



European Commission

QUALITY ASSURANCE QUESTIONNAIRE

**Report on the Results of a Survey of En-Trap Partners
On Quality Assurance and Quality Control**

Report WG-C-02
April 2006

S R Daish, A Dodaro, T Bücherl, B Chabalier, M Dionisi, P Borgermans,
A Gonzales de la Huebra, I Huhtiniemi, A Tiitta, D Lexa,
P Van Iseghem, L van Velzen, A Morales



**European Network of Testing Facilities
For the Quality Checking of
Radioactive Waste Packages**

<http://www.en-trap.eu>

QUALITY ASSURANCE QUESTIONNAIRE

Report on the Results of a Survey of En-Trap Partners On Quality Assurance and Quality Control

Report WG-C-02
April 2006

Working Group C

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A Gonzales de la Huebra (6), I Huhtiniemi (7), A Tiitta (8), D Lexa (9),
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- (1) NNC, United Kingdom
- (2) ENEA, Italy
- (3) TUM, Germany
- (4) CEA, France
- (5) ANPA, Italy
- (6) CEIMAT, Spain
- (7) JRC, Italy
- (8) VTT, Finland
- (9) ARCS, Austria
- (10) SCK.CEN, Belgium
- (11) NRG, The Netherlands
- (12) ENRESA, Spain

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1 Introduction

The quality checking of radioactive waste packages on behalf of the national regulatory authorities requires planned and systematic actions to provide adequate confidence that the entire checking system will satisfy given quality requirements. The application of Quality Assurance and Quality Control in radioactive waste management can provide authorities and the public with the necessary assurance that relevant safety specifications are being met.

This report provides a summary of the findings of a survey carried out by Working Group C of EN-TRAP in 2003. A questionnaire was compiled to assess the level and extent of QA/QC accreditation held by EN-TRAP partners. The questionnaire looked at which parts of the quality checking process were accredited, what standards were used and the accreditation body used by each partner. The questionnaire also attempted to identify areas where cooperation within EN-TRAP may provide benefits to partners seeking QA accreditation or certification. Since the activities of EN-TRAP are broadly divided into the three areas covered by the Working Groups, namely,

- WGA – Non-Destructive Testing
- WGB – Destructive Testing
- WGC – Quality Assurance / Quality Control

the questionnaire sought information on the extent of accreditation/certification in these specific areas in order to establish where cooperation within the EN-TRAP network may be beneficial both to individual partners and to the network as a whole.

2 Background and Aims

Working Group 3 which later became WGC of the European Network (EN-TRAP) was set up in 1993 to focus on quality assurance and quality control (QA/QC) issues relevant to the quality checking of radioactive waste packages. In 1994 an earlier questionnaire (1) was compiled by the group. This questionnaire established the QA/QC roles of the different organisations involved in radioactive waste management in partner countries. These ideas were built upon in the Concerted Action project in 1998, which compared the approach to QA/QC of low and medium level radioactive waste within the European Community represented in EN-TRAP. The results of this concerted action project were published by the European Commission in 2000 (2).

At a meeting of the working group held at NNC Winfrith, UK in March 2002 it was proposed that a survey of EN-TRAP partners should be compiled to assess the level and extent of QA accreditation held by each partner laboratory and their interest in gaining further QA accreditation. The aim of the questionnaire was to provide a foundation of information that could be used to shape and focus the future activities of the Working Group.

3 Scope

The scope of the QA/QC questionnaire was discussed at the WGC meeting held at the RADWAP '02 conference in Würzburg, Germany in September 2002. It was agreed at the meeting that the questionnaire should seek information on the following areas.

- Status of QA accreditation in the partners Laboratory or Institute
- What standard e.g. ISO 17025 / ISO 9000 is worked to?
- What is the name of the Accreditation/Certification body used
- Accreditation / Certification of QA system / specific methods
- Specific methods e.g. gamma assay of waste drums
- Sampling methodologies
- Involvement of the Commission in these activities

Following the Würzburg meeting a questionnaire format was drafted by the Convenor and distributed to the other members of the Working Group for comment. Some comments were received and incorporated into an updated draft of the form. The final version of the questionnaire is shown in Appendix 1.

The questionnaire was distributed to EN-TRAP partners electronically and completed questionnaires were collated by the WGC convenor.

