Statement of Attendance

This is to certify that

Timotej Verbovsek

has successfully completed

Solute and Reactive Transport Modelling

Rottnest Island, WA
12–15 September 2013

Craig T. Simmons
Director, NCGRT

NATIONAL CENTRE FOR GROUNDWATER RESEARCH AND TRAINING

Schedule

Solute and Reactive Transport Modeling
Rottnest Lodge- Rottnest Island
Day 1 - Thursday 12th September, 2013

13.30	Registrations	
14.00	**Introduction, brief course overview**	
14.15	**Introduction flow and transport modelling**	Chunmiao Zheng
14.45	**Introduction to MT3DMS: Theoretical background**	Chunmiao Zheng
15.15	Tea/Coffee Break	
15.45	**Introduction to MT3DMS: Solution techniques**	Chunmiao Zheng
16.30	**Introduction to the Processing Modflow GUI**	Henning Prommer
17.00	**MT3DMS Exercise: Single-species 3-D transport simulation**	
18.15	Happy Hour	
19.00	Day 1 concludes	

Day 2 - Friday 13th September, 2013

8.00	**Introduction geochemical modelling with PHREEQC**	Vincent Post
8.45	**Introduction PHREEQC for Windows**	Vincent Post
9.15	**Reactive Process: Mineral dissolution/precipitation**	Vincent Post
9.45	Tea/Coffee Break	
10.00	**PHREEQC Exercise 1: Water composition and mineral reaction**	Vincent Post
10.30	**Introduction PHT3D: Coupling of transport and chemistry**	Henning Prommer
11.30	Lunch Break	
14.00	**PHT3D Exercise 1: Mineral dissolution/precipitation**	
14.45	**Modelling tailings impact on groundwater**	Henning Prommer
15.15	**PHT3D Exercise 2: Tailings impact on groundwater**	
17.00	**Modelling groundwater age**	Chunmiao Zheng, Vincent Post & Janek Greskowiak
18.00	Day 2 concludes	

Day 3 - Saturday 14th September, 2013

8.00	**Reactive Processes: Ion Exchange and Surface Complexation**	Vincent Post
9.00	**Case Study: Ammonium plume at the Rexco site/UK**	Henning Prommer
9.45	Tea/Coffee Break	
10.15	**Modelling ion exchange and surface complexation with PHREEQC**	Vincent Post
11.00	**Modelling uranium transport at the Hanford 300A site**	Chunmiao Zheng & Janek Greskowiak
11.45	**Modelling of kinetic reactions with PHREEQC**	Vincent Post
12.30	Lunch Break	
13:30	**Case Study: BTEX plume degrading under sulfate-reducing conditions**	Henning Prommer
14.15	**PHREEQC Exercise 5: Microbial growth and decay kinetics in batch experiment**	Vincent Post & Henning Prommer
14.45	**PHT3D Demo/Exercise 4: BTEX plume degrading under sulfate-reducing conditions**	Henning Prommer, Vincent Post & Janek Greskowiak
16.45	**Case Study: Fringe-controlled degradation of phenoxy acids**	Henning Prommer
17.15	**Case Study: Biogeochemical and isotopic dynamics in a nitrate-polluted pyritic aquifer**	Henning Prommer
17.45	Day 3 concludes	

Day 4 - Sunday 15th September, 2013

8.00	**Case Studies: Geochemical changes during managed aquifer recharge**	Henning Prommer & Janek Greskowiak
9.00	**Model calibration, sensitivity analysis, uncertainty analysis**	Chunmiao Zheng, Adam Siade & Catherine Moore
10.00	Tea/Coffee Break	
10.15	**PHT3D Team Exercises** **Nitrate-pollution in a pyritic aquifer** **Arsenic mobilisation by dissolved organic carbon** **Chlorinated hydrocarbon degradation**	
12.00	Lunch Break	
13.00	**PHT3D Team Exercises**	
13.30	**Team Presentations**	
14.00	Course concludes	