



ADVANCED INTERNATIONAL TRAINING COURSE
ON STATE SYSTEMS OF ACCOUNTING FOR
AND CONTROL OF NUCLEAR MATERIALS

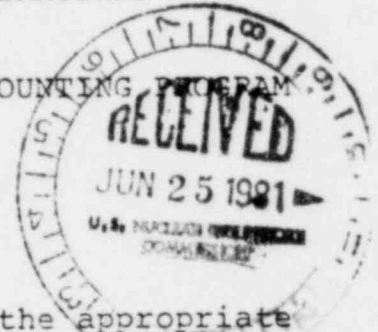


April 27-May 12, 1981

SESSION 6b: NATIONAL SAFEGUARDS SYSTEM OPERATIONS
AT A BULK-HANDLING FACILITY

DETAILS OF INTERNATIONAL MATERIAL CONTROL AND ACCOUNTING PROGRAM

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I. PURPOSE

The State Authority is expected to establish the appropriate national regulations for the nuclear material control and accounting (MC&A) program. (See Reference 1.) These regulations take into account, of course, the requirements of a State's International Safeguards Agreement with the IAEA and any applicable national laws. The purpose of this paper is to provide an example of how one State Authority has fulfilled this responsibility by developing the national regulations necessary for implementing its International Safeguards Agreement with the IAEA. Related State responsibilities regarding the national MC&A program are addressed in Session 6a.

In particular, this paper discusses the national regulations, for private sector nuclear facilities in the U.S., that enable implementation of the NPT-type U.S./IAEA Safeguards Agreement. Since the U.S./IAEA Safeguards Agreement corresponds, for the most part, exactly to INFCIRC/153 and most course participants are more familiar with INFCIRC/153, the regulations in Table 1 are referenced to INFCIRC/153, which is the general model for NPT-type Agreements. This table shows how each article of INFCIRC/153 has corresponding U.S. national regulations (Reference 2) which establish a system of nuclear material control and accounting for purposes of international safeguards and enable implementation of the international safeguards at nuclear facilities licensed by the U.S. Nuclear Regulatory Commission (NRC).

It should be noted that related to these national regulations regarding international safeguards there are more detailed national regulations for national safeguards (Reference 4) for licensing, inspection, accounting, and controlling of special nuclear material. These two sets of regulations complement each other and are inter-related. How the requirements for national safeguards are implemented by facility operators is addressed in Session 5.

II. BACKGROUND

Historically, the development of a comprehensive national MC&A program in the U.S. began about 10 years ago. National MC&A regulations were developed by the NRC for commercial facilities in the private sector. These regulations (Reference 3) apply to special nuclear material.

With regard to international safeguards, the U.S. as a party to the NPT, has actively joined with other nations in an effort to limit the spread of nuclear weapons. The U.S. President signed the instrument of ratification of the U.S./IAEA Safeguards Agreement on July 31, 1980. To encourage widespread adherence to the NPT by Non-Nuclear Weapon States (NNWS), the IAEA is being permitted to apply its safeguards to nuclear activities in the U.S. The instrument for applying IAEA safeguards in the U.S., i.e. the NPT-type U.S./IAEA Safeguards Agreement, entered into force on December 9, 1980. National regulations enabling the U.S. NRC to implement this Agreement at facilities in the private sector entered into force December 24, 1980. (The Department of Energy plays a role parallel to the NRC for DOE contractor facilities in the U.S.) The IAEA has received the list of U.S. facilities which are eligible for IAEA safeguards and has already selected three of them for the application of international safeguards. The first IAEA ad hoc physical inventory verification in the U.S. was conducted at the end of March, 1981, at a low enriched uranium bulk handling facility.

III. OBJECTIVES OF THE STATE SYSTEM FOR ACCOUNTING AND CONTROL (SSAC)

An SSAC may have two distinct, but interrelated, objectives (1). The SSAC national objective, for national safeguards, is addressed in Session 5. The SSAC international objective is to provide the essential basis for the application of IAEA safeguards, which in the case of the U.S., is pursuant to the U.S./IAEA Safeguards Agreement. For both objectives, the facility operators in the U.S. are required to maintain certain material control and accounting (MC&A) procedures. Many of these procedures contribute to the attainment of both objectives. Since the NRC has established a combined system to meet the two objectives, it is necessary to distinguish clearly those requirements which are necessary for the application of IAEA safeguards. Table 1 in this paper focuses attention to the national regulations and requirements that are appropriate to the SSAC's international objective.

