

CODES THAT MAY BE USED IN NNWSI PERFORMANCE ASSESSMENT

CODE	STATUS*	PHYSICS
COYOTE	o	2D heat conduction with boiling and jointed rock models
EQ3/EQ6	o	Equilibrium and kinetic mass speciation in aqueous solution, including heat and transport path affects
FEMTRAN	o	2D radionuclide transport (modification of FEMWASTE)
JAC2D	o	2D nonlinear stress analysis with ubiquitous joint model and thermal effects
NORIA	d	2D transport of liquid water, vapor, and air in unsaturated porous media with heat conduction, convection, and evaporation/condensation (based on SAGUARO, with additional momentum equation as in PETROS)
ORIGEN	o	Radioactive decay and inventories
PETROS	d	1D transport of liquid water, air, vapor, and heat in unsaturated, porous media
SAGUARO	o	2D transport of liquid water, air, and heat in deformable, porous media (no vapor transport)
SPECTROM	o	3D static, dynamic stress analysis in compressible, nonlinear, elastic rock with ubiquitous joints (several submodels exist)
TOSPAC	o	1D unsaturated and saturated liquid water flow in porous or fractured media, advective-dispersive radionuclide transport, equilibrium sorption, and source-term model
TOUGH	o	3D transport of liquid water, vapor, and air in unsaturated porous or fractured media

*Abbreviations: o = operational
d = developmental

WM DOCKET CONTROL CENTER

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PDR WASTE PDR
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<u>CODE</u>	<u>STATUS*</u>	<u>PHYSICS</u>
TRACR3D	o	3D isothermal transport of liquid water, air, and radionuclides in unsaturated porous or fractured media with kinetic sorption
TRUST	o	3D unsaturated liquid water flow in porous or fractured media
WAPPA	d	Waste package analysis: 5 submodels for material degradation, mechanical stress, thermal analysis, dissolution, and radioactive decay

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d = developmental