KOMISIJA EVROPSKIH SKUPNOSTI

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SPOROČILO KOMISIJE EVROPSKEMU PARLAMENTU IN SVETU

Euratom - varnost in nadzor - dejavnosti v letu 2003

1. UVOD

Pogodba o ustanovitvi Evropske skupnosti za atomsko energijo, ki je bila podpisana istočasno kot Pogodba o ustanovitvi Evropske gospodarske skupnosti, določa temeljno podlago v pravu Evropske unije za dejavnosti Komisije na področju jedrske in radiološke varnosti in nadzora. To sporočilo opisuje dejavnosti, ki jih izvaja Generalni direktorat za energetiko in promet (DG TREN) Komisije v zvezi z naslovom dve, poglavjema 3 in 7 Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo. Druge dejavnosti v okviru Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo, npr. raziskave, v tem poročilu niso zajete.

2. NALOGE, PRAVNA PODLAGA IN OBSEG DELOVANJA VARNOSTI IN NADZORA EURATOMA

2.1. Varovanje zdravja (naslov dve, poglavje 3, Pogodba o ustanovitvi Evropske skupnosti za atomsko energijo)

Na podlagi poglavja 3 Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo je glavna naloga Euratoma določitev temeljnih standardov za varovanje zdravja delavcev in prebivalstva pred nevarnostmi, ki izvirajo iz ionizirajočih sevanj. Poglavje 3 daje Komisiji tudi širša pooblastila, da zagotovi pravilno uporabo temeljnih standardov za varovanje.

Sodišče Evropskih skupnosti[1] je izrecno priznalo pristojnost Skupnosti za izdajanje predpisov na področju jedrske varnosti na podlagi poglavja 3 naslova dve Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo. Sodišče je predvsem odločilo, da ima Skupnost zakonodajno pristojnost, da za zaščito zdravja vzpostavi odobritveni sistem, ki ga morajo države članice izvajati poleg temeljnih standardov.

2.2. Nadzor (naslov dve, poglavje 7, Pogodba o ustanovitvi Evropske skupnosti za atomsko energijo)

Naloga Komisije na področju jedrske varnosti je zagotoviti, da se znotraj Evropske unije jedrski material uporablja le za predvidene namene in da se spoštujejo obveznosti glede nadzora, ki jih je Skupnost prevzela s sporazumom, sklenjenim s tretjo državo ali mednarodno organizacijo. Poglavje VII Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo in izvedbena Uredba (Euratom) št. 3227/76, kakor je bila spremenjena, tvorita pravno podlago nadzornih ukrepov Euratoma[2].

3. REORGANIZACIJA

16. februarja 2003 je bil Oddelek za varstvo pred sevanjem premeščen iz Generalnega direktorata za okolje v Generalni direktorat za energetiko in promet (DG TREN). Poleg tega sta se dve enoti Generalnega direktorat za energetiko in promet, ki sta se ukvarjali s pravnimi in tehničnimi vprašanji ter mednarodnimi

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1 Sodba v zadevi C-29/99 z dne 10. decembra 2002, Poročila Sodišča evropskih Skupnosti [2002] I-11221.

2 Za podrobnejše podatke glej poglavji 2 in 3 COM(2001) 436 konč.

odnosi na jedrskem področju, preselili iz Bruslja v Luksemburg. Dva direktorata Generalnega direktorata za energetiko in promet, jedrska energija (H) in jedrski nadzorni ukrepi (I), sta zdaj odgovorna za vse dejavnosti na področju varnosti in nadzora, ki jih izvaja Komisija v okviru Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo, vključno s tistimi, ki jih je izvajal bivši Evropski urad za nadzorne ukrepe.

4. VAROVANJE ZDRAVJA - JEDRSKA VARNOST

4.1. Jedrski paket

30. januarja 2003 je Komisija po posvetu s Skupino za člen 31 in Evropskim ekonomsko-socialnim odborom sprejela predloga za direktivi Sveta o jedrski varnosti in upravljanju z radioaktivnimi odpadki.

Prvi predlog za direktivo, ki opredeljuje[3] osnovne obveznosti in splošna načela glede varnosti jedrskih objektov, je namenjen zagotavljanju varovanja zdravja pred ionizirajočim sevanjem v času življenjskega ciklusa jedrskega objekta - od načrtovanja do razgradnje. Z direktivo bi osnovne obveznosti in splošna načela, zajeta v ustreznih mednarodnih konvencijah, postala del zakonodaje Skupnosti. Za zagotavljanje verodostojnosti sistema predlog predvideva sistem medsebojnega pregleda s strani pristojnih organov za varnost iz drugih držav članic. Poleg tega želi ta pobuda zagotoviti, da bodo na voljo zadostna finančna sredstva za kritje stroškov razgradnje jedrskih objektov.

Cilj drugega predloga za direktivo[4] o upravljanju z izrabljenim jedrskim gorivom in radioaktivnimi odpadki je, da se države članice obveže, da sprejmejo nacionalne programe za upravljanje z radioaktivnimi odpadki, sprejmejo skupne skrajne roke za odlaganje radioaktivnih odpadkov in dajo prednost rešitvi globokega geološkega odlaganja. Ta predlog želi zagotoviti tudi sodelovanje med državami članicami na področju raziskav in tehnološkega razvoja, ki se nanaša na ravnanje z izrabljenim gorivom in odlaganje radioaktivnih odpadkov.

Predlagani direktivi sta bili 2. maja 2003 poslani Svetu, ki ju je v skladu s Pogodbo o ustanovitvi Evropske skupnosti za atomsko energijo poslal v presojo Evropskemu parlamentu. Razprava v Svetu o predlogih, ki ju je podprl tudi Evropski parlament, je pripeljala do revizije dokumentov.

4.2. Regulativne delovne skupine

Skupina CONCERT in Delovna skupina jedrskih regulativnih organov (NRWG) povezujeta visoke predstavnike jedrskih regulativnih organov iz Evropske unije, srednje in vzhodne Evrope ter nekdanje Sovjetske zveze. Leta 2003 so bili obravnavani in dokončani številni dokumenti o predčasnem zaprtju jedrskih elektrarn, neporušitvenih pregledih jedrskih komponent ter vplivih ekonomskih predpisov na jedrsko industrijo.

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[3] COM(2003) 32 konč.

[4] COM(2003) 32 konč.

4.3. Radioaktivni odpadki in razgradnja

Aprila 2003 je Komisija objavila Peto poročilo o stanju na področju upravljanja z radioaktivnimi odpadki v Evropski uniji, ki kaže položaj v razširjeni EU. Poročilo navaja, kot enega pomembnih dosežkov, da se proizvodnja odpadkov še naprej zmanjšuje zaradi postopkov zmanjševanja odpadkov v nizkoradioaktivnih kategorijah.

Na področju razgradnje je Generalni direktorat za energetiko in promet okrepil svoje sodelovanje pri dejavnostih Mednarodnih skladov za razgradnjo (International Decommissioning Funds - IDF) še pred prenosom odgovornosti za upravljanje s skladi za Ignalino v Litvi in Bohunice na Slovaškem na Generalni direktorat za energetiko in promet po širitvi maja 2004.