IV. SSAC AUTHORITY AND RESPONSIBILITIES

In the U.S., the NRC historically has been designated as a U.S. authority that has responsibilities for nuclear material accounting and control, as well as health and safety, physical protection, etc. It has responsibilities for establishing provisions, or regulations, regarding the possession, transfer, or use of nuclear materials by the commercial operators in the U.S. private sector, taking into account the U.S. obligations under the U.S./IAEA Safeguards Agreement, and ensuring that the objectives related to MC&A are met. The NRC also has responsibilities for serving as a point of contact in implementing the U.S./IAEA Safeguards Agreement with the IAEA, and for developing, approving and implementing MC&A procedures necessary to enable the U.S. to discharge its obligations under the U.S./IAEA Safeguards Agreement. In the NRC, these responsibilities are undertaken by the four main Offices for licensing, inspection, research, and standards development. In particular, this includes authority for enforcement of the regulations. For example, the operator is required to promptly notify the NRC in the event that evaluation of accounting and control information suggests losses, unauthorized use or removal of nuclear material. Penalties for non-compliance with this and other regulations for the MC&A program have been specified by the NRC.

V. BASIC ELEMENTS OF THE INTERNATIONAL MC&A PROGRAM

The U.S./IAEA Safeguards Agreement, which conforms to INFCIRC/153 (Reference 4), provides that "...the State shall establish and maintain a system of accounting for and control of all nuclear material subject to safeguards under the Agreement...", and "the Agency, in its verification, shall take due account of the technical effectiveness of the State's system." The basic elements of this system are identified in paragraph 32 of INFCIRC/153. These eight elements, paraphrased below, are addressed by the NRC's national regulations (Reference 2) for implementing international safeguards:

1. A measurement system for determination of the quantities of nuclear material transferred and on inventory;
2. The evaluation and estimation of measurement uncertainty;
3. Procedures for evaluating shipper/receiver differences;
4. Procedures for taking a physical inventory;
5. Procedures for evaluating unmeasured inventory and losses;
6. A records and reports system showing the inventory and inventory changes for each material balance area;
7. Provisions to ensure that the accounting procedures are being operated correctly;
8. Procedures for submitting reports to the IAEA.

It is noted here that Safeguards Agreements conforming to INFCIRC/66/Rev. 2, on the other hand, do not explicitly call for States to establish and maintain a system of accounting for and control of nuclear material. (See Reference 5.) However, the fact that it calls for agreement between the IAEA and the State on a "system of records" and a "system of reports" is considered to imply the need for a State system. Thus, it is recognized that the establishment of an SSAC can serve a useful purpose in all IAEA Safeguards Agreements, whether or not such a system is explicitly required.

VI. NATIONAL REGULATIONS FOR IMPLEMENTING THE U.S./IAEA INTERNATIONAL SAFEGUARDS AGREEMENT

Taking into account the requirements of the U.S./IAEA Safeguards Agreement, the NRC has established national regulations enabling the IAEA to implement its international safeguards for establishing in a timely fashion whether there has been any diversion of significant quantities of nuclear material.

Table 1 lists each article from INFCIRC/153 which was used as a model for the U.S./IAEA Safeguards Agreement, which for the most part corresponds exactly to the model. Articles in the national regulations (i.e., 10 CFR Part 75) that correspond to the Safeguards Agreement articles and give force to the Agreement are listed in parallel by general heading and particular subject. The 10 CFR 75 regulations (Reference 2) recently were developed as national requirements for purposes of international safeguards; whereas, other regulations (Reference 3) were originally developed as national requirements for domestic safeguards. There is, however, a relationship between these two sets of national requirements. In particular, many, but not all, of the material control and accounting procedures that already have been implemented for national safeguards in the U.S. will also be made use of for purposes of international safeguards. This double use

becomes apparent upon detailed analysis of the implementation of the regulations for domestic safeguards. It is expected to become clearer as more experience is gained with implementation of the new regulations for international safeguards.

