and the linked-up management documentation, namely:

- Ř.03.01. Organization rules
- Ř.06.01. Issuing of the RAWRA internal controlled documents
- Ř 12.01. Archiving rules
- Ř 12.02. Shredding and archiving rules
- PP.12.03. RAWRA shredding register
- ŘP 13.01. Contracting

Ř.19.01. Metrological rules

ŘP 24.01. Quality system inspections

ŘP 25.04 Education system and verification of the special professional qualification

Moreover, documents approved by the state supervision bodies, by the Government (working plan and budget), technical procedures and administrative measures are also classified in this category.

4.3 Documents of the contractors

Respective permits of the state supervision bodies, certificates of the qualification conditions for the supply fulfillment, certified QAP or quality plans, metrological rules and any other pertinent documents are a part of the documentation attached to the contract on the supply and are archived in RAWRA.

4.4 Contract documents

Contracts on the individual activities connected with the radioactive waste repository preparation, concluded between RAWRA and its contractors, are kept in the RAWRA archive.

4.5 List of linked-up documents

Along to the printed controlled documents all relevant RAWRA documents are published also in Internet web sites, where files with the texts of the documents as well as other references, if any, are saved under the respective address.

5 LIST OF ITEMS RELEVANT FROM THE POINT OF VIEW OF NUCLEAR SAFETY AND RADIATION PROTECTION AND METHODS OF THEIR QUALITY ASSURANCE

Relevance of the individual QS elements with respect to the item quality assurance is given in Chapter 6.

5.1 Site description

Site is a complex system that can be viewed from various points. Description of the site is a result of the comprehensive assessment of the site with the aim to get such requirements that will allow its evaluation from the point of view of its suitability for building geological repository.

5.2 Site assessment

Assessment of the site is the output of the site assessment process based primarily on the comparison of the found properties with the requirements and criteria.

5.3 Personnel

Only by persons fulfilling the requirements of Chapter 6.3 can perform the activities connected with the preparation of the geological repository or dealing with the items defined in this QAP. Professionally qualified and properly trained personnel are the basic prerequisite of the quality assurance in the preparation of GR.

The following authorized RAWRA workers perform the coordination and activities secured by the RAWRA personnel:

- respective heads of departments or professional guarantors of RAWRA departments, into the spheres of activities of which the individual tasks belong;
- quality officer;
- RAWRA director.

The responsibilities of individual employees are listed in Chapter 6.2.3.

The activities of contractors or their sub-contractors are controlled and secured by the contractor's workers. The contractor has to demonstrate his professional qualification prior to concluding the contract and he is responsible for the fulfillment of all requirements required by the law and directives on the personnel performing these tasks. He has also to demonstrate the fulfillment of all conditions according to the license issued by SÚJB, CMO or by any other state supervision body. The contractor should prove the fulfillment of these requirements to RAWRA in the regular inspections of supplied services prescribed by the respective contract.

5.4 Processes

5.4.1 Site studies

Acquiring the site description comprises the general research, development, survey, and verification activities, particularly the geological works aimed to the description and verification of the geological formation properties.

In compliance with §26, Paragraph (4) of the AA the activities mentioned above are performed predominantly by contractors chosen according to the Act No. 199/94 Coll.

5.4.2 Site assessment

The decision on the assessment criteria is the starting point for the site assessment. The criteria should be kept in compliance with the legislation requirements, with the degree of the knowledge of the sites, and with the social aspects (cf., with the Concept for Radioactive Waste Management in the Czech Republic).

Assessment of the GR sites consists in the comparison of the properties of the sites summarized in their description (particularly the properties of the site, characterization of their rock formations, and of the social-and-economic conditions), with the preset criteria and requirements.

The selection of the surface building site is subjected to the criteria given in SÚJB Decree No. 215/1997 Coll.

5.4.3 Control processes

The basic processes determining the safety and quality of the GR preparation management are as follows:

- selection and supervision of the contractors activities;
- management methods, execution and inspections of works made in RAWRA;
- management of the documents circulation, recording and archiving of records;
- verification of the contractors' activities;
- management of nonconformities and realization of remedial measures;
- information of the general public on the results of these works;
- verification and evaluation of the functioning of systems and processes, particularly with respect to the aim - to obtain the permit for the geological repository siting.