Generalni direktorat za energetiko in promet je še naprej sodeloval tudi pri delu številnih mednarodnih organizacij in njihovih odborov (zlasti IAEA in OECD/NEA) na področju radioaktivnih odpadkov in razgradnje. Posebno pomembno je bilo delo na področju varnostnih zahtev glede geološkega odlaganja radioaktivnih odpadkov.

4.4. Prevoz radioaktivnih snovi in program SURE

Glavna dejavnost v letu 2003 je bila priprava Petega poročila o prevozu radioaktivnih snovi, ki ga je pripravila Stalna delovna skupina (SWG) in priprava sporočila Evropskemu parlamentu in Svetu na osnovi tega poročila. Namen navedenega poročila je opisati položaj v zvezi s prevozom radioaktivnih snovi v EU in ugotoviti posebne težave ter, če je to potrebno, predlagati ukrepe za izboljšanje delovanja tega sektorja in zvišanje ravni varnosti.

Poleg tega so bila pregledana tri končna poročila o statistiki prevozov jedrskih materialov, izboljšanju predpisov IAEA o prevozu površinsko kontaminiranih snovi in snovi z nizko specifično aktivnostjo in oceni varnostnih podatkov o jedrski kritičnosti ter omejitvah za prevoz aktinidov. Pregledani sta bili tudi dve vmesni poročili iz projektov SURE, ki sta osredotočeni na metodologije za izdajanje potrdil držav članic in držav pristopnic ter izpuste radioaktivnih snovi v aerosolih kot posledice nesreč pri prevozu.

5. VAROVANJE ZDRAVJA – VARSTVO PRED SEVANJEM

5.1. Splošni razvoj

Pričakuje se, da se bodo zaradi sinergij, ki izhajajo iz premestitve Enote za varstvo pred sevanjem iz Generalnega direktorata za okolje v Generalni direktorat za energetiko in promet, sprostila sredstva. Ker je bilo v letu 2003 izvedeno le eno preverjanje v skladu s členom 35, so bili izvedeni pripravljalni ukrepi, da bi omogočili obsežen program preverjanja v letu 2004.

Čeprav je zakonodajni načrt utrpel nekaj zamude, je Komisiji do konca leta vseeno uspelo sprejeti dva pomembna akta, in sicer priporočilo Komisije, ki usklajuje

poročanje o izpustih iz jedrskih objektov[5] in direktivo Sveta o nadzoru visokoaktivnih zaprtih virov[6].

5.2. Izvajanje zakonodaje

Prenos v zakonodajo držav članic

Pravilno in popolno izvajanje zakonodaje Skupnosti je bilo zagotovljeno z instrumenti, ki jih določa Pogodba o ustanovitvi Evropske skupnosti za atomsko energijo, in sicer s priporočili, preverjanji, mnenji in postopki za ugotavljanje kršitev. Posebna prizadevanja so bili usmerjena na izvajanje najnovejših direktiv o varnostnih standardih[7] in izpostavljenosti sevanju v zdravstvu[8], ki jih je bilo treba prenesti pred 13. majem 2000.

Člen 33 Pogodbe zavezuje države članice, da Komisiji predložijo osnutke nacionalne zakonodaje. Sprejeti so bili štirje takšni osnutki, v dveh primerih je Komisija imela pripombe. Službe Komisije so pripravile 11 mnenj o načrtih za odlaganje radioaktivnih odpadkov, predloženih v okviru člena 37. V okviru člena 141 je bilo obravnavanih 26 postopkov za ugotavljanje kršitev. Komisija se je odločila, da bo dva primera v zvezi s členom 37 in direktivo o informiranju javnosti predložila Sodišču Evropskih skupnosti. Skupaj je bilo zaključenih 10 primerov, dva od njih potem, ko je Sodišče razglasilo, da država članica ni sporočila prenosa ukrepov direktive o temeljnih varnostnih standardih in direktive o izpostavljenosti sevanju v zdravstvu. 31. decembra 2003 je bilo nerešenih še 16 primerov kršitev.

5.3. Navodila za izvajanje

Navodila za izvajanje, ki se nanašajo na enotne temeljne varnostne standarde za varstvo zdravja delavcev in prebivalstva pred nevarnostmi, ki izvirajo iz ionizirajočega sevanja, pripravi Skupina znanstvenih izvedencev iz člena 31 Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo. Leta 2003 je skupina sprejela osnutek dokumenta o doznih ogradah. Končno sprejetje se pričakuje leta 2004. Strokovni seminar, ki ga je organizirala Komisija, je pripeljal do dogovora o prihodnjih ukrepih na področju poklicne prekomerne izpostavljenosti sevanju v zdravstvu in morebitnih dodatnih tveganjih zaradi novih tehnologij v medicini.

Dodatne pobude so se nanašale na izpostavljenost letalskih posadk sevanju (projekt EURADOS), na evropsko raziskavo o poklicni izpostavljenosti sevanju (ESOREX 2000), na ocene „operativne izvedbe direktive o delavcih na prostem“ in „uvajanja evropske platforme za izobraževanje in usposabljanje“.

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5 UL L 2, 6.1.2004, str. 36.

6 UL L 346, 31.12.2003, str. 57.

7 Direktiva Sveta 96/29/ Euratom z dne 13. maja 1996 o določitvi temeljnih varnostnih standardov za varstvo zdravja delavcev in prebivalstva pred nevarnostmi zaradi ionizirajočega sevanja, UL L 159, 29.6.1996, str. 1.

8 Direktiva Sveta 97/43/Euratom od 30. junija 1997 o varstvu zdravja posameznikov pred nevarnostjo ionizirajočega sevanja zaradi izpostavljenosti sevanju v zdravstvu, UL L 180, 9.7.1997, str. 22.

5.4. Pravni razvoj

Direktiva Sveta o nadzoru visokoaktivnih zaprtih radioaktivnih virov in virov neznanega izvora (Direktiva HASS) je bila sprejeta decembra 2003[9]. Direktiva navaja, da izdaja dovoljenja za kakršno koli dejavnost, ki vključuje visokoaktivni vir, zahteva predhodno preiskavo, da bi se prepričali, da so bili izvedeni vsi ukrepi, ne samo za varno uporabo vira, ampak tudi za pravilno upravljanje z njim po tem, ko ne bo več v uporabi. Direktiva vključuje tudi določbe, ki se nanašajo na vodenje evidence, posedovanje in prenos virov ter odgovornost za vire „neznanega izvora".

Kot smernice sta bili izdani dve priporočili Komisije o radioloških posledicah nesreče v Černobilu[10] in standardiziranih podatkih o radioaktivnih izpustih v okolje iz jedrskih reaktorjev in predelovalnih objektov[11].

Na osnovi razsodbe Sodišča Evropskih skupnosti z dne 10. decembra 2002 o pristojnostih Euratoma na področju varstva pred sevanjem, je Svet sprejel odločbo, ki spreminja besedilo izjave o pristojnostih, ki jo je podal Euratom v skladu s členom 30(4)(iii) Konvencije o jedrski varnosti[12].

5.5. Pripravljenost na izredne dogodke

Enota za varstvo pred sevanjem je obdržala svojo službo s 24-urno pripravljenostjo, imenovano ECURIE, z namenom, da bi lahko v primeru izrednega radiološkega dogodka sprožila izmenjavo informacij. Opravljene so bile tehnične izboljšave komunikacijskih sistemov ECURIE, organizirane pa so bile tudi redne testne vaje.

