

## IFIN-HH Co-operation with Industry, Public Health, Administration, Defense and Culture units

1. GRIRO S.A., Bucuresti (http://www.griro.ro/) - Petrochemical industry

Co-operation in the field of production at IFIN-HH and delivery of Ir-192 sealed sources used by GRIRO SA at production of high quality technological equipments for oil and gas processing industry, chemicals and fertilizers, energy, environment and metallurgy.

2. S.C. CONDMAG S.A., Brasov (http://www.condmag.ro/) - Petrochemical industry

Co-operation in the field of production at IFIN-HH and delivery of Ir-192 sealed sources used by CONDMAG at gas/oil-mains and piping manufacturing and of related technological equipments

3. UZUC S.A., Ploiesti (<u>http://www.uzuc.ro/</u>) – <u>Petrochemical industry</u>

Co-operation in the field of production at IFIN-HH and delivery of Ir-192 sealed sources used by UZUC at production of heat exchanger according to TEMA standard, pressure equipment, metal ware, fittings, autoclave, steamers for civil engineering goods manufacturing.

4. INSPET S.A., Ploiesti (www.inspetsa.ro) – Petrochemical industry

Co-operation in the field of production at IFIN-HH and delivery of Ir-192 sealed sources used by INSPET for equipments manufacturing from design to delivery, civil engineering and installation work, testing, operation, maintenance and technical assistance in the oil and gas processing industry.

- ARCELOR MITTAL, Galati (<u>http://www.mittalsteel.com</u>) <u>Siderurgic Industry</u> Co-operation in management of radioactive waste, transport, radiological characterisation, treatment/storage, final disposal.
- 6. CNE S.A. Cernavoda, Cernavoda.(<u>www.cne.ro</u>) <u>Nuclear power industry</u>

Collaboration as Consultancy Services for nuclear assessment in environment for the conformity of the Canadian Standard CSA-N-288.1-08 with the legislation in European Community and the recommendations of International Atomic Energy Agency concerning the Dose Release Limits for Tritium and C-14.

- MW S.R.L., Baia Mare (<u>http://www.mwgaze.ro</u>) <u>Petrochemical Industry</u> Packaging and distribution in industrial gases, specialised services by leak detection of the storage reservoirs, using Helium Leak detector of DFH/IFIN-HH.
- 8. PETROM S.A. PETROMAR, Constanta Petrochemical industry

Co-operation in management of radioactive waste, transport, radiological characterisation, treatment/storage, final disposal

## 9. S.C. ALSTOM GENERAL TURBO S.A., Bucuresti (<u>www.alstomgeneralturbo.ro</u>) – <u>Energetic Industry</u>

Achievement of a Plant and Technology for vacuum draying and thermal polymerization under bitumen of the turbogenerator stator bars insulation in the frame of Innovation Program.

## 10. S.C. ELECTROTEHNICA\_ECHIPAMENTE ELECTRICE S.A., Bucuresti (www.electrotehnica.ro) – Electrotechnical Industry

Achievement of a Plant and Technology for vacuum draying and thermal polymerization under bitumen of the turbogenerator stator bars insulation in the frame of Innovation Program.

- 11. S.C. MECHEL Targoviste S.A., Targoviste (<u>www.mechel-tgv.ro</u>)- <u>Mining and Metallurgy</u> Collaboration in gamma-radiological characterization of environmental samples (ash and slag resulting from industrial activities).
- **12.** Compania Nationala a Uraniului, Sucursala Bihor <u>Mining Industry</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- **13.** SC PROSPECTIUNI SA (<u>http://www.prospectiuni.ro/</u>) <u>Mining Industry</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- 14. RAAN SCN-Pitesti, Pitesti (<u>http://www.nuclear.ro</u>) <u>Nuclear Industry</u> Co-operation : Transport of type A packages and final disposal at DNDR Baita Bihor. Co-operation in neutron detectors designing in solid-state miniature technologies based on <sup>6</sup>Li.
- 15. S.C. IMSAT S.A., Bucuresti, Alba, Drobeta Turnu Severin, Iasi (<u>http://imsat.snef.fr</u>) <u>Mechanical Industry</u>

Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.