The individual processes are made in compliance with the approved plan, with the material and financial schedule of works.

Results of the processes are checked and verified; the persons performing these activities are given in the quality plans.

5.5 Systems

5.5.1 Site

The site is understood as a demarcated area, comprising all components of the environment (e.g., biosphere, lithosphere, hydrosphere), occupancy and exploitation of the region.

5.5.2 GR system

Geological repository is a nuclear facility assigned for the disposal of SNF and RW unacceptable in surface depositories. The entire system is subdivided in several subsystems according to their siting and function. It consists of the surface and underground parts. Takeover and processing of SNF for disposal, the service areas for the underground part of the repository, the administration and social buildings, processing plant of the excavated and backfilling material, and the respective infrastructure are the components of the surface premises. The underground complex comprises the access and ventilation shafts or slopes, service areas and disposal areas designed with respect to their prospect use either for SNF or RW. The long-term safety of the repository area is secured by a combination of barriers, artificial (form of the waste, packaging, sealing and backfilling materials) and natural (rock structure), that is denoted as the multi-barrier system.

5.5.3 Management system of activities performed by RAWRA

RAWRA management system observes the requirements of the RAWRA quality assurance system and comprises:

- the execution of works by the RAWRA workers;

- takeover, verification, checkup, and filing of the tangible and intangible outputs of works;
- administration and control of information flow;
- archiving of data and conversion of data into databases;
- maintenance of databases;
- control of changes;
- preparation and schooling of personnel;

Materials obtained from contractors as well as those from RAWRA own work are gradually converted into database that makes fast retrieval and systematical processing of individual data possible.

The management system is described in the document VD 1 Manual of RAWRA management system.

5.5.4 System of the contractors control

The system of the contractors' control comprises the following activities:

- preparation of the technical assignment for external activities;
- selection of contractors;
- conclusion of the respective contract;
- checkup and evaluation of the contractors activities;
- takeover and verification of the tangible and intangible outputs of works;
- control of the information flow;
- archiving of data and their conversion into databases;
- maintenance of databases;
- control of changes.

Outputs from the contractors' activities are summarized and archived in RAWRA in a suitable form. RAWRA takes over and archives the primary documentation (i.e., the technical documentation that is collected, treated, and interpreted by the contractors) only if required by the sub-contractor.

5.6 Technical resources

5.6.1 Hardware and software

Software compatible with the RAWRA software is used for the purposes of the GR site selection. Electronic archiving of records is made so that it allows the gradual extension of the database and the automatic retrieval of data as well as the future reexamination and

verification of the records. The hardware secures the data protection by means of regular backup.

5.6.2 Equipment of working places

Equipment of the individual working places of contractors is described in their operational documentation and in the respective QAP. The assessment of the contractor's working place for the purposes of the contract is a part of the contractor selection process.

5.7 Financial resources

The activities connected with the site selection are funded from the state budget via the nuclear account (cf. §28, Paragraph 1 or Paragraph 2, letter d) of the Atomic Act).

6 QUALITY ASSURANCE FOR THE GR SITE SELECTION

Individual elements of the RAWRA quality system for GR selection are grouped into the following items:

1. Relation between RAWRA's QAP and QS
2. Organization
3. Personnel qualification
4. System of handling with the documentation and records
5. Purchase of items, services, evaluation of contractors
6. Verification, examinations, and tests
7. Metrology
8. Non-conformity
9. Remedy and prevention measures
10. QS evaluation

6.1 Relation between RAWRA's QAP and its quality system

RAWRA works out and uses the quality system that:

- permits to meet all the requirements stipulated by the respective legal regulations;
- permits to meet the requirements stipulated by the SÚJB Decree No. 214/1997 Coll., on the quality assurance in activities connected with the use of nuclear energy and activities leading to irradiation and on setting the criteria for the classification of selected facilities into safety classes for the activities performed by RAWRA in connection with its assignment and to which the Directive applies;
- permits to meet the requirements of norms and standards, approved requirements and expectations of the respective parties in time and costs (prices);

- provides for the effective management of RAWRA by means of continuous improvement;
- permits to exploit in future the accumulated results and data

The quality system is applied gradually with respect to the importance of the individual processes and items for the fulfillment of the RAWRA assignment.