Z namenom, da bi v primeru izrednega dogodka sprožili takojšen odziv, vzdržuje sistem ECURIE tesne operativne povezave s Centrom za spremljanje in informiranje (Monitoring and Information Centre - MIC), ki ga vodi Generalni direktorat za okolje v okviru Mehanizma Skupnosti za krepitev sodelovanja na področju civilne zaščite.

Maja je bil za države pristopnice in države kandidatke organiziran tečaj za usposabljanje ECURIE. Jeseni so se Bolgarija, Madžarska in Litva uradno pridružile sistemu ECURIE. Druge države pristopnice in države kandidatke so že udeležene v skupnosti ECURIE in se pripravljajo na članstvo, čeprav v nekaterih državah pristopnicah tehnično izvajanje komunikacijskega sistema ECURIE ni tako tekoče, kot je bilo predvideno.

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9 Direktiva Sveta 2003/122/Euratom, UL L 346, 31.12.2003, str. 57.

10 Priporočilo Komisije 2003/274/Euratom z dne 14. aprila o varstvu in informiranju javnosti glede izpostavljenosti, ki izhaja iz stalne kontaminacije nekaterih prehrambenih izdelkov divjega videza z radioaktivnim cezijem kot posledice nesreče v jedrski elektrarni v Černobilu, UL L 99, 17.4.2003, str. 55.

11 Priporočilo Komisije 2004/2/Euratom z dne 18. decembra o standardiziranih informacijah glede radioaktivnih izpustov v zrak in odpadne vode iz normalno delujočih jedrskih reaktorjev in predelovalnih objektov v okolje, UL L 2, 6.1.2004, str. 36.

12 Sprejeta 15.12.2003. Glej tudi Odločbo Komisije 2004/491/Euratom z dne 29.4.2004, UL L 172, 6.5.2004, str. 7.

6. VAROVANJE ZDRAVJA - ODGOVORNOST NA PODROČJU JEDRSKE VARNOSTI

Pariška Konvencija z dne 29. julija 1960 o odgovornosti tretjim na področju jedrske energije določa zahteve, ki zadevajo odgovornost nosilcev jedrske dejavnosti tretjim in pravila o odškodnini v primeru jedrske nesreče. Spreminjajoči protokol določa več kot tridesetkratno povišanje vsote, ki jo mora plačati nosilec jedrske dejavnosti, ki se tako poveča na minimalno 700 milijonov EUR. Protokol razširja tudi geografski obseg uporabe Konvencije, da bi zagotovili odškodnino žrtvam v državah, ki niso pogodbenice Konvencije, in širi materialni obseg uporabe, da bi pokrili škodo za okolje ter stroške nadzornih ukrepov. Ker spreminjajoči protokol vpliva na pravila Skupnosti o pristojnosti, je proces podpisovanja in ratifikacije zahteval odločitve Sveta in posvetovanja Evropskega parlamenta, ki so potekala leta 2003.

7. JEDRSKA VARNOST – NADZORNI UKREPI EURATOMA

7.1. Splošni razvoj

Leta 2002 je Komisija določila novo poslanstvo za oddelke, ki vodijo njene nadzorne dejavnosti na področju nadzornih ukrepov („nadzorni ukrepi Euratoma“) in od zadevnih direktoratov zahtevala, da ponovno opredelijo splošne pristope spremljanja po tipih objektov in da v skladu s tem spremenijo postopke inšpekcijskih pregledov. Da bi v zvezi s tem zagotovila strokovno svetovanje, je Komisija imenovala tudi Znanstveno skupino za svetovanje o nadzornih ukrepih Euratoma (SAGES). Leta 2003 so na skupnih sestankih SAGES in osebja Komisije razpravljali o spremenjenih pristopih za številne tipe objektov in o krovnem strateškem dokumentu. Predlogi predstavljajo odmik od tradicionalnih nadzornih ukrepov. Pojmi, kot je pravočasnost, bodo manj pomembni kot v preteklosti. Večji poudarek bo na zagotavljanju, da bodo nosilci dejavnosti ustrezno spremljali in nadzirali jedrske snovi v svoji lasti. Vpeljane bodo tehnike, ki se uporabljajo izven področja nadzornih ukrepov, kot je preverjanje sistemov. Razsežnost in časovna razporeditev spremljanja, ki ga bo opravljala Komisija, bosta za nosilce dejavnosti manj predvidljivi. Inšpekcijski pregledi bodo načrtovani ob upoštevanju medsebojnih odnosov med različnimi stopnjami jedrskega gorivnega cikla.

Razprave o osnutku nove uredbe o nadzornih ukrepih (COM(2002)99), ki se ukvarja s tehničnim razvojem nadzornih ukrepov in zagotavlja ustrezno pravno podlago za izvajanje dodatnih protokolov k sporazumom o ukrepih z IAEA, so se nadaljevale v Skupini za jedrska vprašanja Sveta (AQG). Razprave so vodile do številnih obrazložitev, razumevanj in dogovorov med Komisijo in delegacijami držav članic, ki so zbrani v dokumentu z naslovom „Smernice za uporabo COM(2002)99“, ki bo objavljen v obliki priporočila Komisije in bo nosilce dejavnosti oskrbel z neobvezujočimi navodili. Pričakuje se, da bo Svet uredbo potrdil v začetku leta 2004.

Organizirana so bila dvostranska srečanja z zadevnimi državami članicami, da bi razpravljali o vprašanjih, ki izhajajo iz določb spremenjene uredbe o odpadkih in o podrobnostih izvajanja dodatnega protokola (AP). Vse države članice so bile povabljene na srečanje v Luksemburgu decembra 2003, da bi razpravljale o izvedbenih vprašanjih, zlasti na področju skupnih dejavnosti Euratoma in IAEA v evropskih jedrskih objektih. Pozitiven odziv po tem dogodku kaže, da bi bila taka

srečanja lahko koristna tudi v prihodnosti, zato naj bi od zdaj naprej organizirali eno ali dve srečanji letno.

Podrobni rezultati raziskave kakovosti nadzornih ukrepov Euratoma so opisani v Prilogi 1. V splošnem so bili nosilci dejavnosti zadovoljni s podobo in uspešnostjo nadzornih ukrepov Euratoma v svojih objektih.

Nadaljevalo se je delo v zvezi z razvojem in izvajanjem novih tehnologij nadzornih ukrepov. Podrobnosti so navedene v Prilogi 2.

V luči prihodnje širitve EU je bila posebna pozornost namenjena pripravljalnemu delu, da bi se omogočil hiter začetek inšpekcijskega dela na področju nadzornih ukrepov v teh državah. Jedrska industrija v pristopnih državah je najpogosteje omejena na energijske reaktorje in skladišča. Za posamezne države so bile vzpostavljene misije, da bi vzpostavile stike na delovni ravni in vpeljale okvir bodočega inšpekcijskega dela. Delovna skupina za širitev se je novembra srečala s predstavniki IAEA, da bi pripravila prihodnje inšpekcijske dejavnosti. Določen je bil program misije za ugotavljanje dejstev in tehnične naloge, ki se bo izvedel v prvem četrtletju leta 2004.