In particular, the national regulations in 10 CFR Part 75 include requirements for the operator's MC&A program in the following areas:

1. Starting point, termination, and exemption from MC&A requirements. The regulations apply to all operators licensed to possess source or special nuclear material (SNM) at an installation identified on the U.S. eligibility list. Excluded from this list are mining and ore processing activities and activities having direct national security significance. 10 CFR 75.3 identifies specific types of nuclear material that may be exempted from the requirements. This corresponds to the same types of nuclear material that may be exempted from IAEA safeguards in Nuclear Weapon States (NWS) with INFCIRC/153 type Agreements.
2. Categorization of nuclear material. 10 CFR 75.22 requires that the records show for each material balance area a separate listing for each type of nuclear material, i.e., plutonium, enriched uranium, natural uranium, depleted uranium, and thorium (including isotopic composition for SNM).
3. Material balance areas (MBAs). 10 CFR 75.11 requires operators to submit sufficient design information to enable the IAEA to determine MBAs and select strategic points for key measurement points (KMPs) (for flow and inventory) and for application of containment and surveillance measures.
4. Records system. A system of accounting and operating records is required by 10 CFR 75.21. Further, the accounting records are required by 10 CFR 75.22 for each MBA to include the inventory changes, measurement results, source, and batch data. Whereas, the operating records are required by 10 CFR 75.23 for each MBA to include measurement data, calibration data, physical inventory taking procedures, and other actions.
5. Reports system. The regulations in 10 CFR 75.33 through 10 CFR 75.36 identify requirements for the reporting forms and procedures for Inventory Change Reports (ICRs), Material Balance Reports (MBRs), Physical Inventory Listings (PILs), and Special Reports.
6. Measurement system. Operators are required by 10 CFR 75.21 to establish, maintain, and follow written MC&A procedures, including a measurement system for the determination of nuclear material transfer and inventory. Procedures for evaluation of precision and accuracy of measurements and estimation of measurement uncertainty are required also.
7. Nuclear material flow. The measurement system, measurement uncertainty evaluation, requirements of 10 CFR 75.23(b) apply to nuclear material flow as well as nuclear material inventory.

8. Physical inventory taking. 10 CFR 75.21(b)(4) requires the operators to establish, maintain, and follow written MC&A procedures which include the frequency and taking of a physical inventory.

9. Shipper/receiver differences. 10 CFR 75.21(b)(3) requires facility operators to establish, maintain, and follow written MC&A procedures for the identification, review, and evaluation of differences in shipper and receiver measurements.

10. Material balance closing. Using the required measurement system, the operating and accounting records are kept for each MBA (re 10 CFR 75.22-23). Accounting reports are also based on the MBA structure (re 10 CFR 75.33).

11. Measurement Control. 10 CFR 75.21(a)-(b) require operators to establish, maintain, and follow written MC&A procedures. This requirement includes, in particular, a measurement system for nuclear material inventory and transfers. It also includes the evaluation of measurement precision and accuracy, estimation of measurement uncertainty, and evaluation of unmeasured inventory and losses. In conjunction with this, operating records are required by 10 CFR 75.23 to include calibration data for the measurement system, measurement quality control procedures, and random and systematic error estimates.

12. Application of containment and surveillance. Each licensee is required by 10 CFR 75.11 to submit sufficient design information to enable the determination and selection of containment and surveillance methods and techniques at appropriate strategic points. In particular, these techniques might include, for example, use of seals on items, containers, doors, etc., and the use of cameras during physical inventory verifications by the IAEA. In the past, the IAEA has used these techniques to monitor nuclear material flows and to confirm the integrity of stores.

13. International transfers of nuclear material. 10 CFR 75.43 requires licensees to provide to the NRC advance notification for exports and imports as well as domestic transfers between facilities in the U.S. These advance notifications must include information regarding notification time, shipping arrangements, operator authorization, and reporting information such as material description and quantity.