RAWRA quality system is built up using the general approach in quality systems worked out according to the quality management and quality assurance standards (standards of the ČSN EN ISO 9 000 and 10 000 series).

The submitted QAP describes that part of the quality system that is used for the quality assurance in activities connected with the GR site selection.

6.2 Organization

6.2.1 RAWRA's organizational structure

In compliance with the AA and its statute, Director, to whom all the RAWRA employees are subordinated, is the RAWRA general manager. In order to secure the fulfillment of RAWRA assignments the Director decides, after consultations with the RAWRA Board, on the organizational structure of RAWRA taking into account the present needs and possibilities of RAWRA. Permanent and temporary working teams are formed in the course of fulfilling the RAWRA assignments.

Senior executives delegate competence to such levels that adoption of qualified decisions is possible.

The organizational structure and the assignment of responsibilities in RAWRA are based on the principal that:

- every employee is responsible for his work quality;
- the achievement of the required quality is verified by employees that are not directly responsible for the work under scrutiny. If the RAWRA employees are not able to fulfil this requirement or if it is not possible to provide a sufficiently objective proof on the fulfillment of the quality requirements, the RAWRA Director decides on the verification method in compliance with the requirements on the gradual quality assurance.

In the framework of RAWRA the responsibilities for the individual processes are defined in the organizational rule (Ř.03.01. Organizational rule). Senior executives can delegate authority to their subordinates. Such delegation should be documented in writing. By delegating such authority the respective senior executive is not divested of the responsibility for quality.

All employees are entitled to submit proposals for improving the quality system.

Workers responsible for the application of the quality system and for the control and verification are provided with a sufficient authority to identify nonconformities and in case of necessity to demand a remedial action.

In the framework of RAWRA head of the site selection project, directly subordinated to the Director, is responsible for the activities connected with the site selection.

6.2.2 Process coordination methods in the site selection

In the GR site selection process RAWRA performs the following groups of activities:

- Outsourcing of external contractors.
- Activities performed by RAWRA's own workers.
- Checkup and verification of all activities connected with the GR site selection.
- Processing and archiving of all data recording the process of the GR site selection.

The following method is used:

1. Selection procedures and the assessment of the suitability of the site individual characteristics and of the items decisive for fulfillment of the GR functions are determined and recorded in the course of the site selection.
2. The documentation of the site selection contains documents concerning the suitability of the chosen site and on its rock structures.
3. Impartial qualified persons verify the procedure of the site selection.
4. Qualified persons test and approve the documentation on the site selection.
5. All records, calculations, analyses, decisions important from the point of view of the site selection are archived so that they can be examined and verified.
6. In the site selection process the following aspects are of primary concern:
 - The suitability of the proposed geological formations,
 - the suitability of the location of the underground and surface parts of the GR
 - feasibility of building the surface premises in the proposed sites.

RAWRA works out annual, medium-term, and long-term plans of the works on the program of the GR preparation. On its basis it concretizes technical assignments for the execution of individual works, including requirements on the quality and methods and scope of verification and checkup. It makes a search of external contractors of individual, partial or group orders or, as the case may be, it performs some activities by its own employees.

The responsible executive of RAWRA controls the order solution and the takeover of the final results, on the basis of the opponent examination or opinion of impartial experts. In the course of these inspections an attention is paid to the fulfillment of the quality requirements at the contractor that should have worked out the respective plan of the quality assurance of works.

From the point of view of the organizational setup the following organizational boundaries are important in the accomplishment of activities in the GR site selection:

- External contractor– RAWRA
- RAWRA – impartial examiner.

These boundaries are defined in the fixed job contract.

The contacts of RAWRA with the supervision bodies (cf. SÚJB, CMO, COOS, and ITI) and other administrative bodies form other boundaries. Cooperation in these contacts is secured in conformance with the existing legislation relating to the individual activities or by the RAWRA organizational rule.

6.2.3 Responsibilities and powers

The basic layout of responsibilities is given in this Chapter.