7.2. Dejavnosti nadzornih ukrepov preverjanja

Nosilci dejavnosti v jedrskih objektih so Komisiji poročali o svojih zalogah in pretoku jedrskega materiala. Med letom je prispelo več kot milijon vrstic knjigovodskih podatkov, v glavnem preko elektronskih sredstev. Pri vseh podatkih se je preverjalo notranjo in zunanjo usklajenost (vmesno ujemanje) in skladnost z določbami sporazumov o sodelovanju s tretjimi državami. Vse ugotovljene tipkarske napake in neskladnosti so bile popravljene po posvetu z zadevnim nosilcem dejavnosti. Knjigovodski podatki so bili poslani IAEA v skladu z izpolnjevanjem obveznosti EU glede njenih sporazumov z IAEA o nadzornih ukrepih.

V letu 2003 so inšpekcijske dejavnosti, ki so jih izvajali inšpektorji za nadzorne ukrepe Komisije, obsegale 6366 osebnih inšpekcijskih dni, skoraj 13 % manj kot leta 2002. Ta padec je predvsem posledica nadaljnje racionalizacije in določitve prednosti za inšpekcijske dejavnosti. Glavni pomisleki in/ali rezultati, dobljeni med izvajanjem inšpekcijskih dejavnosti za vse tipe objektov pod nadzorom so zbrani v Prilogi 3.

Dejavnosti preverjanja, izvedene v skladu z nadzornimi ukrepi Euratoma v okviru poglavja 7 Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo, so pokazale, da ni dokazov, ki bi kazali na to, da se jedrske snovi ne uporabljajo za predvidene namene. Prav tako ni dokazov, ki bi kazali na neskladnost s posebnimi določbami o nadzornih ukrepih, ki jih je Skupnost sprejela s sporazumi, sklenjenimi z državami, ki niso članice EU.

8. JEDRSKA VARNOST – SODELOVANJE Z IAEA

Komisija sodeluje z Mednarodno agencijo za atomsko energijo (IAEA), ki je odgovorna za svetovne nadzorne ukrepe v skladu s Pogodbo o neširjenju jedrskega orožja (NPT), ki jo spoštujejo vse države članice Evropske unije. Podrobnosti o tem sodelovanju so navedene v Prilogi 4.

9. JEDRSKA VARNOST – NEDOVOLJENA TRGOVINA

Komisija je še naprej aktivno sodelovala pri delu Mednarodne tehnične delovne skupine za tihotapljenje jedrskih snovi (ITWG), ki deluje pod okriljem Strokovne skupine za neširjenje jedrskega orožja (NPEG) v okviru G8. V Evropski uniji so leta 2003 zabeležili tri primere nedovoljene trgovine z jedrskimi snovmi, pri čemer je šlo za ščite iz osiromašenega urana in izdelke, ki so vsebovali torij. Poleg tega je bilo zabeleženih tudi deset primerov nedovoljene trgovine z radioaktivnimi viri.

10. JEDRSKA VARNOST – SODELOVANJE Z DRUGIMI REGIONALNIMI ORGANIZACIJAMI

Kot del „Dialoga o energiji“ med EU in Rusijo je bilo na vrhu EU-Rusija novembra 2003 v Rimu ob navzočnosti g. Prodija in g. Putina predloženo Četrto poročilo o napredku. Poročilo je vključevalo izjavo, da nameravata EU in Rusija z namenom tesnejšega sodelovanja na področju jedrske varnosti izdelati program sodelovanja pri knjigovodstvu in nadzoru jedrskih snovi. Izvedenci Komisije za jedrske nadzorne ukrepe so že opravili predhodne pogovore z ruskimi sogovorniki, da bi pripravili skupen program sodelovanja. Začrtan je bil delovni program, vključno z vzpostavitvijo inšpekcijskih postopkov za predelovalne in proizvodne objekte, skupnim razvojem računalniških aplikacij, namenjenih sledenju zajemanja jedrskih snovi, ali drugih podobnih orodij za upravljanje s podatki na področju nadzornih ukrepov, skupnim programom usposabljanja in z organizacijo konference v Rusiji na temo jedrske varnosti.

11. JEDRSKA VARNOST – FIZIČNO VAROVANJE

Euratom je pogodbenica Konvencije iz leta 1979 o fizičnem varovanju jedrskega materiala (CPPNM), ki v glavnem zadeva fizično varovanje jedrskih materialov med mednarodnim prevozom. Marca 2003 je posebna delovna skupina dokončala poročilo, ki je predlagalo spremembo za okrepitev določb Konvencije. Predlagana sprememba bi okrepila ureditev fizičnega varovanja s širitvijo obsega pristojnosti Konvencije, ki bi pokrivala jedrski material med domačo uporabo, skladiščenjem in prevozom, kakor tudi zaščito objektov pred sabotažo. Predlagana sprememba potrjuje, da primarno odgovornost za fizično varovanje nosijo posamezne države. Poleg tega je predlagana tudi uvedba pravne obveznosti za uporabo temeljnih ciljev in načel fizičnega varovanja, kot je potrdil Svet guvernerjev IAEA. Do konca leta 2003 še ni bila sprejeta odločitev o amandmajski konferenci.

12. MEDNARODNO SODELOVANJE

Leta 2003 so se v zadovoljstvo vseh pogodbenic uveljavili sporazumi o sodelovanju na jedrskem področju z Združenimi državami Amerike, Kanado in Avstralijo. Dvostranska posvetovanja med Komisijo in Kanado, kakor tudi med Komisijo in ZDA, so potrdila, da so se med pogodbenicami razvili dobri odnosi.

Nekaj napredka je bilo doseženega pri pogajanjih o sporazumih z Japonsko in Kitajsko. Čeprav sporazum z Japonsko ni bil sklenjen zaradi težav med postopkom potrjevanja osnutka na Japonskem, obstaja optimizem, da bi se v letu 2004 lahko

dogovorili o kompromisnem besedilu. Svet je Komisijo pooblastil za pogajanja s Kitajsko glede sporazuma o jedrskem sodelovanju in pogajanja se bodo kmalu začela.

13. SREDSTVA

Člen 174 Pogodbe o ustanovitvi Evropske skupnosti za atomsko energijo izrecno omenja nujnost vključevanja dodeljenih proračunskih sredstev v proračun Komisije za operativne izdatke v zvezi z dejavnostmi jedrskih nadzornih ukrepov. Leta 2003 so posebna dodeljena operativna proračunska sredstva v proračunu EU za nadzorne ukrepe Euratoma dosegla 18,8 milijona EUR. Od tega zneska je bilo dejansko porabljenih 13 milijonov EUR (70 %). Podrobnosti so navedene v Prilogi 5.

Ob koncu leta 2003 sta na področju jedrske varnosti in zaščite delala 302 uradnika, od teh je bilo 182 jedrskih inšpektorjev. Podrobnosti o razpoložljivem osebju in njihovih dejavnostih so prav tako navedene v Prilogi 5.

14. SKUPNI ZAKLJUČKI

Leto 2003 je bilo pomembno za prestrukturiranje dejavnosti Komisije na jedrskem področju, kar naj bi vodilo k pomembnim operativnim sinergijam, ki bodo Komisiji npr. omogočile, da bo povečala število preverjanj jedrskih objektov države članice.