- **16.** SC RULMENTI SA Barlad (Difractometry) (<u>http://www.urb.ro/</u>) <u>Mechanical Industry</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- **17.** S.C. ATLAS GIP S.R.L., Ploiesti (<u>www.atlasgip.ro</u>) <u>Geological surweys/prospection</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- **18.** S.C. DAMEN S.A., Galati (<u>http://www.damen.ro/</u>) <u>Naval Industry</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- **19.** S.C. URSUS BREWERIES S.A. Bucuresti (<u>http://www.ursus.ro</u>) <u>Food Industry</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- **20.** Celhart Donaris S.A., Braila <u>Wood Industry</u> Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.
- 21. S.C. BRITISH AMERICAN TOBACCO ROMANIA INVESTMENT S.R.L., Ploiesti (http://www.bat.com) Tobbaco Industry

Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.

22. S.C. BIOEL S.R.L., Tg. Mures (<u>http://www.bioeel.ro/</u>) – <u>Pharmaceutical industry</u>

Microbiological tests for raw material and final pharmaceutical products. IRASM – IFIN-HH microbiological lab has a monthly Co-operation for 20 lots.

23. VELFINA S.A., Campulung (<u>www.velfina.com</u>) – <u>Pharmaceutical industry</u>

R&D co-operation in manufacturing, testing and validation of sterile active dressings with triglycerides and nanoparticles of ZnO and Ag for wounds with high infection risk.

24. SC ARGO-ROM PLASTICS S.A., Bucuresti (<u>www.argorom.com/</u>) – <u>Pharmaceutical</u> <u>industry</u>

Irradiation sterilization of packaging for sterile medical products. IRASM – IFIN-HH is part of a international production chain including companies from Greece and Romania. The final product is constituted in Romania. There are treated flasks for oftalmic solutions (3 millions per month now) delivered in CSI and EU countries.

25. S.C. PUROLITE ROMANIA S.A., Victoria (Brasov) (<u>http://www.purolite.com/</u>) – <u>Pharmaceutical industry</u>

(a) Microbiological tests for ion exchange resins special formulated for pharmaceutical and food industries. There are tested around 100 lots / month. (b) Microbiological control by irradiation of accidentally overcontaminated production lots. SC PUROLITE SA, Victoria-Brasov is one of the 26th subsidiaries of Purolite International Ltd (USA).

26. Centrul Medical Unirea S.R.L., Bucureesti (<u>www.cmu.ro</u>) - <u>Health</u>

Co-operation in the field of developing of more specific imaging techniques used in nuclear medicine.

27. Institutul Oncologic Prof Dr Al. Trestioreanu, Bucuresti (<u>www.iob.ro</u>) – <u>Public Health</u> Institutul de Endocrinologie CI Parhon, Bucuresti (<u>http://www.instparhon.ro</u>), Spitalul Judetean Sibiu (<u>http://www.scjs.ro</u>),

Spitalul Judetean Deva (<u>http://spitaldeva.ro</u>),

Spitalul Clinic Judetean de Urgente Sf Spiridon, Iasi (<u>www.spitalspiridon.ro</u>)

Small scale production of radiopharmaceuticals and delivery to hospitals; they are used for nuclear imaging and radiotherapy.

Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.

28. Institutul Oncologic "Prof. Dr. Ion Chiricuta", Cluj Napoca (<u>http://www.iocn.ro</u>) – <u>Public</u> <u>Health</u>

Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.

29. S.C. HONEYWELL LIFE SAFETY ROMANIA S.R.L. (Laboratory for production of fire detectors with ionizing chambers and Am-241 sealed sources), Lugoj (http://www.honeywell.com) –

Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.