6.2.3.1 RAWRA Director

RAWRA Director is generally responsible for the RAWRA activities. As the statutory body of RAWRA he concludes all contracts. He is responsible for the preparation of the annual, medium- and long-term plans of RAWRA activities.

6.2.3.2 Head of the GR site selection project (Department 0400)

The project head secures:

- preparation of the proposal of the working plan and budget;
- coordination of the external contractors activities and the RAWRA departments in the activities connected with the site selection;
- the preparation of the technical outsourcing and contracts for the execution of the individual orders in cooperation with the other experts of Department 0400 or of other RAWRA departments;
- the inspections of the execution and takeover of the individual orders outputs in cooperation with other RAWRA experts;
- management of the documents circulation, filing and archiving of records;
- management of nonconformities and execution of remedies;
- controls the contacts between RAWRA and contractors from the point of view of RAWRA;
- submission of reports on the execution and outputs of contracts managed by him for the RAWRA Director and for other experts of the Department 0400.

6.2.3.3 Quality officer

In regular interval makes the evaluation of the QS effectiveness in the site selection activities. He makes inspections at external contractors, provided that these inspections were agreed upon in the respective contract on the fixed job.

He maintains, organizes, and controls the RAWRA management of documents.

6.2.3.4 Advisor

The advisor provides the expert support to the head of the project on the basis of a contract in which his activities and responsibilities are specified.

6.2.3.5 Contractors

The contractors perform activities within the limits specified in the respective contract with RAWRA. If the character of the performed activity requires the permit of SÚJB for its execution or another license according to the legal regulations in force, the contractor is obliged to document these facts prior to the contract conclusion.

For the operational control of the contracted activities the contractor shall appoint an authorized worker of the contractor who deals with the head of the project and is responsible for other contractor's workers. The contractor's internal organizational structure is not considered in this document. The contractor shall work out an independent quality assurance program for the solution of the contract; its execution is systematically checked by RAWRA.

6.3 Personnel qualification

Training of workers concerns all workers the professional duties of which affect substantially the RAWRA activities in the coordination and execution of the GR preparation program or that concern processes that could affect substantially the nuclear safety, radiation protection, physical security, emergency preparedness and planning, safety of workers, environment and public relations.

RAWRA provides suitable conditions for securing the sufficient qualification of its employees and its continuous improvement.

Both the professional and safety trainings of employees proceed either by acquiring the object of the training in the course of the practical execution of activities or by special courses and training, or - as the case may be - by participating in international actions. The immediate senior executives of individual employees are responsible for the identification of the needs of training and schooling.

In simpler activities the schooling and training can be substituted by a long-term well proven practice. The direct senior executive of the employee is authorized to this decision.

The qualifications of the contractor's employees are specified by the contractor's internal regulations that should entirely comply with the legislative requirements for the given function. Under contract the contractor is obliged to use for his activities only personnel that is qualified, trained, and passed the prescribed tests. Moreover, the contractor is obliged to keep records on these facts and to submit them on request. The purchaser shall check these facts during the checkup of the supplied services.

6.4 Documents and records

The structure of RAWRA documents comprises both the individual documents of the process documentation and the system of records and linked-up documents as, e.g., reports.

The standardized controlled documentation forms a hierarchical system of documents that deal with the individual aspects of the RAWRA management and quality systems specified in the top management document VD01, Manual of the RAWRA management system.

Along to this set of documents there is a group of documents that summarize the methods of securing a certain group of items, specify the extent of the use of individual items for securing the RAWRA activities (plans and programs). Even these documents can form certain hierarchic structure. Normative documents containing limits and conditions of individual processes and items constitute a special group of documents.

6.4.1 Process documentation

All processes concerning the individual items specified in Chapter 5 are performed in compliance with the approved controlled documents that form their documentation.

All types of documentation used in RAWRA are subject to the system approach, i.e., management. References to the individual controlled documents always concern the current version of the document.

RAWRA departments authorized to prepare the documents are responsible for their systematic arrangement.

6.4.2 Records

Records stipulated by legal regulations and records important from the point of view of the traceability of the procedure of the site selection are subject to the quality system. The individual records are collected with respect to their subjects in record sets - databases and record books.

6.4.2.1 Classification of records

Records and quality records are classified as permanent and temporary (with a specified storage period).

