

**NAME** : Auglaire, Michèle  
**NATIONALITY** : Belgian  
**PRESENT POSITION** : Department Manager – Nuclear Processes and Responsible Designer & Key Expert Network  
Nuclear Processes section  
Nuclear department  
**YEARS WITH THE COMPANY** : 31

---

## KEY QUALIFICATIONS

- Responsible Designer & Key Expert Network
  - Department Manager - Project Management
  - Key expert severe accident
  - NPP's accident simulation
  - PSA level 2
  - People management
  - Product Manager
  - Quantitative risk assessment methods
  - Safety & Licensing
  - Severe Accident Management Guidelines
  - Severe accident phenomenology and modelling
  - Thermalhydraulic behaviour of Nuclear Power Plant
- 

## MEMBERSHIP OF PROFESSIONAL BODIES

VULCANO

Delegate to the Steering Committee of the VULCANO program

A.I.Lv.

Member of the Association of Engineers graduated from the University of Louvain (Belgium)

BNS

Member of the Belgian Nuclear Society

ISTP

Delegate to the Steering Committee of the International source term program

SARNET

Tractebel representative to SARNET (EC project on severe accident research)

OECD-GAMA

Working Group on the Analysis and Management of Accidents

---

## EDUCATIONAL BACKGROUND

Mechanical Engineer - University of Louvain-La-Neuve (Belgium), 1989

---

## LANGUAGE SKILLS

	<u>Speaking</u>	<u>Writing</u>	<u>Reading</u>
French	Mother language	Mother language	Mother language

**LANGUAGE SKILLS**

English	Good	Good	Good
Dutch	Good	Good	Good

**PROFESSIONAL RECORD**

2019-	Nuclear Processes department Manager & Responsible designer & key expert network
2015-2018	Safety & Modeling expertise department Manager
2013-2015	Modelisation & Calculation department Manager
2011-2012	Project Manager - Stress tests for the Belgian NPP's
2010-2012	Product Manager Assets Management and Strategy
2009-2010	Product Manager Safety & Systems with Tractebel Engineering
1999-2008	Thermalhydraulics and severe accident group manager with Tractebel Engineering
1990-1999	Design Engineer with TRACTEBEL ENERGY ENGINEERING - Nuclear Department - Operation and Accident Analysis Section.
1989-1990	Project Engineer with CTIB (Centre Technique de l'Industrie du Bois).

**LAST REFERENCES**

2019 -	<b>Belgium - Nuclear Entity</b> <b>Responsible Designer &amp; Key Expert Network</b>
2019 -	<b>Belgium - Nuclear Entity</b> <b>Department Manager Nuclear Processes</b> In charge of all activities/projects related to : - Core & Fuel Studies - Thermalhydraulics & DBA Accident - Severe Accident - Reactor & Fluid Systems Analysis - Fire Protection - HVAC
2008 -	<b>Belgium</b> <b>Key Expert Severe Accident</b>
2018	<b>France - IRSN</b> <b>Expert désigné dans la Commission Spécialisée d'Evaluation du Groupe Thématique de Recherche Fusion de Coeur</b>
2014 - 2018	<b>Belgium - Nuclear Entity</b> <b>Department Manager Safety &amp; Modeling Expertise</b> In charge of all TE activities/projects related to : - Safety & Licensing - PSA analysis - Safety Analysis Report - Core & fuel studies - Thermalhydraulics & DBA accident - Severe Accident - Structural integrity (mechanical & seismic integrity)  Particular projects to mention : - SMA (Sismic Margin Assessment for D12) - Fire & flooding PSA projects for all Belgian NPP's - LTO (Long Term Operation) projects - PSR (Periodic Safety Review) - CFVS (Containment filtered venting systems) installation - WENRA-RL applications
2012 - 2014	<b>Belgium - ELECTRABEL</b> <b>Teams manager</b>