Ko bo sprejet jedrski paket, najpomembnejša pravna pobuda leta, bo to vodilo k enotni visoki ravni varnostnih standardov v jedrskih objektih po vsej razširjeni EU in bo obenem zagotavljalo, da bodo sprejete ustrezne določbe za razgradnjo jedrskih objektov in za upravljanje z izrabljenim jedrskim gorivom in radioaktivnimi odpadki. Sprejem direktive o upravljanju z visokoaktivnimi zaprtimi viri bo pomagal zagotoviti, da bodo potencialno škodljivi viri natančno zabeleženi, upravljani in odstranjeni. Komisija je tudi dejavno zagotovila, da bodo države članice pravilno prenesle zakonodajo Skupnosti v svojo nacionalno zakonodajo.

Komisija je dejavno sodelovala na mednarodnih forumih o jedrski varnosti, upravljanju z odpadki, nadzornih ukrepih, varstvu pred sevanjem in prevozih radioaktivnih snovi. Še naprej ostaja ključni akter pri ukrepih Skupnosti za obvladovanje večjih radioloških nesreč.

Kar zadeva nadzorne ukrepe Euratoma, je Komisija naredila velik napredek v smeri praktičnega izvajanja novega poslanstva za nadzorne ukrepe Euratoma. Korak naprej je bil dosežen v zvezi s spremembo uredbe o nadzornih ukrepih v razpravah s Svetom. Komisija je dosegla velik napredek tudi pri praktičnih pripravah za izvajanje Dodatnega protokola. Raziskava o tem, kako nosilci dejavnosti sprejemajo nadzorne ukrepe Euratoma, je pokazala, da so na splošno zadovoljni z načinom, kako Komisija izvaja nadzorne ukrepe.

Na osnovi izvedenih inšpekcijskih pregledov in ocene knjigovodskih poročil, ki so jih predložili imetniki jedrskih snovi, ni dokazov, ki bi kazali na to, da se jedrske snovi ne uporabljajo za predvidene namene, ki so jih navedli uporabniki v Evropski uniji leta 2003. Prav tako ni dokazov, ki bi kazali na to, da se niso spoštovale določbe mednarodnih sporazumov o nadzornih ukrepih. Statistična ocena knjigovodskih

poročil kaže, da knjigovodski sistemi za jedrski material pri vseh velikih nosilcih dejavnosti dosegajo mednarodne standarde.

Prizadevanja v letu 2003 tvorijo trdno osnovo, na kateri bo Generalni direktorat za energetiko in promet še naprej razvijal svoje dejavnosti na jedrskem področju. Pomagala bodo obdržati jedrsko opcijo odprto, kar vodi k trajnostno uravnoteženi mešanici energetskih virov, manjši odvisnosti od uvoza energije in varovanju okolja s splošnim zmanjševanjem emisij CO_2.

ANNEXES

ANNEX 1

Euratom Safeguards Performance – Detailed evaluation of the survey of operators 2002

The survey contained 29 questions, divided into five groups (general safeguards issues, transmission of data to Euratom Safeguards, quality of Euratom Safeguards' information on inspections, evaluation of inspection issues, and wider issues).

A total of 72 questionnaires were sent to all the major nuclear installations as well as to a representative sample of all the other nuclear installations in the European Union (EU). 84% of the questionnaires were returned and between 82% and 100% of the individual questions were answered. Thus, the size of the response permits conclusions to be drawn about the image and performance of the Euratom Safeguards authorities. Overall, operators noted their satisfaction concerning the image and the performance of Euratom Safeguards in their installations.

The costs to the operators of a safeguards infrastructure to meet Euratom requirements compared to the costs of meeting other statutory obligations were felt to be not very high.

Operators expressed reservations concerning remote transmission of real-time accountancy data, surveillance images, and non-destructive assay results from their facilities to Euratom Safeguards headquarters in Luxembourg.

With regard to the quality of information on inspections, operators appear to be very satisfied with communication with Euratom Safeguards inspectors during inspections, and most operators welcome the follow-up letters sent after inspections. Nonetheless, the evaluation indicated that communication channels outside inspections need to be improved.

Regarding the evaluation of inspection issues, the answers revealed that the majority of operators of power reactors, enrichment plants and reprocessing plants are not satisfied with coordination/cooperation between Euratom Safeguards and the International Atomic Energy Agency (IAEA). This is an important finding which needs to be followed up. On the other hand, there is reasonably good continuity in the approaches followed during two consecutive inspections conducted by Euratom Safeguards inspectors. The replies concerning the professional abilities of Euratom inspectors confirmed their knowledge and thorough understanding of their working environment.

The balance between cost and effectiveness in the way in which inspections are organised and conducted is rated as medium. However, operators did not suggest measures to increase the effectiveness and efficiency of inspections, nor did they identify ways to improve the balance between cost and effectiveness. Most operators were not very enthusiastic about providing more support to Euratom Safeguards in exchange for a less intrusive inspector presence.

As to the wider framework, operators were opposed to the inclusion of safety, security, physical protection, and radiological protection in the tasks of the Euratom Safeguards inspectors. The views were somewhat divided on the question of whether or not the Euratom Safeguards system contributes to improving the quality of the nuclear accountancy system, the commercial relations/image, and the quality control system of the operators. The consensus view was that two to three years would be a suitable interval between future quality surveys.

ANNEX 2

Progress in Safeguards Technology

In 2003, work continued on the development and implementation of new safeguards technologies including the new digital surveillance systems. These systems have motion detection and image data treatment applications already incorporated in the delivered systems. These advanced features provide valuable assistance and they save time when viewing or reviewing images. The installation of one of these units at the Trillo nuclear power plant (Spain) was the first in the presence of the IAEA. This was an important step on the path to approval of the equipment for routine use by the IAEA.

With regard to existing equipment, development work has continued on the improvement of hand-held instruments and associated software for measuring gamma radiation.

A special instrument for the measurement of fresh, highly enriched fuel elements was developed in 2003 and installed at the FRM2 reactor in Munich.

In terms of new equipment, the Commission participated in a demonstration of a Digital Cerenkov Device for viewing irradiated nuclear fuel stored under water at the Ringhals power plant in Sweden. The device has the potential to view irradiated fuel with a cooling time in excess of 20 years or a low burn-up.

The Commission has also been exploring the possibility of using Virtual Private Networks over the telephone network to provide a secure means of data transmission. Following a workshop held in Luxembourg in March 2003 the requirements and boundary conditions were established for secure data transmission from nuclear sites to Luxembourg.

ANNEX 3

Euratom Safeguards: Detailed inspection findings

In 2003 inspection activities conducted by Commission Safeguards inspectors amounted to 6366 person-inspection days, down by almost 13% in comparison with 2002. This fall mainly resulted from further streamlining and prioritisation of inspection activities.

The main concerns and/or results achieved in the course of the inspection activities for each type of installations under control are summarised below.

Reprocessing facilities[13]

The nuclear fuel reprocessing installations at THORP, Sellafield, UK, and at UP2/UP3, La Hague, France are characterised by their high throughput[14], automation, and limited access to the process areas. The current safeguards approach for these plants comprises high frequency inspections and automated unattended instrumentation to verify the nuclear material flow, a significant part of which is plutonium. Both sites have on-site laboratories, operated by analysts from DG JRC-ITU, in which verification measurements are performed.

THORP was in normal production mode throughout 2003 with the exception of a planned shutdown during the months of October and November. Investigations continued on the apparent bias of the operator's input sample results from 2001 with particular emphasis on the calibration of the material used for verification of input solutions. The annual Physical Inventory and the Material Balance presented by BNFL were accepted.

