Internal information

Quality plan

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SDK-001 Quality plan for the Spent Fuel Project

This document is an English translation of the control document "SDK-001 Kvalitetsplan för Kärnbränsleprojektet" version 7.0 (SKBdoc id. 1054816). The English version is a translation and not a control document in the SKB quality management system.

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1. Quality Plan

1.1   Objective

The objective of the current quality plan "SDK-001 Quality Plan for the Spent Fuel Project" is to provide quality and environmental management for the Spent Fuel Project. The quality plan will also provide support for the project's participants and serve as a gateway for the controlling documentation that exists in SKB's management system and is crucial in order to reach the Spent Fuel Project's goals on quality and environmental management. Important quality goals for the project are as follows:

- to deliver results with requisite technical and scientific quality
- traceability with a focus on the license review of the application, but also from the shorter and longer-term view
- to meet the demands for nuclear safety now and in the long-term
- time- and cost effectiveness
- to maintain good relations with the surrounding world

1.2   Scope and application

The quality plan encompasses control documentation specific to the Spent Fuel Project (SDK-xxx) and SKB common control documentation (SD-xxx).

The quality plan is directed towards all participants (employees and suppliers) involved in the Spent Fuel Project that shall apply SKB's management system.

1.3   The quality plan's role in the Spent Fuel Project's quality and environmental management

The quality plan is the main document and guide to the management system's control documentation for the Spent Fuel Project's quality and environmental management. The quality plan also describes general control documentation outside of SKB's management system with respect to its role in the Spent Fuel Project. The quality plan constitutes a part of and is included as an attachment in the Spent Fuel Project's project plan (SKBdoc id 1066699). The Spent Fuel Project's organization, management and control are shown in the project's project plan.

1.4   Responsibility and authority for the quality plan

The quality plan is designed and managed according to SKB's procedure SD-025 Quality and environmental management in a project *(in Swedish).* Assistant project leaders for coordination questions within the Spent Fuel Project have the responsibility to, in conjunction with the project's other quality and environmental coordinators, establish and revise the quality plan as needed. Project leaders for the Spent Fuel Project have the responsibility to set limits and approve the quality plan.

The project leaders for the Spent Fuel Project's sub-projects have the responsibility to see that all project participants receive satisfactory information about the quality plan and, if needed, initiate further development of procedures and other information that support the project's quality and environmental management.

2. Control and monitoring of the Spent Fuel Project

2.1   Project control

The Spent Fuel Project is divided into sub-projects that are controlled through project and activity plans. The control of the products produced within the project occurs partially according to different structures:

method descriptions respective methodology reports are used as control documentation for the realization
and management of raw data; the project's requirements-database supports the establishment of control
documentation for the realization of the Spent Fuel Project's finished products for applications and
initiation of the building phase.

2.1.1 General control

A fundamental control of the Spent Fuel Project is the laws and regulations governing the project.
Procedure SD-022 Supervision and adherence to and other relevant requirements *(in Sw.)* controls how
SKB gains access to the actual legislation governing their operation, together with how they obtain
sufficient knowledge on the meaning of the applicable statutes so that they can be complied with. The
procedure also controls how compliance to the statutes is monitored. Relevant statutes are compiled in
Register SD-021 Statues and other relevant requirements that affect SKB *(in Sw.)*. For certain activities,
the authorities have granted SKB permits and conditions. These and how they apply to SKB are
explained in SD-029 Permits and conditions for SKB *(in Sw.)*.

Figure 1 illustrates controlling documentation for the general control of the Spent Fuel Project and the
purpose of each document.

Control Documentation	Purpose
Project decisions and project plan for the Spent Fuel project Operations plan	Describes in general **what** needs to be done and **why**, as well as on a general Project level **who**, **when**, **where** and **how.**
Sub-project plans	Specifies what should be done and states **who**, **when**, **where** and **how.**
Activity plans	Specifies work relating to **who**, **when**, **where** and **how.**
Quality plan	Controls how different categories of work assignments shall be carried out and who is responsible to see that it happens. This ties in with SKB's management system.

Figure 1. *Control Documentation for the Spent Fuel Project's general control*

Operational plan
Based on a project decision from the CEO, the director of the Site Investigation Department is
responsible as project leader for the Spent Fuel Project. The Department of Site Investigation establishes
an operational plan every year that is approved by the CEO. This operational plan encompasses the entire
Spent Fuel Project, even the parts of the project that fall under the jurisdiction of departments T, M, D
and V. Operational planning follows procedure SD-019 Operational planning and quarterly monitoring
(in Sw.). Input for the operational plan comes from SD-031 SKB's policy *(in Sw.)*, CEO directive, the
communication plan, common company goals and the RD&D-Program.