**30. SPITALUL UNIVERSITAR Bucuresti (<u>http://www.suub.ro/</u>) – <u>Public Health</u>** 

Co-operation in radioactive waste management, transport, radiological characterization, treatment/storage, final disposal.

**31.** Oficiul Tehnic pentru Dipozitive Medicale (OTDM), Bucuresti (<u>www.otdm.ro</u>) – Medical radiological equipment.testing and charactersation.

- **32.** S.C. MarcTel SIT S.R.L. (<u>www.marctel.ro</u>) Tests and characterisation of radiological equipment.
- **33.** S.C. Nuclear&VACUUM S.R.L. (<u>www.nuclearvacuum</u>) Tests and characterisation of the equipment with incorporated radioactive sources.
- **34.** MApN UM 01634, Campulung <u>National Defense</u> Tests and characterisation of the equipment with incorporated radioactive sources.
- **35. Romanian Ministry of Administration and Interior (Atelierul de verificare, reparare si etalonare aparatura dozimetrica), Bucuresti -** <u>Administration and Interior</u> Colaboration in management of radioactive waste, transport, radiological characterisation, treatment/storage, final disposal.
- 36. MBTelecom SRL, Bucuresti (<u>http://www.mbtelecom.ro/en/home.html</u>) <u>Administration</u> <u>and Interior</u>

Co-operation in the field of gamma radiation detection; IFIN-HH developed and certified a 5 items series of gamma detection systems based on CsI scintillators, large area PIN photodiode and custom design electronics to be used for MBT's Roboscan 1 device. MBT is one of the largest system integrators in Romania for large border, special areas, buildings and general security projects, providing design production and installation of Hi-Tech equipment.

37. Directorate for Investigating Organized Crime and Terrorism, Bucuresti (<u>http://www.diicot.ro/</u>) - <u>Administration and Interior</u>

Expertise for supposed stolen items (Stradivarius violine ). DIICOT the only structure of the Public Ministry specialized in combating and investigating organized crime and terrorism.

38. Muzeul National de Istorie a Romaniei, Bucuresti (<u>http://www.mnir.ro/ro/Default.aspx</u>) - <u>Culture</u>

Collaboration in elemental analysis and expertise for the national treasures (dacian bracelets, kosons and other gold and silver items). The museum is a public institution under the leadership of the Culture and Religion Affairs.

- **39.** Muzeul de Istorie al Mun. București (<u>www.muzeulbucurestiului.ro/main.html</u>) <u>Culture</u> Collaboration in elemental analysis of museum items for future restorations and expertise. The museum is a public institution under the leadership of the Culture and Religion Affairs.
- **40.** Muzeul National de Istorie a Transilvaniei (<u>www.istoria-transilvaniei.ro/</u>) <u>Culture</u> Collaboration in elemental analysis of museum items for future restorations and expertise. The museum is a public institution under the leadership of the Culture and Religion Affairs.
- **41.** Muzeul National al Unirii, Alba Iulia (<u>www.muzeuluniriialba.ro/</u>) <u>Culture</u> Collaboration in elemental analysis of museum items for future restorations and expertise. The museum is a public institution under the leadership of the Culture and Religion Affairs.
- **42.** Muzeul Național Bruckental, Sibiu (<u>http://www.brukenthalmuseum.ro/</u>) <u>Culture</u> Collaboration in elemental analysis of museum items for future restorations and expertise. The museum is a public institution under the leadership of the Culture and Religion Affairs.

**Note.** There are mentioned only some of radwaste producers/ beneficiaries of the IFIN-HH radioactive waste management service. It must be mentioned that there is a close co-operation with many hospitals ( $\sim$ 20-25), some military units ( $\sim$ 15-20), education institutions (including regional inspectorates) and public health agencies, environmental protection agencies, others. We are estimating about 200 small scale economic units from various domains as health, services and production, research, education, industry, national defense, and others.