Apart from a few short technical shut-down periods, the **Magnox reprocessing facilities** at Sellafield were in operation at a high throughput during the year. The first plutonium was introduced in the new Store 9 Extension in November 2002. Verification activities in these plants and in other Magnox related facilities on the Sellafield site were satisfactorily concluded. Some reservations however, had to be made in respect of some old plutonium stores where access is restricted due to radiological conditions, as well as in respect of some very old plants being decommissioned.

The UP2/800 reprocessing plant was in operation during the whole of 2003. Efforts were made to optimise inspection activities. In particular, a revised safeguards approach was successfully tested in the irradiated fuel storage ponds; this will halve the inspection manpower needed to safeguard these ponds. The annual physical inventory verifications were successful in the plutonium stores. With respect to the UP2/800 chemical process, the verifications performed confirmed a problem concerning high values of Material Unaccounted For (MUF) for uranium and uranium 235 which had already been detected in 2002. The issue is still under investigation by COGEMA. The cumulative "Shipper-Receiver Difference" declarations for the unit for recycling of aged separated plutonium are higher than expected and might represent a new problem. This issue is also being examined by COGEMA.

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13 At reprocessing plants, irradiated fuel assemblies received from power reactors are processed chemically to separate uranium and plutonium from the highly radioactive fission products. The separated nuclear materials can be re-introduced into the fuel cycle.

14 The total annual throughput of these three facilities adds up to over 3000 tonnes of fuel containing more than 20 tonnes of plutonium.

The **UP3** reprocessing plant was in operation from January to December 2003. The annual physical inventory carried out in August 2003 was satisfactorily completed. The installed instrumentation to verify the plutonium product input and output was upgraded and updated satisfactorily. The operator announced the start of reprocessing of research reactor fuel in 2005; this will have an impact on the safeguards strategy for the plant as it will involve handling highly enriched uranium.

Enrichment facilities[15]

At the three **Urenco centrifuge enrichment plants** at Almelo (NL), Gronau (D) and Capenhurst (UK), sample taking for subsequent High Performance Trace Analysis (HPTA) is now routinely used to confirm that only low-enriched uranium is produced. The analysis of the samples started in 2003.

Meetings were held between Urenco, the Member States involved, the IAEA and the European Commission to prepare for the implementation of the Additional Protocol in the Urenco plants at Almelo, Gronau and Jülich (D).

The diffusion enrichment plant, **Eurodif Production** at Pierrelatte, France, was subjected to weekly import and export verifications throughout 2003. The operator cooperated with the Commission's request concerning the presentation of product for verification and sealing before export from the European Union.

The annual inventory verification was carried out in the first week of February 2003. Additional verification activities in two other installations were required before the annual inventory verification could be successfully concluded.

Constraints placed by France on the inspectors due to the "*particular status*"[16] of the installation remain in force, which create unsatisfactory verification conditions.

Within the limits set by these constraints, no evidence of diversion of nuclear material under safeguards was found.

Installations for the Fabrication of Mixed Oxide Fuels (MOX)[17]

At the **Belgonucléaire MOX fuel fabrication plant** at Dessel, Belgium, there is an apparent trend in the cumulative MUF. Although the individual MUF figure for the year 2003 was statistically acceptable, the quantities of nuclear material established during all recent annual physical inventory takings were systematically higher than the declared book figures. The operator is conducting a joint investigation with DG TREN to identify the possible cause for this trend.

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15 Modern Light Water Reactors need fuel with about 3 to 5 percent of the fissionable uranium isotope U235. As natural uranium contains only 0.7 percent of this nuclide, an enrichment process is needed to achieve the desired concentration. In the European Union, two companies offer this service for civil customers: URENCO and EURODIF.

16 Due to the presence of material not under safeguards in the material balance area of EURODIF Production S.A.

17 In MOX Fuel Fabrication Plans, the plutonium oxide produced in reprocessing installations is used in a mixture with uranium oxide to fabricate MOX fuel elements for subsequent use in nuclear power plants.

Active commissioning of the **Sellafield MOX Plant (SMP)** in the UK continued. However, operational problems caused production delays throughout the year. These problems were one of the causes of the higher than expected MUF. The operator has started remedial work and has planned improvements of the concerned systems. Progress has been made in discussions with the operator and UK national authorities on data transfer to Luxembourg for evaluation.

The decommissioning of the **Siemens Mixed Oxide fuel fabrication plant** in Hanau, Germany is progressing well and is expected to lead to a reduction of the inspection frequency there in 2004.

The results of the annual Physical Inventory Verification (PIV) at the **COGEMA MOX fabrication plant** at Cadarache in France were not entirely satisfactory owing to the high values of MUF. There is, however, no evidence that safeguarded nuclear material has been diverted from its intended use. The operator has made a commitment to re-measure all materials identified as being a potential source of the discrepancies.

LEU and HEU Fuel Fabrication Plants, Conversion Facilities[18]

At **BNFL Springfields in the** UK, a large natural and low-enriched uranium conversion and fuel fabrication plant, the annual Physical Inventory Verification revealed shortcomings in the stocktaking arrangements for a limited area of the plant. A task force was set up by the operator to improve the nuclear material management.

At **Fabbricazione Nucleare LEU fabrication plant** in Bosco Marengo, Italy, the operator has finished the repackaging of the low enriched and natural uranium oxide which remained in the installation after fabrication activities were stopped. The material was verified and sealed; it will be kept contained for a long period of time.

At the **FBFC LEU fabrication plant Romans**, France, a systematic error was discovered in the declared tare weights of uranium powders shipped to FBFC in Dessel, Belgium. The accountancy declarations have since been corrected accordingly.

Following evaluation, satisfactory explanations were also found for a series of positive MUF values at the **FBFC LEU fabrication plant** at **Dessel** in Belgium.

Nuclear Power and Research Reactors[19]***, other installations and facilities***

The formal status of Unit 1 of the **Gundremmingen** power plant in Germany was changed from closed down to decommissioned as was the status of the **Zwentendorf project** in Austria, which was abandoned before Austria became an EU member. Both power plants are

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[18] At LEU Fuel Fabrication Plants, fuel assemblies are produced from low enriched uranium (LEU) for subsequent use in nuclear power plants. In HEU Fuel Fabrication Plants, fuel elements for research reactors that use high-enriched uranium (HEU) are manufactured.

[19] Most of the nuclear power reactors operated in the European Union are of the Light Water Reactor type (LWR), i.e. the reactors are cooled and moderated with normal water. In addition, the UK operates MAGNOX and Advanced Gas Cooled Reactors (AGR) which are moderated with graphite and cooled with CO2 gas. The operation of LWRs using LEU is characterised by long periods (12-18 months) of continuous operation. These periods, when the in-core fuel is inaccessible, are followed by outages typically lasting 2-4 weeks when about one third of the (used) core fuel is exchanged for fresh fuel from Fuel Fabrication Plants. LWRs are inspected during this outage period when all the fuel is accessible for verification.

still being decommissioned but inspection visits confirmed that massive reconstruction would be needed before the plants could be made usable.

Initiatives are underway to remove the **Dodewaard** reactor in the Netherlands from the list of safeguarded plants, the remaining action being the final shutdown of the facility and the subsequent shipments of the remaining nuclear material, accompanied by the necessary inspections.