## LAST REFERENCES

- KCD3/CNT2 Reactor Vessel Assessment  
Structural analysis (Fracture Mechanics and probabilistic analysis)
- 2012 **Belgium - NUCLEAR Entity**  
**Department Manager Modelisation & Calculations**  
In charge of TE activities/projects related to :  
- fuel cycle studies  
- thermal-hydraulic  
- mechanics  
- structural integrity (mechanical & seismic integrity)  
- severe accident analysis in support of NPP's
- 2011 - 2012 **Belgium - TRACTEBEL Engineering - Nuclear Entity**  
**Project Manager for Belgian Stress tests**  
Redaction and analysis for the Belgian (7 units)  
Stress tests following Fukushima accident
- 2007 - 2012 **France**  
**International Source Term Program (ISTP)**  
Delegate to the SAWG and Steering Committee  
Follow-up of experimental research in fission product behaviour
- 2009 - 2011 **South Korea - KOPEC**  
**Senior advisor to Project Manager**  
Technical assistance contract for replacement of steam generator for ULCHIN NUCLEAR POWER PLANT UNITS 1 & 2
- 2009 - 2011 **Belgium, France - GSNF - GDF Suez - EPR France**  
Permitting & Licensing Process :  
- review of design and technical documents related to severe accident aspects of the EPR concept  
- preparation of the permitting process  
- discussion with the French Safety Authority (ASN)
- 2009 - 2011 **Belgium - Tractebel Engineering**  
**Product Manager and Project Group Manager (Safety studies) for nuclear entity**  
Decenal Revision  
PSA projects level 1, level 2, fire, flooding  
Fire Hazard Analysis  
Long Term Operations (lifetime extension of NPP)  
Ageing  
Dismantling & Radwaste  
Operational support to NPP
- 1999 - 2009 **Thermalhydraulics and severe accident group manager**  
Technical supervision of engineers  
Project management  
Coordinator of TH activities in support of NPP  
- safety studies (power uprate, SG replacement)  
- decenal revision  
- thermalhydraulics studies for the safety report (RELAP, TRAPCON, TRAPSCO)  
- CFD calculations  
- Operational thermalhydraulic transient analyses  
  
Coordinator of SA activities  
- Beyond-design basis accident  
- PSA level 2  
- Severe accident integration measures  
- Severe accident management guidelines (SAMG)  
  
Coordinator of R&D activities.
- 1998 - 2009 **- European Commission TACIS**  
On-site Assistance to Kalinin NPP (Russia)  
Severe Accident Management Guidelines  
Development of plant-specific SAMG's  
Development of severe accident strategies
- 2003 - 2008 **- CEC-Project**  
6th Framework Program : SARNET : A proposal of network of Excellence for a sustainable integration of European Research on Severe Accident Phenomenology and management
- 2003 - 2007 **- TACIS 2004**  
On-site Assistance to South-Ukraine NPP  
Severe Accident Management Guidelines

## LAST REFERENCES

- 1997 - 2005 **Belgium - Electrabel**  
Follow up of International severe accident research projects:  
- MACE (Melt Attack and Coolability Experiments) (EPRI)  
- ACEX (Advanced Containment Experiments Extension Program) (EPRI)  
- RASPLAV (Kurchatov)  
- MASCA (Kurchatov)  
- MCCI (Melt coolability and concrete Interaction) (Argone National Labs)
- delegate to OECD :  
- FPC -PWG4 Principal Working Group (PWG) n° 4 (Fission Products Behaviour in Primary Circuit and Containment)  
- SAC-PWG4 Principal Working Group (PWG) n° 4 SAC (Severe Accident in Containment)  
- CAM-PWG4 Principal Working Group (PWG) n° 4 (Containment Accident Management)  
- USNRC : Tractebel representative to CSARP (Co-operative Severe Accident Research Program with USNRC)  
- SANDIA : delegate to the Melcor Co-operative Assessment Program
- 2000 - 2002 **Belgium - European Commission**  
**Senior Engineer**  
5th Framework Program of the European Commission  
PARSOAR : State of the Art Program on Passive Autocatalytic Recombiners
- 1999 - 2002 **Belgium - European Commission**  
**Senior Engineer**  
5th Framework Program of the European Commission  
OPTSAM : Optimisation of severe accident management measures for source term analysis
- 1999 - 2001 **Belgium - Electrabel**  
Doel NPPs: plant specific synthesis document on high level actions strategies to mitigate severe accident scenario.  
Development of severe accident management strategies and implementation of severe accident management measures
- 1998 - 2001 **- CEC - Project**  
5th Framework Program:MICA concerted Action "Industrial Needs in R&D for the safety and competitiveness of the next generation of Reactors" Technical responsible for the task related to severe accident issues.
- 1998 - 1999 **Belgium - Product development**  
Severe Accident Simulation tool for NPP operator training and for emergency planning exercises.  
  
Development of an interactive graphic display system based on computation results of the MELCOR severe accident code.
- 1997 - 1999 **Belgium - Electrabel**  
Emergency Planning Exercise Tihange  
- Supporting calculations  
- Development of standart scenarii for Emergency Plannings - Tihange  
  
Severe Accident Simulation - Tihange  
- Training on severe accident phenomenology  
- Emergency planning exercise  
  