EN-TRAP partners who completed and returned the questionnaire are listed in Table 1 below

Table 1 Respondents

Country	Organisation	Respondent
Austria	ARC	D Lexa
Belgium	SCK-CEN	P Van Iseghem
European Union	JRC	I Huhtiniemi
France	CEA	B Chabaliier / G Brunel
Germany	RCM/TUM	Ch. Lierse von Gostomski
Italy	ENEA	A Dodaro
The Netherlands	NRG	L van Velzen
Spain	CIEMAT	A Gonzales de la Huebra
Finland	VTT	A Tiitta
United Kingdom	NNC	S Daish

4 Results and Discussion

The completed QA/QC questionnaires returned to the WGC convenor are included in this document at Appendix 2. A presentation on the results of the questionnaire was made to a combined meeting of WGA and WGC at JRC, Ispra on 20 October 2003. The results are described in this report under the headings given below.

4.1 Current Status

After establishing the name and details of the EN-TRAP partner completing the form, the questionnaire first asks;

3. “Does your company/institute currently hold any kind of formal QA accreditation/certification for quality checking radioactive waste packages?”

Of the partners who completed the questionnaire seven (70%) ticked the YES box in answer to this question. These were: ENEA, NRG, VTT, SCK.CEN, ARC and NNC.

The partners who ticked the NO box (30%) were: JRC, CIEMAT, and RCM-TUM.

This result is encouraging and it should be noted that all those partners who did not have formal accreditation/certification were interested in gaining it (question 4).

4.2 QA Standards and Accreditation Bodies

For those partners who have QA accreditation/certification and answered yes to question three, question five sought information on the QA standards worked to and which national accreditation/certification body was used by each partner/institute. Questions 5.1 and 5.2 are shown below.

5.1 What QA Standard (e.g.ISO 17025) is worked to?

5.2 What is the name of the Accreditation/ Certification body used?

The answers provided to question 5.1 and 5.2 are shown in Table 2 below.

Table 2 QA Standards and Accreditation Bodies Used

EN-TRAP Partner	QA Standard ISO 17025	QA Standard ISO 9000:2000	Accreditation Body Used
CEA, France	Yes	Yes	
NNC, United Kingdom	Yes	Yes	UKAS
NRG, The Netherlands		Yes	Lloyds Registry
VTT, Finland		Yes	DNV
ENEA, Italy	Yes		SINAL
SCK.CEN, Belgium	Yes		BELTEST
ARC, Austria		Yes	

The two ISO standards that were quoted in the questionnaire perform similar but different functions. ISO 9000:2000 is a general quality management systems standard whereas ISO 17025 sets out general requirements for the competence of testing and calibration laboratories. Whilst ISO 17025 covers quality management requirements as well as specific technical requirements for laboratories, ISO 9000 is more general and does not go into technical requirements for testing laboratories.

The results of the survey show a mixture of preferences to either or both of the applicable QA standards.

4.3 Existing Expertise

Question 5.3 of the questionnaire asked what specific technical test methods are covered by your QA accreditation? The responses to this question are summarised in Table 3 below.

Table 3 Test Methods for which Accreditation is held

EN-TRAP Partner	NDT Methods	DT Methods
ENEA, Italy	SGS, PNCC	Formulation & qualification of conditioning process
SCK.CEN, Belgium	Gamma Spec of waste packages	ICP-AES, TOC/IC, α spec, γ spec, SSMS, TIMS compatibility studies
NNC, United Kingdom	SGS, X-ray examination	Total α , total β , γ spec, H-3, C-14, Tc-99, S-35, Cl-36, Sr-90/Ca-45, I-125/129, Fe-55, radioisotopes of Am, Cm, Pu, U, Th,

Table 3 lists the technical methods for which QA accreditation is held by the three laboratories who gave detailed information in this section of the questionnaire.

Other positive responses to this section of the questionnaire were received from CEA, who said that both non-destructive and destructive measurements were covered by their QA and from NRG who have QA accreditation for “long-term nuclear research and medium-term development in the field of nuclear energy, as well as the associated services and transfer of knowledge”.

4.4 Gaining and Extending Accreditation

Question 6 of the questionnaire sought to gauge the interest within EN-TRAP for gaining or extending QA accreditation through cooperation with other EN-TRAP partners as part of the Working Groups activities. The response to this question was 90% in favour and 10% against.