Permanent quality records are records that:

- have a substantial value for proving the individual decision steps;
- serve for the verification of processes concerning the GR site selection;
- are important for the preservation of the information on the state of the sites of interest;
- can determine in a substantial measure the causes of nonconformities;
- provide basic data for the proposal of the GR actual solution.

Short-term records are such records that provide a proof that the given process or activity were performed in compliance with the specified requirements but that do not meet the criteria of permanent records.

Shredding criteria of individual records are specified in PP.12.03. RAWRA shredding register.

6.4.2.2 Preparation of a valid record

The documentation of the individual processes identifies those documents (or objects) that will become quality records.

Persons preparing quality records should take care that the records are legible, correct and complete and also unambiguously identifiable.

Documents become quality records only after a proper authorization. If it concerns such documents (objects) that cannot be authorized by signature (cf. magnetic media, drilling cores) suitable forms of authorization should be specified.

Both original documents and their authorized copies can be the quality records.

The records are dated, numbered, and properly subdivided so that they are easily accessible.

6.4.2.3 Storage and protection of documents

Persons handling with the records should protect them against damage, destruction or loss.

Records are kept in a place that protects them against damage due to humidity, temperature, light and other effects negatively affecting the record properties. The records are protected against unauthorized use, larceny and vandalism.

Wherever it is practical, the records are gradually converted into electronic form.

The period of the individual records' storage is specified in PP.12.03. RAWRA shredding register. The temporary records marked with the shredding symbol "V" should not be discarded until:

- the legal limits are fulfilled;
- the licensing process did not start;
- contract conditions are fulfilled.

RAWRA contractors keep and archive records in compliance with the RAWRA quality system requirements. In the respective contract it is agreed upon that the relevant records are passed to RAWRA or are available on request.

6.4.2.4 Records archiving

Records are collected in an archive that is established for these purposes. The documents are incorporated into an information system that allows the authorized persons access to the individual records. A concrete person is appointed that is responsible for the manipulation with the records in compliance with the requirements specified above.

6.4.3 Related documents

PJ.P.12 Survey of documentation related to PJ.P.02

Ř.06.01. Issuing of RAWRA internal management documents

Ř 12.02. Shredding and archiving rules

PP.12.03. RAWRA shredding register

6.5 Purchase of items, services, evaluation of contractors

6.5.1 General

The process of purchase and supplies is controlled by documented procedures (ŘP 13.01. Outsourcing).

Employees responsible for the given activity for which the item or service is purchased specify the objects of the commercial contracts' fulfillment. These specifications are submitted to the RAWRA management in compliance with the approved regulations.

The employee responsible for the specification of the contract object fulfillment is obliged to submit such a specification that is in conformity with the overall quality requirements, complies with the legal and other regulations and meets the requirements of the approved procedures. The specification of the purchased item examination and, if necessary, of the contractor is a part of the documentation in the case of supplies and processes affecting the items quality and the methods of their documentation. An authorized RAWRA executive checks the incorporation of these requirements into the contract.

Changes in the supplies' documentation are subject to the same extent of checkup as that that was used for the working out the original documentation of the supply.

Items and services subject to the legal regulations of the Czech Republic (e.g., to the Decree No. 76/1989 Coll., Decree No. 214/1997 Coll.) are purchased from contractors that are licensed for these supplies.

6.5.2 Outsourcing of public contracts

RAWRA makes all purchases in compliance with the Act No. 199/1994 Coll. on the contracting of public contracts as amended by later regulations.

The employees are responsible for contracting the orders only to qualified contractors. The professional qualification of the contractor is based on his evaluation performed in compliance with the RAWRA management documents.

A list of qualified contractors results from the process of the evaluation of contractors. Enlistment in the list of qualified contractors could be an important factor in the evaluation of the contractors' offers in the competitive tendering.

6.5.3 Quality plan

Quality plans are a part of the contract management by means of quality plans in the case of supplies important by their extent, impacts on the radiation and/or nuclear safety, on the physical security or on the involvement of general public.

The quality plan is worked out in connection with the RAWRA QAP prior to the beginning of the contracted activities. The quality plan has to be approved by the RAWRA authorized workers and its fulfillment is controlled according to ČSN-ISO 10 0011-1.