Severe Accident Management Guidelines  
Training of plant staff on SAMG's & Severe accident phenoma
- 1995 - 1999 **Belgium - Electrabel**  
**Senior Engineer**  
Passive Autocatalytic Recombiners  
Supporting calculations for the design and the installation of PARS in the 7 Belgian NPP's  
Qualification tests definition and follow-up
- 1997 - 1998 **- OECD - International Standard Problem 40**  
STORM test (Simplified Test on Resuspension Mechanisms) organised by JRC-ISPRA  
Aerosol Deposition and Resuspension. Modelisation and analysis
- 1994 - 1998 **- CEC - Project**  
Euratom 4th Framework Program  
Evaluation of the key uncertainties in Predicting the Source Terms for Severe Accident (STU)
- 1994 - 1998 **- CEC - Project**  
Euratom 4th Framework Program  
Realistic Methods for Calculating Radiological  
Releases Following Degraded Core Faults: Reactor Containment Bypass Sequence.
- 1996 - 1997 **Belgium - Electrabel**  
Severe Accident Management Guidelines Tihange 2  
- Supporting calculations  
- Training on severe accident phenomenology  
- Severe accident sequence analysis

## LAST REFERENCES

- 1993 - 1997 **Belgium - Electrabel**  
Technical Coordinator of PSA level 2 Doel 1/2 (400 MW PWR) & Tihange 1 (870 MW PWR);  
Development of Accident Progression Event Tree;  
Modélisation of PWR NPP with MELCOR;  
Event Tree Quantification (EVNTRE code).
- 1994 - 1995 **- OECD - International Standard Problem 35**  
Helium Distribution in a Containment Model organised by NEA and NUPEC (with MELCOR).
- 1992 - 1995 **Belgium - Electrabel**  
Implementation of MELCOR and Severe Accident Calculations.
- 1991 - 1993 **Belgium - Electrabel**  
PSA level 2 Doel 3 and Tihange 2 (900 MW PWR)  
Severe Accident Calculations with STCP/MARCH3.
- 1990 - 1991 **Belgium - Electrabel**  
Modélisation of the Doel 3 NPP for the WAVCO code.
- 1989 - 1990 **Belgium - CTIB (Centre Technique de l'Industrie du Bois).  
Project Engineer**  
Development of a method to assess the quality of chipboard by means of its response to vibration.
- 

## PUBLICATIONS

- *"OECD - ISP35 Benchmark exercise: MELCOR 1.8.2 results"* (M. Auglaire, OECD - ISP35 meeting, November 4-5, 1993, Tokyo)
  - *"Modelling of uncertainties in hydrogen deflagration behaviour in containment for PSA of nuclear power plants"* (M. Auglaire, B. Boesmans, J. Snoeck, International Conference on Nuclear Containment, 23-25 Sept. 1996, Cambridge (UK))
  - *"Severe accident analysis methodology in support of accident management"* (M. Auglaire, B. Boesmans, J. Snoeck, presented at NUTHOS Conference 1997, Beijing (China))
  - *"Level 2 PSA to evaluate the performance of the Doel 1&2 NPP containment under severe accident conditions"* (A. D'Eer, M. Auglaire, B. Boesmans, P. Wilmart, P. Moeyaert, ESREL 97 Conference, June 97, Lisbon)
  - *"OECD - ISP40 Benchmark exercise: STORM experiment on aerosol deposition - MELCOR 1.8.3. results"* (M. Auglaire, Sixth MCAP Technical Meeting, April 29 - May 1, 1998, Maryland)
  - *"ISP-35 Benchmark calculation"* (M. Auglaire, Nupec Hydrogen Mixing and Distribution test M7-1)
  - *"Realistic methods for calculating radiological releases following degraded core faults: reactor containment by-pass sequence"* (M. Auglaire, B. Boesmans, B. Centner, S. Vanderperre, BELGATOM, CEC contract ENTU/CT/94/0141-BE)
  - *"Severe Accident Simulation for NPP operator training and for Emergency planning exercise"* (M. Auglaire, Nuclear Europe Worldscan No 1-2 January - February 1999)
  - *"Evaluation of the Key Uncertainties in Predicting the Source Terms for Severe Accidents: Tellurium Chemistry"* (M. Auglaire, B. Centner, BELGATOM, CEC contract F14S-CT96-0028)
  - *"Severe Accident management measures introduced in Belgian Nuclear Power Plant"* (CSNI Workshop on the implementation of severe accident management measures, Villigen September 2001)
  - *"Ex-vessel Coolability Analysis for a Belgian NPP"* (J. Verpoorten, M. Auglaire, F. Bertels ICONE 17 Conference – Brussels, July 12-16, 2009)
  - *Rapport d'évaluation du Groupe Thématique de recherche "fusion du cœur"* (Michèle AUGLAIRE, 22 mars, 2019)
  - *Interlaw book on nuclear energy and waste* (Foreword by Michèle Auglaire & Daniel Orban, Tractebel, 2017)
  - *"Structural Integrity Assessment of Reactor Pressure Vessel Affected by Hydrogen Flaking : Methodology, Computations & Results"* (V. Lacroix, P. Dulieu, C. Malékian, M. Auglaire) (PVP 2014 (PVP 2014 - 28198), 2014)
-