The questionnaire then went on to explore which areas of the networks activities and specific methods or topics should be included. The responses received are collated in Tables 4 and 5 below.

Table 4 Non-Destructive Test Methods WGA (6.1)

Name of Technique	Partners seeking to gain accreditation for this technique
SGS	SCK-CEN, RCM/TUM, JRC, CIEMAT, VTT
TGS, γ -TCT	JRC, RCM/TUM
γ - radiography	RCM/TUM
PNCC	SCK-CEN, NNC
PAN	JRC

Table 5 Destructive Test Methods WGB (6.2)

Name of Technique	Partners seeking to gain accreditation for methods
General analysis methods	VTT, NRG
Destructive sampling	RCM/TUM
Sample treatment	RCM/TUM (e.g. homogenisation)
Characterisation (α , β , γ)	SCK-CEN, ENEA (α spec, β spec, g.c. etc)
Radionuclide analysis	RCM/TUM, NNC (Ni-63, Sr-89/90)
ICP-MS	SCK-CEN

From the results shown in Table 3 it is clear that there is a common interest in gaining QA accreditation for NDT techniques in general and for segmented gamma scanning (SGS) in particular. Other less common gamma NDT techniques were also listed in this box. Neutron assay techniques such as Passive Neutron Coincidence Counting (PNCC) and Passive/Active Neutron Assay (PAN) were also included.

Interest in QA accreditation of specific destructive testing methods (Table 4) also covered the full range of DT processes carried out at partner laboratories, however, no particular area stood out as being of common interest.

The third part of question 6 concerned general quality systems topics, which come under the ISO standards. Examples included on the form were:

- QA Manuals
- Audit and Review
- Document Control
- Other

Four of the returned questionnaire provided feedback in this area. The results are summarised in Table 6.

Table 6 QA/QC Topics (6.3)

QA/QC Topic	JRC, Italy	VTT, Finland	SCK-CEN, Belgium	RCM/TUM, Germany
All aspects	YES	YES		
QA Manuals				YES
Audit & Review			YES	YES
Doc' Control				
Other			YES*	

* Methodology for quality checking of waste packages/ waste forms.

The responses to this part of the questionnaire indicate a general interest in QA/QC topics from those organisations that are seeking QA Accreditation for waste checking methods. Of the more specific QA/QC topics, internal audit and review is a common interest for two partners.

Question 7 of the questionnaire was designed to gauge the interest amongst EN-TRAP partners for a common approach to developing QA protocols for waste sampling. The response to this question was very positive with 90% of those received ticking the YES box. This topic may provide a suitable focus for a future WG or Task Group meeting.

Question 8 of the questionnaire asked whether “Laboratory Member of EN-TRAP” or the EN-TRAP logo should be used e.g. on company letterhead as a mark of quality. The response to this question was as follows:

- YES – 60%
- NO – 40%

The last question of the survey provided the opportunity for partners to add any general comments or provide feedback on a possible proposal to request funding from the European Commission for QA/QC development projects. See Appendix 2 for comments.

5 Conclusions and Recommendations

All the EN-TRAP partners who responded to the quality assurance questionnaire and do not currently any formal QA accreditation/ certification are seeking it.

Most partners are hoping to expand the scope of their QA accreditation/ certification either independently or would welcome the opportunity to do so through cooperation with EN-TRAP partners

Expertise exists within the EN-TRAP Network to make this possible. This would be best achieved through the existing working group structure.

6 References

1. European Network of Testing Laboratories Quality assurance and Quality Control Questionnaire. 54069-KET/R&B 95-4096. L. Tamboer. 1995.
2. Quality Assurance and Quality Control of Low and Medium-Level Radioactive Waste Packages. L P M van Velzen, L Tamboer, M Dionisi, J J Delepine, A Morales, H Steinmetz, P Borgermans, J Neubauer, S R Daish. European Commission Contract No F14W-CT97-0040.

APPENDIX 1

QA QUESTIONNAIRE PRO-FORMA

**Working Group C
QUALITY ASSURANCE QUESTIONNAIRE**

1	Name of EN-TRAP member Company/ Institute, Country	
2	Name of person completing this Questionnaire	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input type="checkbox"/> <input type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION	
5.1	What QA Standard (e.g. ISO 17025) is worked to?	
5.2	What is the name of the Accreditation/ Certification body used?	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)	
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods	
6.2	WGB – DT methods	
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input type="checkbox"/> <input type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?	(Yes / No) <input type="checkbox"/> <input type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?	