Project plans
Several sub-projects have been established within the Spent Fuel Project: Site-Project Forsmark, Site-
Project Oskarshamn, Site Modeling, Design Repository, Design Encapsulation, Operational Safety Final
Repository, Safety Assessment, Nuclear transports, Production Process, Environmental Impact
Assessment and consultation, and Application. The Spent Fuel Project respective sub-projects are
planned, decided upon and implemented according to SD-002 Project process *(in Sw.)*. The Spent Fuel
Project and sub-projects establish project plans for the respective projects. The sub-project project plans

are also attachments to the Spent Fuel Project's project plan. A yearly study is made of all the project plans in conjunction with operational planning. Under-projects can be defined within the sub-projects; these are also implemented in accordance with SD-002 Project process *(in Sw.).*

Activity plans

Operations within the sub-projects can be conducted as activities. The activities are planned, decided upon and implemented according to SDK-105 Activities planning, implementation and monitoring within the Spent Fuel Project *(in Sw.).* Lists of the activity plans are reported in:

- FK-003 Register of activity plans Forsmark *(in Sw.)*
- FK-004 Register of activity plans Oskarshamn *(in Sw.)*
- FK-005 Register of activity plans site investigation (PLU) technology *(in Sw.)*

Additional activity plan registers may be added if more sub-projects decide to pursue operations in the form of activities.

Quality plans

The Spent Fuel Project applies SKB's management system, which is described in detail in SD-128 Design and structure of SKB's management system *(in Sw.).* Here, a clear connection between operation-specific and general company components is found. The parts of SKB's management system that are applicable to the quality- and environmental management of the Spent Fuel Project are reported in the project's current quality plan. SDK-003 Quality assurance plan for the safety assessment SR-Site *(in English)* is in place for safety reporting with respect to long-term safety.

Management, monitoring and improvements to the management system are governed by SD-001 Management, monitoring and improvement of SKB's management system and operations *(in Sw.).* Documentation and revision of the procedures in SKB's management system fall under SD-084 Documentation and revision of control documentation *(in Sw.).* Procedures and other project-specific documentation in the management system for the Spent Fuel Project are established and managed in accordance with SDK-109 Establishment and management of quality and environmental control documentation within the Spent Fuel Project *(in Sw.).*

2.1.2 Control of the realization and analysis of raw data

Site-Project Forsmark, Site-Project Oskarshamn and Site Modeling have as their primary objective to perform supplemental studies and monitoring in the field that generate raw data. They are also responsible to manage the data from each site investigation/site project and produce site-descriptive models on the basis of this data.

Figure 2 illustrates control documentation for the realization and analysis of raw data

Control Documentation	Purpose
Method descriptions Method instructions	Explains in detail **how**, provides reference to the site investigations' activity plans
Methodology reports	Explains in detail how, provides reference to site-descriptive models
Measurement system descriptions	Describes SKB's own measuring system and how it should be used; provides reference to the site investigations' activity plans and method descriptions

Figure 2. Control documentation with respect to the realization, management and analysis of raw data

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Control of handling, storage, delivery and quality assurance of raw data is covered in Section 4.2.

Method descriptions/Method instructions
A method description is a method-specific control document that describes how methods are used at site investigations. They are the main references for the activity plans for the investigations. Method instructions are collective designations for other specifications that control an activity's execution. They are used as references to activity plans, for example when method descriptions provide insufficient explanation or when the activity is to be performed another way. See:

- SDK-502 SKB Method documentation (SKB MD) – registration and archiving of MD-documents *(in Sw.)*
- SDK-503 Establishment and management of method descriptions *(in Sw.)*
- FK-007 Register of method descriptions and supplier's control plans (LKP) *(in Sw.)*
- FK-008 Register of method instructions *(in Sw.)*

Descriptions of measuring system
Measuring system descriptions exist for the measuring systems that SKB has developed. A measuring system description is a system-specified controlling document that describes the measuring system's technical design and how the measuring system shall be used at the site investigations. The measuring system description is used as a reference to activity plans and/or method descriptions for investigations. See:

- SDK-502 SKB Method documentation (SKB MD) – registration and archiving of MD-documents *(in Sw.)*
- SDK-113 Management of measuring devices *(in Sw.)*
- SDK-506 Establishment of measuring system descriptions *(in Sw.)*
- SDPU-003 Management of measuring devices and other devices managed via site investigation (PLU) technology *(in Sw.)*
- FK-009 Register of measuring system descriptions *(in Sw.)*

Methodology Reports
Methodology reports for site-descriptive modeling detail modeling- and evaluation strategies for every discipline (subject area) that is included in the site descriptions. Discipline-integrated evaluations are described in a separate strategy report. Usage of methodology reports is limited to site-modeling, which means that evaluations directly linked to design and safety assessment are not affected.