VII. ENFORCEMENT OF THE NATIONAL REGULATIONS BY THE SSAC

Briefly, the NRC enforcement of 10 CFR 75 relies heavily on the functions identified earlier - information system, licensing, compliance, and technical support. First, an SSAC information system has been established (jointly by NRC and Dept. of Energy) and is being maintained to handle the extensive information, reports, and other communications required by 10 CFR 75. The information, etc., is provided by the operators per 10 CFR 75.6 and related sections. This information is collected, processed, recorded, and prepared for internal evaluation as well as for submission to other organizations; e.g., to the IAEA to satisfy international obligations.

In particular, the NRC maintains a list of nuclear facilities eligible under the US/IAEA Safeguards Agreement. Facilities having facility attachments (re 10 CFR 75.8) and being inspected by the IAEA (re 10 CFR 75.42) have provided detailed design information (re 10 CFR 75.11), including extensive MC&A procedures, and continue routinely to provide accounting reports on nuclear material inventory and transfers.

Second, the NRC maintains a comprehensive licensing, audit, and inspection program to assure the operator's compliance with the regulations and to assure continued effectiveness of the SSAC. Such a program helps assure that each operator's capability and performance for MC&A satisfies the requirements of the US/IAEA Safeguards Agreement. Additional assurance is derived from independent verification at facilities by NRC inspectors that the MC&A measures implemented by the operators are effective. These assurances contribute to the establishment by the IAEA, through its own independent verification activities, whether there has been any diversion of significant quantities of nuclear material.

Particular licensing and inspection activities re 10 CFR 75 include the following:

1. Examination of the operator's design information presented in the license application (re 10 CFR 75.8 and 10 CFR 75.11) in order to determine the capability of the applicant to perform the required MC&A functions. License amendments are issued vis à vis the facility attachments.

2. Periodic inspections at the facilities to determine whether the operator's MC&A program meets performance standards. These may be performed during construction, start-up, or full operation and may include independent verification activities by the NRC.

3. Evaluation of MC&A data routinely reported by the operators to the NRC.

To secure compliance with 10 CFR 75, the NRC licensees may be subject to license modification, suspension or revocation (re 10 CFR 75.51).

Finally, the NRC has provided technical support to help develop and establish national (and international) standards and procedures for adequate measurement systems, non-destructive assay techniques, data processing, and data analysis techniques. (It is also noted that the Dept. of Energy, in addition, has for many years undertaken extensive technical support and training in MC&A through its contractor laboratories.)

V. REFERENCES

1. IAEA Safeguards: Guidelines for States' Systems of Accounting for and Control of Nuclear Materials, December 1980, IAEA/SG/INF/2.
2. Title 10 of the U.S. Code of Federal Regulations, Part 75, Safeguards on Nuclear Material--Implementation of US/IAEA Agreement, Final Rule, Federal Register (45 FR 50705), July 31, 1980.
3. Title 10 of the U.S. Code of Federal Regulations, Part 70, Domestic Licensing of Special Nuclear Material, Final Rule, Federal Register.
4. The Structure and Content of Agreements Between the Agency and States Required in Connection with the Treaty on the Nonproliferation of Nuclear Weapons, IAEA/INFCIRC/153 (corrected), June 1972.
5. The Agency's Safeguards System (1965, as provisionally extended in 1966 and 1968), INFCIRC/66/Rev. 2.