6.5.4 Assessment of contractors

The process of the assessment of contractors is described in the RAWRA management documents.

In the assessment of contractors of the purchased items and services the historical data and experience with the quality of the supplied items and services, audit results, inspections and controls are taken into consideration.

Moreover, the contractors are assessed according to their:

- commercial characteristics
- technical quality of the supplied items and services
- personnel providing the supplied services
- quality of their quality system

Prior to contracting or concluding a contract, the suppliers of items important for the safety are checked from the point of view of additional requirements on their quality system.

The contractors of works and services must be able to demonstrate the professional abilities of their personnel. The acquirement and demonstration methods of this professional ability are verified from the RAWRA side.

Contractors that do not meet the preset criteria of RAWRA assessment are excluded from the list of the qualified contractors.

6.5.5 Commercial contracts

RAWRA requirements fulfilled from external sources by purchasing supplies and services are satisfied by commercial contracts. The commercial contracts concluded by RAWRA have to be in written form, except for the small purchases of municipal services and goods. The contract is concluded with the necessary professional care so that it will meet the RAWRA requirements keenly priced, in the required terms of fulfillment and in the required quality.

All changes of the contract, supplements, appendices, and amendments are prepared using the same procedure as for the original contract.

Prior to their final conclusion all contracts are assessed by an employee authorized for the specification of the supply in compliance with the requirements of RP 13-01.

6.5.5.1 Requirements to the contract with the contractor

Along to the prerequisites of any commercial contract the following items should be unambiguously specified in the contract on purchase:

- specification of the individual items of the supply,
- quality requirements to the individual items (in the case of extensive supplies also the methods of the contractor's quality system),
- requirements to the documentation of the individual items and processes,
- specification of the passed over records and of records to which RAWRA will be given an access on request,

- the extent and methods of the supply control,
- procedures taken in the case of a nonconformity,
- appointment of an authorized representative of the contractor.

If a subcontract is a part of the supply, the contract must contain also the procedures by which the requirements posed on the contractor are applied also to the subcontractor.

6.5.6 Acceptance and inspection of the supply

The acceptance should secure that the item or service is supplied in amounts and quality complying with the contract. If any defects are discovered in the course of the acceptance procedure or if the specified quality requirements have not been met, a procedure on the enforcement of RAWRA rights following from these defects is launched.

The comprehensively provided services are continuously checked, usually in the form of the inspection days.

The extent and methods of takeover and inspection are specified in the contract.

6.5.7 Responsibility

RAWRA senior executives are responsible for the specification of the individual items of the purchase according to their fields of activities. RAWRA director approves the individual orders.

6.5.8. Related documents

ŘP.13.01 Outsourcing

Ř 13.02 RAWRA internal management system

6.6 Checks, examinations, and tests

The principle of the gradual quality assurance according to the importance of the controlled item on the quality is applied to the checking and testing procedures.

Checking procedures concerning processes important from the point of view of nuclear safety, radiation protection are executed according to the documentation specifying also the necessary conditions for the checkup procedure.

Methods and terms of the individual checkup, examination, and test records archiving are specified in PP.12.03. RAWRA shredding register.

The head executive of the respective checkup or test procedure is responsible for releasing and marking of the tested items for subsequent operations.

- All data on the performed tests are documented.
- In the course of the procedure the important items should be marked and should be identifiable from the point of view of their state with respect to the checkup. In the case that this marking is connected with the risk of exposing the worker to the ionizing radiation, this marking is made in the accompanying documentation.

- Marking of products and selection of the non-conforming products is made by the controllers.

The person performing the test according to the respective documentation is responsible for the method and quality of the performed checkup or test.

Quality verification is suitably planned well ahead before executing the individual activities. Inspection days are the common method of the supplied services' checkup. The extent and specification of the supplied services' checkups are specified in the annexes to the respective contracts.

6.6.1 Related documents

PP.12.03. RAWRA shredding register.