The methodology is developed successively and smaller changes are reported in the site-descriptive model reports, while larger changes are documented separately. Such a separate documents then becomes a supplemental document to the subject-specific methodology report. A change affecting a different part of the methodology can be documented in a new, separate document. There can, therefore, be several supplemental documents to take into consideration outside of the actual methodology report for the modeling work. It is reasonable to update the original methodology report in the case of extensive changes in methodology.

Methodology reports, together with supplemental documentation (P-reports and memos), are approved by the project leader for the sub-project Site-Modeling within the Spent Fuel Project. The person responsible for the material within the Analysis/Site-Modeling unit has the responsibility to see that the correct methodology for site-modeling is followed and, if needed, is developed, documented and stored according to SDK-120 Document management plan – The Spent Fuel Project *(in Sw.)*. Responsible parties within the Analysis unit hold regular meetings (Site-Descriptive Model [SDM] workshops) one or two times a year where the review of methodology is a standing item. Methodology reports, together with supplemental documentation are found in:

- FK-011 Register of methodology reports *(in Sw.)*

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Methodology reports are the main references to activity plans within Site-Modeling and are one of the starting points for the project plan for Site descriptions.

2.1.3 Control of the Spent Fuel Project's finished product

The requirements that control the final repository's design and function, together with its design, operation and decommissioning are grouped together in a requirements-database that is managed by the function, Systematic management of requirements. General requirements are based, among other things, on laws, regulations and requirements by the owners of SKB. These are broken down by system requirements, sub-system requirements, design requirements and specifications. With the requirements come design conditions and limitations that are, for example, made up of the site and fuel characteristics. Requirements and design conditions in the database are approved through decisions made in accordance with the decision policy reported in the Spent Fuel Project's project plan. The database, therefore, is the foundation for the requirements-documentation that is established for the control of the operation, Repository Design, and to parts of department T's technology development. Review of the requirements and design conditions listed in the database will be done as new knowledge is obtained that affects the requirements in the database, and, if needed, revisions will be made and approved by the Requirement Council.

Current controlling documents are:

- General control documentation for design, including the management of "best available technology" (BAT) (SKBdoc id. 1084110)
- Underground Design Premises (UDP) (draft on P's department page)
- Environmental Program (SKBdoc id. 1064685)
- Architectural Design Program (Forsmark SKBdoc id. 1096715 and Laxemar SKBdoc id. 1093083)
- Preliminary Safety Analysis Report (PSAR) Chapter 3 (Requirements and design conditions) (SKBdoc id. 1091554)
- Design premises for facility (under preparation)

Additional controlling documentation will be provided within the requirements-database as a future basis when new operations and products are initiated or when the requirements that control an operation have been revised. *A controlling document applicable to responsibility and authority, as well as the requirements-database's function, is under preparation.*

SD-131 Decision policy for technical decisions *(in Sw.)* controls decisions made on the design and/or method for the manufacturing or control of the parts included in the KBS-3 system. Technical decisions shall be made according to the decision policy reported in the Spent Fuel Project's project plan on documented evidence that shows in a traceable way how requirements in the requirements-database are considered in the design of the KBS-3 system.

2.2 Monitoring and evaluation

2.2.1 Monitoring of the operational plan

The operational plan is monitored in accordance with SD-019 Operational planning and quarterly monitoring *(in Sw.)* (*the procedure is under reconstruction where, among other changes, quarterly monitoring will be replaced with tertial monitoring*). Sub-projects report to the project leader for the Spent Fuel Project, who will compile a single report to the CEO.

2.2.2 Audits

Internal audits within the Spent Fuel Project can be done for sub-projects or as a part of SKB's general audits of processes, models and other important areas for SKB's product quality and image according to

the general requirements for internal audits, which are reported in SD-001 Management, monitoring and improvements of SKB's management system and operations *(in Sw.).* The results from the internal audits serve as input for management's review. SD-005 Internal audits *(in Sw.)* describes how internal audits are conducted. Management's plan for internal audits is shown in SD-004 Internal audits program *(in Sw.).* In addition to internal audits, the certification body also monitors third-party audits. Supplier audits are done in accordance with applicable sections of SD-005 Internal audits *(in Sw.)* until the procedure for external audits has been established.

2.2.3   Internal control

Internal control of the Spent Fuel Project's quality and environmental work is done yearly; see SD-001 Management, monitoring and improvements of SKB's management system and operations *(in Sw.).* The aim of internal control is to identify areas where quality-enhancing measures should be implemented, which will provide input for what the quality and environmental work will focus on during the upcoming period.