APPENDIX 2
COMPLETED QUESTIONNAIRE

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	ENEA, Italy	
2	Name of person completing this Questionnaire	Alessandro Dodaro	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6		1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 17025	
5.2	What is the name of the Accreditation/ Certification body used?	SINAL	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)		
	1. Radioactive Waste Characterisation by means of Segmented Gamma Scanning 2. Radioactive Waste Characterisation by means of Neutron Passive Counting 3. Formulation and Qualification of radioactive waste conditioning process following the ENEA-DISP Technical Guide 26		
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods		
6.2	WGB – DT methods	alpha-spectrometry beta-spectrometry gas-chromatography spectrophotometry	
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...	
7	Are you interested in developing QA protocols for Sampling through WGC		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		

**Working Group C
QUALITY ASSURANCE QUESTIONNAIRE**

1	Name of EN-TRAP member Company/ Institute, Country	CIEMAT, SPAIN
2	Name of person completing this Questionnaire	ANGEL GONZALE DE LA HUEBRA
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input type="checkbox"/> 2. <input checked="" type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION	
5.1	What QA Standard (e.g. ISO 17025) is worked to?	
5.2	What is the name of the Accreditation/ Certification body used?	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)	
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods	Gamma assay techniques for specific waste packages
6.2	WGB – DT methods	Mainly for radioactive characterisation (beta, gamma and alpha emitters)
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?	

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	JRC Ispra, NDWM Unit, Directorate of Resources, European Commission, Italy
2	Name of person completing this Questionnaire	Ilpo HUHTINIEMI
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input checked="" type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION	
5.1	What QA Standard (e.g. ISO 17025) is worked to?	
5.2	What is the name of the Accreditation/ Certification body used?	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)	
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods	SGS, TGS, PAN
6.2	WGB – DT methods	Not defined yet
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other... All the applicable aspects
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?	

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	VTT Technical Research Centre of Finland	
2	Name of person completing this Questionnaire	Antero Tiitta	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>	
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input type="checkbox"/> 2. <input checked="" type="checkbox"/> 3. <input type="checkbox"/>	
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 9001 - 2000	
5.2	What is the name of the Accreditation/ Certification body used?	DNV	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)		
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
6.1	WGA - NDT methods	Yes	
6.2	WGB – DT methods	Yes	
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other... Yes	
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
8	Should "Laboratory Member of EN-TRAP" (or logo) be included on company letterhead etc?	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>	
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		
<p>VTT has been contracted by the Radiation and Nuclear Safety Authority to draft a revised QA plan for the LLW and ILW packages produced in Finnish NPPs so as to include independent QC/verification. In this context the requirement of accreditation shall be solved. The procurement of technical capabilities for this activity will take place in 2004. The activity shall start in 2005 at the earliest, when also the accreditation shall become topical.</p>			

**Working Group C
QUALITY ASSURANCE QUESTIONNAIRE**

1	Name of EN-TRAP member Company/ Institute, Country	NNC, UNITED KINGDOM	
2	Name of person completing this Questionnaire	Steve Daish	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>	
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 9001:2000, ISO 17025	
5.2	What is the name of the Accreditation/ Certification body used?	UKAS	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)		
	NDT: Segmented Gamma Scanning (SGS), Real Time X-Radiography (RTX) DT: Determination and quantification of: total alpha, total beta, individual gamma, H-3, C-14, Tc-99, S-35, Cl-36, Sr-90/Ca-45, I-129/125, Fe-55, radioisotopes of Am, Pu, U, Th & Cm, Pb-210/Po-210		
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
6.1	WGA - NDT methods	Monitoring of 220 litre waste drums by PNCC	
6.2	WGB – DT methods	Ni-63, Sr-89/90	
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...	
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
8	Should "Laboratory Member of EN-TRAP" (or logo) be included on company letterhead etc?	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>	
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		