TABLE 1: NPT AGREEMENT ARTICLES AND STATE AUTHORITY REGULATIONS

<u>INFCIRC/153 Article</u>	<u>INFCIRC/153 Heading (-Subject)</u>	<u>10 CFR 75 Article</u>	<u>10 CFR 75 Heading</u>
<u>Part I</u>			
1	Basic Undertaking	Part 75 in toto (especially 75.1)	(1) (Purpose)
2	Application of Safeguards	Part 75 in toto (especially 75.2 and 75.41)	(1) (Scope and Designation)
3	Co-operation Between the Agency and the State	75.1 75.2 75.42	Purpose Scope Inspections
4	Implementation of Safeguards - interference	-	(2)
5	Implementation of Safeguards - information protection	-	(2), (7)
6	Implementation of Safeguards - IAEA effectiveness	-	(2)
7	SSAC - establish and maintain	Part 75 in toto (especially 75.1)	(1) (purpose)
8	Provision of Information to the Agency	75.6 75.12(a) 75.12(b) 75.14 75.37	Delivery of Information, Reports, and Other Communications (8) Communication of Information to IAEA Communication of Information to IAEA Supplemental Information Disclosure of Reports to IAEA (5)
9	Agency Inspectors - inspection - information protection	75.7 75.13 75.42 75.12(b)	IAEA Representatives Verification Inspections Communication of Information to IAEA (5), (7)
10	Privileges and Immunities	-	(9)
11	Termination of Safeguards - consumption or dilution	-	-
12	Termination of Safeguards - international transfers	75.43(b) (also 75.44) (also 75.45)	Circumstances Requiring Advance Notification (Timing of Advance Notification) (Content of Advance Notification)
13	Termination of Safeguards - non-nuclear use	75.3(b)(2)	Exemptions
14	Non-Application of Safeguards	-	(6)

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<u>INFCIRC/153 Article</u>	<u>INFCIRC/153 Heading (-Subject)</u>	<u>10 CFR 75 Article</u>	<u>10 CFR 75 Heading</u>
15	Finance	75.46	Expenses (21)
16	Third Party Liability for Nuclear Damage	-	(10)
17	International Responsibility	-	(11)
18	Verification of Non-Diversion - State action	-	(2)
19	Verification of Non-Diversion - inability	-	(2)
20	Interpretation and Application of Agreement - consult	75.5	Interpretations
21	Interpretation and Application of Agreement - requests	75.5	Interpretations
22	Interpretation and Application of Agreement - disputes	75.5	Interpretation
23	Final Clauses - amendments	-	(12)
24	Final Clauses - suspension	-	(13)
25	Final Clauses - entry into force	-	(14)
26	Final Clauses - duration	-	-
<u>Part II</u>			
27	Introduction - specify procedures	Part 75 in toto	(1)
28	Objective of Safeguards - timely detection	-	(2)
29	Objective of Safeguards - material accountancy; containment & surveillance	Part 75 in toto	(1), (2)
30	Objective of Safeguards - technical conclusions	-	(2)
31	SSAC - used by IAEA	-	(2)
32	SSAC - established measures	75.21(a)	Material Accounting and Control:
	(a) measurement system	75.21(b)(1)	General Requirements
	(b) measurement uncertainty	75.21(b)(2)	General Requirements
	(c) shipper/receiver differences	75.21(b)(3)	General Requirements
	(d) physical inventory	75.21(b)(4)	General Requirements
	(e) unmeasured inventory and losses	75.21(b)(5)	General Requirements
	(f) reports and records system	75.21(b)(6)	General Requirements
	(g) accounting procedures	75.22	Accounting Records
	(h) reporting to IAEA	75.31	Reports: General Requirements

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<u>INFCIRC/153 Article</u>	<u>INFCIRC/153 Heading (-Subject)</u>	<u>10 CFR 75 Article</u>	<u>10 CFR 75 Heading</u>
33	Starting Point of Safeguards - mining and ore processing	75.2(b)(2)	Scope
34	Starting Point of Safeguards - transfers	75.2(b)(1) & (2) 75.41	Scope Designation
35	Termination of Safeguards	75.41	Designation
36	Exemptions from Safeguards - use	75.3(b)(1)-(3)	Exemptions
37	Exemptions from Safeguards - quantity	75.3(a)	Exemptions
38	Exemptions from Safeguards - mixed	(?)	(24)
39	Subsidiary Arrangements - detailed	75.8(a)-(e)	Facility Attachments (22)
40	Subsidiary Arrangements - entry into force	-	(4)
41	Inventory - unified by IAEA	-	(2)
42	Design Information - provided	75.11(a)	Installation Information (5)
43	Design Information - specified	75.11(b)	Installation Information (5)
44	Design Information - other information	75.14	Supplemental Information (5)
45	Design Information - modifications	75.11(c)	Installation Information (5)
46	Design Information - purposes	75.11(d)	Installation Information (5)
46(b)(iv)	Design Information - special MBA	75.11(b)(4)	Installation Information (5)
47	Design Information - re-examination	-	(2)
48	Design Information - verification	75.13(a)-(c)	Verification (5)
49	Information Outside of Facilities	-	(6)
50	Information Outside of Facilities	-	(6)
51	Records System - MBA	75.22(a) 75.23	Accounting Records Operating Records
52	Records System - examination	75.42(d)(1)	Inspections