2.2.4   Evaluation of projects and activities

Every project shall be evaluated according to the guidelines in SD-002 Project process *(in Sw.).* Activities shall be evaluated in accordance with SDK-105 Activities planning, implementation and monitoring within the Spent Fuel Project *(in Sw.).* Implemented evaluations are reported in writing and serve as the basis for improvements in the planning and implementation of upcoming projects and activities.

3. Administration

3.1   Financial management

SD-012 Financial management *(in Sw.)* aims to ensure that quality-sufficient information is gathered for all financial transactions covered by accounting law or is needed to provide information for management of the operation. The procedure also covers the management of invoices and payments to customers and suppliers. The Spent Fuel Project uses SDK-111 Orders and account-coding *(in Sw.),* which specifies the financial management within the project. An account plan is found on SKB's Intranet.

3.2   Planning

SDK-014 Planning the Spent Fuel Project *(in Sw.)* controls how the project's activities are planned using planning tools. The purpose of the procedure is to coordinate the planning within the Spent Fuel Project so that the operation can, through effective time- and resource-planning, be steered towards the project's goal. SDK-114 Procedure for risk management in the Spent Fuel Project *(in Sw.)* should be taken into account when planning the Spent Fuel Project and its sub-projects.

3.3   Risk management

Risk management is done according to SD-020 Risk management *(in Sw.).* The Spent Fuel Project and its sub-projects are also controlled by SDK-114 Procedure for risk management in the Spent Fuel Project *(in Sw.),* which gives instructions for systematic and uniform risk management within the entire project. All project members should implement the project with consistent awareness of its risks and thus implement measures that decrease the likelihood of unpleasant surprises or limit the negative consequences if something does happen.

3.4   Postal management

Postal management is covered under SD-060 Postal management *(in Sw.)* and SDK-110 Archiving and postal management, the Spent Fuel Project *(in Sw.),* which aims to ensure that the Spent Fuel Project's incoming and outgoing documents in Stockholm, Oskarshamn and Forsmark are registered and archived both appropriately and systematically. Correspondence with the Swedish Radiation Safety Authority

(previously Swedish Nuclear Power Inspectorate [SKI] and Swedish Radiation Protection Authority [SSI]) is managed according to SD-047 Procedure for communication with SKI and SSI *(in Sw.)*. See also Section 4.5.

3.5 Measuring devices

The measuring devices that are used within the site investigations are managed according to:

- SDPU-003 Management of measuring devices and other devices managed   via site investigation (PLU) technology *(in Sw.)*
- SDK-113 Management of measuring devices *(in Sw.)*

4. Communication and information management

The Spent Fuel Project's operation requires that data and documentation is readily available for a long time. SKB's Spent Fuel Project and the field activities that are carried-out within the project are done so based on a confidence from local residents and other community inhabitants, authorities and politicians at both the local and national level. Traceability and the maintenance of good relations with the surrounding world have been identified as a few of the Spent Fuel Project's important quality goals.

4.1 Communication

The internal and external communication about the Spent Fuel Project has its starting point in SKB's Communication plan. This procedure sets specific requirements so that not only SKB's own personnel, but also their field contractors work in a way that promotes confidence in SKB and its operations. SDK-501 Orientation prior to contract work at SKB's site investigations *(in Sw.)* establishes guidelines for a transfer of knowledge revolving around the demands SKB's operations (both general and site-specific) set for its participants, consultants and contractors that are engaged in field work.

It is important that the company's press unit is immediately made aware of events/nonconformities that have occurred within the Spent Fuel Project that can lead to publicity for SKB. See SD-009 RIO – Reporting of initiatives to surrounding world contacts *(in Sw.)*.

Visits to SKB's facilities and the site investigations in Forsmark and Oskarshamn are planned and conducted according to SD-092 Tours of SKB facilities *(in Sw.)*.

SKB's sponsoring shall be conducive in increasing key-group interest, understanding and faith in SKB and its operation, in creating relationships with these groups, and in promoting long-term access to personnel in certain areas. This requires that SKB work systematically with its sponsoring and monitors the results. See SD-077 Sponsorship *(in Sw.)*.

SKB's Intranet has up to date internal information via Latest News: see Department and project information/P-Department Site investigations and the Spent Fuel Project. Communication tools, for example a communications plan and message platform, can be found on the Intranet's Department and project information/M-MKB and Community Contacts.

4.2 Documentation

4.2.1 Document control

SD-008 Document management *(in Sw.)* controls how the management of documentation is done within SKB. The procedure is valid for both documentation created within SKB and externally-created documentation received by SKB. Document management within the Spent Fuel Project is controlled by SDK-120 Document management plan – the Spent Fuel Project *(in Sw.)*, which is created and managed according to SD-026 Creation of document management plans *(in Sw.)*.