During a check of the spent fuel pond at the **Oskarshamn Power Plant** in Sweden the operator found that a fuel rod appeared to be missing from a storage cassette. The matter was treated seriously and it took concurrent investigations by the Commission and the IAEA to clarify the situation which goes back to the time before Sweden joined the EU.

In **Finland** the start of inspection work in two power plants was delayed because of plant security not accepting the inspector's passport as a valid document. In both cases, the matter could only be resolved by negotiation and through the intervention of the Finnish State Authority (STUK). Inspectors also experienced difficulties in gaining access to facilities in **France** where an operator's health physics service refused to accept the inspector's radiation protection passport, even though it was properly in order and up to date.

Operators' uncertainty with respect to the progress/handling of verification requests led to growing pressure for clarification. This was specifically felt in plants in Belgium: **Doel, Tihange,** and **Belgonucléaire**.

At the **BR2 reactor** in Mol, Belgium, an Advanced Thermal Power monitor was installed by the IAEA to verify the declaration of the operating history and guarantee the absence of undeclared production of plutonium. The BR2 reactor is the first research reactor in the EU to be equipped with such a monitor. The device is still being tested.

Inspections to verify **the transfer of spent fuel to CASTOR casks** continued to be of particular concern. In view of the envisaged medium to long term storage of these containers at reactor sites in **Germany, Belgium and Spain**, their contents were measured by DG TREN I before loading and subsequently brought under multiple containment and surveillance systems. Due to recurring technical problems during the loading, drying and closing of the CASTOR flasks, inspections proved to be difficult to plan. As the above countries have to empty their reactor ponds for operational purposes, these activities required more human resources than expected.

A new store for spent fuel and plutonium (MAGENTA) is to be constructed at **Cadarache** in France and is expected to be operational in 2009. The French authorities and the plants' management presented the project to the Commission at an early stage in order to allow DG TREN's requirements to be met.

Anticipating the entry into force of the Additional Protocol, the IAEA insisted on visiting a large number of locations containing small quantities of nuclear material (**Locations Outside Facilities - LOF**). This caused a substantial additional inspection burden for DG TREN. However, on occasions these inspections led to unexpected findings, for example at the University of Vienna a small sample of highly enriched uranium, which had not been recorded as such, was found.

Material Balance Evaluation of Bulk-Handling Facilities

In bulk handling facilities (Conversion Plants, Enrichment Plants, Fuel Fabrication Plants, and, Reprocessing Plants) nuclear material is mostly processed in loose forms, such as powders or liquids. Measurement uncertainties and particularities of the process lead to differences between the book inventory and the physical reality (known as **M**aterial **U**naccounted **F**or, MUF). The MUF is established at the operator's own annual physical inventory taking. It is verified by the inspectors of DG TREN, who do their own verifications and measurements.

In 2003, the Material Balance Evaluation focused on

- the evaluation of differences between operators' declarations and inspectors' measurement results obtained by Destructive Analysis (DA),
- evaluation of the MUF declared by the facility,
- evaluation of the cumulative MUF, which is the algebraic sum of the MUF for a Material Balance Area (MBA) over time, and
- Shipper-Receiver Differences (SRD)[20].

The entire evaluation of MUF, cumulative MUF and SRD was based on data collected from the Euratom Safeguards accountancy database which means that the French bulk-handling MBAs for which no declarations exist were excluded from the evaluation. Small bulk-handling MBAs with a physical ending or a throughput less than two significant quantities[21], as well as those plants decommissioned in 2003, were excluded from the evaluation.

No evidence was found to suggest that, in the bulk-handling facilities of the EU, source materials or special fissile materials were diverted from their intended uses as declared by the operators. It found that, without exception, operators' measurement systems comply with the most recent international standards. Nevertheless, some problems were revealed. At the large BNFL uranium conversion and fuel fabrication plant at Springfields in the UK, the MUF cannot be explained by measurement uncertainties alone. In addition, there was still evidence of biases in the cumulative MUF for some bulk-handling facilities, which have to be further investigated to identify the required corrective actions.

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[20] 'Shipper-Receiver Difference' means the difference between the quantity of nuclear material in a batch as stated by the shipping material balance area and as measured at the receiving material balance area.

[21] Significant quantities are used in establishing the quantity component of the safeguards inspection goal, e.g. 8 kg plutonium, 25 kg high enriched uranium and 75 kg low enriched uranium.

ANNEX 4

CO-OPERATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY

The IAEA Safeguards Implementation Report (SIR)

The SIR 2002 concluded that there was no evidence of diversion of nuclear material or misuse of equipment or facilities placed under safeguards in the European Union.

The SIR 2002 acknowledged that collaboration with Euratom and Member State support programmes made it possible to achieve significant advances in safeguards technology and verification procedures. Trials were carried out in various EU installations in the areas of surveillance systems, short notice random inspections, and remote monitoring, as were field tests on implementing the Additional Protocol (research centres in Finland and in the Netherlands). A workplan for Flowsheet Verification (FSV) of neptunium was discussed and agreed with the ITU at Karlsruhe and the implementation of FSV measures is expected to begin shortly.

In line with the New Partnership Approach arrangements and in order to save resources, the IAEA and Euratom Safeguards continued to share the purchase, operational and maintenance costs of equipment installed in facilities under IAEA safeguards.

A seminar on the New Partnership Approach, jointly developed by the Agency and Euratom, was held in Vienna. Many of the IAEA's routine training courses were attended by inspectors from DG TREN and conversely, IAEA inspectors attended courses given by DG TREN, thus maintaining cooperation on training.

In addition to its global conclusions, the SIR 2002 made recommendations for improvement in specific areas. These recommendations may be summarised as follows:

- Problems occurred when nuclear material remained in closed shipping containers at reactors over long periods. The practicalities of extending the area under surveillance and of sealing the shipping containers before their removal are being investigated.

- The issue of verifying that there has been no undeclared production of plutonium in the EU's three large research reactors will be settled once power monitors are installed at the reactors concerned. Indeed, the first power monitor was installed in 2003 at the BR2 reactor in Belgium.

- Corrective actions need to be taken as soon as possible after a Containment and Surveillance (C/S) failure is detected. The IAEA intends to install a newer generation of C/S equipment, improve equipment reliability, and provide backup measures for C/S applied to reactor cores (particularly during open core periods).

Several meetings of Working Groups and the Liaison Committee took place to discuss these and other topics. Because the Euratom Safeguards Office underwent extensive reorganisation, which will lead to changes in the implementation of safeguards with the IAEA, the New Partnership Approach (NPA) arrangements need to be reviewed to reflect these changes and to seek new efficiency and enhanced cooperation. The IAEA has called for a meeting to discuss forthcoming changes and their potential impact.

Additional Protocol and integrated safeguards

The aim of the Additional Protocols is to increase the IAEA's capabilities to detect undeclared nuclear materials and activities in violation of the Non-Proliferation Treaty (NPT). In 2003, Euratom Safeguards continued to play a key role in preparing for the implementation of the Additional Protocol in the European Union, on issues such as harmonising and standardising reporting under the Additional Protocol[22], arrangements for users with small quantities of nuclear material for non-fuel cycle related activities and joint visits with the IAEA to confirm the status of decommissioned facilities. Dedicated reporting software[23], developed by the Commission, was supplied to all the Member States for trials. The conceptual work on site definitions, developed jointly by DG TREN H and the EU Member States, is now reflected in the revised IAEA Guidelines for reporting and can be considered as the international standard on site definition.