6.7 Metrology

The metrological verification of apparatus used in the activities connected with the GR site selection is a *conditio sine qua non* of the quality and safety assurance. RAWRA and its contractors have to meet the requirements of the Act No. 505/1990 Coll. on metrology. Namely they have to:

- secure prerequisites for assuring the uniformity and correctness of meters and measurements with the aim to fulfill all requirements of safety and environment protection;
- use measuring devices prescribed by the state technical standards;
- keep on files on the prescribed meters;
- mark the meters so that it is evident that the meter has been verified and is able to perform the respective measurement;
- mark the meters that do not meet the requirements of the respective legal and internal regulations.

The quality assurance executive is responsible for the calibration of the control and testing meters.

Workers using the control and testing meters are responsible for sending these meters to calibration in the prescribed terms.

6.7.1 Related documentation

Ř.19.01. Metrological rules

6.8 Nonconformities

All discovered nonconformities should be solved and remedied, if possible.

This rule is applied to all nonconforming products discovered internally and externally.

Employees responsible for the execution of assignments connected with these nonconformities are responsible for the execution of these activities. Any RAWRA

employee is entitled to report nonconformity. The nonconformity should be reported using the respective form - Record on nonconformity.

The quality executive provides cooperation and methodical assistance.

In the case of discovering defects or nonobservance of the specified quality requirements in the supplied items and services the complaint procedure is launched.

Head of the respective department is responsible for conducting the complaint procedure.

Procedure of the nonconformity solution:

1. Identification and re-examination of the nonconforming product, its marking and rejection and isolation from the conforming products. Description of the nonconformity in the respective documentation.
2. Issuing (working out and approval) of directives what to do with the nonconforming product.

With respect to the actual conditions it is possible:

- a) to reprocess and repair it to meet the specified requirements
 - b) to pass it over, repaired or not repaired, on the basis of exception granted by the customer
 - c) to use it for another purpose or to liquidate it.
3. Execution of the decision, including repeated examination of products that were reprocessed or repaired.
 4. Analysis of the primary causes of the nonconformity reasons, determination and execution of measures to prevent the nonconformity reoccurrence.
 5. Making of a record on the executed accomplished activity and on its result, including the verification, if necessary.

A discovery of a problem in the field of quality requires adopting measures in order to prevent the reappearance of this problem or to minimize its impacts.

6.9 Remedial and prevention measures

Preparing the remedial measures the worker responsible for the proposal of the remedial measures should determine the reason of the nonconformity and make a record of it.

Remedial measures are adopted after:

1. reoccurrence of nonconformities,
2. discovery of supervising bodies,
3. discovery of a nonconformity of products connected with items important for the nuclear safety and radiation protection,

4. discovery of a nonconformity during the internal and external quality system inspections,
5. discovery of conditions jeopardizing the quality.

In the case of the non-conformities reoccurrence the senior quality assurance executive is responsible for the proposal and verification of the preventive measures execution. Along to the technical and organizational measures also measures applying the self-control of individual workers and the internal system of every worker assessment are used.

In cases of emergence, when the personnel or the surrounding environment are endangered, it has to be proceeded in compliance with the internal emergency plans of the respective working place where the situation arises.

In the solution of nonconformity detected during the acceptance of radioactive waste it is necessary to consider the possible risks emerging from the refusal of the radioactive waste acceptance and from the transportation back to the generator or processor.

6.10 Evaluation of the quality system

The process of planning and execution of examinations of the quality assurance with the aim to verify the conformity of the adopted quality system with the requirements of the SÚJB Decree No. 214/1997 Coll. observes the respective chapter of MMS. Both persons participating on the application of the quality system and independent or external persons that are empowered to the independent assessment verify the fulfillment of the requirements posed on QS. The QS evaluation process comprises also the QS verification.

QS assessment is made once per year. The assessment extent and period could be changed according to the needs of the managing and control processes.

The quality system is assessed on several levels. Results of the assessment are submitted to the RAWRA Director.

6.10.1. Related documents

ŘP 24.01. Quality system controls

7 CONCLUDING AND TRANSIENT PROVISIONS

This document is closely connected with the quality assurance system of RAWRA. Due to the long time of the site selection process this QAP can be updated and modified with respect to the current extent and orientation of the accomplished activities.

8 CHANGES AND AMENDMENTS

8.1 History of changes

Revision	With effect from:	Changes
0	11 Nov. 2002	Basic version without any changes or amendments

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