4.2.2   General requirements for application management

SDK-117 Quality requirements for application management *(in Sw.)* controls the documentation that shall be included in or form references to applications according to the Act on Nuclear Activities (KTL) and the Environmental Code (MB). SDK-119 General requirements for application management in the Spent Fuel Project *(in Sw.)* gives an account of the common requirements in terms of the application management's content and structure, together with the underlying motive for the requirement. The instruction also controls the production instructions that are drawn up for the attachments included in the applications. SDK-201 SKB Final Repository for used nuclear fuel – Production instructions for system descriptions *(in Sw.)* defines the scope of system descriptions for final repository facilities. This is to give the system descriptions for final repository facilities a uniform structure, as well as a well-defined content corresponding to the user's expectations and with the same level of detail (per category).

4.2.3   Archiving

SD-015 Archiving *(in Sw.)* controls how archiving at SKB should be performed in order to ensure a good management of information. Quality documentation and project documentation is archived within the Spent Fuel Project according to SDK-110 Archiving and postal management, the Spent Fuel Project *(in Sw.)*. Quality documentation can either be produced by the Spent Fuel Project or be external documents, for example decisions, reports, business management, meeting protocols, technical input, drawings, estimates, amendment notifications, incoming and outgoing correspondence, internal correspondence and quotations. Documentation can be both physical and digital (facsimile, e-mail and CD-Rom). Project documentation is the project's administrative documentation, for example project plans, project decisions and product descriptions. Digital storage occurs in SKBdoc and physical storage within the respective sub-project.

4.2.4   Safety classification

SD-008 Document management *(in Sw.)* includes rules for the safety classification of documentation. The person that first issues or receives a document assigns a classification level to the document through the guidance of SDK-120 Document management plan – The Spent Fuel Project *(in Sw.)*.

4.2.5   Production of reports and printed matter

The graphic profile SD-065 SKB's Company profile *(in Sw.)* is used to ensure that SKB maintains a consistent style in the development of printed matter. Production of printer matter occurs in accordance with SD-066 Production of reports and printed matter *(in Sw.)*.

All photographs and pictures that are judged to have a lifetime of at least one year should be managed, stored and meet the quality requirements in accordance with SD-073 Photographs and pictures – management and quality requirements *(in Sw.)*.

There are three report series within SKB that are public and can be referenced: TR – R- and P-reports. PIR-reports within the Spent Fuel Project are used for internal information only and are not available for publication or as reference material.

TR-reports are technical reports that are used to give a comprehensive account of the results of the operation. This covers, for example, site-descriptive models that call for broad international dissemination. TR-reports are written in English and distributed according to special lists and serve as external information on SKB operations, both nationally and internationally.

R-reports are social-scientific, technological and other reports that are used to report collected or important results that demand larger distribution. R-reports are intended as external information on SKB's operations on a national and international level. Each report has its own unique distribution list.

P-reports are mainly used for reporting of quality-assured raw data and model results, usually at the activity or sub-project level. The raw data reports are descriptive complements to data tables and site-descriptive models that are presented on data media. Additionally, P-reports can be used as a simpler format for the publication of social-scientific, technical or other information in either Swedish or English. P-reports are published externally in pdf-format and only a few copies are printed: for SKB's library, the Swedish Nuclear Power Inspectorate and the Swedish Radiation Protection Authority, the author(s) and administrators. See SDK-107 Realization and management of P-reports *(in Sw.)*.

Internal reports (PIR) are used to report the company's internal information (classification according to SD-008) and are not intended as reference material. SDK-118 Production of internal reports within Department P *(in Sw.)* has as its goal to clarify the roles and responsibility surrounding production of Department P's internal reports. PIR-reports shall as a rule not be printed and should only be distributed digitally. However, the four internal SKB libraries each receive a written copy. PIR-reports are reviewed and approved according to the same procedure as P-reports, SDK-107 Realization and management of P-reports *(in Sw.),* before the pdf file is made available on SKB's Intranet.

The site investigations' main results and general planning for the upcoming calendar year are reported in yearly reports – one for Forsmark and one for Oskarshamn. The yearly reports are publicized externally and present the study area's activities. The project leaders for Site-Project Forsmark respective Site-Project Oskarshamn are responsible for the yearly reports, which are then approved by the project leader for the Spent Fuel Project. The yearly reports are also published for consultations according to the Swedish Environmental Code's rules for Oskarshamn and Forsmark. The reports present what has been done during the previous year and which questions have come up.

Certain parts of the project's results (mostly progress reports from Forsmark and Oskarshamn) are reported on SKB's home page on the Internet. Information regarding the Environmental Impact Assessment's (MKB) work can be found on www.skb.se/mkb.