Working Group C QUALITY ASSURANCE QUESTIONNAIRE		
1	Name of EN-TRAP member Company/ Institute, Country	SCK-CEN
2	Name of person completing this Questionnaire	Pierre Van Iseghem
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input checked="" type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION	
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 17025
5.2	What is the name of the Accreditation/ Certification body used?	BELTEST
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)	
	<ul style="list-style-type: none"> - Gamma spectrometry on waste packages with Low Level Waste Assay System - Chemical and radiochemical analyses: ICP-AES, TOC/IC/TC, alpha spectrometry, Am-241 (gamma spectrometry), SSMS, TIMS - Compatibility studies on waste forms: HLW glass, ILLW bitumen, cellulose waste 	
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods	<ul style="list-style-type: none"> - Segmented gamma scanning and matrix correction methods - Passive neutron counting
6.2	WGB – DT methods	ICP-MS
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other... <ul style="list-style-type: none"> - Methodology for quality checking of waste packages/ waste forms - Internal audits & review
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?	

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	NRG vof, The Netherlands	
2	Name of person completing this Questionnaire	Leo van Velzen	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6		1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 9001/2000	
5.2	What is the name of the Accreditation/ Certification body used?	Lloyds Registry Qa service	
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below) Long-term nuclear research and medium-term development in the field of nuclear energy, as well as the associated services and transfer of knowledge		
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods	lab analyses and dosimetrie	
6.2	WGB – DT methods	lab analyses	
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...	
7	Are you interested in developing QA protocols for Sampling through WGC		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	RCM/TUM, Germany	
2	Name of person completing this Questionnaire	Ch. Lierse von Gostomski	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5		(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6		1. <input checked="" type="checkbox"/> 2. <input checked="" type="checkbox"/> 3. <input type="checkbox"/>
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?		
5.2	What is the name of the Accreditation/ Certification body used?		
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)		
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
6.1	WGA - NDT methods	Gamma-Scanning (integral and segmented) Gamma-Radiography Gamma-Transmission-Computer-Tomography	
6.2	WGB – DT methods	Destructive Sampling Sample Treatment (Homogenization etc.) Radionuclide Analysis	
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other... QA Manual, Audit & Review	
7	Are you interested in developing QA protocols for Sampling through WGC		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?		(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	Austrian Research Centres GmbH - ARC	
2	Name of person completing this Questionnaire	D Lexa	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input checked="" type="checkbox"/>	
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 9001	
5.2	What is the name of the Accreditation/ Certification body used?		
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)		
	ARC Seibersdorf is a certified laboratory (ISO 9001), but no specific methods accredited.		
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>	
6.1	WGA - NDT methods		
6.2	WGB – DT methods		
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...	
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?	(Yes / No) <input type="checkbox"/> <input checked="" type="checkbox"/>	
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		

Working Group C
QUALITY ASSURANCE QUESTIONNAIRE

1	Name of EN-TRAP member Company/ Institute, Country	CEA. France	
2	Name of person completing this Questionnaire	B Chabaliier / G Brunel	
3	Does your Company / Institute currently hold any kind of formal QA Accreditation/ Certification for quality checking radioactive waste packages? If yes go to question 5	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
4	Is the Company/ Institute interested in gaining QA Accreditation/ Certification for quality checking radioactive waste packages? 1. – YES (in any case). 2. - YES (under EC framework). 3. – NO. If 1 or 2 go to question 6	1. <input checked="" type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/>	
5	EXISTING QA ACCREDITATION / CERTIFICATION		
5.1	What QA Standard (e.g. ISO 17025) is worked to?	ISO 17025 - 9000 - 2000	
5.2	What is the name of the Accreditation/ Certification body used?		
5.3	What specific technical test methods are covered by your QA accreditation? (Please list below)		
Non-Destructive Measurements / Destructive Measurements			
6	Are you interested in gaining or extending QA accreditation/ certification through co-operation with other EN-TRAP partners in the Working Groups? If yes please list methods/ topics below	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
6.1	WGA - NDT methods		
6.2	WGB – DT methods		
6.3	WGC – QA/QC topics	e.g. QA Manuals, Audit & Review, Document Control, Other...	
7	Are you interested in developing QA protocols for Sampling through WGC	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
8	Should “Laboratory Member of EN-TRAP” (or logo) be included on company letterhead etc?	(Yes / No) <input checked="" type="checkbox"/> <input type="checkbox"/>	
9	Please add any general comments below e.g. possibilities of involvement or funding from the European Commission?		