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<u>INFCIRC/153 Article</u>	<u>INFCIRC/153 Heading (-Subject)</u>	<u>10 CFR 75 Article</u>	<u>10 CFR 75 Heading</u>
53	Records System - retention	75.24	Retention of Records
54	Records System - accounting and operating	75.21(b)(6)	Material Accounting & Control: General Requirements
55	Records System - measurements basis	-	(23)
56	Accounting Records - each MBA	75.22(a)	Accounting Records
	(a) inventory changes	75.22(a)(1)	Accounting Records
	(b) measurement results	75.22(a)(2)	Accounting Records
	(c) adjustments & corrections	75.22(a)(3)	Accounting Records
57	Accounting Records -		
	- batch/source data	75.22(b)	Accounting Records
	- dates/MBAs	75.22(c)(1)-(2)	Accounting Records
58	Operating Records -	75.23	Operating Records
	(a) changes	75.23(a)	Operating Records
	(b) calibrations, etc.	75.23(b)	Operating Records
	(c) PIT procedures	75.23(c)	Operating Records
	(d) loss actions	75.23(d)	Operating Records
59	Reports System - provided to IAEA	75.31 75.37	Reports: General Requirements Disclosure of Reports to IAEA
60	Reports System - in English	-	-
61	Reports System - based on records	75.31	Reports: General Requirements
62	Accounting Reports - initial	75.31 75.32(a)-(c)	Reports: General Requirements Initial Inventory Report
63	Accounting Reports -	-	(15)
	(a) inventory change reports	75.33(a)(1) and (b)	Accounting Reports
	(b) material balance reports	75.33(a)(2) and (b) 75.35(b)	Accounting Reports Material Status Reports
64	Accounting Reports - inventory change reports	75.34(a)-(b)	Inventory Change Reports (16)
65	Accounting Reports - inventory changes	75.34(a)-(b)	Inventory Change Reports (16)
66	Accounting Reports - semi annual	-	(2)
67	Accounting Reports - entries	75.35(a)	Material Status Reports
68	Accounting Reports - special reports	75.36	Special Reports

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<u>INFCIRC/153 Article</u>	<u>INFCIRC/153 Heading (-Subject)</u>	<u>10 CFR 75 Article</u>	<u>10 CFR 75 Heading</u>
69	Amplification and clarification of Reports	75.31	Reports: General Requirements
70	Inspections - general	75.42(a)-(b)	Inspections
71	Inspections - ad hoc (a) initial report (b) changes (c) transfers	75.42(c)(1) 75.42(c)(1) 75.42(c)(2)	Inspections Inspections Inspections
72	Inspections - routine	75.42(c)(3)	Inspections
73	Inspections - special	75.42(c)(4)	Inspections
74	Inspections - scope	75.42(d)(1),(3),(5) 75.42(e)(2)	Inspections (17)
75	Inspections - scope	75.42(d)(2) 75.42(d)(4)-(5) 75.42(e)(1)-(2)	Inspections (17) Inspections (17) Inspections (17)
76	Inspections - access (a) ad hoc (b) ad hoc (c) routine (d) unusual circumstances	75.42(c)(1) 75.42(c)(2) 75.42(c)(3) -	Inspections Inspections Inspections -
77	Inspections - access (special)	75.42(c)(4)	Inspections
78	Inspections - frequency and intensity	-	(2)
79	Inspections - frequency and intensity	-	(2)
80	Inspections - frequency and intensity	-	(2)
81	Inspections - frequency and intensity	-	(18)
82	Inspections - frequency and intensity	-	(18)
83	Notice of Inspections - Advanced	75.42(h)	Inspections
84	Notice of Inspections - Unannounced	75.42(h)	Inspections
85	Designation of Inspectors	-	(2), (3)
86	Designation of Inspectors	-	(3)