Other printed material shall be assured for quality before production and distribution in accordance with SD-075 Quality assurance of informational material *(in Sw.)*.

4.3   Deliveries and quality assurance of data and other results

Internal and external data deliveries are sometimes made through results being placed in databases where they can later be retrieved for further investigations or calculations.

The data generated within the site investigations shall be retrieved according to the following:

- SDK-115 Database instructions for site-descriptive models and their use within the modeling projects Oskarshamn (POM), Forsmark (PFM) and the surface system's SurfaceNet *(in Sw.)*
- SDK-508 Management of raw data at the site investigations *(in Sw.)*
- SDK-516 Management of safety-classified data *(in Sw.)*
- SD-111 Distribution to and from GIS (Geographic database) and SICADA (Primary database) *(in Sw.)*
- SD-114 Layout for GIS (Geographic database) maps *(in Sw.)*
- SD-141 Management of errors in raw data *(in Sw.)* (previously SDK-517)

4.4   Review

Documents produced within the Spent Fuel Project must go through different types of review procedures. Safety analysis reports of the facility's operational and long-term safety, together with other documentation pertaining to nuclear safety in the short- and long-term shall undergo primary and independent safety review according to the regulations in the Swedish Nuclear Power Inspectorate (SKIFS) 2004:1. All documentation to be included in the applications according to the Nuclear Activities

Act and the Swedish Environmental Code shall be examined for quality and substance. SD-037 Review *(in Sw.)* controls how reviews are conducted at SKB. The procedure includes all types of reviews and includes safety reviews.

Common program requirements and support for the review process within the Spent Fuel Project is found in SDK-116 Review of application documentation in the Spent Fuel Project *(in Sw.).* The purpose of the instruction is to meet the project's need of guidance and support regarding reviews in addition to what is explained in SD-037 Review *(in Sw.).* Additionally, it should assist in the planning of the application management's progress and the production instructions for the application's attachments. Finally, it should also provide input for coordination-, resource- and time management.

4.5   Communication with the Swedish Radiation Safety Authority (SKI, SSI)

Communication with the Swedish Radiation Safety Authority (before July 1 Swedish Nuclear Power Inspectorate [SKI] and Swedish Radiation Protection Authority [SSI]) follows SD-047 Procedure for communication with SKI and SSI *(in Sw.).* The basic rule is that all written communication with the Swedish Radiation Safety Authority (SKI, SSI) shall go via Department S. There are, however, certain exceptions that deviate from the procedure where the only demand is that one copy for informational purposes be sent to the Nuclear Safety Department (Nuclear Safety – Common Mailbox). All of the Spent Fuel Project's communication with the Swedish Radiation Safety Authority (SKI, SSI) should go through Olle Olsson, Ingrid Aggeryd or Maria Johansson, or be approved by one of these persons. The communication should be with the person responsible for site investigation (PLU) consultations within the Swedish Radiation Safety Authority (SKI, SSI) or with the person these authorities have indicated should receive the information. Data deliveries from SKB to these authorities should follow the instruction "Instruction on data deliveries between SKB and SKI and SSI" (SKBdoc id 1052524). The sub-projects of Environment Impact Assessment (MKB) and Consultation are responsible for the communication with the authorities that occurs within the framework for consultation according to the Environmental Code (MB), Chapter Six.

5. Nuclear Safety

The Spent Fuel Project's activities do not legally constitute nuclear activities, but rather constitute planning and design of future nuclear facilities. Part of the data taken from within the project shall be included in applications for the final disposal and the encapsulation facility according to the Nuclear Activities Act (KTL). Some of the results and the documentation that the project produces will therefore need to meet the demands placed on nuclear activities. This also means that the management in developing these products must meet the requirements according to Swedish Nuclear Power Inspectorate's (SKI) regulations.

Control and development of the work with nuclear safety at SKB and the clarification of organization, responsibility and authority, together with the management and control of the nuclear activities is reported in SD-030 Security management *(in Sw.).* An important part of maintaining nuclear safety and promoting a culture of safety is the interaction between the people, the techniques and the organization (MTO). SD-124 Working with MTO-activities and a safety culture *(in Sw.)* controls SKB's work with MTO-activities and safety culture. Internal and external requirements are clarified in order to maintain and develop a good safety culture and to enable the use of MTO-skills to adapt the techniques and activities after human conditions so that all employees, consultants and suppliers have the prerequisites to work safely. A part of the work with MTO is to investigate the events, underlying causes and what could have prevented an unwanted event, as well as to take measures to prevent the repeat of such events, and to ensure that operations and safety are improved. See SD-123 Primary cause analysis with an MTO-perspective *(in Sw.).*

Except for a few exceptions, SKI's and SSI's regulations are not specifically designed for SKB's facilities and operations. There is a need, therefore, to interpret the regulations with thought to how they

should be applied within SKB. There is also a need for uniform interpretations within different parts of SKB, something that is steered by SD-116 Interpretation of the Swedish Nuclear Power Inspectorate's regulations (SKIFS) and Swedish Radiation Protection Authority's regulations (SSIFS) together with updating the interpretation *(in Sw.)*.