By the end of 2003, all EU Member States had ratified the Additional Protocol and the majority had put the corresponding implementing arrangements in place. In line with Annex III of the EU-NNWS (non-nuclear Weapons States) Additional Protocol, known as the "Side Letter", the Commission the Commission agreed to accept the transfer of certain activities which are the responsibility of the Member States. Provision for the acceding Member States to become parties to the EU-NNWS Additional Protocol[24] was made in close cooperation with the Commission's Legal Service and the IAEA.

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22 The implementation paper for the so-called Side Letter and non-Side Letter Member States has been merged as the differences turned out to be of only minor relevance.

23 CAPE, Commission Additional Protocol Editor.

24 The Additional Protocol does not provide for its own accession clause, but the Safeguards Agreement does.

ANNEX 5

RESOURCES

Budget Appropriations for Nuclear Safeguards

Article 174 of the Euratom Treaty specifically mentions the necessity to include appropriations in the Commission's budget for operational expenditure related to nuclear safeguards activity.

On this legal basis, safeguards activities are financed from two types of budget appropriations:

- A general "administrative" appropriation involving the costs of Euratom Safeguards overheads such as general IT equipment, telecommunications, etc. (Part A of the Budget, chapters A-70 and A-24), as well as a specific appropriation for the medical survey and the radiation protection of the inspectors (Part A of the Budget, line A-1420);

- Specific "operational" appropriations allocated for expenditure directly related to nuclear safeguards such as mission costs, rental of offices on site (including on site laboratories), purchase of technical equipment and samples taking and analysis, contracts for services (i.e. maintenance and repairs), transportation of equipment and samples, training, etc., necessary for Euratom Safeguards activities (Part B of the Budget, chapter B4-20).

For 2003, specific operational appropriations in the EU budget for Euratom Safeguards came to €18.8 million. Of that amount, €13 million (70%) was actually committed. The expenditure was broken down as follows:

• Inspection mission costs (travel, daily allowances)	€3.8m	(29.2%)
• Rental of offices for the inspectors on inspected sites (and related equipment costs)	€0.5m	(3.8%)
• Purchase, installation, maintenance and repair of equipment on site, including IT, analysis of samples, and related costs such as transport, consumables, spare parts, etc.	€2.0m	(15.4%)
• Investments made in large scale plutonium bulk handling plants and related maintenance, operation and logistics	€6.0m	(46.2%)
• Administrative and technical assistance, training for inspectors, and other expenses (including special insurance coverage)	€0.7m	(5.4%)

Staff Resources and Utilisation

As of 31 December 2003, 95 officials were working in Directorate H (Nuclear Safety and Security), and 189 officials in Directorate I (Nuclear Inspection). In addition, the office of the deputy Director General, charged with the coordination of nuclear matters, comprised 5 persons. In addition, a total of 13 officials of Directorate A in Luxembourg were allocated to a number of administrative tasks related to both Directorates.

Thus, an overall total of 302 officials were working in the field of nuclear safety and security, of which 182 were Nuclear Inspectors.

In addition, the work of both Directorates was supported by a total of 19 external personnel.

ANNEX 6

Table 1 - Quantities of nuclear material under Euratom safeguards (t)

	End 1990	End 1995	End 2001[1)]	End 2002[1)]	End 2003[1)]
Plutonium	203	406	548	569	590
Uranium					
Total	200 400	269 100	314 610	318 710	325 510
HEU[2)]	13	11	10	10	10
LEU[3)]	32 000	46 700	57 000	58 500	59 700
NU[4)]	44 000	51 400	52 700	47 700	42 600
DU[5)]	124 400	171 000	204 900	212 500	223 200
Thorium	2 600	4 600	4 500	4 500	4 400

1) Quantities based on final reported data

2) High enriched uranium

3) Low enriched uranium

4) Natural uranium

5) Depleted uranium

Table 2 - Inspection activities of Euratom Safeguards

Person days of inspection in:	1999	2000	2001	2002	2003
Non-Nuclear Weapon States	2412	2113	2328	2348	1990
France	3492	3426	2934	2539	2266
UK	2871	2895	2399	2404	2110
Total	8775	8434	7661	7291	6366

Table 3 – Euratom Safeguards budget 2003

Expenditure committed for the specific appropriations

Table 3A: Line B4-2000

Safeguard inspections, training and retraining of inspectors

Topics	Expenditure (€ '000)
a) Studies, convocation of experts, publications	50
b) Mission costs	3,744
c) Transportation for staff and equipment	640
d) Rental of offices and special services on sites	456
e) Internships and training	30
f) Special insurance	40
TOTAL	**4,960 (out of 5,700)**

Table 3B: Line B4-2020

Sampling and analyses, equipment, specific work, provision of services and transport

Topics	Expenditure (€ '000)
a) Administrative and technical assistance	135
b) Purchase of surveillance equipment	463
c) Purchase of measurement equipment	118
d) Purchase of equipment for seals	
e) Purchase and maintenance of computing equipment directly linked to inspections	109
f) Costs for destructive analysis	
g) Equipment spares, repairs, accessories and maintenance	282
h) Consumable items, purchase of sources, transport of radioactive materials	47
i) Monitoring (warning system based in Luxembourg)	52
j) Software (accountancy program, management and firewall)	794
TOTAL	**2,000 (out of 5,500)**

Table 3C:

Line B4-2021: Specific safeguards for large-scale plutonium processing plants

Topics	Expenditure (€ '000)
a) Sellafield – BNFL (THORP, MOX)	294
b) La Hague – COGEMA (UP3, UP2)	205
c) Cadarache – COGEMA	10
d) Marcoule – MELOX	30
e) Dessel – BELGONUCLEAIRE	15
f) On site laboratories (initial investments and operations)	3,563
g) Software (on sites)	223
h) Maintenance & repairs (equipment, hardware and software support)	1,129
i) Software development (new applications, new equipment)	531
TOTAL	**6,000 (out of 7,400)**

Table 3D:

Line A0-1420: Health checks for staff exposed to radiation

Topics	Expenditure (€ '000)
a) Gamma spectrometry and toxicological analysis (non-standard)	5
b) Measurement equipment (dosimeters)	29
c) Maintenance and calibration	15
d) Material, services and other contamination controls	46
e) Mission costs (for body-counter)	35
f) Other running expenses	20
TOTAL	**150 (out of 215)**

Table 4 – DG TREN Safeguards budget 1991-2003 (€ million)

Evolution of expenditure for the specific budget appropriations

Budget Line	**1991**	**1995**	**2003**
Safeguard inspections, training and retraining of inspectors **(B4-2000)**	2.5	4.2	5.7
Sampling and analyses, equipment, specific work, provision of services and transport **(B4-2020)**	2.3	3.2	5.5
Specific safeguards for large-scale plutonium processing plants **(B4-2021)**	2.6	10	7.4
Health checks for staff exposed to radiation **(A0-1420)**	0.1	0.3	0.2
TOTAL	**7.5**	**17.7***	**18.8**

*In addition, €1.8 million was spent on cooperation with Russia.