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<u>INFCIRC/153 Article</u>	<u>INFCIRC/153 Heading (-Subject)</u>	<u>10 CFR 75 Article</u>	<u>10 CFR 75 Heading</u>
87	Conduct & Visits of Inspectors - direct operation	-	(19)
88	Conduct & Visits of Inspectors - services	-	(3), (19)
89	Conduct & Visits of Inspectors - escort	75.42(g)	Inspections
90	Agency's Statements	-	(2)
91	International Transfers - exports and imports	-	(3), (20)
92	International Transfers - exports	75.43(a)-(b)	Circumstances Requiring Advance Notification (20)
93	International Transfers - exports	-	(2), (20)
94	International Transfers - exports	-	(3), (20)
95	International Transfers - imports	75.43(a) and (c)	Circumstances Requiring Advance Notification (20)
96	International Transfers - imports	-	(2), (20)
97	International Transfers - losses	75.36(c)(1)	Special Reports
98-116	Definitions	75.4(a)-(r)	Definitions

Footnotes

- (1) Title: "Part 75 - Safeguards on Nuclear Material - Implementation of US/IAEA Agreement," Final Rule, 31 July 1980.
- (2) This is an obligation of the IAEA.
- (3) This is an obligation of the State Authorities.
- (4) See US/IAEA Agreement for specific schedule.
- (5) See also articles 40.31(g), 50.78, 70.21.
- (6) Due to the nature of the Voluntary Offer by the U.S. as a NWS, there is no corresponding article in US/IAEA Agreement.
- (7) See, for example, 10 CFR 95, "Security Facility Approval & Safeguarding of National Security Information & Restricted Data," Final Rule.
- (8) See referenced articles: 75.7, 8, 11, 12, 13, 14, 31, 32, 34, 35, 36, 42, 43, and 44.

TABLE 1: NPT AGREEMENT ARTICLES AND STATE AUTHORITY REGULATIONSFootnotes (continued)

- (9) See INFCIRC/9/Rev. 2 and International Organization Immunities Act of the U.S.
- (10) See the Price-Anderson Act of the U.S.
- (11) There is recourse to international law.
- (12) Regulations (e.g. 10 CFR 75) may be correspondingly amended.
- (13) See, for example, USA/Japan/IAEA Safeguards Transfer Agreement (IAEA INFCIRC/119).
- (14) 10 CFR 75 enters into force the same date that the US/IAEA Agreement enters into force.
- (15) See also articles 40.64, 70.53, 70.54.
- (16) See also articles 40.64(e), 70.53(a), & 70.54.
- (17) In particular:

<u>INFCIRC/153</u>	<u>10 CFR 75.42</u>
74(a)	(d)(1)
74(b)	(d)(5)
74(c)	(d)(3)
74(d)	(d)(5), (3) (2)(i)-(ii)
74(e)	(e)(2)
75(a)	(d)(4)
75(b)	(d)(2)
75(c)(i)	(e)(2)(iii)
75(c)(ii)	(e)(2)(iv)
75(c)(iii)	(e)(2)(v)
75(c)(iv)	(e)(2)(vi)
75(d)	(d)(5), (e)(2)(i)
75(e)	(e)(2)(ii)
75(f)	(e)(1)

- (18) Details are negotiated between the IAEA and the State Authorities.
- (19) Note, however, article 75.42(f).
- (20) For the US/IAEA Agreement, in particular, see INFCIRC/207.
- (21) See also article 170.11(a)(10).
- (22) See also Subsidiary Arrangements for US/IAEA Safeguards Agreement.
- (23) See 10 CFR 70.57, "Measurement Control Program for Special Nuclear Materials Control and Accounting."
- (24) This situation does not exist under US/IAEA Agreement.