SD-028 Development of SKB's safety analysis report *(in Sw.)* is used for the establishment and revision of the safety analysis reports for SKB's nuclear facilities. The procedure does not include the part of the safety analysis report for final disposal dealing with the time after the disposal. SDK-003 Quality assurance plan for the safety assessment SR-Site *(in Eng.)* is available for security analysis reports with an eye towards long-term safety. SD-037 Review *(in Sw.)* is used for control of primary and independent safety reviews of the safety analysis reports and other documentation that affects nuclear safety. The Spent Fuel Project also has instructions that note common project requirements and provide review support, SDK-116 Review of application documentation in the Spent Fuel Project *(in Sw.)*. This is to give project participants a uniform view of the reviews done within the Spent Fuel Project and to also give them the possibility to share this view with Department S and the authorities.

6. Environment

SDK-301 Environmental control plan Site Investigations *(in Sw.)* describes how activities in the field are planned and implemented in order to avoid permanent negative environmental effects and to ensure that environmental rules and regulations are observed. Regular identification and evaluation of the company's environmental aspects within the Spent Fuel Project are done in accordance with SD-051 Environmental aspects *(in Sw.)*. SKB's and the Spent Fuel Project's environmental aspects can be found consolidated in SD-052 SKB's Environmental aspects register *(in Sw.)*.

SDPF-003 General policy, protection and environmental rules for site investigation Forsmark *(in Sw./Eng.)* and SDPO-003 General policy, protection and environmental rules for site investigation Oskarshamn *(in Sw./Eng.)* describe among other things the environmental considerations that should be observed with all field work. Site Project Forsmark respective Site Project Oskarshamn see to it that all contractors, consultants, personnel, etc., that are engaged in the field work undergo an introductory course before the job assignment can begin. Each person then acknowledges in writing that he/she has undergone the course. For further information, see SDK-501 Introductory course prior to field work at SKB's site investigations *(in Sw.)*. SD-029 Permits and conditions for SKB *(in Sw.)* shows the permits and conditions applicable to the Spent Fuel Project that can occasionally place demands for special environmental consideration on certain field investigations. The conditions also govern requirements for the restoration of the sites.

SD-053 Purchasing and management of chemicals *(in Sw.)* controls how chemicals and chemical products are procured and managed within SKB so that applicable chemical legislation is followed. The procedure also describes how related information regarding the product's health and environmental properties is made available. SKB will establish a Chemical Council during 2008 that will give support for, control and lead the management of chemicals at SKB. The Chemical-database provides information on the chemicals handled at SKB.

Waste generated within the Spent Fuel Project is treated in accordance with procedure SD-055 Waste management *(in Sw.)*. The procedure also provides instruction on the transport of dangerous waste. Waste separation at the source for site investigations in Forsmark and Oskarshamn is in accordance with SDPF-003 General policy, protection and environmental rules for site investigation Forsmark *(in Sw./Eng.) (SDPF-003 is being updated and name will change to SD-143)* respective SDPO-003 General policy, protection and environmental rules for site investigation Oskarshamn *(in Sw./Eng.)*.

7. Work environment

SKB has a work environment organization in accordance with the Work Environment Act. See SD-003 Work environment and systematic work-environment work *(in Sw.)*. Other activities within the Spent Fuel Project concerned with work-environment work are controlled by the following:

- SDPF-003 General policy, protection and environmental rules for site investigation Forsmark *(in Sw./Eng)* (is being updated and name will change to SD-143)
- SDPO-003 General policy, protection and environmental rules for site investigation Oskarshamn *(in Sw./Eng.)*
- SDPU-001 Work environment, protection and safety at SKB's instrument storage at the old shipyard in Oskarshamn *(in Sw.)*

8. Purchasing

Purchases are made according to SD-016 Purchasing model *(in Sw.)*. Earlier, the Spent Fuel Project had had its own purchasing expertise within site investigation (PLU) technology that established a framework and assisted in procurement. This support function has been replaced by the newly established entity VU (operational support for procurement) which, in its initial stage, is supported by site investigation (PLU) technology. The various purchasing roles within SKB are reported in SD-043 Function descriptions Purchasing within SKB *(in Sw.)*. See also:

- SD-079 Suppliers assessment *(in Sw.)*
- SD-101 Requests for tender – other contracts *(in Sw.)*
- SD-102 Tender evaluations *(in Sw.)*
- SD-104 Procurement strategy *(in Sw.)*
- SD-053 Purchase and management of chemicals *(in Sw.)*
- SDK-111 Orders and account-coding *(in Sw.)*

SDK-108 Review and approval of suppliers' quality plans *(in Sw.)* describe how the review and approval of suppliers' quality plans is implemented and documented. The procedure also defines the lowest requirements that a quality plan must meet in order to be approved. The procedure focuses on keeping appropriate internal control and quality assurance of the raw data with the supplier.

9. Nonconformities

Nonconformities are managed and resolved in accordance with SD-006 Management of nonconformities and suggestions for improvement *(in Sw.)*. This procedure is also applicable for suggesting improvements to preventive measures or to suggest a change in the working method before nonconformities occur. Nonconformities that can lead to negative publicity are reported according to SD-009 RIO – Reporting of initiatives to surrounding world contacts *(in Sw.)*. When needed, root cause analyses of nonconformities are done according to SD-123 Root cause analysis with an MTO-perspective *(in Sw.)*. Nonconformities are compiled in the company-common Register of nonconformities and suggestions for improvement.

Suppliers document nonconformities that arise within an assignment in their own system for nonconformities management and inform SKB about said nonconformities. The responsible project leader/activity leader judges if the nonconformity affects SKB to the extent that it should also be reported according to SD-006 Management of nonconformities and suggestions for improvement *(in Sw.)*.

Nonconformity reports for nonconformities that address another organizational activity are stored in SKBdoc in the common company file for nonconformities (Storage place/Department – Units/Common Company/Nonconformities). Conversely, if the nonconformity is drawn-up and addressed within one and the same activity, the report is stored in the activity-specific file for nonconformities. In the instance of

nonconformity within an activity, a copy of the nonconformity report should be stored in the activity notebook.

10.   Safety protection and crisis management

SD-014 Safety protection *(in Sw.)* describes how SKB ensures the protection of persons, property and information along with how safety procedures are organized and which regulations are valid for the operation. The following procedures are applicable for site investigations in Forsmark and Oskarshamn:

- SDPF-001 Protection and surveillance at site investigation Forsmark *(in Sw.)*
- SDPO-001 Protection and surveillance at site investigation Oskarshamn *(in Sw.)*
- SDPU-001 Work environment, protection and safety at SKB's instrument storage at the old shipyard in Oskarshamn *(in Sw.)*
- SDPF-003 General policy, protection and environmental rules for site investigation Forsmark *(in Sw./Eng.)* (is being updated and name will change to SD-143)
- SDPO-003 General policy, protection and environmental rules for site investigation Oskarshamn *(in Sw./Eng)*

Safety-classified data within the Spent Fuel Project shall be managed according to SDK-516 Management of safety-classified data *(in Sw.)*. SD-010 IT Safety manual *(in Sw.)* is applicable for IT safety.

In the event of a crisis, SKB's crisis team has the possibility to draw resources from the Spent Fuel Project, which can have a short-term influence on the project's operation. SD-063 Crisis management *(in Sw.)* defines what can be considered a crisis, describes how the crisis should be handled and describes how SKB's crisis team works. The management and responsibility of SKB's central crisis management team (KLO) is shown in SD-064 Management of SKB's central crisis management team *(in Sw.)*. The establishment and management of local crisis management planning for crises within a local unit are described in SD-070 Local crisis management plan *(in Sw.)*. SDPF-002 Crisis management Site-Investigation Forsmark *(in Sw.)* and SDPO-002 Crisis management Site-Investigation Oskarshamn *(in Sw.)* are available for local crisis management at site investigations.

Svensk Kärnbränslehantering AB
Swedish Nuclear Fuel and Waste Management Co

11. List of revisions

Version	Date	Revision includes	Done by	Reviewed	Approved
7.0	2008-04	Updated regarding new procedures and operational changes. Site investigations have been changed to Site projects. Clarified communication with the Swedish Radiation Safety Authority (SKI/SSI)	LRL	MJo	OO
6.0	2007-02	Adapted for the Spent Fuel Project and to the changes of SKB's management system that occured as a result of the take-over of the Clab-operation.	IA	Jca	OO
5.0	2006-03	Adapted for the new and revised procedures. Chapter 2 Project control and monitoring has been rewritten.	IA	KEA, JTn	OO
4.0	2005-02	Adapted for new and revised procedures for the Management system on the Intranet.	IA	KEA, JTn	OO
3.0	2003-10	Reworked to be applicable as a handbook for the Deep disposal project.	IA	KEA, JTn	OO
2.0	2002-12	Entirely reworked. New table of contents that follows SD-001.	ASd	IA	OO
1.0	2002-08	Manual issued.	ASd	IA	OO